

-Abstract-

Key concept : Suffering, Development of an Instrument,  
Cancer patient

## Development of a Tool to Measure Suffering in Patients with Cancer

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This study is a methodological research study to develop an instrument to measure in patients with cancer and to test the validity and reliability of the instrument.

The research procedure was as follows :

1) The first step was to develop conceptual framework based on a comprehensive review of the literature and in-depth interviews with patients with cancer. This conceptual framework was organized in to three dimensions (the intrapersonal dimension, the significant-other and context related dimension, the transcendental dimension). Initially 59 items were adopted. 2) These items were analyzed through the index of content validity(CVI) and 53 items were selected which met more than 80% on the CVI. 3) The pretest was carried out with 87 patients with cancer. After the pretest results were analyzed by item analysis, 44 items were selected. A second test of content validity was conducted and 6 items were eliminated considering the 80% CVI. 4) To test for reliability and validity, data collection was done during the period from January 25, 1999, to February 26, 1999. The subjects for the test were 160 patients with cancer and 185 healthy persons.

This study utilized Cronbach's alpha in analyzing the reliability of the collected data and applied factor

analysis, item analysis and multitrait-multimethod method to analyze validity.

The findings are as follows :

- 1) The Cronbach's alpha coefficient for internal consistency was .92 for the total 38 items and .79, .82, .85, for the three dimensions in that order.
- 2) The item analysis was based on the corrected item to total correlation coefficient( .30 or more) and information about the alpha estimate if this item was dropped from the scale.
- 3) As a result of the initial factor analysis using principal component analysis and varimax rotation, one item was deleted because of factor complexity (indiscriminate factor loadings). In the secondary factor analysis, 7 factors with eigenvalue of more than 1.0 were extracted and these factors explained 56 percents of the total variance. The seven factors were labeled as 'family relationship', 'emotional condition', 'physical discomfort', 'meaning and goal of life', 'contextual stimuli', 'change of body image', 'guilt feelings'.
- 4) The convergence effect between this instrument and the life satisfaction scale was identified and there was significant positive correlation( $r = .52, p = .00$ ). The discriminant validity between this instrument and the depression scale(CES-D) was tested and there was significant negative correlation( $r = -.50, p = .00$ ).

The instrument for accessing the suffering of patients with cancer developed in this study was identified as a tool with a high degree of reliability and validity. In this sense, this tool can be effectively utilized for assessment in caring for patients with cancer.

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