Author's response to reviews

Title: Psychosocial work load and stress in the geriatric care

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Author's response to reviews: see over
Dear Editor of BMC Public health

We would like to resubmit our article “Psychosocial work load and stress in the geriatric care” to BMC Public Health.

On the background of growing importance of the geriatric care sector (demographic development) the analysis of the psychosocial working conditions in professions of geriatric care (Home Care and geriatric nursing homes) and the comparison to other professions is of high importance.

A comprehensive study with 889 respondents was carried out in these professions using the COPSOQ (Copenhagen Psychosocial Questionnaire). Results were compared to the general working population and to the mean of hospital care.

Results showed favourable working conditions especially for the Home Care personnel as compared to other professions (partly due to a high rate of part-time workers) but with the disadvantage of the obligation to work alone most of the time. For the geriatric nursing homes the biggest problem was the high insecurity of work stated.

We would be very glad, if our paper was considered publication in BMC Public health.

We have tried to meet all the suggestions of the two reviewers in the second round – in two separate files we have documented all the changes made in connection to the reviewers’ points.

Best regards,

Matthias Nübling
Reviewer's report

Title: Psychosocial work load and stress in the geriatric care

Version: 3 Date: 25 January 2010

Reviewer: Jan Hyld H Pejtersen

Reviewer's report:

I think the manuscript have improved on many point. However, I still have the following comments.

Major Compulsory Revisions

2. The study compares the results with results from quite a huge database. However, it is not clearly described how this database is obtained. The database is described as dynamic, so I guess users of the questionnaire provide data to the database. The advantage and disadvantage of using reference values from such a dynamic database should be discussed.

MN The data in the German COPSOQ-database is not a representative German sample but a collection of data gathered in all enterprises and organisations that did the assessment together with us (FFAS) in a cooperation model. Advantage is that the database is huge and the data is “fresh”, disadvantage maybe the lack of a prove of representativity.

JHP The lack of representativity and the consequences for the present study should be discussed in the manuscript.

MN2 A sentence addressing this potential lack of representativeness was added in the limitations-section.

7. I do not understand the method used for the comparison related to figure 2. In the manuscript, it is described as an example of comparison made for all scales. It seems that the values for home care and geriatric care are compared to the other job groups as well as to the reference values for the database. But are the values for home care and geriatric care for the single dimensions ranked according to the mean values for the different job groups or how was the comparison made to the job groups of the reference database? I think the description should be moved to the method section and the method described more clearly and in more details. The results of the comparison to the other job
groups for all scales should be presented somehow, for instance in a table and not only as an example.

MN The figures were not in a good quality in the supplementary jpg-files. We have included them also in the text now. The comparison is made simply by showing the means of a COPSOQ scale for different job groups (grouping according to the German KbB92). In the example this is done for quantitative demands. With the example we want to show, what is in the COPSOQ database and how it works. We cannot show all the results for all professions – therefore we do the evaluation With the COPSOQ-overall mean and a profession specific reference value for the Geriatric care, the hospital care.

JHP see, reply below comment 9.

MN2 figure 2 is deleted now, see below

9. The conclusion of the study is that workers in geriatric care and especially in home care have a positive psychosocial work environment compared to other professions. I do not think that the data presented fully support that conclusion. Table 3 shows that the psychosocial work environment for geriatric care and especially home care are more positive than compared with the average value for the reference group. However, this does not necessarily mean that the psychosocial work environments for the two groups are better than for most other professions. I can see that this is true for quantitative demands, at least for home care, figure 1. As stated before, I think the reader needs the results of the comparison to other job groups for all scales, not only for quantitative demands.

MN we give a comparison between the two study groups, of each group with Hospital care and with the overall COPSOQ mean value for all scales – in the last version in the text and in tables 2 and 3 now all together at a glance in table 3. The reader can see 3 things. First, that the situation of HC is evaluated better for a lot of aspects when compared to GNH– exception is the quantity of social relations (working alone). Second that the work situation for Home Care is favourable in a lot of COPSOQ-areas when compared to a similar profession, the hospital care – this is partly also true for the GNH-workers. And third: he/ she can see that both study groups (again this stronger for HC) evaluate their working situation as being better than the mean of all COPSOQ respondents does. What the reader cannot see (or can see only for one example) is the comparison of the two study groups with
about 20 other professions (i.e. priests, teachers, admin. workers, etc.) – but this was not the aim of this study and would lead to far.

