

## **Abstract**

### **Background:**

**Objective:** The aims of this study were to apply Rasch analysis to examine the construct validity and person reliability of the 9-item Shared Decision Making Questionnaire (SDM-Q-9) in women with breast cancer.

**Methods:** The construct validity of the SDM-Q-9 was confirmed when the items fit the Rasch model's assumptions of unidimensionality: (1) infit and outfit mean square (MNSQ) ranged from 0.6 to 1.4; (2) the unexplained variance of the first dimension of the principle component analysis (PCA) was < 20%. Person reliability was calculated.

**Results:** A total of 212 participants were recruited in this study. Item 1 did not fit the model's assumptions and was deleted. The unidimensionality of the remaining 8 items (SDM-Q-8) was supported with good item fit (infit and outfit MNSQ ranging from 0.6 to 1.3) and very low unexplained variance of the first dimension (5.3%) of the PCA. The person reliability of the SDM-8 was 0.90.

**Conclusions:** The SDM-Q-8 was unidimensional and had good person reliability in women with breast cancer.

**Implications for Practice:** The SDM-Q-8 has shown its potential for assessing the level of perceived involvement in SDM in women with breast cancer for both research and clinical purposes.

**Key words:** breast neoplasms, construct validity, Rasch analysis, shared decision making