Analyses Examining Negatively Worded Items on SOPS Surveys

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Goal of this Presentation

- The overall goal of this presentation is to:

  - Share results examining whether people respond differently to positively and negatively worded items in the

    - Hospital

    - Nursing Home and

    - Medical Office Surveys on Patient Safety Culture

1. Why examine negatively worded items?

2. What are negatively worded items?

3. What are the pros and cons of including them?

4. Method

5. Results

6. Next Steps

- Do <u>negatively</u> worded items lead to lower SOPS scores?

- Dimensions with negatively worded items tend to be the lower scoring dimensions
  - Is this a item wording issue or content issue?

- Positively and Negatively Worded Items **+ / -**

  - Overall Perceptions of Patient Safety
    - A15. Our procedures and systems are good at preventing errors from happening (positively worded).
    - A17. We have patient safety problems in this unit (negatively worded).

  - Staffing
    - A2. We have enough staff to handle the workload (positively worded).
    - A14. We work in "crisis mode" trying to do too much, too quickly. (negatively worded)

- Positively and Negatively Worded Items **+ / -**

  - Organizational Learning
    - D5. This nursing home is always doing things to improve resident safety (positively worded)
    - D3. This nursing home lets the same mistakes happen again and again (negatively worded).

  - Nonpunitive Response to Mistakes
    - A18. Staff feel safe reporting their mistakes (positively worded).
    - A10. Staff are blamed when a resident is harmed (negatively worded).

- Positively and Negatively Worded Items + / −

  – Office Processes and Standardization
    - C9. We have good procedures for checking that work in this office was done correctly (positively worded).
    - C12. We have problems with workflow in this office (negatively worded).

  – Work Pressure and Pace
    - C11. We have enough staff to handle our patient load (positively worded).
    - C6. We have too many patients for the number of providers in this office (negatively worded).

Why include negatively worded items?
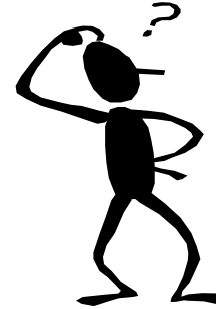
- Acquiescence bias

- Social desirability bias

- Identify straight-lining

- Some concepts difficult to measure positively

- Respondent Confusion

- Respondent Carelessness

- May measure a separate method construct

- Compare positive and negatively worded items that measure the same thing

- Are respondents answering differently?
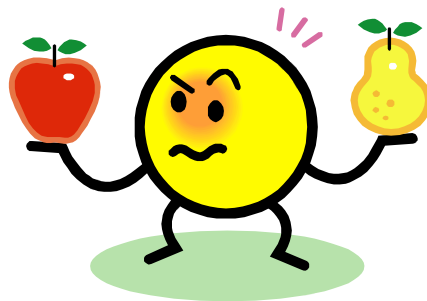
Measures: Surveys on Patient Safety Culture (SOPS)

- ## Hospital SOPS
  - Released 2004
  - 42 items measuring 12 dimensions

- ## Nursing Home SOPS
  - Released 2008
  - 42 items measuring 12 dimensions

- ## Medical Office SOPS
  - Released 2009
  - 52 items measuring 12 dimensions

Item Wording in the Surveys

Each survey includes negatively worded items
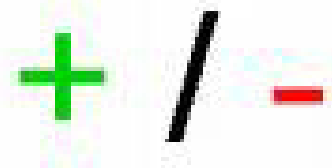
SOPS Survey	% Negatively Worded Items	# Dimensions with <u>both</u> Positively and Negatively Worded Items
Hospital	21/42 = 50%	6 out of 12
Nursing Home	8/42 = 19%	5 out of 12
Medical Office	15/52 = 29%	7 out of 12

- We conducted dependent sample t-tests

- t-tests compare the positively worded item scores to negatively worded item scores within a composite

- Expect the scores to be similar

- Examined only those dimensions with <u>both</u> negatively worded AND positively worded items

