

LETTER TO THE EDITOR

Critique and Appraisal of a Study on the Attitudes Towards Organ Donor Advocacy Scale

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DEAR EDITOR,

The recent study by Floden, Lennerling, Fridh, Rizell and Forsberg [1] concluded that using the Attitude Towards Organ Donor Advocacy Scale (ATODAS) is ready for use in future research studies because it has good psychometric properties for measuring ICU nurses' attitudes towards advocacy on behalf of potential and actual organ donors. However, that conclusion is not supported by the data in the study because of lack of evidence of measurement validity.

First, the study provided evidence against the idea that ATODAS questionnaire is ready for use in other research studies. In our opinion, a good number of the items were either lengthy, confusing, or otherwise difficult to answer fairly. If the nurse participants who asked to take this questionnaire also felt this way, it may explain why the percentage of nurses that completed and returned the questionnaire was so low. Also, although seven individuals referred to as experts were used to assess the quality of the questions and the content validity of the 55 item scale, helpful information was not provided, such as: criteria or process of selection of experts, the background or characteristics of the experts, whether the evaluation was done individual, as a group, or pieces of the group, and other information. Given that both item quality and content validity assessment can be dependent on evaluator selection and procedure, the concerns remain that difficult or confusing questions were a factor in the low return rate and that the content validity was not fully established.

There is a quantitative support for the above criticism of the content validity. Some of the items correlated very weakly with the factors to which they contributed. In table 2 of the study, the correlations of the fifth factor with the last two items concerning next of kin were somewhat low (between $r = 0.40$ and 0.50), indicating that it might have been better to move these two items out into a separate factor. There are quite a large number of other items that had

somewhat low correlations to their factors, with correlations under 0.60. This might not be a problem if the factors were orthogonal to each other, but non-orthogonal fitting was used with the result that many of the factors have correlations with each other that are of similar magnitude (above .40) to the correlations of the items to the factors. This does not support the idea that the factors in the ATODAS are really separate entities from each other, nor that they have good construct validity, therefore, the conclusion that the ATODAS produced good psychometric properties is an overstatement.

Last, the study noted that random sampling was used to select nurses to participate in the study, but if a person selects nurses to participate then it is not random, but arbitrarily selection. The difference is that random sampling is a probability sample with high external validity but arbitrary selection is a convenience or purposive sample with low external validity. The problem is compounded by the fact that the number of nurses who refused to participate was not indicated. Helpful information needed to figure out the sample quality is omitted, such as how the nurses were contacted and how many refused to participate. Without this information, attempts by the reader to assess the methodological quality, and therefore the strengths and weaknesses of the ATODAS, are hampered.

This study has many strengths including a large sample size, good statistical analysis, clear literature review, well-formulated purpose statements, and a concise theoretical concept for developing the ATODAS. Despite these strengths, the evidence of problems with both the content and construct validity, which may have lowered the return rate and rendered the factor scores difficult to separate and interpret, does not support the conclusion that the ATODAS has good psychometric properties. Therefore, further refinement of the ATODAS by the authors is suggested before it is used in other research studies for the purpose of assessing organ donor advocacy.

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CONFLICT OF INTEREST

The authors confirm that this article content has no conflicts of interest.

REFERENCE

- [1] Flodén A, Lennerling A, Fridh I, Rizell M, Forsberg A. Development and psychometric evaluation of the instrument: attitudes towards organ donor advocacy scale (ATODAS). *Open Nurs J* 2011; 5: 65-73.

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