Author’s response to reviews

Title: A global survey on occupational health services in selected International Commission on Occupational Health (ICOH) member countries

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Author’s response to reviews:
Our comments to the Editor’s and reviewers’ remarks
Reviewer reports: Anne­-Mette Hedeager Momsen, Ph.D. (Reviewer 1):

1. General comments: The manuscript is too long, including an overload of tables.
1. We have reduced the text as much as we can without compromising the description of the results. The original number of pages with references was 44, the current condensed version is 33 pages, including tables.

2. Suggestion to use the abbreviation for occupational Health service OHS throughout the manuscript - may ease reading.
2. We have replaced the words occupational health services - as suggested by the reviewer - for OHS, except for the name of the ILO Convention on Occupational Health Services, which needs to be kept as it is.

3. Check the English.
3. A native English-speaking scientific editor has checked the English language.
4. More structured text, suggest the results and discussion structured according to the survey questions/the conclusion regarding the "gaps".
4. The whole study design was based on the Domains in Table 1. The text is structured according to the domains. We have tried to make the text more clear. Not all the questions listed in Table 1 have been reported, due to space limitations.

5. Parts of the text (discussion and conclusion) need rephrasing.
5. These have been considered. We have followed the guidance by our scientific/linguistic editor. We have also moved some parts from results to discussion. Sometimes we have tried to explain briefly the background of the questions, as they may be less familiar to the reader without knowledge on occupational health.

6. Abstract, Background: Not clear, e.g. for whom should Occupational health services be organized, this sentence makes it unclear. Is it only for the sector of economy?
6. According to the sentence in the abstract, ….have encouraged the countries to organize occupational health services (OHS) for all working people…(who, of course, work in different sectors of economy (altogether some 20+) such as industries, services, agriculture etc., and in 9 main occupational groups with one hundred individual occupations)

7. Keywords: choose other (more precise) keywords than coverage, priorities
7. We have added coverage of services and priorities in services to the keywords

8. Background
Suggestion to only write the newest resolution (11), the others may be enclosed as references only, so that the main subject is stressed: “…called the members to strengthen their OHS…
8. We have mentioned the main document on OHS and included the other documents as references.

9. What are the main issues of the paper? p. 5, last 2 sentences: References are missing
9. Main issues: What is the status of OHS in selected (ICOH member) countries, and how their OHS meet the requirements set by the ILO Convention No. 161 and the WHO Resolution WHA 60.26/2007. This has been stated in the abstract and in the background. References added to p.5.

10. Material and Method section: Check the language and excess informations, e.g. "if available to the investigator" (unnecessary information)

10. We have eliminated several redundancies, including this one. (It may be that the reviewer has an earlier (long) version as in the current text this expression cannot be found).

11. Is the level of statistically significant difference $p<0.001$?

11. On recommendation of Reviewer no. 3 we decided to leave out the statistical analyses, except for the two figures of Correlation between the coverage of OHS and GDP, and HDI (Figs 4 and 5). In both of the Figures the $p$-values < 0.001 are given and considered as significant.

12. Are the main domains of the survey (presented in Table 1) a method or a result?

12. As the main domains were included in the questionnaire to guide the replying in a logical framework, we think they should be handled in the Method Chapter as the key content of method.

13a. Suggestion to let these domains to a larger extent structure the following result and discussion sections

13b. Descriptions (p. 10) are results of the survey?

13a. The results and discussion have been structured to follow the domains of Table 1.

13b. In the condensed version (provided to the editors) there are only results on p. 10.

14. Results: Too much information is provided as both text and tables, e.g. page 16/Table 7. Too many tables - however, text could be shortened, and maybe some tables could be either collapsed or include more of the text information. e.g. Table 3 Availability of professional groups in responding countries + information of professional associations

14. Texts have been reduced, and a part of the tables merged in order to shorten the manuscript.
15. Text provided in the result section e.g. p. 19 - move to discussion section, e.g. "The increase in coverage was due to the higher coverage of the new respondents when compared with the 2011 survey. Thus, it cannot be concluded that the global coverage of occupational health services would have increased, but it was due to the change in the study base."
15. Has been moved to discussion.

16. Text in result section e.g. p. 21 may belong to background (or deleted?): "an optimal case, the occupational health services provide surveillance of work environment, surveillance of workers' health, risk assessment, prevention of occupational injuries and diseases, first aid, curative care, maintenance of work ability and rehabilitation, health promotion and health education, and workplace Development services [61], i.e. comprehensive occupational health services."
16. This sentence has been deleted.

