Author's response to reviews

Title: Late-life depression and quality of life in a geriatric evaluation and management unit: an exploratory study

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Version: 6 Date: 22 April 2014

Author's response to reviews: see over
Dear editor-in-chief:

Thanks for your recommendation. We have revised the Title and abstract in accordance with the topics of interest in this issue (reviewer Dr. Amanda Grenier and Dr. Yen-Kuang Yang). We also elaborated and restructured the discussion, conclusion and limitation in this study (reviewer Dr. Amanda Grenier and Dr. Yen Kuang Yang). We thank Dr. Amanda Grenier and Dr. Yen Kuang Yang for their comments and suggestions. Below are our responses to the comments and suggestions. In addition to the amendments according to the comments of Dr. Amanda Grenier and Dr. Yen Kuang Yang, the manuscript has been carefully read by a senior researcher in psychiatry. He provided advises on further language and logics corrections.

Your consideration for publication is highly appreciated.

Reviewer 1: Dr. Amanda Grenier

General comments: The authors make an important contribution in highlighting the extent of depression experienced by older adults in a geriatric evaluation and management unit. The study is well-defined and comprehensive. The prevalence of depression is the crux of this paper, and represents a very good contribution to the literature. They rightly point to account for and treat depression through design and implementation of targeted interventions (even if short-term). I was less convinced by the component of measuring Quality of Life in this hospital population, especially considering the short duration of stay. The paper could stand alone in measuring the extent of depression rather than necessarily linking depression with QOL. However, the field does tend to measure QOL- and the study carries this out with a large sample, and using appropriate instruments. I would have liked to see an expanded discussion of the importance of this prevalence of depression and suggested pathways for further exploration (level of education, etc). Another avenue is perhaps the implication that impairment has on the perception of self and perceived health.

General reply: We agreed and further study will be carried out.

Comment 1: The use of 'observational' in the title seems to imply observational methods. Would the term 'exploratory study' be more appropriate? Perhaps this is a reflection of differences in the terms used in the authors discipline of psychiatry.

Reply 1: We agreed “exploratory study” is more appropriate. The “observational” has been substituted by “exploratory” in the revised version.
Comment 2: The summary does not read as clearly as the article, and there are some awkward turns of phrase and structure. In the background summary section, the last sentence 'this study aimed to...' should be move to the first line. The first sentence of the results section (summary) could be revised.

Reply 2: Agreed. The last sentence of the background has been moved to the first line of methods section. The first sentence of results section which say,” In the elderly who were admitted to the GEMU, the prevalence of depressive symptoms was 54.4%”, has been revised to “the prevalence of depressive symptoms was 54.4% in the elderly inpatients”. We have also rephrased other inappropriate sentences in the abstract. We listed one of the changes below:

Original: Late-life depression is not a consequence of normal aging. It is common among elderly patients residing in hospitals or living in the community. Ignorance of this health problem, either because of under-diagnosis or under-treatment, causes additional medical cost and comorbidity.

Revised: Late-life depression is common among elderly patients. Ignorance of the health problem, either because of under-diagnosis or under-treatment, causes additional medical cost and comorbidity. For a better health and quality of life (QoL), evaluation, prevention and treatment of late-life depression in elderly patients is essential.

Comment 3: Clarification needed. On page 4- "the prevalence of LLD ranges from 10%-40%...". is this 10% in the general population or among older people?

Reply 3: Agreed. The changes are listed below.

Original: The prevalence of LLD ranges from ~10% in the community to ~40% in hospitals and long-term care facilities. It does not increase with age, indicating that this mood disorder is not an outcome of the normal aging process.

Revised: The prevalence of LLD was about 10% in community and about 40% in hospitals and long-term care facilities. The following sentence has been deleted.

Comment 4: On page 6- 'we hoped to explore' should be made more definitive...we explored? we measured...using -- instruments?

Reply 4: The original sentence is inappropriate. The changes are listed as follow:

Original: We hoped to explore the relationship between LLD and QoL in a GEMU in Taiwan.

Revised: In this study, we examined how depression affects QoL and functionality in elderly inpatients in a GEMU in Taiwan.
Comment 5: On page 6, the sample cites 471 patients in a facility that has 18 beds. This implies a quick turnover, which is later confirmed. I would suggest including the average duration of stay in the description of the study participants.

Reply 5: The average duration of stay of all subjects, depressed and non-depressed group are actually summarized in Table 1. But we agree to amend the information in result section. Original and revised sentences are shown below:

Original: There were no differences in age, gender, education and length of hospital stay between the two groups.

Revised: There were no differences in age (80.79 ± 5.98 vs 79.82 ± 6.30 years), gender (71.5% male vs 74.9% male), education (omitted) and length of hospital stay (13.61 ± 9.18 vs 12.75 ± 9.62 days) between the non-depressed and depressed group.

Comment 6: Although beyond the scope of the study, I wondered about the cultural interpretations that older people may make with regards to being 'ill or impaired' and if this somewhat impacts their level of self-rated health (QOL) or levels of depression.

