

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Can education alter attitudes, behaviour and knowledge about organ donation? A pre-test post-test study
AUTHORS	Pierscionek, Barbara; McGlade, Donal

VERSION 1 - REVIEW

REVIEWER	John Daryl Thornton University of Washington, Seattle, WA
REVIEW RETURNED	14-Oct-2013

GENERAL COMMENTS	<p>This is a pre-post study of an educational intervention aimed at second-year nursing students undertaking a full-time degree course leading to a BSc. (Hons) degree at the University of Ulster, North Ireland.</p> <p>Major Comments:</p> <ol style="list-style-type: none">1.The study was a pre-post design without a control group. It is possible that factors other than the intervention were responsible for the significant increase in knowledge and change in behavior exhibited by the subjects. This should be acknowledged in the discussion as a limitation. It would be helpful if there was any additional data that could be provided to support the intervention being the source of improved outcomes. For example, were the subjects asked questions on the pre and post-tests that were not covered in the intervention? If so, can you stratify the responses to questions regarding information covered in the intervention and those that were not when presenting the results?2.The educational intervention may have had a substantial effect on the knowledge and behaviors of the participants. More detail regarding the content of the intervention would be helpful in the Methods. The Discussion should have more explanation about why the intervention was successful and which portions were most potent.3.The intervention was 36 hours in length. Was it given at different times to different participants? If so, were the post-tests given at the same time following the intervention for all participants?4.The tables are difficult to interpret as they appear to have
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	<p>summarized data. It would be more helpful to have the pretest and posttest responses to each question then aggregate responses to, say "Benefits of organ donation."</p> <p>5. The references should be checked carefully. Some are used to support statements that are unrelated to the referenced study. For example, references 16 and 17 refer to studies of U.S. medical students and are used to support the statement that student nurses have lack of knowledge and experience in dealing with organ donation and transplantation.</p> <p>Minor Comments:</p> <ol style="list-style-type: none"> 1. The results of the sample size analysis should be stated (i.e. what is the exact number of people estimated to achieve the hypothesized outcome?) 2. On page 6, line 36, it states "Validation of the questionnaire content was undertaken by several academic experts." Much more detail is needed here. What experts, how were they chosen, and how did they validate the content? What happened when there was a discrepancy?
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REVIEWER	Dr Melissa Hyde Griffith University, Australia
REVIEW RETURNED	20-Oct-2013

GENERAL COMMENTS	<p>Overall comments</p> <p>Overall this is an interesting piece and it is good to see some experimental work in this area. However, my view is that the authors need to be clearer about what they are measuring. At different points it is suggested that there are differences in attitudes, knowledge, and behaviour is also introduced towards the end of the paper (see conclusion). There is also discussion of measuring intentions/willingness when the measures suggest that what was measured was actually behaviour. I also do not agree that some of the measures categorised as knowledge actually measure knowledge; or that all the attitude measures actually measure attitudes. I suggest the authors revisit these concepts based on the literature. If these measures are retained using the current categorisations of attitude and knowledge then the authors need to justify their choices and back these up with prior research. Please see specific comments below.</p> <p>Addressing this issue of clarity will strengthen the paper and also bring focus on the fact that the authors appeared to also measure communication behaviour (registering and discussing) which is a rarity in organ donation research and therefore an important aspect of this study.</p> <p>Abstract</p> <p>Objective – the phrase "ability to participate in the organ donation system" is too vague.</p> <p>Design is stated as a questionnaire based study – it was more than</p>
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this; the participants completed a program in between the questionnaires.

Results – it is stated that “changes in attitude were also observed in relation to participants’ willingness to discuss organ donation intentions” – my understanding based on measures used is that you assessed actual discussion behaviour pre and post, not willingness?

Key message “knowledge of participants significantly improved in several key areas” – this key message does not give the reader any detail about the kind of knowledge referred to.

Background

Regarding the sentences “Although approximately 90% of the general public report a favourable attitude towards organ donation,[9] less than 55% of relatives of potential donors ultimately provide consent for donation.[10] These inconsistencies demonstrate that successful organ procurement fundamentally requires action on the part of the health care professional.” – these sentences do not follow on; it is not clear based on these two sentences how relatives of potential donors who provide consent suggests that successful organ procurement requires the health professional to act.

