Reviewer's report

Title: Occupational stressors and its organizational and individual correlates: A nationwide study of Norwegian ambulance personnel

Version: 1 Date: 14 November 2007

Reviewer: Jane Shakespeare-Finch

Reviewer's report:

General
This paper addresses an interesting question of competing stressors in ambulance work and the impact of the severity and frequency of selected organizational and work-role related factors with respect to how they relate to individual factors and organisational conditions. The first part of the title does not really accurately reflect the content of the paper but the abstract makes the intent clearer. The introduction is clearly written and the hypotheses are a natural progression from the literature reviewed. The sample size is impressive and the ‘whole of state’ invitation to operational ambulance personnel is a strength of the study.

However, there are significant inconsistencies in the method section and omissions in the results section. I have detailed below ways in which the paper could be made more statistically valid. The discussion is fair but no mention is made of the lack of psychologically significant results. That is, significant correlations with standardised coefficients of .09 for example, are not psychologically significant and I suggest their statistical significance is a function of the large sample size.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. In the sample and procedure sections of the Method, 3 different figures are given regarding sample size. One final sample size is needed. That is, which, if any of the figures 1180, 1005 or 1286 actually represent the valid sample? With a failure to include statistics that contain degrees of freedom, the task to identify the actual sample size is made more difficult. Further, on page 7, are the authors suggesting they deleted (listwise) all cases from the data set that had even 1 missing value?

2. Please include the results of the significant independent samples t-test alluded to in the sample section with relation to age and gender.

3. In the procedure section the authors mention differences in demographic factors such as education and work role. Were any tests conducted to address the potential differences on variables of interest due to these categorical distinctions?
4. On page 12 a series of paired sample t-tests are conducted and the reader is directed to Table 3. Table 3 only presents means and SDs for the items and extracted factors. The authors need to include the results of the t-tests. Was any adjustment made for multiple comparisons to ward off the heightened potential for type 1 error?

5. Using multiple linear regression for this study is not the most efficient or effective statistic to employ. It appears that the whole regression was conducted and then organisational factors were removed to see what was left. At least, the analyses should include hierarchical regression where groups of variables (e.g., individual differences, organisational) are added in steps to observe any changes in r squared.

6. It is essential in my view that the issue of statistically significant results as a function of the sample size is addressed. Effect sizes need to be included, adjustments for multiple comparisons would be a positive addition to the statistics and a discussion about which, if any, relationships are psychologically significant would add to the paper.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

-1. It would be advantageous to label or make explicit that the intersecting figures in Table 2 (correlation matrix) are in fact the alpha coefficients. The inclusion of gender in this table is confusing as not only is it a categorical variable but the table suggests a SD 3 times larger than the mean. I know a mention is made in the notes but removal would be clearer.

2. Top of page 15 the word ‘ranged’ may best be changed for ‘rated’. Two lines further down a full stop is missing after references 4, 30, 31 and the words ‘meaningful’ and ‘motivating’ are not clear in the context of the discussion.

3. On page 24 there are a number of commas instead of full stops between figures (e.g., 0.54 and 0.51 rather than 0.54 and 0.51).
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Discretionary Revisions (which the author can choose to ignore)

1. Identifying a sampling strategy would be beneficial (i.e., criterion based).

2. Although not vital, at the end of page 8 when reference to the MANOVA is made, I believe it is customary to provide the F-test details to demonstrate the lack of significance.

3. Table 1 is not very clear to read and the issue of complex loadings is not really discussed (e.g., take care of seriously injured and dying patients and uncertainty about what you will meet….)

4. At the bottom of page 11 an r value of .32 is presented; please clarify the point of this.

5. Age is often confounded with length of service in emergency service
populations. Those who find the work has become too much for them tend to self-select out just as this group self-selects in to the service.

6. At the top of page 18 please clarify that this is the largest investigation in Norway.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.