

What's Important to Doctors and Nurses: An Attitude Survey

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Research Contributors

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- Title of project – Health Protective Textiles: Bridging the Disposable/Reusable Divide
- Multidisciplinary project – physical sciences, social sciences, engineering
- Multidisciplinary team of faculty researchers – Gang Sun (textile chemistry), Margaret Rucker (marketing and economics), Susan Kaiser (social psychology and culture), Mark Nicas (environmental health), Michael Overcash (life-cycle assessment) and Lu Wang (textile engineering)

Previous Presentations Based on Sections of the Survey

- Comparison of nurse perceptions toward vectors of transmission in 1999 (Alfrey, 2000) with data on nurse perceptions collected in 2008
- Comparison of nurse and doctor perceptions of various vectors of transmission
- Personal gown preference and reasons
- Hospital switch in types of gowns and perceived reasons for the switch
- Comparison of nurse and doctor levels of environmental concern as measured on a scale adapted from Weigel and Weigel (1978)

The Attitude Survey

Factors Affecting Opinions about the Types of Protective Gowns and Drapes that Should Be Used in the OR

- Description of the scale
- Description of the samples
- Results
- Future directions

The Scale

The attitude scale was based on previous research conducted by Alfrey (2000) and Lu (2005) as well as other articles in the literature. Respondents were asked to check the box that best described their feelings about each of thirteen variables in terms of influence on their opinions about protective clothing and drapes in the OR. The options ranged from strong influence (4) to no influence at all (1).

The Thirteen Variables in Questionnaire Order

- ✓ Inservices/Health education
- ✓ Advertising in nursing magazines
- ✓ Personal safety
- ✓ Sales reps
- ✓ Hospital protocol
- ✓ Co-workers
- ✓ Cost of the products
- ✓ Availability of the products
- ✓ Patient safety
- ✓ Environmental impact
- ✓ Odor
- ✓ Convenience
- ✓ Public image/appearance

The Samples

- A national sample of 550 doctors was obtained from a market research firm. These 550 doctors were mailed the questionnaire: 110 returned a completed survey.
- Nurses were invited to respond to an electronic copy of the questionnaire through an A.O.R.N. newsletter. A total of 540 potential respondents looked at the questionnaire and 236 completed the survey.

Results

- Demographic Data
- Attitude Data

Demographic Data

Doctors

Registered Nurses

Sex	N	%
Male	87	88.81
Female	12	12.19

Sex	N	%
Male	15	7.21
Female	189	82.79

Marital Status	N	%
Married	86	89.72
Widowed	0	0
Separated	0	0
Divorced	7	7.54
Never Married	4	4.74

Marital Status	N	%
Married	118	58.14
Widowed	8	4.41
Separated	2	0.98
Divorced	11	5.29
Never Married	21	10.17

Number of Children	N	%
0	21	21.82
1	8	8.33
2	28	28.82
3+	18	18.58

Number of Children	N	%
0	118	61.11
1	19	20.33
2	28	13.98
3+	7	3.58

State Region	N	%
Northeast	17	17.58
Midwest	27	27.79
South	18	18.58
West	27	27.79

State Region	N	%
Northeast	10	18.00
Midwest	44	20.14
South	78	36.82
West	19	8.97

Interpretation of Demographic Data

- Although the samples were drawn in different ways, the percentages of respondents from each region were almost identical
- Doctors were more likely to be married (90% vs 68%) and more likely to have children (50% vs 38%)
- The biggest difference between the two groups was in sex of respondent. About 90% of the doctors were male whereas only a little over 7% of the nurses were male. (This is consistent with national statistics but makes it difficult to statistically separate the effects of occupation and gender.)

Analysis of the Attitude Data

On average, nurses, compared to doctors, rated the variables as having more influence on their opinions.

Even though nurses' ratings were higher, the responses of the two group were highly correlated

- Pearson Correlation = .92
- Spearman Correlation = .88

Attitude Data Averages

Top Seven Factors in Order of Importance

Factors	RNs	DRs
Patient safety	3.77	3.68
My own safety	3.77	3.50
Hospital protocol	3.39	3.20
Availability	3.39	3.01
Inservices	3.37	2.74
Cost	3.28	3.25
Convenience	3.22	3.00

Attitude Data Averages

Bottom Six Factors in Order of Importance

Factors	RNs	DRs
Environmental impact	3.21	2.62
Co-workers	3.08	2.65
Odor	2.80	2.22
Sales representatives	2.69	2.08
Ads in nursing magazines	2.20	1.43
Public image	2.17	1.91