Methods

Design – in this section it is stated “...was chosen to establish the level of knowledge gained and the impact of this knowledge on attitude.” This statement would benefit from being rephrased. The authors are not just checking the impact of knowledge on attitudes they are examining the impact of a program on knowledge, attitudes (and also behaviour although this is not mentioned until the conclusion).

Table 1 Questionnaire items

The authors state that eight attitudinal items and nine knowledge-based items are included. I disagree with the categorisation of some items. In my view the items should be categorised as 8 attitude items; 2 behaviour items; 6 knowledge items; and 1 willingness item. Specifically:

Attitude items

1. Becoming an organ donor makes me think about my own death?[24] (strongly agree/agree/disagree/strongly disagree)
2. I would support a change to the current organ donation system?[24] (strongly agree/agree/disagree/ strongly disagree)
3. The law should be changed so that everyone is an organ donor unless they say no?[25] (strongly agree/agree/disagree/strongly disagree)
4. The law should be changed so that everyone is encouraged to formalise their donation intentions? (strongly agree/agree/disagree/strongly disagree)
5. The government should provide financial help to those families who donate? (strongly agree/agree/disagree/strongly disagree)
6. What do you think are the benefits of donation?[26] (to help improve another person’s quality of life/to save another person’s life/to help families through the grieving process/it is a good thing for society)
7. By signing a donor card, doctors might do something to me before I am really dead?[24] (strongly agree/agree/disagree/strongly disagree)

8. The possible misuse of my organs after death makes me feel less supportive of organ donation?[26] (strongly agree/agree/disagree/strongly disagree)

Behaviour items

1. Have you registered to be an organ donor? (yes/no)
2. Have you discussed your organ donation intentions with your family? (yes/no)

Knowledge items

1. Of which method of registration are you aware?[23] (donor card/national register/driving license/GP surgery/electoral roll/passport/Boots The Chemist)
2. Which of the following do you think can be donated after death?[26] (eyes/heart/kidneys/liver/lungs)
3. Does your religion allow organ donation?[26] (yes/no/I do not know)
4. Are you aware of any laws that control organ donation?[26] (yes/no/I do not know)
5. Would you consider a person who is declared brain dead but still has a beating heart as being dead?[24] (yes/no/I do not know)
6. How likely do you think it is that a brain dead person with a beating heart might recover and live? (very likely/likely/unlikely/very unlikely)

Willingness item

1. Would you consider becoming an organ donor? (yes/no/I do not know)

Results

There is no information in this section about the number of participants who chose yes, no, or don't know regarding willingness to donate organs. It is the latter two categories in which it is hardest to change attitudes and behaviour and it would be useful to give some indication of these numbers and if possible whether responses differed on the basis of donation preference.

Table 2 – it is unclear for some items what the percentages represent based on just looking at the table. For example 53% for misappropriation of organs – do these percentages mean that 53% strongly agreed, agreed, disagreed or strongly disagreed that misappropriation of organs made them feel less supportive?

Table 3 includes an item “willingness to consider registration”; however, there is no corresponding item in the measures list (there is a preference for organ donation but donation is not the same as registration).

Discussion

The statement “The results from this study support the conclusions of previous work that the opinions and attitudes of student nurses are positively influenced by education on the topic” is too strong. There appears little evidence of change in attitudes overall (as conceptualised by the authors).

The literature on attitude of health professionals towards discussing organ donation both personally within their own families and professionally suggests that confidence having a discussion is an important aspect. Can the authors please clarify if this issue was addressed in their training program?

VERSION 1 – AUTHOR RESPONSE

Reviewer 1

Major Comments:

1. The study was a pre-post design without a control group. It is possible that factors other than the intervention were responsible for the significant increase in knowledge and change in behavior exhibited by the subjects. This should be acknowledged in the discussion as a limitation. It would be helpful if there was any additional data that could be provided to support the intervention being the source of improved outcomes. For example, were the subjects asked questions on the pre and post-tests that were not covered in the intervention? If so, can you stratify the responses to questions regarding information covered in the intervention and those that were not when presenting the results?