**JHP** First of all there is no table 3 in the new manuscript. I am a little confused. In response to comment #14 you say that the tables 2 and 3 now are merged together. However, you still refer to table 3 in the manuscript at page 13, 3. paragraph. Is that a mistake?

**MN2** Yes this is a mistake and was confusing. We collapsed the tables 2 and 3 in only one (new table 2) between version 1 and 2 and did not change this reference to table 3.

Since the conclusion of the study is that Geriatric care employees and especially HC workers judge their psychosocial working situation as being quite positive compared to other profession (see abstract), I think it is very natural to present the data that support this conclusion. Therefore, I still think the results of the comparison to the other 20 professions for all scales should be presented somehow. Or if the comparison is not part of the aim, then it should not be the main conclusion.

**MN** the second reviewer, Birgit Aust, also addressed this point. We wanted to show this comparison as an example of what can be done with the database. But since both of you do not find that it adds something substantial to this study, we have deleted figure 2 and the comparison to the 20 professional groups (even if I personally feel sorry about it).

Minor comment
The figures 3 and 4 seem to be the same?

**MN** no, one is on on-call duties and one on part-time – full time (now numbers 2 and 3)

Level of interest: An article whose findings are important to those with closely related research interests Quality of written English: Needs some language corrections before being Published

**MN** reformulated and corrected by a native speaker.
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: I declare that I have no competing interests

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:** I declare that I have no competing interests
Reviewer's report

Title: Psychosocial work load and stress in the geriatric care

Version: 3 Date: 9 February 2010

Reviewer: Birgit Aust

Reviewer's report:

The manuscript has certainly improved and is now much clearer and easier to read and understand. However, some arguments need to be sharpened in order to be convincing and the sub analysis with part-timers should be redone (see below). There are still a number of small and larger problems and/or mistakes which need to be sorted out before publication. Also I like to come back to some of my earlier comments.

Mayor Compulsory Revision

I think the authors need to be (even) more precise and consistent with the terms they are using throughout the manuscript. For example in the background section the terms “nursing staff” and “geriatric nursing staff” are used and it is not quite clear, if the term “nursing staff” relates to hospital nurses – which are later used as a comparison group to nursing staff in geriatric care - OR if “nursing staff” is used as a synonym to “geriatric nursing staff”. It actually seems as if the term sometimes is used in the one way and other times in the other way. This makes understanding extremely difficult and raises some serious questions especially with respect to what kind of studies have shown which results and what kind of knowledge still is missing. This is a problem in the background section (page 5) as well as in the discussion section (page 19).

MN ok we have checked all these and corrected where necessary.

Related to this is another problem: The authors show that earlier studies pointed in different directions, some showing straining working conditions and high sickness absence, while others found only moderate workload in geriatric care (page 5). The current study aims to clarify the situation. However, as I pointed out before, one does not get much information about these earlier studies. This information would be necessary to better understand what could have been the reasons for the different outcomes and how this study contributes to clarifying the situation. For example: how representative were the earlier studies? Did they
distinguish between home care and geriatric nursing homes and did they take
into account the high number of part time employees? If the authors of the
manuscript could show, that the earlier studies did not study this, than it would
become much clearer what the current study contributes to the field. I therefore
urge the authors to use their own arguments in a better way and especially to
return to it in the discussion and in the conclusion, that is, to point out what this
study adds to the field what was not known before.

Ok, we added some supplementary information on earlier studies (as far as
available)

With regard to the data analysis: I do not understand why the analysis with
respect to part-time and full-time work have been done with the whole sample,
that is including the 164 employees employed in administration or other sectors
not related to care work. That to me does not make sense, since the aim of the
sub-analysis was to understand better, if the high percentage of CARE workers
working part time could be an explanation for the relative positive values for their
psychosocial work environment. I suggest therefore redoing the sub-analysis
using only care workers.

Ok, we redid this analysis excluding occupations outside HC and GNH. This changes
also the two figures (now #2 and #3) and the interpretation of the subgroup analysis.

As I could read in the other reviewers' comments there was some confusion
about the use of the other job-groups, especially the use of figure 2 which shows
results for all job groups using quantitative demands as an example. I actually
think this figure should be deleted. It does not add any extra knowledge and – as
the other reviewers' comments shows – can actually lead to misunderstandings.
As table 2 shows, the current sample of employees in geriatric care (divided into
home care and geriatric nursing homes) are compared to two other reference
groups: employees in general hospital care and the average of all job groups. All
data come from the same source: the German COPSOQ database. I think this
information is sufficient and therefore figure 2 is not needed.

