A Dummies Guide to Reading a Research Article:
Reading a Research Article Can Be Fun!

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Roger and Pat
Why Did You Come?
Goals and Objectives

After participating in this workshop participants will be able to:

• Critically read research and where appropriate apply the findings in their professional practice.
• Describe what patient satisfaction means
• Name the two chaplain behaviors best related to a sense that
  – spiritual needs were met?
  – that emotional needs were met.
• To name practical ways that chaplains can use the information in this article.
The Correlates of Chaplains’ Effectiveness in Meeting the Spiritual/Religious and Emotional Needs of Patients

The Correlates of Chaplains’ Effectiveness in Meeting the Spiritual/Religious and Emotional Needs of Patients

- Correlates
- Spiritual/Religious Needs
- Emotional Needs
- Patients
Why is Reading Research Important?

• Justification
• Evidence Based
• #1 Reason
  – Research Can Help Us Improve Our Care!
Reading Articles

• The title!
• Introduction
  – Background
  – Aim or hypothesis (sets the GPS system)
• Methods
  – Tells the reader how we will get there
• Results
  – Tells the reader if we made it or what we found
• Discussion
• Your own thoughts
• Clinical Application
Kevin Flannelly Sets Us on the Road

**Study Aim:** The survey was designed to assess not only the degree to which patient’s needs were met, but, more importantly, to assess the degree to which “satisfaction” with several chaplain interventions contributed to patients’ perceptions that their spiritual/and or emotional needs were met. p. 2

Kevin Flannelly et al., 2009, p. 1002
Methods for Quantitative Research

• You measure a quantity with ______________

• Supposing we asked people in this study: “Are you at a hospital in New York City?” What answer would we get? ______________

• One of the things we will measure is satisfaction with the chaplain. The patients have the option of four ranked choices. Will answers all be the same? ______

Measures with a variety of answers are called variables.
Types of Variables

Pretest

**Pretest Question:** Label the picture as categorical, ordinal, or scale.
Statistics Interlude

Descriptive
• Easy things to count
  – Number
  – Percent
• Counting lots of possible scores, like ages of people in your hospital
  – Average (Mean)
  – Standard deviation (SD)
  – Median

Associations
Similar ratings
• Chi-square $\chi^2$
• Correlation
  – Bivariate
  – Multivariate

Early Session
Happy chaplains
Coffee
Probability for the Intuitive Person

- Probability of winning Publishers’ Clearing House; 1 in 1.7 billion or 0.00000017
- Probability of having twins 0.0035
- Probability of getting a speeding ticket this year 0.216
If the results of a statistical test are extreme, and the results have a probability of .05 or less, statisticians say the results are significant (not just the result of chance).
Which p-value is the smallest?

\[ p = \]

1. .04
2. 1.04
3. .58
4. .001

Which p-value(s) indicates that the results are not by chance? Hint: \( p < .05 \)
Methods:
Sample: Who are the folks?

- NYC
- Orthopedic patients
- Short length of stay
- Responded yes to wanting pastoral care
- Median age 67 range 22-92
- 64.5% were women
A Question

Which diagnosis is least likely to have the same responses?

1. Cancer surgery
2. Cataract surgery
Procedures: Data Collection

• Answered “yes” to “want to see a chaplain;”

• Volunteer conducted interview in a convenience sample within a day or two of being visited by chaplain; return rate < 50% (120 patients)

• Research assistant hired to conduct interview; randomized sample; 131 contacted and all but one responded (130 patients)
Dependent and Independent Variables
Outcome Measures: Survey related to Aims

Satisfaction (Outcome or Dependent Variable)

- How well did the chaplain meet your spiritual/religious needs?
  
<table>
<thead>
<tr>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very Well</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

- How well did the chaplain meet your emotional need?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very Well</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Survey on Demeanor: Independent Variable

**Yes or no questions: 1, 0**

- Introduced himself/herself to the patient
- Seemed to care about the patient
- Spent enough time with the patient
- Provided privacy so patient felt comfortable talking
- Followed up with more visits (if patient wanted)
- Left a calling card (If patient wanted)
- Sat down while talking to the patient
Satisfaction with (behavior): Independent variable

Scores 0 to 3

• Really listen to patient
• Make patient feel comfortable
• Pray with patient
• Make hospitalization easier
• Tap inner strength/resources
• Help overcome fears/concerns
• Provide referral or other help
Analysis: Focus is on Aims

Descriptive
– Mean and Median for ordinal measures
– Number and frequency for “yes” or “no” questions

Bivariate associations – correlations

Multivariate Associations - Regression
Analysis: Focus is on Aims

**Descriptive**
- Mean, Standard Deviation (SD) and Median for “Needs Met” and “Satisfaction Measures”
- Number and percent for Demeanor measures

**Associations**
- **Inter-correlations**
  - How are the Demeanor items related to each other? (Table 4)
  - How are the Satisfaction items related to each other? (Table 5)
- **Correlations**
  - Needs met with demeanor (table 6)
  - Needs met with satisfaction with chaplain’s care (Table 7)
Results: Are we there yet?

to assess the degree to which “satisfaction” with several chaplain interventions contributed to patients’ perceptions that their spiritual/and or emotional needs were met. p. 2
Skewed Data