Personal Safety vs Patient Safety

- Reports that patient safety is more important or as important as personal safety are consistent with findings of Alfrey (2000).
- Other researchers have found in studying safe practices such as hand washing, personal safety seems to be more important than the safety of patients or other healthcare workers (e.g., Erasmus et al., 2009; Jang et al., 2010)

Differences and Similarities

Biggest differences

Ads in nursing magazines

2.20 (RN) vs 1.43 (DR)

Inservices

3.37 (RN) vs 2.75 (DR)

Sales representatives

2.69 (RN) vs 2.08 (DR)

Biggest similarities

Cost

3.28 (RN) vs 3.25 (DR)

Patient safety

3.77 (RN) vs 3.68 (DR)

Hospital protocol

3.39 (RN) vs 3.20 (DR)

Figure 1 Top Seven Factors

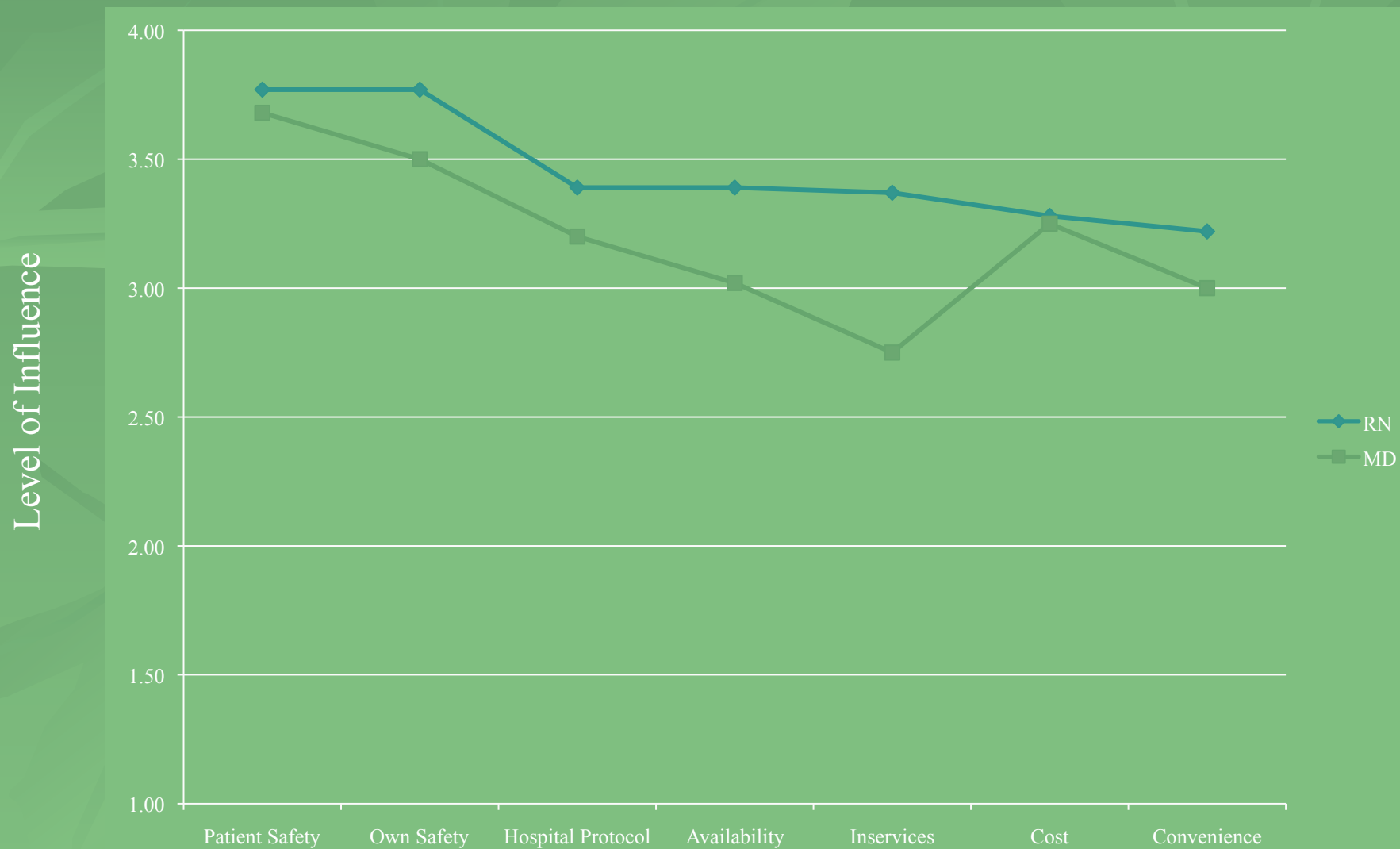
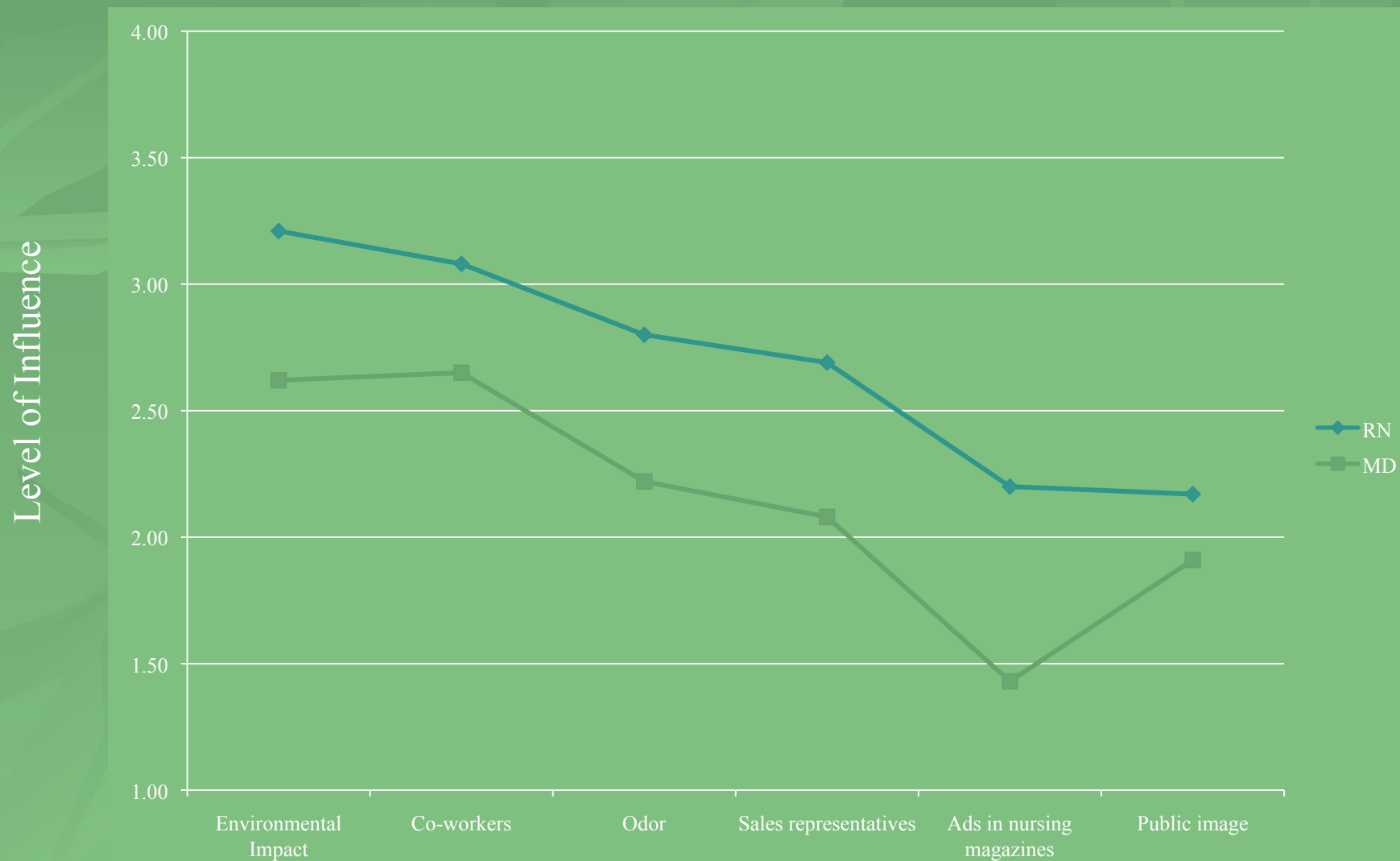


Figure 2 Bottom Six Factors



Future directions for health protective textile research

Our study looked at operating room staff and their perceptions/attitudes

Future studies should consider the various roles of medical textiles in other departments of a hospital (neonatal, geriatrics, etc.)

Another research question could be how do the attitudes compare across other occupations that utilize PPE (e.g., firefighters, police, chefs)

References

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Thank you!