Author's response to reviews

Title: Factors and symptoms associated with work stress and health-promoting lifestyles among hospital staff: a cross-sectional study

Authors:

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Author's response to reviews: see over
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Natasha Mellins-Cohen  
on behalf of  
Simon Harold PhD  
BMC-series Journals  
BioMed Central  
Floor 6, 236 Gray's Inn Road  
London, WC1X 8HL

Dear Ms Mellins-Cohen:

Thank you for the opportunity to revise our manuscript. Specific responses to your reviewers’ comments follow.

Reviewer's report 1

Title: Factors and symptoms associated with work stress and health-promoting lifestyles among hospital medical staff: a cross-sectional study

Reviewer's report:

Major compulsory revisions:

-In view of your research question (page 6): Please point out clearly what your study adds to the existing knowledge. Is this an innovative research question? What is new about it?

Response:

What your study adds to the existing knowledge
Our study demonstrated that not all stress-related symptoms correlate with job stress and health-promoting lifestyle. Among the factors of job stress, “psychological demands of the job”, “discretion to utilize skills” and “decision-making authority” had a positive correlation with stress-related symptoms except for irritability. “Social support” correlated negatively with stress-related symptoms except for nightmares and irritability. All items on the HPLSP correlated negatively with stress-related symptoms except for irritability, suggesting that the increase in health-promoting lifestyle might reduce the stress-related symptoms.

Is this an innovative research question?
There were two research questions in this study:
(1) What are the factors associated with job stress among professional hospital staff, and what is the correlation between those factors and stress-related symptoms?
(2) What is the correlation between performance of health-promoting lifestyle activities and stress-related symptoms? There is no report in the literature that investigates those questions among professional staff in a hospital (physicians, nurses, medical technician staff and administrative staff).

What is new about it? Although a comparison of health-promoting lifestyles and job stress in the four types of hospital staff was not our objective, our data demonstrated that hospital nursing staff, medical technicians and administrative staff had significantly less discretion in skill utilization and decision-making authority than did physicians. Nurses had lower scores than did physicians in self-actualization and nutrition, and more self-reported stress-related symptoms than the other professions.

Moreover, the relevance of the study is unclear to me as the quality of the sample is poorly described. What does purposive sampling mean (see below)? What about the external validity of the study? Moreover, the sample is quite heterogeneous as it consists of nursing staff, administrative staff, medical technicians and physicians. Are the working conditions similar for these different occupational groups? Does it make sense to analyse the whole sample without differentiating the occupational groups? Is the population adequately labeled with "hospital medical staff" (see title)? If the sample quality is limited (see page 14f.)

Response: The Healthcare system in Taiwan divides healthcare units into medical centres, regional hospitals, community hospitals, and personal clinics. The workload may be different in the four types of healthcare units. Since the present study was considered to be a pilot study, a purposive sample (a deliberate, non-random sample of the target population) was used to recruit the participants from two regional hospitals. Chia-Yi hospital is in southern Taiwan and Hsin-Chu is in Northern Taiwan. This is a limitation of the study.

An informed consent form and questionnaire were delivered to all the staff in those two hospitals. The retrieval rate was 72.5% (775 / 1069). Given that the workload and lifestyle are different in the four professions in the hospital staff, we have reanalyzed the data separately for physicians, nurses, medical technician staff and administrative staff; however, there are common elements.

The study was also limited by the fact that 48.5% of subjects worked as nursing staff and only 4.5% as physicians.

Since the present study was designed as a pilot study, we did not determine external validity.

-Why do you think the study is nevertheless worth publishing?

Response:
Stress-related mental or physical symptoms may relate to medication errors and significantly affect the quality of medical care. In this regard, Health-Promoting Lifestyle may provide a way to reduce stress-related symptoms.

Minor essential revisions:

Please explain "purposive sampling" in the Abstract. and in the text
Response:
Please see above.

There are repetitions on pages 4 and 5.

These have been addressed.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

This has been done.

Reviewer's report 2

Title: Factors and symptoms associated with work stress and health-promoting lifestyles among hospital medical staff: a cross-sectional study

Version: 1 Date: 17 December 2011

Reviewer: Milan Milosevic

Reviewer's report:

Major Compulsory Revisions

1. Although there were high response rate (72.5%) among all participants, it should be assessed due to their occupation/position: eg. it is generally known that physicians have very low response in every used questionnaire compared to nurses or lab technicians. This is important, because physicians represent crucial part among health care workers, and in investigated sample only 35 (4.5%) was included. It is needed to describe why there are such a low number of physicians to see are there any biases in the study (maybe some questions or approach were not appropriate).
Response:
We realize that our study may be limited by the fact that 48.5% of subjects worked as
nursing staff and only 4.5% as physicians. As you have mentioned, physicians had a very low response to our questionnaire compared to nurses or lab technicians. We also realize that nursing staff responses may predominantly affect the overall scores on the questionnaires. A future study may focus on each profession separately.

2. Limitations are not clearly stated -it should be written at the end of Discussion chapter. One of limitations (I already mention the low number of physicians) is cross-sectional type of study and use of this data to assess odds ratios in logistic regression. Cross sectional study is not relevant for that -only prospective studies can be used to assess risks.

**Response:**
Limitations have been more clearly identified. The low number of physicians is one of the limitations. Another limitation is the cross-sectional type of study and use of this data to assess odds ratios in logistic regression. Odds ratios in logistic regression may not be appropriate for a cross-sectional study (Lee 1994, Hughes 1995, Axelson et al. 1994, Lee & Chia 1994). To assess risks, a prospective study may be conducted in the future.


3. There are 16 references used for all citations -and only one from 2011 (Cheng Y et all). Literature should be reviewed and authors should include more recent publications.

**Response:**
Three more recent references were added to clarify the rationale for the study in the introduction section:

4. Does "manuscript editing and article review" (doesn't describe what kind of review -eg. critical, statistical, language?) qualify contributor to be on authors
list?

Response:
Dr. CH Liu was the supervisor of the project. We have reworded the “Authors’ contributions” as:
YC Tsai designed the study, wrote the protocol, managed the literature searches, data acquisition and analysis, and wrote the manuscript. Dr. CH Liu was the supervisor for the project, was closely involved in creating the hypothesis and study design, and undertook the manuscript editing and review of the rough draft.

Minor Essential Revisions

Please state median (interquartile range) for quantitative variables that not follow normal distribution. If percentage is mentioned in the text, please state absolute number relevant to this percentage eg. 98 (78%)

Response:
The Results section has been revised.

Linear regression model is parametric statistical method so every variable included in the model must have normal distribution. This is not clear from the presented data.

Response:
We checked the estimated residual of the model to test for normality. It did not follow a normal distribution. Therefore, we agree that the GLM method may not be appropriate for univariate linear regression analysis. For the objective of the study, we still had to identify the correlation between healthy profiles and subjects’ characteristics and the correlation between Job Content Questionnaire and subjects’ characteristics. Hence, we have modified the statistical analytic method to show the correlation. The correlation analysis was applied using Spearman’s correlation coefficient, point biserial correlation coefficient, and point multiserial correlation coefficient according to the normality of data (data here were not normally distributed) or type of data (nominal or continuous variables). The results have been updated.

Reference: