Author's response to reviews

Title: Psychotropic drug use among people with dementia - a six-month follow-up study

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Version: 2 Date: 21 October 2013

Author's response to reviews: see over
Reviewer's report
Title: Psychotropic drug use among people with dementia - a six-month follow-up study
Version: 1 Date: 7 September 2013
Reviewer: Daniel O'Connor

Reviewer's report:
This paper describes patterns of use of psychotropic medications over a six month period in 40 specialized dementia care units in northern Sweden.

Thank you for your valuable comments.

We have made some changes concerning your comments that we hope will improve the paper:

Major revisions
It should be made clear in the abstract that data were collected in 2005-6. The authors should note in their discussion if there is reason to believe that findings might have changed since then.

This is a relevant comment.
We have added a sentence in the abstract:
The data were collected in 2005-2006.

We have also added a sentence in the discussion:
The data were collected in 2005-2006. We cannot know if the prescribing has changed since then, but there is no reason to believe that long-term treatment with psychotropic drugs among people with dementia has changed considerably.

The units were selected in the first place because of their higher than average use of physical restraints. The implications of this selection process should be discussed. Did the units care for the most challenging people with dementia in northern Sweden? Or were their care practices unusual for other reasons? Some more information about this is required.

This is an important remark, and we think this is a methodological problem as well. Data for this study were taken from a research study concerning the use of physical restraint as you state. All specialized care units in these areas were inventoried, i.e. 99 units were contacted - and those units with the highest prevalence of physical restraint use (≥ 20%) were selected for inclusion in the study. As no data were collected from the non-selected units, we do not have any information to compare the selected and non-selected units in this particular population. We fully agree this would have been of interest, and regret we cannot provide this information.

However, we have been able to compare this study population to an unselected population of people with dementia living in specialized care units from 2000, recruited from the same geographical region. The material is presented in e.g. Lövheim et al. 2006 Relationship between antipsychotic drug use and behavioral and psychological symptoms of dementia in old people with cognitive impairment living in geriatric care. International Psychogeriatrics 2006; 18: 713-726. In this material 665 persons living in specialized care units was included and assessed with the same scale (MDDAS) as our study, and we have selected those individuals to compare the prevalence rates with the current study.
We compared the two groups of symptoms “aggressive behavior” and “verbally disruptive/attention-seeking behavior” and found that the mean scores are in line with the data in our present study:

Present study population (mean score):
Aggressive behavior: 0.24
Verbally disruptive/attention-seeking behavior: 0.28

Data from 2000, 665 people with dementia, living in SCU (mean score):
Aggressive behavior: 0.25
Verbally disruptive/attention-seeking behavior: 0.30

We therefore conclude that there is no indication that the participants in the present study differed significantly in the prevalence of behavioral symptoms, compared to an unselected material.

We have added a paragraph to the discussion (page 17):

It could be that people in these homes have severe problems with BPSD and, therefore, receive long-term treatment of psychotropic drugs to a greater extent. However, comparing this population with an unselected material of persons living in specialized care units for people with dementia (a subset of the material presented in Lövheim et al. 2006)[39], also assessed with the MDDAS, there were no differences concerning the prevalence of aggressive behavior and verbally disruptive/attention-seeking behavior (data not shown). We believe that the selection of participants does not affect the main results of the study, but it should be borne in mind when interpreting the results.

We are fully aware of these methodological limitations, but given the very limited number of previous studies among people with dementia and psychotropic drugs, we believe that the study nevertheless has value.

The additional analysis (the comparison with the unselected material) could, if the Editor wishes, be published in an online supplement to the article. As including it in the article would require the presentation of a completely different material, we have decided not to include it in the article as it would make the article much longer and less straight-forward.

Psychotropic prescription rates were extraordinarily high, even by international standards, and discontinuation rates were low too. The authors imply that this reflects poor care practices but this might not be true in every case. Did the authors collect data on residents’ psychiatric diagnoses? It is possible that some suffered from schizophrenia, bipolar disorder or recurrent severe depressive illness and might therefore have benefited from long-term maintenance antipsychotic and/or antidepressant medications (though these still warrant a review at intervals by suitably qualified clinicians).

We agree on your comment, some of the people probably have schizophrenia or other chronic psychiatric illnesses that might, to some extent, explain the long-term use of antipsychotics or antidepressants. And, as you state, these people might possibly have benefited from long-term antipsychotic or antidepressant medication. Unfortunately, we have not been able to separate these people from the other participants since we do not have the residents’ diagnoses. However, when it comes to antipsychotics, we have in our first
report collected indications for treatment when this was reported in the prescription records. Only 4.5 % of the indications were “psychosis”, and the far most common was “treatment of disturbed and restless behavior /sedative” (43%). The reason for prescribing antipsychotics was therefore probably related to BPSD in the vast majority of cases among this population (ref Gustafsson et al, 2013).

