LETTER TO THE EDITOR

Response to Comments on Asma Ansari, et al. (J Pak Med Assoc. Vol 72, No-5, May 2022)

Video based learning vs instructor led training for optimising personal protective equipment use to prevent Covid-19 infection-a comparative study

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Madam, first of all thank you for such an interactive feedback, research flourish by these interactions.

Following are the explanations of the queries raised on article, "Video based learning vs instructor led training for optimising personal protective equipment use to prevent COVID-19 infection-a comparative study" (JPMA, Vol 72, No-5, May 2022)

The points are hereby enlisted:

1. The introduction section couldn't give an idea about the gap of knowledge the current study tried to cover taking into account that the sample was health care team who already know how to use the protective measures. Being a quasi-experimental study; it was important to be conducted for testing one or more hypothesis linking the dependent and independent variables together1. No hypothesis was formulated.

   Response: Null hypothesis was "There is a difference between techniques of Donning and Doffing in HCW who are trained by video verses live instructor-led PPE Donning and doffing training."

2. The authors did not provide either a rationale for selecting the study setting nor a selection procedure which may affect the generalizability of the results.[1]

   Response: Quasi-experimental studies are pragmatic because they evaluate the real-world effectiveness of an intervention implemented by hospital staff, rather than efficacy of an intervention implemented by research staff under research conditions.[1]

   The rationale of selecting the study setting was as it was tertiary care center where training of staff was done by NIH, keeping in mind that, same facility will not be available in smaller health care units, authors wanted to see if video-based training be implemented in units where trainers are not available physically?

3. Piloting the data collection instruments were not done, piloting is important to test the clarity, applicability and time needed for filling in the instruments.[1]

   Response: Piloting was not done as the instruments used by authors were already validated and implemented by WHO and NIH for Donning and Doffing techniques.[2]

4. To effectively establish a causal relation, the baseline findings should be compared with both post-test data and retention or follow-up,[1] no pre-test was done however it was important to know the health care team baseline practices of protective measures. As for the PPE competency checklist; it was better to be a Likert scale "done correct, done incorrect and not done" better than the dichotomy scale used "done, not done".

   Response: We used Quasi-experiment design without control group, i.e., "The one group posttest-only design (X 01)".[2]

   Likert scale of PPE competency list cannot be changed as we used validated list provided by CDC.

   Personal Protective Equipment (PPE) Competency Validation

   Donning and Doffing
   Standard Precautions and Transmission Based Precautions" is attached as annex A.

5. A follow-up or retention measurement phase would reflect the sample practices three to six months after the intervention.

   Response: Follow ups were done by internal audits only as it was ongoing pandemic. Moreover, during ongoing Pandemic and HCW also getting effected by COVID-19, it was difficult to perform interrupted time series analysis.

6. Recommendations of the study if mentioned; would help researchers to start from the end of others.

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Annex-A: Personal Protective Equipment (PPE) Competency Validation

Donning and Doffing

Standard Precautions and Transmission Based Precautions

Type of validation: Return demonstration	☐ Orientation ☐ Annual ☐ Other

Employee Name: _____ Job Title: _____

Donning PPE	Competent	
	YES	NO
1. Perform Hand Hygiene 2. **Don Gown:** Fully covering torso from neck to knees, arms to end of wrists		
3. Tie/fasten in back of neck and waist		
4. **Don Mask/Respirator:** Secure ties/elastic bands at middle of head & neck 5. Fit flexible band to nose bridge 6. Fit snug to face and below chin (Fit-check respirator if applicable)		
7. **Don Goggles or Face Shield:** Place over face and eyes; adjust to fit		
8. **Don Gloves:** Extend to cover wrist of gown		
Doffing PPE		
9. **Remove Gloves:** Grasp outside of glove with opposite gloved hand; peel off 10. Hold removed glove in gloved hand 11. Slide fingers of ungloved hand under remaining glove at wrist 12. Peel glove off over first glove		
13. Discard gloves in waste container 14. **Remove Goggles or Face Shield:** Handle by head band or ear pieces		
15. Discard in designated receptacle if re-processed or in waste container 16. **Remove Gown:** Unfasten ties/fastener		
17. Pull away from neck and shoulders, touching inside of gown only 18. Turn gown inside out		
19. Fold or roll into bundle and discard 20. **Remove Mask/Respirator** (respirator removed after exit room/closed door): Grasp bottom, then top ties or elastics and remove 21. Discard in waste container 22. Perform Hand Hygiene		

Response: The end of discussion portion quotes

"The quality of evidence for most of studies cited above is low because of risk of bias, indirectness of evidence and small number of participants. More studies are required on this count.

The limitations of the current study are its small size and the fact that it was conducted at a single center and while the pandemic was still ongoing."

Disclaimer: None

Conflict of interest: None

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References

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2. Harris, A. D. et al. The use and interpretation of quasi-experimental studies in medical informatics. J. Am. Med. Informatics Assoc. 2006; 13: 16–23.