Author's response to reviews

Title: Patient safety culture lives in departments and wards: Multilevel partitioning of variance in patient safety culture

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Author's response to reviews: see over

We thank reviewer 1 for his unreserved endorsement ("No revision is needed") and reviewer 2 for her constructive suggestions for improvement.

We hereby submit a revised version of our manuscript. The manuscript has been extensively rewritten, in order to comply with reviewer 2’s suggestions and to improve the language. The old manuscript was 1896 words (not counting “Abstract”, “References” and the tables), the new one is 2352. The number of references is up from 12 to 16.

Major compulsory revisions (reviewer 2)

1) Background

a) “The background section includes information that should be moved to the methods section or is already in the methods section.”

The old manuscript version’s paragraphs 2 and 3 have been moved to the Methods section and adapted to what was already there.

b) “… why patient safety is now a national policy issue in Norway …”

The new version of the manuscript calls attention to the successful efforts of the undefatiguable professor emeritus Peter F Hjort to spur the government into patient safety improvement action.

c) “Why did the authors decide to study safety culture? … study put in the context of what has been done in this area and what their study adds. One study I recently read … Singer et al 2009 … should at least be cited.”

A short discussion has been added of alternative approaches to patient safety improvement has been added, along with a reference to an article which describes them in greater detail. We have also made explicit our reason for studying patient safety culture. Singer et al’s excellent study is
now acknowledged (reference 13), and a comment is made on how our study is similar and different.

2) Methods

a) “I suggest the author use a template that includes the study design, setting and participants, survey, data collection, statistical analysis”.

The Methods section has been re-structured according to the reviewer’s suggestion.

b) “The SAQ is not described at all. How was the SAQ administered … was it done confidentially and anonymity maintained?”

The original manuscript tried to save space by referring the interested reader to the details presented in our previously published BMC article (Deilkas E, Hofoss D. Psychometric properties of the Norwegian version of the Safety Attitudes Questionnaire (SAQ), Generic version (Short Form 2006). BMC Health Serv Res 2008; 8 (1): 191). But we agree that the reader of this article, without having to look it up elsewhere, may wish to learn more about the SAQ, how the questionnaire was administered and how anonymity was maintained. This information is now summed up in the Data collection sub-section of Methods.

c) “… not clear why the authors benchmarked their culture scores against inpatient scores published by Sexton and colleagues”, “… scores should be explained clearly so that the reader knows what is a good culture score”.

We have deleted the presentation of the Ahus safety culture scores. As the reviewer correctly points out, we did not set out to discuss the Ahus’ culture score level. Our purpose was to estimate which fractions of the variation in score were across departments and across wards. The revised manuscript does not at all refer to “high” or “low” scores.

d) “… the authors should more clearly write the statistical analysis section.”

We agree. This, however, is a difficult balancing act, and one should probably not try to make the details of multilevel analysis transparent to the uninitiated reader in an article which just applies the technique and is not a textbook. But the statistical analysis section is now a good deal longer, we have added more details on what was done.

3) Results

“… not clear why the authors benchmarked their culture scores against inpatient scores published by Sexton and colleagues”

The reviewer is right, the benchmarking did not fit into the manuscript’s main line of reasoning. We have deleted the paragraph describing the Ahus score level (see 2c above).

4) Discussion
a) “… the major findings … buried in the third paragraph … should be in the first”

We agree. The point that great variation occur among departments and among wards is now the first point in the discussion, immediately following the presentation of the results in tables 1 and 2.

b) “… no discussion of where these results fit in the context of other study results”.

The revised manuscript includes the reference to Singer et al’s 2009-article, and discusses how our result resembles and differs from other studies. Our aim was to estimate the magnitude of the higher-level variance in patient safety culture. We also wanted to link to the strongly argued point (references 15-17) that the internal life of micro units is the core of medical care, by pointing out that patient safety culture studies might be studied by multilevel analyses including units below ward level.

c) “… it is not well written”

The manuscript has been thoroughly revised. And after we re-wrote it, we have had it checked by the company Editmyenglish.

Minor essential revisions (reviewer 2)

“The title of the manuscript is not informative.”

We have changed the title, it now reads “Patient safety culture lives in departments and wards: Multilevel partitioning of variance in patient safety culture”.

Editorial comments

a) “… a fuller description of the ethical aspects of the study.”

The revised manuscript’s “Study design” sub-section makes it clear that formal applications were sent to the proper governmental and academic authorities (the Norwegian Data Inspectorate and the Regional Ethical Committee for Medical Research in Eastern Norway), and that the necessary approvals were given.

b) “… make sure the manuscript conforms to the BMC format”

The manuscript has been revised according to the BMC guidelines for authors