Reviewer's report

Title: Determinants of intentions to monitor antihypertensive medication adherence in Irish community pharmacy: a factorial survey

Version: 0 Date: 01 Mar 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

No - there are minor issues

Statistics - Is the use of statistics in the manuscript appropriate?

No - there are issues with the statistics in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are major issues
OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Maybe - with major revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: REVIEW OF THE MANUSCRIPT TITLED FEASIBILITY OF IDENTIFYING POOR ANTIHYPERTENSIVE MEDICATION ADHERENCE IN COMMUNITY PHARMACY: A FACTORIAL SURVEY

TITLE SECTION:

i. From the content of the manuscript, the study is on feasibility of identifying facilitators and barriers to monitoring anti-hypertensive medication adherence in Irish community pharmacies

ii. The title should be modified to include the response/dependent and independent/influential variables of the survey

iii. The site of the study should be included for epidemiological purposes

iv. Include also the survey design for completeness

v. Note also there is a technical difference between 'a study' and 'a survey'

PLEASE READ THIS……The objectives of this study were to identify facilitators and barriers to monitoring antihypertensive medication adherence of older adults at the point of repeat dispensing.

SUGGESTED TITLE:

FACILITATORS AND BARRIERS TO MONITORING OF ANTIHYPERTENSIVE MEDICATION ADHERENCE IN IRISH COMMUNITY PHARMACIES: A FACTORIAL SURVEY DESIGN
GRAMMATICAL STRUCTURE

1. Authors should write in active voice appropriately

ABSTRACT SECTION:

1. Write Abstract section for clarity under Background; Aim or Objective(s); Participants and Methods; Results; Conclusion and ± recommendation(s); keywords.

2. Change 'introduction to 'Background' and separate it from aim/objective(s).

This sentence can form background......... Community pharmacy represents an important setting to identify patients who may benefit from an adherence intervention, however it remains unclear whether it would be feasible and compatible to identify poor adherence within the workflow of community pharmacy.

3. Aim or Objectives: Re-cast the aim/objective(s) to reflect the suggested title above. Note there is a technical difference between aim and objectives of a study.

4. Change 'Methods' to Participants and methods: This section should be re-written to contain summarily survey design, survey participants, survey period, sampling technique, methods eg medication monitoring attitude measure (MMAM), self-efficacy etc.

5. Results
   i. Start result section with total number of participants, age and sex distribution of the survey participants and any other relevant bio-demographic and work environment variables.
   ii. Provide clearly the identify facilitators with their quantitative main and interaction effects
   iii. Provide clearly the identify barriers with their quantitative main and interaction effects
6. Conclusion

i. Authors have no conclusion. The provided sentence on conclusion is verbose

ii. Please provide conclusion to reflect the identified facilitators and barriers based on the aim/objectives of the survey.

iii. This sentence is not conclusion but recommendation. The use of the word 'potential' is also inappropriate. This is a survey with real-time conclusion. PLEASE READ THIS....... However, there are a number of potential time-barriers, which would need to be overcome, while pharmacists perceptions of their role will also need to be addressed..........................

KEYWORDS:

i. Inappropriate and poorly written. Authors should know there is a difference between 'adherence' and 'compliance'

ii. Focus on the survey variables. Include also the survey design and site

iii. Re-cast based on journal specification or use MeSH guideline

INTRODUCTION SECTION

1. This SECTION is inadequate and not properly funneled to focus the survey on FACILITATORS AND BAARRIERS TO MONITORING OF ANTIHYPERTENSIVE MEDICATION ADHERENCE IN COMMUNITY PHARMACIES

2. Admittedly facilitators and barriers to medication adherence can be patient-related, pharmacy-related, health-system-related, physician-related, etc. Authors should focus the introduction with appropriate literature on pharmacy led and related facilitators and barriers first before patient-related/health[pharmacy] system factors

3. There is paucity of similar studies from other parts of the world for comparative and consultative purposes

4. What are pharmacy-related facilitators [pharmacy demographics, contextual factors, behavioural, attitudinal factors, etc] to monitoring of anti-hypertensive medication adherence in community pharmacies in developed nations, developing nations, UK, then Ireland

5. What are pharmacy-related barriers [pharmacy demographics, contextual factors, behavioural, attitudinal factors, etc] to monitoring of anti-hypertensive medication adherence in community pharmacies in developed nations, developing nations, UK, then Ireland
6. Provide a sub-section on Theory of Planned Behaviour (TPB). Explain how it forms the basis for the theoretical framework for the study linking contextual, beliefs and attitudinal factors. [The content of Figure 1 is noted] Justify why your choice of TPB over other models like TRA [theory of reasoned action]?