MN the second reviewer also addressed this point. We wanted to show this
comparison as an example of what could be done with the database. But since both
of you do not find that it adds something substantial to this study, we have deleted
figure 2 and the comparison to the 20 professional groups (even if I personally feel sorry about it).

I have a number of comments throughout the text with regard to being more precise and consistent with how things are described. I made suggestions for rewriting to highlight what I think should be changed – but it is up to the authors to find the best formulation. There are some mistakes - especially with regard to the text referring to figure 2 and to the figure itself - which of course need to be corrected.

MN figure 2 is deleted

Abstract:

Methods: As can be seen on table 2 the instrument used has 22 scales and 3 single items. The word “aspect” here is confusing as it later is used with a different meaning. I suggest using the description similar to that from page 6/7 “The instrument includes 19 aspects (mostly scales) assessing the psychosocial work environment grouped into the sections: demands, influence and development, interpersonal support and relationship, and job insecurity and six constructs assessing the employee’s reaction to the workplace situation as outcome factors (for example job satisfaction)”

MN we used “The instrument includes 22 scales and 3 single items” for staying short in the abstract

Next sentence: results between two study groups (delete “the”)

ok

Results: First sentence: explain HC first before using abbreviation: home care (HC)

ok

The term “external values” seems strange. Why not just write: Compared to a sample for general hospital care.

“COPSOQ-total” can not be used like that without introduction. Find another formulation, for example: “average for all job groups” or “population mean”

MN we have explained the termini better now: “Comparison between HC and GNH showed more favourable values for the first group for the most scales, e.g. lower quantitative and emotional demands and less work-privacy conflict, better
possibilities for development etc. Compared to external values from the German COPSOQ database for general hospital care (N=1.195) and the total mean across all professions, COPSOQ-total (N=11.168…"

The authors still use terms as “see advantages” – I don’t think the employees see advantages. Rather, it turns out that their mean values are higher or lower than other job groups or the population mean, so I suggest to just write what was found. One can of course write “they have more favourable values” or something like that.

MN see above, we changed advantage in all instances but we kept disadvantage since we felt that this gets the point best.

Last sentence in result section: I suggest writing: A supplementary subgroup analysis showed that the degree of negative psychosocial factors was related to the amount of working hours per week and the number of on-call duties.

MN ok, thank you

Conclusion: Here is my suggestion to rewrite the conclusion “Compared to employees in general hospital care and the population average, geriatric care employees and especially home care workers evaluate their psychosocial working situation more positive. However, this seems partly due to the very high proportion of part time workers.

Delete last sentence of conclusion in abstract.

MN we included the sentence (with changes, we don’t want to call the COPSOQ mean a "population mean") but we kept the last one (with changes), since we want to address negative findings too in the summary.

Main text
Page 4, 3. sentence: move (home care, HC) up one line to after professional care at home.

ok

Next sentence: I don’t understand PNC and GNH 709.311. The sentence points out that there will be more people in need of care and I expected the numbers in the parentheses to explain how many in HC and how many in GNH – not PNC again

ok. sorry the PNC was to be deleted inside the parenthesis.
Last to last sentence in 1. paragraph on page 4: change to “rising need of employees in professional care”

ok

Last sentence in 1. paragraph on page 4: What is meant by “due to changes in the extent of nursing care itself”? delete “the number of nurses”

ok, changed and made (hopefully) more comprehensible.

Last paragraph on page 4: what is job pressure (maybe delete)

Ok deleted

Page 5, 1. paragraph: intention to leave the job and sickness absence

Ok added “sickness absence” and “the job” but kept also the others, since absenteeism and job turnover are not the same but further aspects

Next paragraph: Give information about the BELUGA-study – what did they study? (See also my general comments above) Add an S to researcher.
Check terms “nursing staff” and “geriatric nursing staff” – I think only the term “geriatric nursing staff” should be used.

ok

Next paragraph: why mobile HC? Why not just home care. Also: Use full terms OR abbreviations consistently, not as here HC (abbreviation) and Geriatric Nursing homes (full term) in one sentence (check entire text for that).

ok

The term “COPSOQ database” can not be used like that before it has been explained. At this point in the manuscript it would be enough to say “a population average”.

Ok, we explained it

I am not sure if the second goal really is a goal (impact of working schedule aspects): I think it is more a reaction to the results found, that is, a further analysis which was undertaken to understand the results better.

