



Psychometric Testing of the Collaborative Behavior Scale-Shortened (CBSS)

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Objectives

At the completion of this session, participants will be able to:

- Describe the methods used to test the psychometric properties of the new 8 item CBSS scale
- Apply the use of the CBSS in their own practice setting

Purpose of Study

- To identify predictors and moderators of nurse leader stress
- To test the psychometric properties of a shortened 8 item version (CBSS) of the original 20 item Collaborative Behavior Scale (CBS) – Cronbach's *alpha* = .98

Significance

Collaboration in nursing has significant positive effects on:

- Job satisfaction – $R^2 = .40^{***}$ (Chang et al, 2009)
- Organizational commitment – $r = .399^{**}$
- Professional fit – $r = .457^{**}$
- Patient outcomes - $R^2 = .35^{***}$ (Chang et al, 2009)
- Job strain $R^2 = .43^{***}$ (Almost & Laschinger, 2002)
- Workplace empowerment $r = .415^{***}$
(Almost & Laschinger, 2002)

Method

- Multi-trait-multi-method (MTMM) approach
(Polit & Beck, 2008)
- Reviewed inter-item correlations among items from previous studies using CBS
- Original concept analysis – three dimensions
 - Balance of power,
 - Integration,
 - Interpersonal valuing

Methods (continued)

- A panel of five experts reviewed 8/20 items from original survey based on original concept analysis and theoretical frameworks Deutsch, (1973) Homans (1950) & Kilmann, (1977)
- CBSS (8 items) used in a multi-site (36 hospitals) to evaluate stress among nurse leaders (n = 751; 70% response rate)

Scoring of the CBSS

- Responses coded
 - 4 = *nearly always*,
 - 3 = *often*,
 - 2 = *sometimes*,
 - 1 = *rarely*,
 - NA
- Total scale score & total *mean* score should be calculated for analysis

CBSS – 8 items (please only use with permission)

Please tell us more about your relationship with your supervisor:

	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Nearly Always</i>
My supervisor and I trust one another.	1	2	3	4
My opinions are listened to by my supervisor.	1	2	3	4
I feel that my input is truly valued by my supervisor.	1	2	3	4
There is a feeling of mutual regard and respect with my supervisor.	1	2	3	4
My supervisor and I share information openly with one another.	1	2	3	4
My supervisor and I recognize the need to have a sense of “give and take” in the work relationship.	1	2	3	4
My supervisor and I recognize our interdependence with one another in order to meet our goals.	1	2	3	4
My supervisor and I are committed to the process of working together to meet our goals.	1	2	3	4

CBSS – 8 items (please only use with permission)

1. My **supervisor** and I trust one another.
2. My opinions are listened to by my **supervisor**.
3. I feel that my input is truly valued by my **supervisor**.
4. There is a feeling of mutual regard and respect **among my nurse peers**
5. **The physicians and the nurses share** information openly with one another.
6. My supervisor and I recognize the need to have a sense of “give and take” in the relationship.
7. My supervisor and I recognize our interdependence with one another in order to meet our goals.
8. My supervisor and I are committed to the process of working together to meet our goals.

Results - CBSS

- Cronbach' s *alpha* = .96
(CBS α = .98)
- Item total correlations = .77 – .86
(CBS .84 – .90)
- Convergent & discriminate validity was confirmed using (MTMM) approach (Polit & Beck, 2008)

CBSS

- Convergent validity
 - Participation in Decision Making ($r = .436^{**}$)
 - Job Control/Decision Authority ($r = .502^{**}$)
- Divergent validity
 - Meyer & Allen Continuance Commitment Scale ($r = .106^*$)
 - Cortina et al. Workplace Incivility Scale ($r = -.483^{**}$)

Results - CBSS

- CBSS was significantly correlated with:
 - Organizational voice ($r = .411^{**}$)
 - Authentic Leadership ($r = .792^{**}$)
 - Transformational leadership ($r = .784^{**}$)
 - Supervisor support ($r = .834^{**}$)
 - Job satisfaction ($r = .319^{**}$)
- Findings support correlations previously reported in the literature

Factor Analysis

- Original CBS – Exploratory factor analysis with Varimax rotation yielded a simple structure with 73% of the variance attributed to Factor 1 (factor loadings ranged from .79 to .92)
- CBSS – (n = 577) Principal component analysis with Varimax rotation with Kaiser normalization resulted in a unidimensional model with 82% of variance attributed to Factor 1 (factor loadings .77-.86).

Applications

- CBSS can be used to assess collaborative behavior:
 - Nurses in interactive situations
 - Shared governance initiatives
 - Magnet journeys
 - Professional practice environments
 - Resolution of conflictual situations
 - Among nurses, between nurses and managers, & between nurses and physicians

Recommendations for Future Research

- Test the CBSS for other relationships
 - Nurses & physicians
 - Among nurses on a unit
 - Nurses and other interdisciplinary partners
 - New nurse graduates or nurse residents and nurses on the unit

Conclusions

- The 8 item CBSS can be used in research in lieu of the 20 item CBS to measure collaborative behavior among various groups.

Implications for Practice

- Collaborative behaviors among interdisciplinary healthcare providers is essential for quality patient care, professional practice, a positive work environment, job satisfaction and professional / organizational commitment.

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Questions?

