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Development and Testing of Cancer Treatment Shared Decision Making Scale for Nurses

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Development & Testing of...  
Cancer Treatment  
Shared Decision Making Scale for Nurses (SDMS-N)

Pamela Katz, BS, Joseph D. Tariman, PhD, ANP-BC, FAAN, Lisa Hartle, MS, RN, AOCN, APN, Katharine L. Szubski, RN, BSN, OCN

Background

Shared decision-making (SDM) has emerged as the preferred model for decision-making in treatment decisions for cancer patients. Patient outcomes are maximized when this model is used since the patient is more engaged and empowered to be a part of their care.

Yet, there are many barriers to participation in SDM that must be overcome from the patient, practitioner, and structural perspectives. Oncology nurses are crucial in the SDM process and tend to have a higher level of involvement relative to their counterparts in other specialties. However, many of these nurses do not feel competent or comfortable participating in SDM due to a variety of reasons such as level of training (or lack thereof), differences in communication skills and styles, and organizational environmental challenges.

It is important to find a way to accurately measure nurses’ competency in SDM since they are the ones spending the lion’s share of time with patients and need to have an active role in the decision-making process.

Purpose

- Oncology nurses in the US value their participation in the cancer treatment SDM process (Tariman et al., 2016). In the UK, practitioners asked for more guidance on SDM (Staveley & Sullivan, 2015).
- Study authors aimed at developing a valid, reliable scale to measure oncology nurses’ competence in SDM.

Goals:
- Discuss the validity and reliability of the new SDMS-N tool.
- Describe the knowledge, attitudes and skills of oncology nurses in the SDM process.

Methods

This study utilized a descriptive online survey and the SDMS-N tool was sent to oncology nurses in and out of the Chicagoland area. The survey measured 22 key variables within three domains of nursing practice: knowledge, attitudes, and skills. A convenience sample of 226 nurses was recruited to participate to account for the minimum 10 subjects per variable and any missing responses (Kellar & Kelvin, 2012). The data was measured with a 5-point Likert scale for each subset of questions (1 Strongly disagree to 5 Strongly agree).

Results

The Kaiser-Meyer-Olkin (KMO) measure was developed based on the assumption that controlling for the effects of other variables, the partial correlations between pairs of variables should be small if the variables share common factors. A KMO of 0.80 or greater means the correlation among variables is high and factor analysis is appropriate (Plichta, Kelvin, & Munro, 2013).

In this study, the KMO was .909 which indicates sampling adequacy and it meets the partial correlations assumption as seen in Table 3.

Additionally, Bartlett’s test of sphericity was used to test the null hypothesis that the correlation matrix has all coefficients not in the diagonal are equal to zeroes. In this study, the Bartlett’s test was statistically significant (p<.001) and the null hypothesis was rejected indicating that all the coefficients not in the diagonal are greater or lesser than zeroes as seen in Table 3.

In order to test the internal consistency of each item in the CCONS-SDMS-N tool, the Cronbach’s alpha coefficient was calculated and the results showed an excellent Cronbach’s alpha value of .913. For a new instrument, a Cronbach’s alpha greater than .80 is considered as an indicator of excellent internal consistency (DeVellis, 2017).

Table 3. KMO and Bartlett’s Test

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>Bartlett’s Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. Chi-Square</td>
<td>2149.186</td>
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</tbody>
</table>

Table 4. Cronbach’s Alpha Coefficients for Attitudes, Communication, Adaptability & Implementation

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude Subscale = .813</td>
<td>4</td>
</tr>
<tr>
<td>Communication Skills Subscale = .707</td>
<td>4</td>
</tr>
<tr>
<td>Adaptability &amp; Implementation Skills Subscale = .837</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge Subscale = .812</td>
<td>5</td>
</tr>
</tbody>
</table>

Conclusions

The SDMS tool was found to be a valid and reliable scale/tool that can measure the competencies of nurses during the Shared Decision Making process. There were three subscales that that were theoretically developed for this study. They were the attitudes, knowledge and skills subscales. The parallel analysis completed as part of the Exploratory factor analysis (EFA) determined there to be four (4) subscale factors vs the original hypothesized three (3) based on the Principle component analysis (PCA) numerical values being higher than the Parallel analysis (PA) value in more than one of the question subscales (“Skills” subscale). When the actual data was analyzed, it was determined there were four subscales identified. The revised subscales now include “Attitudes, Communications Skills, Adaptability & Implementation Skills, and Knowledge”. Cronbach scores were strong, with all subscales having adequate reliability coefficients.

A confirmatory analysis will need to be completed to validate the results of this study. The SDM-N Competency Tool is a new valid and reliable tool with excellent psychometric properties.