Reply 6: To address this issue, we amended the following in limitations: Second, how Taiwan people interpret illness or impairment occurred on elderly is unclear. The cultural factor may somewhat impacts levels of self-rated health in QoL or depression.

Comment 7: On page 11, the article states 'promotes disability'. I am not entirely sure that this is what is meant. Please clarify.

Reply 7: The original sentence is inappropriate. The changes are listed as follow:

Original: Although the evidence that depression in elderly inpatients predicts mortality was inconclusive in a subsequent study, depression promotes disability and is associated with worsened outcomes of comorbid chronic medical diseases.

Revised: Although it is inclusive if depression predicts mortality in elderly inpatients, the disorder does increase the chance of disability and is associated with worsened outcomes of comorbid chronic medical diseases.
Reviewer 2: Dr. Yen- Kuang Yang

Comment 1: To shorten the abstract will be preferable in this manuscript. The aim of this study was not stated clearly and precisely. The statement in the section Background and Abstract is unclear. I suggest the authors carefully check that each aim could be supported by the hypothesis testing in the analysis.

Reply 1: Agreed. The abstract has been shortened from 283 words to 241 words.

Background
Late-life depression is common among elderly patients. Ignorance of the health problem, either because of under-diagnosis or under-treatment, causes additional medical cost and comorbidity. For a better health and quality of life (QoL), evaluation, prevention and treatment of late-life depression in elderly patients is essential.

Methods
This study examined (1) the differences of clinical characteristics, degree of improvement on QoL and functionality on discharge between non-depressed and depressed elderly inpatients and (2) factors associated with QoL on discharge. Four hundred and seventy-one elderly inpatients admitted to a geriatric evaluation and management unit (GEMU) from 2009 to 2010 were enrolled in this study. Comprehensive geriatric assessment including the activities of daily living (ADL), geriatric depression scale, and mini-mental state examination were conducted. QoL was assessed using the European Quality of Life-5 Dimensions and the European Quality of Life-5 Dimensions Visual Analog Scale on discharge. Information on hospital stay and Charlson comorbidity index were obtained by chart review. Chi-square tests, independent t-tests, Mann-Whitney U tests and multiple linear regressions were used in statistical analysis.

Results
Worse QoL and ADL on discharge were found among the depressed. Depressive symptoms, female gender, duration of hospital stay, and rehabilitation were significant factors affecting QoL on discharge in linear regression models.

Conclusions
The importance of the diagnosis and treatment of depression among elderly inpatients should not be overlooked during hospital stay and after discharge. Greater efforts should be made to improve intervention with depressed elderly inpatients.

Keywords:
Elderly, late-life depression, geriatric depression, quality of life, EQ-5D, geriatric evaluation and management unit, GEMU, ADL, GDS
Comment 2: I don't think this single site study is suitable to focus on the prevalence of LLD. Therefore, I think the section Background should be trimmed and refocused. In particular, the prevalence and risk factors of LLD could be trimmed and combined into the first section.

Reply 2: Agreed. Sentences related to the prevalence and risk factors of LDD has been trimmed and combined into the first section. Also, unnecessary sentences of the introduction section have also been deleted.

Comment 3: I am very concern about the sentence in the last section of Background: However, no single study has investigated the role of depression in QoL”. I don't think this statement is validated. Please clarified that, and rewrite this point.

Reply 3: The sentence has been deleted and substituted with “In this study, we examined (1) the differences of clinical characteristics, degree of improvement on QoL and functionality on discharge between non-depressed and depressed elderly inpatients and (2) factors associated with QoL on discharge in a GEMU in Taiwan”

Comment 4: I think the limitations of this study were not stated in the section Advantage of this study and limitations yet. I suggested the authors review other articles from medical journals and check an internet resource: “Limitation of present study” from the University of Southern California libraries (URL: http://libguides.usc.edu/content.php?pid=83009&sid=616083).

Reply 4: Thank you for great suggestion. We reviewed the articles from medical journals and check an internet resource: “Limitation of present study” from the University of Southern California libraries (URL: http://libguides.usc.edu/content.php?pid=83009&sid=616083). This subsection has been rewritten as suggested.

The major advantage of this study was the use a comprehensive set of assessment tools for answering the questions of QoL and functionality in elderly patients. The implications of this study are also limited. The main concern was the short duration of hospital stay which restricts further understanding of the role of the factor. Second, how Taiwan people interpret illness or impairment occurred on elderly is unclear. The cultural factor may somewhat impacts levels of self-rated health in QoL or depression.

Comment 5: The style of Figure 1 and 2 should be adjusted into the sample one before submitting a draft.

Reply 5: The figures have been adjusted to the journal style in the revised version.
Comment 6: The most important information (regression coefficient) in the Table 2 was not shown yet.
Reply 6: The regression coefficients have been amended in Table 2 in the revised version.

Comment 7: The statistical method in the section Method, Results and Abstract are not the same.
Reply 7: Agreed. Sentences in abstract have been revised to correspond to the contents of the method section of main body.