

**NURSING RESEARCH REVIEW FORM**

1st Review

Manuscript # 2005/027  
Manuscript title: Use of situation-specific Norbeck Social Support Questionnaire items  
Manuscript type: Brief Report  
Number of text pgs.: 10  
Number of figures: 1  
Number of tables: 4  
Reviewer: Susan J. Henly  
Stat reviewer assigned?: Yes

**Please evaluate the following with these choices: (1) adequate, (2) inadequate (describe in written review) or (3) not appropriate (describe in written review)**

Problem statement:  
Attention to relevant literature:  
Theoretical framework:  
Research design:  
Data analysis:  
Discussion of results:  
Organization:  
Writing style:

**Please rate the following topics 1-5 (with 5 being the highest rating):**

Value of topic:  
Probable reader interest in topic:  
Importance of present contribution to nursing:  
Priority of topic for publication:  
Rank this manuscript for its value:

**Reviewer's Recommendation (please type "X" after your choice):**

Accept without revisions  
Accept with revisions  
Maybe accept with revisions  
Do not accept

**Comments for Editor only:**

**Please provide a comprehensive and integrated review of this manuscript.  
Be sure to present a balanced view of the manuscript's strengths and weaknesses.**

Reviewer #5 comments to the authors:

ABSTRACT:

METHODS: USING DATA (N=154) COLLECTED FOR A LARGER STUDY, THE PARAMETERS OF 3 CONFIRMATORY FACTOR ANALYSIS MODELS WERE ESTIMATED BY THE gENERALLY wEIGHTED IEAST sQUARES METHOD IMPLEMENTED IN LISREL.

p 12 para 1 comment:

THE SOLUTION FOR MODEL 1 IS INADMISSABLE BECAUSE PARAMETER ESTIMATES ARE OUT OF BOUNDS. tHE UNIQUENESS PARAMETERS ARE VARIANCES AND SHOULD BE  $\geq 0$ .

THE ROOT PROBLEM FOR OUT OF BOUNDS PARAMETERS IS SMALL SAMPLE SIZE, AND THIS SHOWS UP CLEARLY IN SAMPLING EXPERIMENTS USING SIMULATED DATA. tHE PROBLEM CAN BE CIRCUMVENTED BY CONSTRAINING THE MINIMIZATION ALGORITHM TO ALWAYS STAY WITHIN THE DEFINED PARAMETER SPACE RATHER THAN USING ALL THE REAL NUMBERS. LISREL DOES NOT USE THIS CONSTRAINT IN ITS NUMERICAL ALGORITHM. IT IS VERY HAPPY TO ESTIMATE NEGATIVE VARIANCES, IF THAT'S WHAT IT TAKES TO FIND THE SMALLEST WEIGHTED DIFFERENCE BETWEEN THE DATA AND MATRIX ESTIMATED BY THE MODEL. NOT ALL PROGRAMS WILL ALLOW THIS TO HAPPEN. THE ESTIMATION PROBLEM CAN BE AVOIDED IN LISREL IF A REPARAMETERIZATION OF THE CFA MODEL IS USED whereby the square roots of the uniquenesses are estimated rather than the uniquenesses themselves. fOR THESE REASONS, I THINK THE EXPLANATION FOR THE NEGATIVE VARIANCES ('OVERESTIMATION OF THE VARIABLES' COVARIANCES) IS WRONG, WITH ALL DUE RESPECT TO KARL AND DAG who are cited in support of this interpretation.