Mean = 8.46  Median = 9  Mode = 10
Description for Dependent variable

Table 1. Mean (SD) and Median Patient Ratings of How Well Their Spiritual/Religious and Emotional Needs Were Met by the Chaplain

<table>
<thead>
<tr>
<th>Need</th>
<th>Mean</th>
<th>S.D.</th>
<th>Median</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual/Religious</td>
<td>2.77</td>
<td>0.55</td>
<td>3</td>
<td>223</td>
</tr>
<tr>
<td>Emotional</td>
<td>2.76</td>
<td>0.59</td>
<td>3</td>
<td>194</td>
</tr>
</tbody>
</table>

What was the possible range of scores?__________
Description for independent variable: Demeanor

<table>
<thead>
<tr>
<th>Measure</th>
<th>Yes</th>
<th>No</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduced himself/herself to the patient</td>
<td>99.6</td>
<td>0.4</td>
<td>238</td>
</tr>
<tr>
<td>Seemed to care about the patient</td>
<td>98.3</td>
<td>1.7</td>
<td>232</td>
</tr>
</tbody>
</table>
Description for independent variable: Satisfaction with Chaplain Care

Table 3. Mean (S.D.) and Median Patient Responses on the Seven Satisfaction Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>S.D.</th>
<th>Median</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Really listen to patient</td>
<td>2.80</td>
<td>0.60</td>
<td>3</td>
<td>216</td>
</tr>
<tr>
<td>Make patient feel comfortable</td>
<td>2.81</td>
<td>0.58</td>
<td>3</td>
<td>237</td>
</tr>
<tr>
<td>Pray with patient</td>
<td>2.64</td>
<td>0.94</td>
<td>3</td>
<td>184</td>
</tr>
</tbody>
</table>

What was the possible range of scores?___________
Correlations

Ice cream and death?

Click link and control to see Youtube.
Glimpsing how to read correlations: A negative correlation

\[ r = -0.29 \]
A positive correlation

\[ r = .65 \]
Correlations go from -1 to 1
Size depends on how close the points are to the line.

A strong correlation $r = .83$  

A weaker correlation $r = .30$
Table 5 is interesting

<table>
<thead>
<tr>
<th>Item</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Really listen to patient</td>
<td>.52†</td>
<td>.24**</td>
<td>.48†</td>
<td>.43†</td>
<td>.64†</td>
<td>.44†</td>
</tr>
<tr>
<td>2. Make comfortable</td>
<td>.41†</td>
<td>.51†</td>
<td>.42†</td>
<td></td>
<td>.78†</td>
<td>.20</td>
</tr>
<tr>
<td>3. Pray with patient</td>
<td>.15</td>
<td>.47†</td>
<td></td>
<td>.53†</td>
<td>.38†</td>
<td></td>
</tr>
<tr>
<td>4. Make hospitalization easier</td>
<td></td>
<td>.54†</td>
<td>.73†</td>
<td>.39†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Tap inner strengths</td>
<td></td>
<td></td>
<td></td>
<td>.77†</td>
<td>.65†</td>
<td></td>
</tr>
<tr>
<td>6. Help overcome fears</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.54†</td>
</tr>
<tr>
<td>7. Provide referrals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05     ** p < .01     † p < .001

What item is strongly correlated with helping the patient feel comfortable?
Model with multiple correlates

S/R needs met

Make patient feel comfortable

Help overcome fears
### Multiple Correlation Models

**Table 7. Correlations between How Well the Chaplains Met Patients’ Spiritual/Religious and Emotional Needs and Patients’ Satisfaction with Various Aspects of Chaplains’ Care**

<table>
<thead>
<tr>
<th>Item</th>
<th>Spiritual or Religious</th>
<th>Emotional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Really listen to patient</td>
<td>.34†</td>
<td>.39†</td>
</tr>
<tr>
<td>Make patient feel comfortable</td>
<td>.22**</td>
<td>.27†</td>
</tr>
<tr>
<td>Pray with patient</td>
<td>.24**</td>
<td>.34†</td>
</tr>
<tr>
<td>Make hospitalization easier</td>
<td>.24**</td>
<td>.40†</td>
</tr>
<tr>
<td>Tap inner strength/resources</td>
<td>.54†</td>
<td>.69†</td>
</tr>
<tr>
<td>Help overcome fears/concerns</td>
<td>.53†</td>
<td>.65†</td>
</tr>
<tr>
<td>Provide referral or other help</td>
<td>.25*</td>
<td>.39†</td>
</tr>
</tbody>
</table>

* *p < .05   ** *p < .01   † *p < .001
What does it mean?

Religious/Spiritual Needs
Two behaviors to cultivate:

Emotional needs
Two behaviors to cultivate:
Discussion

Strengths:

“Although patients’ spiritual needs and emotional needs are widely treated as if they are one and the same (Clark et al., 2003), the present study suggests that patients see them as being different.” (p10)

Limitations:

“Though the sample size is reasonable for these types of studies, a larger sample size would obviously be better, especially in light of the many patients who said several items did not apply to them. The sample itself is somewhat unique in that it was drawn from a fairly unique healthcare setting, i.e., a hospital that specializes in orthopedic surgery.” (p.13)

Implications

Some of these items might be a way to measure chaplains’ effectiveness. Effectiveness is related to patients’ needs.
What are your thoughts?

• Strengths

• Weaknesses

• Clinical implications