Nurses’ Communication with Type 2 Diabetes Patients in Primary Care Settings: A Focus on Health Literacy

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"... If we forge a better match between the expectations & processes of the [healthcare] system and the skills of .. [individuals], we can solve the problem of HL and reduce barriers to good health" (Rudd, 2010)
YOU SHOULD TAKE BETTER CARE OF YOUR TEETH. YOU CAN DO THIS BY BANGING ON YOUR TEETH. NO BRUSHING!!!
Medical Jargon

“No, HDL and LDL were not the robots in Star Wars.”
Objectives

- To examine nurses’ application of the interactive communication loop components, and use of jargon in providing self-care education and counseling to individuals with type 2 diabetes.

- To explore whether these aspects of nurses’ communication differ by individuals’ health literacy level.

Interactive Communication Loop

[Diagram showing the interactive communication loop as described in the text]

Schillinger et al., 2003
Why Nurses?
Participants

36 Patients

9 Nurses

Audio-recording
Patient Survey

Primary Care Network
EDMONTON NORTH

Primary Care Network
LEDUC BEAUMONT DEVON

Primary Care Network
EDMONTON SOUTHIDE
Coding and Rating

**Code 1**
- Repeating health information and instructions

**Code 2**
- Clarifying health information and instructions

**Code 3**
- Asking for understanding

**Code 4**
- Checking for understanding

**Code 5**
- Seeking patient’s perceptions

**Code 6**
- Medical Jargon

**Code 7**
- Mismatched Language

**Rating**

0 = Never | 1 = Seldom | 2 = Sometimes | 3 = Often
Characteristics of Patients

36% (N=13) of participants had inadequate Health Literacy.

Participants with inadequate HL were more likely to:

.... be of non-white ethnicity
.... to have lower educational level
.... not to have English as their first language
.... to have lower self-efficacy
.... to have a higher prevalence of almost all comorbid chronic conditions
than participants with adequate HL.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Overall (N=36)</th>
<th>Mean or N (SD or %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>58.5 (14.1)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
<td>21 (58.3)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White</td>
<td>28 (77.8)</td>
</tr>
<tr>
<td>Educational level</td>
<td>High</td>
<td>25 (69.4)</td>
</tr>
<tr>
<td>Employment status</td>
<td>unemployed</td>
<td>16 (44.4)</td>
</tr>
<tr>
<td>Income</td>
<td>&lt; $40,000</td>
<td>5 (13.9)</td>
</tr>
<tr>
<td>Diabetes duration (years)</td>
<td></td>
<td>6.8 (7.0)</td>
</tr>
<tr>
<td>A1c</td>
<td></td>
<td>8.1 (1.8)</td>
</tr>
<tr>
<td>LDL</td>
<td></td>
<td>2.3 (0.7)</td>
</tr>
<tr>
<td>SBP</td>
<td></td>
<td>135.0 (11.2)</td>
</tr>
<tr>
<td>BMI</td>
<td>Obese</td>
<td>27.0 (75.0%)</td>
</tr>
<tr>
<td>Medical History</td>
<td>Cardiac problems</td>
<td>5 (13.9)</td>
</tr>
<tr>
<td></td>
<td>Hypertension</td>
<td>21 (58.3)</td>
</tr>
<tr>
<td></td>
<td>Hyperlipidemia</td>
<td>17 (47.2)</td>
</tr>
<tr>
<td></td>
<td>Renal problems</td>
<td>3 (8.3)</td>
</tr>
<tr>
<td></td>
<td>Respiratory problems</td>
<td>8 (22.2)</td>
</tr>
<tr>
<td></td>
<td>Joint problems</td>
<td>9 (25.0)</td>
</tr>
<tr>
<td></td>
<td>Thyroid problems</td>
<td>8 (22.2)</td>
</tr>
<tr>
<td></td>
<td>Vision problems</td>
<td>8 (22.2)</td>
</tr>
<tr>
<td></td>
<td>Mental or psychological illness</td>
<td>6 (16.7)</td>
</tr>
<tr>
<td>Visit duration (minutes)</td>
<td></td>
<td>46.0 (19.0)</td>
</tr>
<tr>
<td>Visit type</td>
<td>New</td>
<td>18 (56.2%)</td>
</tr>
</tbody>
</table>

36% (N=13) of participants had inadequate Health Literacy. Participants with inadequate HL were more likely to:

.... be of non-white ethnicity
.... to have lower educational level
.... not to have English as their first language
.... to have lower self-efficacy
.... to have a higher prevalence of almost all comorbid chronic conditions
than participants with adequate HL.
Interactive Communication Loop

- **Seeking patient's perspective**
  - Never 58%
  - Seldom 31%
  - Sometimes 11%
  - Often 0%

- **Complete Interactive Communication Loop 11%**
  - **Repetitions**
  - Never 11%
  - Seldom 36%
  - Sometimes 20%
  - Often 33%

- **Clarifications**
  - Never 3%
  - Seldom 6%
  - Sometimes 33%
  - Often 58%

- **Checking for understanding**
  - Never 81%
  - Seldom 17%
  - Sometimes 3%
  - Often 0%

- **Asking for Understanding**
  - Never 42%
  - Seldom 36%
  - Sometimes 17%
  - Often 6%

- **Mismatched Language**
  - Never 19%
  - Seldom 22%
  - Sometimes 33%
  - Often 25%

- **Medical Jargon**
  - Never 31%
  - Seldom 33%
  - Sometimes 19%
  - Often 17%
The use of communication loop components and jargon by Health Literacy level

**Frequently Used**

<table>
<thead>
<tr>
<th>Component</th>
<th>Adequate HL</th>
<th>Inadequate HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetitions</td>
<td>57</td>
<td>46</td>
</tr>
<tr>
<td>Clarifications</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>Asks for understanding</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>Checks for understanding</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Seeks patient's perception</td>
<td>17</td>
<td>0</td>
</tr>
</tbody>
</table>

**Medical Jargon**

- 39
- 31

**Mismatched Language**

- 65
- 46
Conclusion

• Nurses may place high demands on patients through their communication and interaction with them.

• This highlights the need to explore the level of complexity of different components of this system and the demands it places on patients, perhaps regardless of their health literacy.
Thank you for your attention!

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