7. Statement of the problem that necessitated the survey is sparsely stated by the authors. The statement of the problem and problem analysis should be provided in order to focus the survey appropriately and dovetail into the aim/objective(s).

8. Please in text insertion of references should be done as recommended by the journal

PARTICIPANTS AND METHODS SECTION

THIS SECTION SHOULD BE RE-ORGANIZED FOR CLARITY AND EASY COMPREHENSION. IT SHOULD BE ORGANIZED AS ITEMIZED BELOW.

AUTHORS CAN WRITE IN SECTIONS AND SUBSECTIONS OR IN PARAGRAPHED PROSE PATTERN

1. Change 'Methods' to 'Participants and Methods'.

2. Re-write this section in subsection or paragraphed prose with clear emphasis on

i. SURVEY FACTORIAL DESIGN AND APPROACH

-Delete 'study overview' and change to 'survey factorial design and approach'

- The first sentence is the survey design. Elaborate more on the survey design with focus on factorial survey design

- Move the sentences on sampling frame, etc to a subsection on sampling methods

- Move the sentences on sections of the questionnaires to appropriate section on methods section

- Move the sentences on ethics and informed consent to a subsection before statistical analysis.

PROVIDE THE DATE OF APPROVAL OF THE SURVEY. What was the content of the information study leaflet? [Please provide it as an appendix]

ii. Provide survey setting

iii. Provide survey participants

iv. Provide survey period
Sample size determination:

i. Move the sample size determination and elaboration here

ii. Why did you use the 2016 register of community pharmacy instead of 2017 when the main/final study was done?

PLEASE READ THIS…… Approximately 3,600 community pharmacists practice in Ireland (December 2016) and a sample of 347 was required to reach a statistically representative sample (95% confidence interval; 5% margin of error)……..

Sampling method:

i. Move the sampling frame and other techniques here

ii. How did you apply random sampling in the selection of community pharmacists in Ireland from 2016 register? What type of random sampling method did you use in the sampling technique

PLEASE READ THIS…..A random sample (n=1,543) of potential respondents were contacted via email addresses provided by the PSI and were sent a unique password protected web-link to complete the survey online……..

vii. Selection criteria:

a. Inclusion criteria:

i. Provide inclusion criteria with clear statement on how the community pharmacies/pharmacists were identified by Pharmaceutical Society of Ireland? How was the first and subsequent participants selected? .
b. Exclusion criteria:

ii. Please provide exclusion criteria.

MOVE THIS SUBSECTION UP TO THE PARAGRAPH ON SURVEY FACTORIAL DESIGN AND APPROACH

Factorial Survey Approach

PILOT TESTING

1. Provide a sub-section on pilot testing

2. Why was the pilot testing done in May and June 2016. And the main/final study was done August 2017? [More than a year after the pre-testing]

METHODS:

- Move the sentences from the first paragraph on sections of the questionnaires to appropriate section on methods section

- Move information on demographic and workplace questions here

- Move information on five factorial vignettes here

- Move information on Medication Monitoring Attitude Measure here. Was the MMAM pre-tested or pilot tested in Ireland before use?

- Move information on subjective norms, self-efficacy and perceived behavioural control questions here

- Move information on Survey Administration here
Response rates

viii. Ethical consideration: -Move the sentences on ethics and informed consent here. PROVIDE THE DATE OF APPROVAL OF THE SURVEY. What was the content of the information study leaflet[Please provide it as an appendix]

ix. Statistical analysis:
   a. What type of linear regression did you do? Multiple or multivariate?
   b. Specify the response and explanatory/influential variables for the linear regression?
   c. Provide statement on Confidence Intervals, Odds Ratios and p-value for acceptance and rejection of null hypothesis.