Response: A discussion about the limitations of the pre-test post-test design has been added (pages 19-20). There were no questions asked that were not covered in the intervention or did not have some relevance to the intervention eg attitude; responses have been stratified in accordance with the recommendations Reviewer 2.

2. The educational intervention may have had a substantial effect on the knowledge and behaviors of the participants. More detail regarding the content of the intervention would be helpful in the Methods.

Response: Further details of the content of the intervention have now been added in the section titled 'The programme of study' (page 9).

3. The Discussion should have more explanation about why the intervention was successful and which portions were most potent.

Response: Further discussions about the intervention have been added to page 16.

4. The intervention was 36 hours in length. Was it given at different times to different participants? If so, were the post-tests given at the same time following the intervention for all participants?

Response: The intervention was delivered to all participants at the same time and in the same venue. This has been clarified on page 9.

5. The tables are difficult to interpret as they appear to have summarized data. It would be more helpful to have the pretest and posttest responses to each question then aggregate responses to, say "Benefits of organ donation."

Response: The tables now show pretest and posttest responses to each question. The tables now contain items that correspond to the questionnaire and aggregate responses have been omitted to avoid potential confusion. (See also response to Reviewer 2, comment 10)

6. The references should be checked carefully. Some are used to support statements that are unrelated to the referenced study. For example, references 16 and 17 refer to studies of U.S. medical students and are used to support the statement that student nurses have lack of knowledge and experience in dealing with organ donation and transplantation.

Response: References have been checked and a distinction has now been made regarding the literature related to nurses and medical students (pages 4-5).

Minor Comments:

7. The results of the sample size analysis should be stated (i.e. what is the exact number of people estimated to achieve the hypothesized outcome?)

Response: This has been added to page 10.

8. On page 6, line 36, it states "Validation of the questionnaire content was undertaken by several academic experts." Much more detail is needed here. What experts, how were they chosen, and how did they validate the content? What happened when there was a discrepancy?

Response: The questionnaire used in this study has been based on validated questionnaires used in previous studies (Conesa 2003, Haddow 2006, Kent 1995, Rodrigue 2006, Saleem 2009) and further developed by academic experts in the area of biomedical science and psychology. The questionnaire was then tested on a student nursing population in Northern Ireland. This has been added on page 7.

Reviewer 2

Abstract

1. Objective – the phrase “ability to participate in the organ donation system” is too vague.

Response: This has now been clarified.

2. Design is stated as a questionnaire based study – it was more than this; the participants completed a program in between the questionnaires.

Response: Further details have been added.

3. Results – it is stated that “changes in attitude were also observed in relation to participants’ willingness to discuss organ donation intentions” – my understanding based on measures used is that you assessed actual discussion behaviour pre and post, not willingness?

Response: This point has been clarified to indicate that there were changes with regard to willingness to accept informed consent and with regard to actual discussion behaviour.

4. Key message “knowledge of participants significantly improved in several key areas” – this key message does not give the reader any detail about the kind of knowledge referred to.

Response: Further details have been added to the Key messages.

Background

5. Regarding the sentences “Although approximately 90% of the general public report a favourable attitude towards organ donation,[9] less than 55% of relatives of potential donors ultimately provide consent for donation.[10] These inconsistencies demonstrate that successful organ procurement fundamentally requires action on the part of the health care professional.” – these sentences do not follow on; it is not clear based on these two sentences how relatives of potential donors who provide consent suggests that successful organ procurement requires the health professional to act.

Response: This has been clarified on page 4.

Methods

6. Design – in this section it is stated “...was chosen to establish the level of knowledge gained and the impact of this knowledge on attitude.” This statement would benefit from being rephrased. The authors are not just checking the impact of knowledge on attitudes they are examining the impact of a program on knowledge, attitudes (and also behaviour although this is not mentioned until the conclusion).

Response: The design of the study has now been properly stated on page 6.