Concerning antidepressants, we have mentioned long-term use on page 12: Unlike the situation for all other psychotropic classes, properly monitored, long-term treatment with antidepressants might be appropriate among people with dementia.

We have also added a paragraph in limitations (page 17):
Some people might have bipolar disorder or other chronic psychiatric illnesses where long-term treatment of some psychotropic drugs might be appropriate when properly monitored.

Linking medication use with current psychological and behavioural symptoms is problematic. As the authors mention (though only briefly and obliquely in page 12), people taking an antidepressant might have no current depressive symptoms because the medication has proven successful. It is much more worrying if people taking an antidepressant are still depressed. Fewer conclusions can be drawn from an apparently euthymic state and the authors should make this point more clearly.

Yes, this might possibly be the case as you state, and we have added a sentence (page 13):
It may also be that people taking an antidepressant drug have no current depressive symptoms because the drug treatment had been successful, therefore few conclusions can be drawn from a lack of association between depressive symptoms and antidepressants. It is much more worrying if persons taking antidepressants are still depressed.

It is not clear who administered the clinical rating scale, MDDAS. Was it completed by staff members or by the researchers?
Thank you for this comment. This information should of course be included in the method section, but had regrettably been omitted from the text at some stage. The staff members who knew each resident best and were most involved in their care performed the assessments based on observations made over the preceding 7 days. These care staff were registered nurses, licensed practical nurses and nurse’s aides. MDDAS is an instrument adapted for the questionnaire studies and requires no prior knowledge or training and are therefore well suited to be filled in by nursing staff. The behaviors and symptoms that are considered are common behaviors and no medical assessment is required in order to make the observations (Lövheim et al 2006).

We have added a sentence in Procedures (page 5):
The member of staff who knew each resident best and were most involved in their care performed the assessments based on observations made over the preceding 7 days.

Level of interest: An article of importance in its field
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: Psychotropic drug use among people with dementia - a six-month follow-up study
Version: 1 Date: 9 September 2013
Reviewer: Marie Tournier

Reviewer's report:
This very interesting and well-written manuscript describe the long-term use of psychotropic drugs other than antipsychotics in older people with dementia. There is no major revisions. Some revisions may improve the understanding of the manuscript.

Minor essential revisions
Page 4: the meta-analysis of Declercq et al 2013 should be added to the cited publication. It found that some people with dementia or neuropsychiatric symptoms could benefit from continuing their antipsychotic medication. In these people, withdrawal might not be recommended.
Thank you for showing us this interesting reference. We have added this reference in our discussion concerning treatment of BPSD (page 3).

Many older people with dementia and neuropsychiatric symptoms can be withdrawn from chronic antipsychotic treatment without deterioration, however, some people could benefit from continuing their antipsychotic medication [11].

Page 5: 355 should be replaced with 353.
Thank you for drawing our attention to this, we have replaced this number.

Results: subtitles would make the reading of the results section easier
Hopefully we have made the reading easier by adding following subtitles to the result section: multiple logistic regression analyses, antidepressant drugs, anxiolytic drugs and hypnotic and sedative drugs.

Page 8: The last sentence is difficult to understand (from « people who exhibited » to hypnotics and sedatives »).
We agree and have changed this sentence:
Three variables were associated with hypnotic and sedative drug use: younger age, mild cognitive impairment (compared to severe cognitive impairment) and disoriented symptoms (a factor consisting of the following symptoms: lies in other patients’ beds, take things from other patients’ boxes and closets and undresses in the dayroom).

Discussion
Page 11: the paragraph from « the regression analyses » to « hypnotics and sedatives » seems useless as this information is written before or after.
Thank you for drawing our attention to this, we have deleted this section.

Page 14: Authors state that psychotropic drugs may be prescribed because of staff distress. However, they do not describe the drugs’ effectiveness on aggressive or disruptive behavior.

We have added one sentence (page 14):
Concerning aggressive behavior, antipsychotics have been shown to have some efficacy (Ballard and Waite, 2006), however, evidence of the efficacy of psychotropic drugs for treating patients with verbally disruptive/attention-seeking behavior is limited [22].

Discretionary revisions
Page 3: « the use of inappropriate drugs » may be replaced with « the inappropriate use of drugs », which is broader.

We have changed this sentence according to your suggestion.

**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 received fees as a speaker from BMS, Astra Zeneca, Janssen.