RESULTS SECTION

[ORGANIZE THIS SECTION FOR CLARITY EITHER IN SUB-SECTIONS TO REFLECT THE TABLE TITLES OF PARAGRAVED PROSE

i. Move the sub-section on response rate here

ii. Respondents should be changed to 'Demographics and work environment of the study participants

iii. Medication Monitoring Attitudes scores

iv. Subjective norms and self-efficacy

v. Factorial Vignette-examining dispensing records to assess adherence

vi. Questioning patients about adherence

vii. Explore beliefs about medication that influence adherence
a. What type of linear regression did you do? Multiple or multivariate?

b. Specify the response and explanatory variables for the linear regression in the methods section?

c. Indicate the significant variables with asterisks. The bolding is not clear.

d. Provide appropriate interpretations for the coefficients that didn't cross the unity 1

Examples

Interpret and include in the results section appropriately

NOTE THAT P=0.000 is not mathematically. Write based on journal of submission recommendation
LEVEL 1; MODEL 1:

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<th>Coef</th>
<th>95% CI</th>
<th>p</th>
</tr>
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<tr>
<td>No of Days Early/Late</td>
<td>0.12</td>
<td>0.091 - 0.15</td>
<td>0.000</td>
</tr>
<tr>
<td>No of Patients Waiting</td>
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<td>-0.20 - -0.06</td>
<td>0.000</td>
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<td>Fully-staffed</td>
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<tr>
<td>Time on treatment (yrs)</td>
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<td>-0.20 - -0.05</td>
<td>0.002</td>
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<tr>
<td>No of Patients Waiting</td>
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<td>-0.25 - -0.09</td>
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<tr>
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<td>0.44</td>
<td>0.17 - 0.71</td>
<td>0.001</td>
</tr>
<tr>
<td>Medication Necessity Doubts</td>
<td>0.64</td>
<td>0.32 - 0.97</td>
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<td>Time on treatment (yrs)</td>
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<td>Phone for daughter to collect</td>
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<td>Hours worked per week</td>
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<td>Ambulatory BP services</td>
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<td>Descriptive Norms</td>
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LEVEL 2; MODEL 2

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LEVEL 2; MODEL 3

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<td>0.59</td>
<td>0.20 - 0.97</td>
<td>0.003</td>
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<tr>
<td>Descriptive Norms</td>
<td>0.27</td>
<td>0.07 - 0.47</td>
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DISCUSSION

1. Delete the first paragraph titled 'Principal Findings'. The paragraph is occupying space inappropriately

2. Focus discussion on objectives with focus on the thematic findings as stated in the result section in consideration with the tabular and textual components of the results.

Start first with

- 'Demographic and work environment influences
- Pharmacist beliefs about adherence monitoring
- Contextual Influences
- Facilitators towards adherence monitoring
- Barriers towards adherence monitoring
- Attitudes, normative beliefs and self-efficacy
3. Include discussion on objectives with focus on significant variables at linear regression analysis considering all the levels and models of measurements.

4. You may include discussion on other thematic findings that are absolutely or marginally or relatively relevant for discussion [clinical relevance]

5. There is paucity of similar studies [on-line factorial study design] for international comparisons and discussion?

Strengths and limitations
i. Separate strengths of the study from the limitations of the study

ii. Focus the strength of the study on your study findings and contribution to knowledge. Delete the references inserted in the strength of your study.

Practice and research implications
1. Change 'Practice and research implications' to 'implications of the survey'

Conclusion
iv. Authors have no conclusion. The provided sentence on conclusion is verbose

v. Please provide conclusion to reflect the identified facilitators and barriers based on the aim/objectives of the study.

This sentence is not conclusion but recommendation.

PLEASE READ THIS……….Monitoring adherence through pharmacy records appears the most feasible approach within the current workflow to identify poor adherence however there are number of potential time-barriers, which likely require extra resourcing to overcome, while pharmacists perceptions of their role will also need to be addressed……..

PROVIDE SUB-SECTION ON

a. RECOMMENDATIONS

b. RECOMMENDATION FOR FURTHER STUDIES if any?
REFERENCES

1. SOME REFERENCES ARE INCOMPLETE

2. Most references are not related to the FACTORIAL SURVEY DESIGN AND APPROACH

3. Provide more international references for global readership

4. Authors should re-write base on journal recommendation

RECOMMENDATION

MAJOR REVISION

REQUESTED REVISIONS:

ALL SECTIONS OF THE MANUSCRIPT

ADDITIONAL REQUESTS/SUGGESTIONS:

ALL SECTIONS OF THE MANUSCRIPT

Note: This reviewer report can be downloaded - see attached pdf file.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

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