Table 1 Questionnaire items

7. The authors state that eight attitudinal items and nine knowledge-based items are included. I disagree with the categorisation of some items. In my view the items should be categorised as 8 attitude items; 2 behaviour items; 6 knowledge items; and 1 willingness item. Specifically:

Attitude items

- Becoming an organ donor makes me think about my own death?[24] (strongly agree/agree/disagree/strongly disagree)

- I would support a change to the current organ donation system?[24] (strongly agree/agree/disagree/strongly disagree)

- The law should be changed so that everyone is an organ donor unless they say no?[25] (strongly agree/agree/disagree/strongly disagree)

- The law should be changed so that everyone is encouraged to formalise their donation intentions? (strongly agree/agree/disagree/strongly disagree)

- The government should provide financial help to those families who donate? (strongly agree/agree/disagree/strongly disagree)

- What do you think are the benefits of donation?[26] (to help improve another person’s quality of life/to save another person’s life/to help families through the grieving process/it is a good thing for society)

- By signing a donor card, doctors might do something to me before I am really dead?[24] (strongly agree/agree/disagree/strongly disagree)

- The possible misuse of my organs after death makes me feel less supportive of organ donation?[26] (strongly agree/agree/disagree/strongly disagree)

Behaviour items

- Have you registered to be an organ donor? (yes/no)
- Have you discussed your organ donation intentions with your family? (yes/no)

Knowledge items

- Of which method of registration are you aware?[23] (donor card/national register/driving license/GP surgery/electoral roll/passport/Boots The Chemist)
- Which of the following do you think can be donated after death?[26] (eyes/heart/kidneys/liver/lungs)
- Does your religion allow organ donation?[26] (yes/no/I do not know)
- Are you aware of any laws that control organ donation?[26] (yes/no/I do not know)
- Would you consider a person who is declared brain dead but still has a beating heart as being dead?[24] (yes/no/I do not know)
- How likely do you think it is that a brain dead person with a beating heart might recover and live? (very likely/likely/unlikely/very unlikely)

Willingness item

- Would you consider becoming an organ donor? (yes/no/I do not know)

Response: All recommended changes to the questionnaire items have been made (pages 8-9). The authors want to thank the reviewer for all these recommendations.

Results

8. There is no information in this section about the number of participants who chose yes, no, or don't know regarding willingness to donate organs. It is the latter two categories in which it is hardest to change attitudes and behaviour and it would be useful to give some indication of these numbers and if possible whether responses differed on the basis of donation preference.

Response: More information has been provided with regard to participants' organ donation willingness and behaviour. Further analysis did not reveal statistically significant differences and this has been mentioned (pages 13-14).

9. Table 2 – it is unclear for some items what the percentages represent based on just looking at the table. For example 53% for misappropriation of organs – do these percentages mean that 53% strongly agreed, agreed, disagreed or strongly disagreed that misappropriation of organs made them feel less supportive?

Response: The results found in all tables have been updated clarifying to what the items relate.

10. Table 3 includes an item "willingness to consider registration"; however, there is no corresponding item in the measures list (there is a preference for organ donation but donation is not the same as registration).

Response: This was an aggregate result and has been now omitted to avoid confusion. Results found in the tables now only relate to items found in the questionnaire.

Discussion

11. The statement "The results from this study support the conclusions of previous work that the opinions and attitudes of student nurses are positively influenced by education on the topic" is too strong. There appears little evidence of change in attitudes overall (as conceptualised by the authors).

Response: This statement has been corrected to indicate what the results from this study show and where they do support previous work. The reference to opinions and attitudes has been removed; more discussion about attitudes has also been added (page 16).

12. The literature on attitude of health professionals towards discussing organ donation both personally within their own families and professionally suggests that confidence having a discussion is an important aspect. Can the authors please clarify if this issue was addressed in their training program?

Response: The importance of communicating donation intentions among family members was discussed during the programme of study. This has now been added under the section titled 'The programme of study' (page 9).

VERSION 2 – REVIEW

REVIEWER	Melissa Hyde Griffith University, Australia
REVIEW RETURNED	26-Nov-2013

GENERAL COMMENTS	<p>I believe the authors have effectively responded to and made the necessary changes based on reviewer comments. The paper reads very clearly. I have two very minor points below to be addressed. Thank you for the opportunity to review this article and I wish the authors every success with their future research.</p> <p>Article focus:</p> <ul style="list-style-type: none">- Suggest being more specific and adding the words “about organ donation” to the end of the point “To determine student nurses knowledge”. <p>Background:</p> <ul style="list-style-type: none">- “less than 55% of those likely to donate” – it is unclear whether this statement refers to donor families/relatives or nurses. Please clarify.
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