MN, it was a goal from the very beginning, since we knew, that employees in HC differ from “normal” care workers. We had it not as broad in the first manuscript but Jan Pejtersen urged to show it more in detail….

Page 6, 2. paragraph: Add a reference.
Page 7, 1. paragraph: be more precise with number of scales and single items (if the abstract has been changed it is already better), but the authors could add information about scales or single items to the outcome measures, so that information does not be retrieved from table 2 only.

Last sentence in this paragraph: add answer to categories

MN categories differ from scale to scale. Some are frequency-based like: always, often, sometime, seldom, never some extent-based like: to a very large extent, to a large extent etc.

It is referred to figure 1 here – but it turns out that figure 1 shows the content of the German standard COPSOQ. I suggest showing what was used in this study. That is: change the box “supplementary scales” to what was used in this study (namely specific questions concerning the working schedule and specific aspects in the care of the elderly) and change the text accordingly, that is in the manuscript on page 7: move the short 3. paragraph up to the first paragraph on page 7, so that the entire instrument is described in that paragraph.

MN we added that this is the „German standard COPSOQ” at this point, since we want to show the general methods (COPSOQ) first and the specific methods for this study later. The questionnaire for this study is described later.

Page 7, 2. paragraph, 2. sentence: which scientific institute? The part about the scientific institute can also be deleted here, as the full information is given later.

MN ok, we put FFAS instead. But we want to keep this general information about the COPSOQ-DB here, before we show the study itself.

End of paragraph: write: according to the system of job classifications of the German Federal Statistical Office and than add a reference.

MN ok expanded, the reference is www.destatis.de, one gets the KdB92 from there

Page 7, last paragraph: The information about the range from 0 to 100 does not explain WHY the scale values not present percentages. Add a sentence here.
MN ok we wrote: “Scale values presented are thus mean values and not percentages or prevalence rates, which has the advantage that no information is lost by collapsing categories in order to calculate percentages”.

Page 8 second sentence: delete “of course”
Ok

Second paragraph, last sentence: including an evaluation of the facility specific results seems to me to be the same as an assessment of psychosocial factors at work: what is the difference? – rewrite sentence more clearly.
Ok: added “in comparison to the mean of all facilities and to reference values from the COPSOQ database”.

3. paragraph: add at the end: “which conducted the survey.”
Ok

Page 9: correct 25 scales. What is meant by cases, subjects?
Write “postulated as a relevant difference”
Ok

Page 10, 1 sentence: delete “according to BGW care type classification” (it has been explained before)
Ok

2. paragraph: delete first part of 1. sentence and rewrite to “The data was grouped according to the occupation of the respondents: and continue with HC, GNH and than the others.
Ok

Last paragraph: why was “nursing profession” used for home care and “geriatric nursing profession” for GNH?
MN people in the GNH usually give the specific title of geriatric care as a profession while employees of HC give various types if nursing job titles. In Germany inside HC we have no distinction between nursery care and geriatric nursery care, but the stationary sectors is divided into hospitals and geriatric nursing homes. Our definition
was, that persons had to have a nursing occupation. Usually it is of the types described, however we changed in text into “nursing or geriatric profession” for both groups.

Last sentence on page 10: delete “in addition” and change the wording of “especially well represented” it sounds as if it was an advantage of some kind.

Page 11, second paragraph: HC and GNH are mixed up several times.

Check the table and make all necessary corrections, including the flow of the argument. Shared shift and alternating shift has been explained to me as a reviewer now, but not to the reader of the text. That should be done.

Last paragraph, 1. sentence: it should be referred to figure 2 (not 1). As I wrote above this whole paragraph and the figure are actually not needed (they might even cause more confusion). I suggest deleting this paragraph and figure 2

Page 12: delete “COPSOQ philosophy”

Page 13, 1. paragraph: delete “better possibilities of development” (HC is only one point better than COPSOQ Hospital), add a + for workplace commitment in the column HC vs COPhosp

Second paragraph: In the geriatric nursing homes (delete HC)

Page 15: Add (figure 3) after “38 points for no on-call duty”.

Add (data not shown) after “when not performing on-call duties”.

Page 16: The presentation of results of this subgroup analysis makes it difficult to distinguish between positive and negative relations. For example in the last sentence: there were fewer demands for those with less hours (a positive effect for those with fewer hours) and higher quantity of social relations with more hours (a positive effect for those with more hours). That paragraph should be rewritten to avoid the impression that fewer hours have positive effects on all variables.