17. Discussion: The text provided in discussion section (p.26) is rather a part of results: "The study base was changed for part by drop-out of 13 of the respondents of the 2011 survey. At the same time, 15 'new' respondents who did not participate in 2011 came in. The net increase was 2 countries. Africa added substantially its participation by 6 'new' countries."
17. Has been moved to results.

18. Figures are to be presented before the discussion section? Suggestion: move to results: p. 29
"An experiment for an 8-domain profile by using data from four countries in this survey is presented in Figure 3 [38, 40, 68-69]."
18. Has been moved to results.

19. Excess text presented in the discussion, e.g. p. 29 "The current study question No. 16 inquired the coverage of the workers as a percentage of the total employed population, i.e. the proportion of the workers with access to occupational Health services. This coverage describes the extent to which the occupational health service needs by the total workforce are met, including all modes of employment (e.g. small enterprises, the selfemployed and the informal sector)."
19. Has been deleted.

20. Rephrase to make the statements clear.

Future priorities: "The respondents identified high numbers of priorities for future developments of occupational health services (Figure 2). The priorities were principally directed to content, infrastructures, functions and capacities of occupational health services, i.e. to strengthening of the implementation rather than to policy or strategy, which are available in the majority of the countries. The replies suggest that the countries have recognized the gaps in human resources, content and in coverage, and seek responses to them."

20. Has been slightly modified, but we find it relatively clear as does also our English editor.

21. Conclusions: ..."The replies to surveys such as the present one are, however, affected by almost the universal lack of statistics and of systematically collected information on occupational health services. There is a need for the development of national information and statistics systems on occupational health service policies, institutional, human and financial resources, structures, coverage, contents, activities and impact of occupational health services in the countries in order to enable more quantitative analysis."

21. Has been rephrased and modified in conclusions. This is a real and big problem. The Reviewer no. 3 proposed it to be discussed in the discussion section.

Ioannis Anyfantis (Reviewer 2):

This is an interesting manuscript, which attempts to perform a global survey on occupational health services in a number of countries. Health services are described in detail, however there are several issues that have to be addressed before a possible publication.

Specifically:

1. There are several grammatical and syntactical flaws in the manuscript that should be addressed. A native English speaker could assist the authors on that. There are too many to describe in detail, however in many cases it is hard for the reader to follow.

1. A native English speaking scientific editor has checked the language. We have considerably condensed and corrected the text and tried to make it clearer.
2. The authors should be careful on the tense (past-present) that they use.

2. The results of the study are reported in general in the past tense, the discussion on activities of the respondents’ OHS and e.g. on the existing legislation in the present tense. There are many sentences, which describe the situation as it is at present (and will be also in future and such sentences are given in the present tense).

3. Try not to have too long sentences.

3. We have considered this.

4. Psychosocial risks should also be mentioned in the background section, since these kinds of risks have taken troublesome dimensions.

4. We agree the psychosocial risks are of primary concern. The article was not intended to describe the current occupational health problems, but the state of OHS. There are several surveys, e.g. the Eurofound ESCW, the EU-OSHA ESENER survey and several others on that. OHS deal with all risks and exposures of the work environment. Therefore, no hazards or risks (such as safety, ergonomic, chemical, physical, biological or psychosocial hazards nor diseases like musculoskeletal disorders, cancers or allergies are specifically mentioned here. The psychosocial issues have been indirectly discussed in connection of the psychology resources in the OHS.

5. Page 8, lines 9-10. The authors should just mention the that p-value for statistical significance was taken as p<0.001.

5. On the proposal of Reviewer no. 3 we have deleted all other statistics information except for the correlations between the OHS coverage and the WEF competitiveness index and the UNDP HDI index. In both cases the p value was <0.001 and thus significant.

6. Page 13, lines 40-51. The "average density" of occupational physicians per workers may be misleading. There are specific limits in the number employees' at which an enterprise is obliged to provide occupational health services. In many countries, micro and small firms are not required to provide occupational health services, while they employ a vast percentage of the country's workforce. On the contrary all firms are obliged to have a safety engineer. This should be clarified in the discussion section.

6. This is an old EU OSH policy, and was also earlier of the ILO, but no more the policy of most member countries and particularly not of the ILO and WHO. There is also criticism on OSH exemptions for SMEs as they do not have any scientific justification. OHS and OSH needs,
hazards and exposures are most prevalent and severe in the SMEs and their OHS needs are well documented and obvious (see ESENER II). The ILO and WHO require OHS for all workers and the coverage of all workplaces.

7. The "Results" section should just present the results. Justification of the results should be provided in the "Discussion" section. The authors should try to keep those separately and at a clear and structured way.

7. We have considered this and moved many parts to new locations or deleted. In some points, we have given some explanation before presenting the result as the reader may need it for understanding the result.

8. A single p-value should be used for the whole study, such as p<0.001 or p<0.05, since in Page 18, line 7 p<0.06948 is considered as "almost significant"

8. This is correct and we have deleted all the statistical comments except for Figures 4 and 5.

9. As mentioned before, in many countries, micro and small firms are not required to provide occupational health services, while they employ a vast percentage of the country's workforce. This is mentioned in the manuscript as the "implementation gap", however it should be further discussed.

9. See our comment on point 6.

10. The "Representativeness of the study" and this explanation should be moved to the "Methods" section.

10. This part is in the Discussion section.

11. Page 24, line 31: Bias should be moved to the "Limitations" section.

11. Moving has been done.

12. The need for the development of national information and statistics systems on occupational health service policies, should also be discussed to the Discussion section.

11. Has been discussed in the present version.

Matthias Bethge (Reviewer 3):
The authors report on a global survey on occupational health services in selected International Commission on Occupational Health (ICOH) member countries. The content is in the scope of BMC Public Health. The draft gives a comprehensive overview of occupational health services
coverage. This is very important for the field of occupational medicine. The authors identify a coverage gap, an implementation gap and a capacity gap.

I have some minor remarks.

d4, line 20: Please correct (4, 12-15) => [4, 12-15].
d4. Has been done.
d5: The background should close with the purpose of the study.
d5. Has been done

d7, line 49ff.: Please check which statistical analyses were indeed used. Most of the reported results are descriptive. As the sample is small and the authors emphasize the qualitative character of their findings I propose to abandon statistical testing at all.
d7. This is correct. The variation was in most cases wide and significances missing. We have given mainly percentage figures. The correlation analyses between the coverage and WEF competitiveness index and UNDP HDI index have been presented with statistical data (Figures 4 and 5).

d8, line 11: Reporting of the p-value should be moved to the results section (but see above).
d8: Response should be reported as the first result (please check the STROBE statement).
d8. We have checked the report against the Strobe statement and many of the changes have been done accordingly.
d9, line 46: Please correct: recommendations.
d9. In the ILO Recommendations, and the capital letter is used un the official names of the specific ILO instrument (explaining the content of Convention, which is a part of international law).
d18, line 2-7: The association is not significant. Please avoid artificial precision when reporting numbers (i.e.: chi2 = 3.30, p = 0.07). Please avoid causal interpretation (maybe ratification was found easier if coverage was already excellent).
d18. See comment on p7. We have removed all the statistical comments except for Fig. 4 and 5. (only very few findings of high numbers of analyses were significant due to the wide variation and small samples. In fact, the prerequisite for ratification is that the country meets a number of requirements set by the Convention. It is the ILO policy to stimulate the development of OSH
and OHS by encouraging ratifications. As soon as the Convention has been ratified, it becomes binding for the country and the content must be transposed into the national law. ILO has also a formal follow-up mechanism for the implementation, but it does not seem to work very well. We have some scientific evidence on the positive impact of ratifications on accidents and diseases, particularly of C 161 (Ref.no 73: Wilson et al. 2007). Interpretation of finding should be part of the discussion. p19, line 1-2: Avoid artificial precision. Statistical analyses are reported in the methods section and can be skipped. Please provide the numbers. Likelihood of occupational health services for governance by the MOH and the reference (non-governance by MOH? or others?). p19, line 46ff: Please avoid causal interpretation due to the cross-sectional design. p20, line 28: better: (n = 60)? p22, line 56: better: (n = 20)? p26, line 51: Please use the correct citation style. Wilson et al. (2006); (70)? p27, line 27: international instruments p30, line 6-57: Correlation of coverage and development indicators should be reported in the results section. The draft needs careful proofreading. p19 We have removed all such expressions referred from pps 20, 22 p26: Has been corrected and the year changed to refer to the printed version 2007. p27: International instruments belong to the UN jargon, meaning all the UN organizations’ Covenants, conventions and agreements which are more binding than just recommendations (in some cases even legally “competent”). p30: Has been moved to results. Final: We have edited a lot the revised version, and an experienced scientific editor with English as mother tongue has checked and corrected quite considerably.