

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Clarifying the learning experiences of healthcare professionals with in situ and off site simulation based medical education: a qualitative study
AUTHORS	Sorensen, Jette Led; Navne, Laura Emdal; martin, Helle Max; Ottesen, Bent; Albrechtsen, Charlotte; Pedersen, Berit Woetmann; Kjaergaard, Hanne; Van der Vleuten, Cees

VERSION 1 - REVIEW

REVIEWER	David Foreman University of Derby UK
REVIEW RETURNED	18-May-2015

GENERAL COMMENTS	This is a really useful article focussing on aspects of simulation which are both emerging and underinvestigated. Throughout the paper there are small informalities in terms of language.
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REVIEWER	Torben Wisborg University of Tromsoe, Norway
REVIEW RETURNED	28-May-2015

GENERAL COMMENTS	<p>This is an interesting and well performed supplementary study to the parallel quantitative study submitted simultaneously.</p> <p>The manuscript is well written, and easy to read. I have the same concerns as with the quantitative version: Most of the participants had previous simulation experience, thereby possibly increasing their ability to "dive-in" and accept the simulated reality. This does not preclude the findings, but should be better underlined as a limitation to transfer of findings to similar settings. Although the discussion around fidelity and outcome is mainly sufficient, I miss a specific discussion of the impact of previous professional and simulation experience, as e.g. Saus ER, Johnsen BH, Eid J. Perceived learning outcome: the relationship between experience, realism and situation awareness during simulator training. <i>Int Marit Health.</i> 2010;62(4):258-64.</p> <p>The reporting of the respondents' views on cross-training was at best an incidental finding from the focus groups, and should be clearly marked as such. The participants' experience with cross-training does again underline that the informants were not virgin to simulation. The study was not designed to study the outcome of cross-training, and the reported views on this does actually represent informants' experience from other training sessions. I suggest that the authors consider removing this part.</p>
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REVIEWER	Jane Lindsay Miller University of Minnesota United States
REVIEW RETURNED	10-Jun-2015

GENERAL COMMENTS	I found this manuscript to be unusually detailed in its description of the methodology that informed the study's implementation, as well as its design. This is in and of itself a contribution to the literature, as this very important aspect of simulation and interprofessional education research is usually inadequately addressed. Further, I found the discussion of situativity (or situational learning) and the importance of physical, semantic and commitment contexts particularly relevant, based on my own experiences designing, implementing, and assessing uni- and interprofessional ISS and OSS. The most significant revision I would recommend is some additional description of the RCT on which this paper relies. I realize that a complete manuscript has been submitted describing this aspect of the study as a whole. However, it would have enhanced the credibility of the authors' conclusions to have a more thorough description of the RCT design (e.g. what methods were used to ensure randomization?).
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VERSION 1 – AUTHOR RESPONSE

Reviewer Name: David Foreman, Institution and Country University of Derby

UK: This is a really useful article focussing on aspects of simulation which are both emerging and underinvestigated. Throughout the paper there are small informalities in terms of language.

RESPONSE: Thank you very much. We have again sent the paper for professional English revision.

Reviewer Name Professor Torben Wisborg, Institution and Country University of Tromsø, Norway:

This is an interesting and well performed supplementary study to the parallel quantitative study submitted simultaneously. The manuscript is well written, and easy to read.

RESPONSE: Thank you very much.

I have the same concerns as with the quantitative version: Most of the participants had previous simulation experience, thereby possibly increasing their ability to "dive-in" and accept the simulated reality. This does not preclude the findings, but should be better underlined as a limitation to transfer of findings to similar settings.

RESPONSE: Table 2 shows that 8/25 focus group participants had experience with full-scale simulation, 16/25 with simple simulation and 1/25 no previous experience. Among participants in the randomised trial (table 2 in the quantitative paper to be published back to back with this qualitative paper), 30/97 had experience with full-scale simulation, 49/97 with simple simulation and 30 /97 no previous experience.

We have added a footnote to table 2 on page 10 explaining what the different categories of simulation experience mean. New text:

* A simple simulation experience is, for example skills training using a low-tech delivery mannequin and no video recording of the simulation scenario. Full-scale simulation is done in teams with fully interactive mannequins and video recorded scenarios.