Page 17: Discussion and conclusion
The section should start with a summary of the most important findings – not (only) how it was done. This is a service to the reader who might have gotten lost in the many details of the result section. It also paves the way to the discussion which follows this short summary: what was found and how should it be understood, what does it mean.

MN we added one sentence, but felt that it would be too redundant to sum up and interpret the results at this point.

The discussion about the low participation rate should be moved to the discussion about limitations.

MN we felt that the better place was here in order to discuss the representativeness next.

Are the information from Dulon and colleagues about German nursing homes? It should be added what they refer to.

MN yes, Germany, nursing homes and HC. added

Page 18, next to last sentence: Use “often found” instead of “systematically”. Use “tends to be high” instead of “is quite good”.

Ok

Last sentence: I think it is more leadership aspects that are at play here than social support aspects.
Page 19, 1. sentence: add compared to nurses and to the average of all Occupations

Ok

3. sentence: use “would” instead of “might”

ok

About the argument under 1.: What is meant by “Employees in nursing profession” only in geriatric care or all three groups? There are differences between the three nursing groups studies here (HC, GNH and hospital nurses) – hospital nurses are not too different from the population average. So I am not sure the first argument can be contained. (See also my comments about the use of terms above.)

MN the rationale of the argue is, that we (or others) expected values above average for all the nursing professions, - thus a value about average is already a surprise (and we found results in the average and beyond). We added half a sentence on this – but I’m not sure if it became clearer.

Page 20, middle of the page. The next to last sentence is not finished and ends with “and 32%.”

ok

Page 21, 1. sentence: what is meant by “integrated”, combined in one item? Or rather it is not distinguished between the two aspects of job insecurity? If there actually are two items (one on qualitative and one on quantitative job insecurity) than the authors could have tested their hypothesis. Why was that not done? The scale was of course tested in the validations study and the scale quality was good. It is meant, that both topics are addressed in the 4 items if the scale. This is in the text now.

Last line: “interested” instead of “interesting”

Part was rewritten
Page 22: The short paragraph about the strengths of the study is all too short and imprecise. What is meant by high usability (in terms of Kompier)?
Use “large” database instead of “big”

Ok

Page 22: The “remark on adjustment for structural biases” in itself has some important thoughts, but I still think the manuscript should end with a conclusion forcing the authors to highlight what their study has added to the field of research. As it is now the manuscript does not have a conclusion as the headline of this chapter suggests.

For us and the discussion in Germany it is quite important to have these argues in the study. We hope therefore that you can agree with keeping this part in. We have put a title in the same format as Discussion and Conclusion, so it hopefully becomes clearer that this part is to be seen separately.

Under the 2. point: a lot of studies

Ok

More general comments:
Is it burnout in general or personal burnout (an under category)?
It is the scale “personal burnout” of the CBI, added in page 7

Is it feedback or feedback quality?
It is the COPSOQ scale “feedback (quality)”

My question about the measurement of social relation is only halfway answered: It seems to be only a single item asking about how often one works together with others. The term “social relations” and the impression (?) that it is a scale (more questions) leads to think that there is more “behind”. Therefore I suggest adding the information about the single item assessment (maybe even give the precise wording of the question and answer categories).

MN: no it is not a single item, but the standard COPSOQ scale “Social relations” (identical so the Danish / English original) and with the same scale title in German. It addresses the two topics “(not) having to work alone” and “having the opportunity to
talk to colleagues while working” (items). We added “quantity” to make clearer that not “quality” is meant.

In addition to my comments to the tables/figures pointed out in the text I have the following comments:

Table 1: explain shared shift and alternating shifts either here or in the text
Ok

Table 2: The first column should read “scales and single items”
ok

The N in the top of the columns should not be written in parenthesis as it gives the impressing that everything in parenthesis refers to Ns, were it is in fact SD in most cases. Consider writing “mean (SD)” in the top of the columns
ok

Check spelling of single item in General care
ok

What is meant by “Remark: all” at the bottom?
MN it is the beginning of the sentence “Remark: all differences reaching…”

Figure 3 and 4: The titles of the two figures are different with regard to giving information about Ns (figure 4) or not (figure3). It should be the same type of information on both figures. As I wrote above, I think the analysis should only be done for care-workers.
ok

Figure 3: Use only the term “on-call duty” as also used in table 1
ok

Figure 4: Delete (N=12 missing) from the title of the figure (not relevant here)
Ok

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests