Author's response to reviews

Title: Chronic pain in primary care: German figures from 1991 and 2006

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Author's response to reviews: see over
Cover letter

Chronic pain in primary care – German figures from 1991 and 2006

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Dear Editor,

Please find enclosed our revised manuscript entitled “Chronic pain in primary care - German figures from 1991 and 2006” to be considered for publication in Biomed Public Health Journal.

Both reviewers have made very valuable comments. We are most grateful for this thorough work. We have been able to follow most of the reviewer proposals and comments. We think we could thereby improve our paper significantly and make our message clear.

Yours sincerely

Christine H. Frießem
Anne Willweber-Strumpf
Michael Zenz
Frießem et al present an epidemiological study describing prevalence and characteristics of pain in 1200 patients of six practices of specialized GPs in a German urban area. Data are compared to a similar survey fifteen years before. 60% of these patients suffered from pain on the day of the interview, and 40% reported pain for more than six months.

Compared to the 1991 survey, it shows an unchanged high prevalence of pain in patients of GPs' practices but pain as the main reason to see the GP decreased. More women complain about pain than men. The order of pain activating factors (physical strain, weather conditions, and psychological strain) did not change. Impact on daily life was reported to be higher but loss of work days lower than 1991. More patients were seen by an orthopaedist or a pain specialist than in 1991.

The study offers insights in epidemiology of acute and chronic pain in a sample of German patients. Such data are most important for allocation of health system resources and improving treatment for patients with acute and chronic pain. The idea to compare a similar setting in 1991 and 2006 offers the possibility to discuss changes over time over these issues.

However, interpretation of results needs clarification of two major methodological aspects of this study.

**Major Compulsory Revisions:**

1. The authors state “Optimal comparability was ensured…”. From my point of view, comparability of the two study populations is questionable. First, in the present survey, more practices than in the 1991 survey were involved.

*Please see text changes: “The inclusion of an oncology practice did not change the balance by increasing the pain prevalence. Surprisingly, in oncology fewer patients consulted the doctor due to pain. We have included these patients because a criticism of our initial paper was the fact that cancer patients were omitted. It was suspected that this lack of cancer patients would have decreased the total prevalence. In the actual data of 2006 this assumption is not justified, as our figures demonstrate.”*

Second, the questionnaire was not completely identical. At least those items which were modified should not be compared to the previous ones.

*We fully accept this comment. The section about causes of pain has been deleted. Confounding factors have been mentioned. The remaining factors are now comparable.*
Third, the marked differences in ages and educational status and their potential impact should be discussed.

Please see discussion: “The demographic changes in industrial countries alone account for the increased average age of all patients in the study. Patients suffering from long-lasting pain are ten years older than those suffering from acute pain or those without pain. The population is getting older. Age is one predisposing factor for chronic pain. Increasingly, “pain in the elderly” plays an important role in public discussions. The International Association for the Study of Pain has devoted the “Global Year Against Pain” 2006/2007 to the topic of “Pain in Older Persons” [IASP].

Our random sample has revealed that, in particular, patients who are unemployed, divorced or who left school after grade 9 are suffering from chronic pain. Similar results have been published [Schumacher, 1999; Yu, 2006]. Such social parameters reflect the general development in modern societies. More people have reached higher education levels, and the divorce rate in Germany has increased from 30% to over 50% [www.eurofound.europa.eu].”

There are no data about inclusion rate, number of patients refusing to participate (and their reasons to refuse) in 1991,

Unfortunately we do not have any information about the refusal rate in 1991. In 2006 it has been 4.61%. “Exclusion criteria were poor health, concerns about privacy and inability to understand the German questionnaire.”

diagnoses and comorbidity and ethnicity. Lack of diagnosis/comorbidity data seems to be to be the most severe problem. Due to inclusion of an oncologist’s practice, a higher percentage of patients with malignant diseases might be a simple explanation of the observed differences. Even in the remaining cases, a change in underlying diagnoses between 1991 and 2006 might have caused some of the reported results. The authors should add at least some basic information on this issue. Otherwise, comparison of the two populations does not really make sense and the 2006 survey should be presented on its own.

Pain prevalence in the Oncology sample has been 38.3% in the mean. Please see above. So the observed differences are independent from malignant diseases.

Diagnosis and comorbidity were not investigated (please see Methods and Results). A part of the patient’s personal view of comorbidity is given by the answers to the social aspects. Ethnicity was not investigated because all patients were covered by the German social security system. In the actual paper the aspect of ethnicity plays a minor or no role.

2. Even if the two populations are comparable the statement that there is an increased number of patients in 2006 compared to 1991 seems to be only partly supported by the data. In both surveys, 62% of patients reported pain.
Even less patients visited their GP because of pain in 2006, and less patients suffered from pain for 5 and 20 years.

“Within these 15 years a significant decrease was expected.” But nevertheless the point prevalence of chronic pain did not decrease in contrast to the increased efforts in specialisation in pain and awareness of pain as a health problem. Still 62% reported pain on the randomly selected days of the survey. 42.5% of the patients visited their primary care physician because of pain. The health care utilisation is still high and impressive.

It seems to me the paper -especially the discussion section -needs editing by a native English speaker (quite a few sentences seem as if they are translated from German and so the writing is not always idiomatic).

We apologize for this. The text has been reviewed by a native speaker now.

Minor Essential Revisions

1. Abstract: Please use decimal markers in a similar manner (dots instead of a comma).

This has been modified.

2. The authors state that the “number of patients with pain has increased”. However, in the results section, they report that 1991 as well as 2006 62% of the responding patients suffered from pain.

The total number was unchanged. However, the part of chronic pain increased in fact. We have reformulated.

3. P3, last paragraph: “…to demonstrate for the first time the real actual primary care utilisation of pain…”: Do the authors mean “the real actual primary care utilisation of pain patients”? Please clarify.

How representative is the sample of the patients of the six GPs? Without discussing this, is it justified to state this study will demonstrate the “real actual primary care utilisation? We mean the “actual primary care utilisation of pain patients”. How many patients visit their doctor just because of pain? The word “real” has been deleted. The sample with 900 and 1200 patients is representative for all patients who need outpatient health care. The sample size is comparable to other studies [Cosby et al., 2005; Neville et al., 2008; Moulin et al. 2002; Andersson et al. 1999].

4. P6, 1st / 2nd paragraph and discussion: The authors should discuss the possible impact of differences in age and educational status of the two patient groups.

Please see discussion: “The demographic changes in industrial countries alone account for the increased average age of all patients in the study. Patients suffering from long-lasting pain are ten years older than those suffering from acute pain or those without pain. The population is getting older.
Age is one predisposing factor for chronic pain. Increasingly, “pain in the elderly” plays an important role in public discussions. The International Association for the Study of Pain has devoted the “Global Year Against Pain” 2006/2007 to the topic of “Pain in Older Persons” [IASP]. Our random sample has revealed that, in particular, patients who are unemployed, divorced or who left school after grade 9 are suffering from chronic pain. Similar results have been published [Schumacher, 1999; Yu, 2006]. Such social parameters reflect the general development in modern societies. More people have reached higher education levels, and the divorce rate in Germany has increased from 30% to over 50% [www.eurofound.europa.eu].

5. P 6/7: “…the patients estimated their pain as higher as 6-10 NRS”. What is a pain score “higher as 6-10”?

Please see text change: “…pain sufferers estimated the intensity of their chronic pain to be between 6 and 10 on the numeric rating scale (NRS 0–10) (1991: 34.1%).”

6. P9 (discussion section). “This study is the first direct comparison of data ever carried out on the changes of the prevalence of pain in a comparable population in primary care.” -In the third paragraph two other studies are cited (10, 11) reporting prevalence of pain over 5 and 40 years. Please comment.

We have tried to clarify by changing the paragraph: “It is the first study that investigates the health care utilisation just because of pain as the leading symptom.”

7. P9, 2nd paragraph: Given the above stated differences in the two populations, is it adequate to say a difference of pain by 3.6% within 15 years is an increase of prevalence?

“Within these 15 years a decrease was expected”, but nevertheless the point prevalence of chronic pain did not decrease. Despite a lot of measures that have been undertaken the prevalence is still as high as 15 years ago, even has increased slightly. Still 62% report pain on the randomly selected days of the survey. 42.5% of the patients consult their primary care physician because of pain. The health care utilisation is still high and impressive.

8. P9, 3rd paragraph: It is stated that other authors attribute differences in pain prevalence to increased reporting and/or awareness. This explanation seems to be very reasonable - why don’t discuss it the authors regarding their own results?

Please see text change: “Among other possible reasons, this could be explained by an increase in the reporting or awareness of pain as the leading symptom.”
9. P10, 2nd paragraph: If an observed difference is due to methodological problem it should not be reported as a “difference” in the result section.

Please see above. We fully accept this suggestion. The section about pain causes has been deleted completely.

10. P10, 3rd paragraph: “The fact that in 2006 more people continued to go to work despite their pain is probably due to the impaired situation on the job market. It can be anticipated that the work efficiency is impaired by chronic pain, and this might be as important as the loss of complete working days “. Both explanations are assumptions. Also the contrast might be true: Pain is less compromising, resulting in less work loss / increased work efficiency. These statements should be supported by facts or discussed in an adequate manner.

This assumption is in line with Reports from the Swedish Council on Technology Assessment in Health Care. Back pain [Int J technol Assess health Care: 2000, 16(3): 929-43].

11. P10, 4th paragraph: “Just as 15 years ago, every second patient consulted a medical practitioner because of pain, every forth patient visited a doctor because of long-lasting pain. These figures again illustrate the pain sufferers’ high need for treatment.” As pain is a frequent symptom in many diseases it is quite reasonable that these patients see their doctor. However, what they primarily expect (and need) is treatment of their underlying illness.

Often the underlying illness or diagnosis is unknown. So there is no causal therapy but rather symptomatic therapy possible. Consequently, there is no adequate pain treatment. Otherwise fewer patients would suffer from chronic pain. Accordingly pain relief is the reason to visit a doctor. Please see above Paragraph #1 and discussion additionally.

12. P11, last paragraph: These data should be presented in the method section.

See Method section, we have updated it: “Upon approval of the ethics committee of the Medical Faculty of the Ruhr University Bochum, on randomly selected days all consecutive patients of all age groups entering these practices were asked to participate. Exclusion criteria were poor health, concerns about privacy and inability to understand the German questionnaire. It was planned to include up to 200 patients from each practice.”

13. P12, first paragraph: “90% of the pain sufferers are impaired in their job”. Are these interventions are specific to patients with job impairment? Does pain interfering with social activities or household activities not deserving multimodal approaches? Please comment.

Yes, this statement is completely correct, it links to our paper. Please see discussion: “Nowadays, 90% of pain sufferers experience impairment of their jobs. Therefore, countrywide provision of multimodal pain therapy is needed [Lang, 2002], as well as effective early pain diagnosis for the prevention of
14. Conclusion: “The prevalence of severe pain in primary care is even higher than anticipated from epidemiological studies. Whereas the pain prevalence is anticipated at 10% -20%, pain is in nearly half of all cases the reason for health care utilisation in primary care”. Did these epidemiological studies measure prevalence of pain in a population sample or in patients? It is not surprising that pain prevalence is higher in patients than in non-patients.

*We agree and have deleted this sentence in the conclusion. We just want to underline how important it is to draw the attention to proper pain diagnosis, management and utilisation in primary care.*

15. References: The layout of the reference section needs some improvement (at least in the reviewer’s version).

*We have added references and improved the layout of the references in line with the style file for EndNote BMC Public Health.*

16. Fig 1: The same information should not be reported twice.

*We have dropped Figure 1.*

**Reviewer's report**

**Title:** Chronic pain in primary care: German figures from 1991 and 2006

**Version:** 3 **Date:** 13 January 2009

**Reviewer:** Kate Dunn

The question that this paper aims to answer, whether the prevalence and healthcare utilization for pain in primary care has changed over a 15 year period, is a useful one. However, I am unclear from the paper whether the authors have managed to achieve this aim, as the study is not sufficiently well described. Without knowing exactly who the sample was, and what the denominator was for the calculations, it is difficult to assess the interpretations. In general, the paper is not very clearly written. There are a number of specific points on which clarification is required.

* Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)
1. The authors state that they interviewed patients in specialist practices for both the surveys, but further information is required. Were these patients visiting a doctor about a health problem? If so, which health problems were they consulting about? This is important to determine who the results of the surveys are generalisable to. The prevalence of pain among a group of people with cancer is likely very different to the prevalence of pain among people visiting their doctor with influenza.

The patients have been asked if pain was the main reason for their consultation “today”. 42.5% answered this question with ‘yes’. As our results show the prevalence of chronic pain in the practice of oncology is below the average, so there is no impact by means of increasing the prevalence rate. Please see discussion.

2. More information is necessary on the setting of the study in Germany. Why are neurology and oncology clinics, for example, used identify a ‘primary care’ sample? In many other countries, these clinics would certainly not be classed as primary care.

These practices have been chosen to include the wide spectrum of possible consultations for pain and to investigate which outpatient institutions are visited most frequently. Additional data will be published in near future.

“All patients in Germany are primarily diagnosed and treated by their home physicians. It is up to patients to decide which physicians to use as their home physicians. Patients can select any outpatient clinic for their home physician, general practitioner, neurologist, surgeon and internist. But the primary care consultation always takes place with one of these home physicians. Different practices were chosen during the investigations to include a wide spectrum of possible consultations for pain. Therefore our figures give a fairly exact picture of pain in primary care.”

3. Were all consecutive patients invited? Or was it a sample? How were the included patients identified? How many were invited to take part? We currently have no information on the denominator, and so cannot assess non-response (although there is a mention of 5% refusing in the discussion, but this is not sufficient).

This has been updated. Please see Methods: “…on randomly selected days all consecutive patients of all age groups entering these practices were asked to participate. Exclusion criteria were poor health, concerns about privacy and inability to understand the German questionnaire. It was planned to include up to 200 patients from each practice…. The refusal rate was 4.61%… The denominators of the data collected in Part B included only patients who reported chronic pain.” Please see Table 1.

4. In some places the authors talk about interviews, but in the methods it is implied that patients self-completed a questionnaire. Which method was used? And was it the same in 1991 and 2006?
This has been explained more clearly now, please see Methods: In 1991 and 2006 patients had to complete a questionnaire. In case of difficulties assistance was provided.

5. More information should be given on the definitions of pain used, as this is the focus of the study. You give a definition of chronic pain, but no reference is included. There is no definition of acute pain. How was the site of the pain identified and defined? And could people report pain at more than one site?

Please see Methods now: “Acute pain was defined as pain lasting for hours or days. Chronic pain was defined as recurring or constant pain lasting longer than six months [von Korff, 1988; Potter, 1992; Eriksen, 2002; Brattberg, 1989; Moulin, 2002].”

The questionnaire included open questions as well as multiple-choice questions. Multiple answers were allowed for certain questions (for example pain location, previous therapies, daily impact of chronic pain). The open questions have been excluded from analysis to guarantee full comparability.

The question was: Where do you have chronic pain? The patients were able to select more than one answer (back, legs, hands, joints, head, feet, lower abdomen, upper abdomen, chest, wide-spread pain or miscellaneous).

6. What questions were used to measure the impact of pain on daily activities and sleep?

Do you sleep worse due to chronic pain? (Yes or no).
Do you have any impact of daily activities because of chronic pain? Multiple answers were allowed: no impairment, impairment in leisure activities, impairment in housekeeping, increased aggression, impairment in personal hygiene, frictions with spouse or partner and miscellaneous. Please see Figure 3.

7. How was the efficacy of pain therapy estimated?

Patients were asked to mark those therapies which felt effective in the past.

8. There are too many figures in the paper. The authors should reduce the number, and simply report the figures in the text.

We have deleted two figures. Three figures and one table are left.

9. For many of the figures reported, it is unclear what the denominator is. For example, on page 7, did 41% of chronic pain sufferers highlight weather conditions, or 41% of all pain sufferers, or 41% of the sample? Similarly, was it 54% of all the pain sufferers who were impaired in their housekeeping by their pain?

Please see Methods now: Part B of the questionnaire has only been completed by patients with chronic pain. So the denominators are only patients with chronic pain.

41% of chronic pain sufferers highlighted weather conditions. 54% of chronic pain sufferers were impaired in their housekeeping.
10. In section 3.6, it is unclear whether you are saying that 71.7% of the respondents in pain have consulted an orthopaedist, or would consult an orthopaedist. And the time period during which this consultation happened should also be specified. Without a time period, it is meaningless.

*We have deleted this part. Respondents have consulted an orthopaedic surgeon in the last event of pain.*

11. The first statement in the discussion is too strong. I am not convinced that this is the first study ‘ever’, and I am also not yet convinced that this is a primary care sample.

“This study is the first to directly compare data on the changes in pain prevalence in a comparable population in primary care, focussing on pain as the reason for outpatient health care visits.”

12. I am unclear how this sample is useful. If it is assessing consultations for pain conditions in primary care, surely analysis of medical consultation records would be a better source?

*Medical consultation records are misleading because they mostly document a purely somatic diagnosis. The high number and extend of patients suffering from long lasting chronic pain is a consequence of this problematic somatic approach, which contrasts to the modern view of chronic pain as a bio-psycho-social disease. Therefore medical records give a false negative picture of the pain problem. The International Classification of diseases (ICD) still has no specific diagnosis for chronic pain. Pain occurs as angina pectoris, persistent somatoform disorder or trigeminal neuralgia [www.WHO.int/classifications/apps/icd/icd10online]. Related to the ICD pain is a minor health problem because it is summarized under somatic disorders with the symptom pain. This understanding contrasts to the modern view of pain as an illness in its own [Niv and Devor, 2004].*

13. The point raised in the discussion about the reason for wear increasing as a perceived cause is worrying, as the authors point out that the list of potential causes was different in the two surveys. This means that they are not comparable, and interpretation of change over time is invalid.

*We agree that this issue is invalid. The point has been deleted.*

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

14. In section 3.4 you refer to back pain, but in figure 2 you refer to spinal pain, which is not necessarily the same. Spinal pain would usually include back and neck pain, but it is unclear which it is here.

*We apologize for this mistake. We clearly mean back pain.*
15. The sentence at the bottom of page 6 and top of page 7 does not make sense.

   Please see text change:…”pain sufferers estimated the intensity of their chronic pain to be between 6 and 10 on the numeric rating scale (NRS 0–10) (1991: 34.1%).”

16. The term orthopaedist (page 7) is culture specific, and would not mean anything to many readers outside Germany.

   Please see text change: “orthopaedic surgeon”

17. Sometimes people use the term wear-and-tear which I assume would be the same thing. Or perhaps perceived joint degeneration? term ‘wear’ is a little vague

   Yes, the point is right. Anyway this part has been deleted because of the methodical problem.