  – Hospital SOPS – 6 dimensions

  – Nursing Home SOPS – 5 dimensions

  – Medical Office SOPS – 7 dimensions

RESULTS

Hospital SOPS t-test Results

Dimension	# Items Negatively Worded	Positive Wording Score	Negative Wording Score	Difference (Positive - Negative)
1. Communication Openness	1 out of 3	3.65	**_3.67_**	-0.02*
2. Overall Perceptions of Patient Safety	2 out of 4	**_3.62_**	3.56	0.07*
3. Management Support for Patient Safety	1 out of 3	**_3.88_**	3.45	0.43*
4. Staffing	3 out of 4	3.22	**_3.44_**	-0.22*
5. Supervisor/Manager Expectations & Actions Promoting Patient Safety	2 out of 4	3.83	**_3.88_**	-0.05*
6. Teamwork Across Units	2 out of 4	**_3.55_**	3.28	0.27*

* Significant $p < .01$; Respondent N = 338,607

Conclusion: No clear pattern emerges; sometimes positively worded items are higher and sometimes the negatively worded items are higher.

Nursing Home SOPS t-test Results

Dimension	# Items Negatively Worded	Positive Wording Score	Negative Wording Score	Difference (Positive - Negative)
1. Communication Openness	1 out of 3	**3.68**	3.63	0.05*
2. Staffing	2 out of 4	3.08	**3.15**	-0.06*
3. Compliance with Procedures	2 out of 3	**3.97**	3.47	0.50*
4. Nonpunitive Response to Mistakes	2 out of 4	**3.43**	3.28	0.15*
5. Organizational Learning	1 out of 4	3.90	**4.00**	-0.10*

* Significant p <.01; Respondent N =3,698

Conclusion: No clear pattern emerges. The positively worded items are higher for 3 of the 5 dimensions; while the negatively worded items are higher for 2 of the 5 dimensions.

Medical Office SOPS t-test Results

Dimension	# Items Negatively Worded	Positive Wording Score	Negative Wording Score	Difference (Positive - Negative)
1. Communication Openness	2 out of 4	**3.76**	3.61	0.15*
2. Overall Perceptions of Patient Safety and Quality	3 out of 4	**3.86**	3.76	0.10*
3. Owner/Managing Partner/Leadership Support for Patient Safety	3 out of 4	**3.99**	3.60	0.39*
4. Staff Training	1 out of 3	**3.76**	3.62	0.14*
5. Communication about Error	1 out of 4	**3.82**	3.47	0.35*
6. Office Processes and Standardization	2 out of 4	**3.63**	3.28	0.35*
7. Work Pressure and Pace	3 out of 4	**3.06**	3.01	0.05*

* Significant $p < .01$; Respondent N = 10,567

**Conclusion**: Positively worded items have higher scores than the negatively worded items.

Conclusions

- ## There is no clear pattern of differences for
  - Hospital and Nursing Home SOPS

Survey	% Dimensions Pos. Worded Higher	% Dimensions Neg. Worded Higher
Hospital SOPS	3/6 = 50%	3/6 = 50%
NH SOPS	3/5 = 60%	2/5 = 40%

- ## Medical Office Survey a pattern emerges
  - All 7 dimension scores were higher for the positively worded items
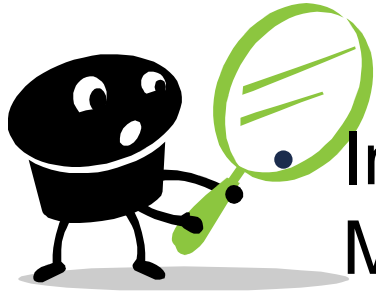
- Investigate the negatively worded items in the Medical Office Survey

- Conduct further analyses to examine if these differences exist at facility-level

- Consider a Version 2 of the surveys that replaces or drops negatively worded items

- Use results to inform development of Pharmacy Services SOPS

Any Questions?