As suggested by the reviewer, we cannot conclude that most of the participants had previous simulation experience as only one-third of the participants that had experienced extensive full-scale

simulation. As a result we have added the following to page 21:

This finding needs to be confirmed in other institutions and medical specialities as well as among other kinds of healthcare professionals and participants with less experience in simulation-based learning.

Although the discussion around fidelity and outcome is mainly sufficient, I miss a specific discussion of the impact of previous professional and simulation experience, as e.g. Saus ER, Johnsen BH, Eid J. Perceived learning outcome: the relationship between experience, realism and situation awareness during simulator training. *Int Marit Health*. 2010;62(4):258-64.

RESPONSE: Thank you very much for the interesting paper you recommended.

The quantitative randomised study followed by the present qualitative study was not designed to distinguish and report outcome on the level of healthcare professional groups or on the level of participant simulation experience. However the tendency we found was not the same as that described in Saus ER et al. Our randomised trial showed that OSS participants, in contrast to ISS participants, found the simulation to be less authentic, a perception that did not depend on years of work experiences or healthcare professional group. These results are not reported on our article because they are beyond the scope of the trial design. The qualitative study showed that auxiliary and operating theatre nurses appeared to have a greater need to have e.g. equipment in the right place, i.e. a higher authenticity or fidelity of setting, as described on page 12. These healthcare professional groups had very little or no previous simulation experience. The discussion on page 4 has been added to (in the bullet list on transferability):

...or health-care professionals without simulation experience

Page 19 now also includes the following:

Auxiliary and operating theatre nurses appeared to have a greater need for higher authenticity or fidelity of setting. These professional groups had very little or no simulation experience, a finding that is in contradiction to some of the literature, which shows that non-experts or novice participants can accept a lower level of authenticity or fidelity.[3]

The reporting of the respondents' views on cross-training was at best an incidental finding from the focus groups, and should be clearly marked as such. The participants' experience with cross-training does again underline that the informants were not virgin to simulation. The study was not designed to study the outcome of cross-training, and the reported views on this does actually represent informants' experience from other training sessions. I suggest that the authors consider removing this part.

RESPONSE: We agree with the reviewer that addressing cross training was not a specific part of the interview guide. However bullet 6 in table 1 states: "Which elements contributed to making the simulation (ISS/OSS) authentic / realistic? Perhaps compare your experience with previous experiences with simulation."

We discussed this again in the research group and the two anthropologists moderating the focus group found this result on training in 'own' versus 'other role' highly relevant to report. Several participants from each focus group also provided a response in this respect. Seen from a methodology perspective including important findings even if the topic was only partially mentioned in the interview guide is acceptable.

Page 18 has been revised to include the following:

The interview guide (table 1) encouraged participants to compare their current ISS and OSS experiences with previous simulation experiences. The focus groups had a clearly preferred simulation in authentic roles in their own workplace.

On page 18 'confirmed' has been replaced with 'investigated':

This finding on cross training, however, will need to be investigated in future studies using outcomes other than the perceptions of participants.

Reviewer Name : Jane Lindsay Miller Institution and Country University of Minnesota, United States. I found this manuscript to be unusually detailed in its description of the methodology that informed the study's implementation, as well as its design. This is in and of itself a contribution to the literature, as this very important aspect of simulation and interprofessional education research is usually inadequately addressed. Further, I found the discussion of situativity (or situational learning) and the importance of physical, semantic and commitment contexts particularly relevant, based on my own experiences designing, implementing, and assessing uni- and interprofessional ISS and OSS.
RESPONSE: Thank you very much.

The most significant revision I would recommend is some additional description of the RCT on which this paper relies. I realize that a complete manuscript has been submitted describing this aspect of the study as a whole. However, it would have enhanced the credibility of the authors' conclusions to have a more thorough description of the RCT design (e.g. what methods were used to ensure randomization?).

RESPONSE: We agree that our qualitative paper can be difficult to read without knowledge of the quantitative paper on the randomised trial. We have therefore added additional information describing the randomised trial. The following text has been added to page 6:

Prior to the present qualitative study a randomised trial was conducted that recruited individuals from among 265 healthcare professionals working shifts on a labour ward. After giving written informed consent, randomisation was performed by the Copenhagen Trial Unit using a computer-generated allocation sequence concealed to the investigators. The randomisation was conducted in two steps, first, 1:1 to the ISS or the OSS group, then randomisation into 10 teams for either the ISS or OSS. Based on a power calculation one hundred participants were randomised, and of these 97 participated in the randomised controlled trial.