How Much do Health Literacy and Patient Activation Contribute to Older Adults Ability to Manage their Health?

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Patient Activation and Health Literacy

- Patient Activation
  - What is it?
  - How is it measured?

- How is Patient Activation related to health literacy?

- How are literacy and Activation related to health behaviors and health decision making?
Chronic Care Model puts the patient on the health care team as a partner

To be partner in care patients need to have the necessary:

- **Knowledge**
- **Skills**
- **Confidence**
The ability to measure activation is important:

- Like every other area of care--- Measurement is first step to improvement
- For targeting what information/supports patients need
- For evaluating efforts to increase activation
- For evaluating the quality of care
### Domains for Activation Measure

<table>
<thead>
<tr>
<th>Has the knowledge to:</th>
<th>...self manage</th>
<th>...collaborate with provider</th>
<th>...maintain function / prevent declines</th>
<th>...access appropriate and high quality care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Has the skills to:</td>
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<tr>
<td>Can access emotional supports to:</td>
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<tr>
<td>Believes patient is important in:</td>
<td></td>
<td></td>
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</tbody>
</table>

- **Identified by experts and consumers as a key component**
- **Identified only by experts as a key component**
- **Identified by experts as a key component and identified by consumers as a secondary component**
Used Rasch Analysis to Create PAM

- Has strong measurement properties
  - Interval level measurement
  - Unidimensional
  - Guttman-like scale
Patient Activation Measurement (PAM)
Difficulty Structure of 13 Items

4 Stages of Activation

- Does Not Yet Believe
- Have Active/Important Role
- Lack Confidence and Knowledge to Take Action
- Beginning to Take Action
- Maintaining Behaviors Over Time

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Regular exercise, low fat diet, fruits & vegetables and PAM Stages

Exercise
Low fat diet
5 fruits or vegetable
Consumeristic Behaviors and PAM Stages

- Bring Dr. Newspaper Information
- Look up Dr.'s Qualifications
- Persistence in Asking

Stage 1 (168) Stage 2 (455) Stage 3 (511) Stage 4 (316)
Consumeristic Behaviors & PAM Stages

- Bring Dr. a List of Questions
- Read about Complications

<table>
<thead>
<tr>
<th>Stage</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td>455</td>
<td></td>
</tr>
<tr>
<td>Stage 3</td>
<td>511</td>
<td></td>
</tr>
<tr>
<td>Stage 4</td>
<td>316</td>
<td></td>
</tr>
</tbody>
</table>
Longitudinal Study Findings

- Over time—Increases in Activation were followed by improvements in health behaviors
- Decreases in Activation were followed by declines in health behaviors
  - Diet
  - Exercise
  - Weight management
  - Consumeristic behaviors
How much does literacy vs patient activation explain differences in health behaviors?

**One hypothesis:**

![Diagram showing the relationship between health literacy, patient activation, and healthy behaviors.](image-url)
How much does literacy vs patient activation explain differences in health behaviors?

2\textsuperscript{nd} Hypothesis:
Examined the relative contribution of health literacy and activation to health behaviors, consumeristic behaviors, and to making Medicare decisions.

Among 65+ population (N=293)

Measured health literacy using S-TOHFLA
Health Literacy and Activation are Related, but are not the same

Correlation = .2, p < .001, r-square = .035
How Much does Patient Activation and Health Literacy Explain Behaviors?

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>Amount of variation accounted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise regularly</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>7%</td>
</tr>
<tr>
<td>Low fat diet</td>
<td>Patient Activation**</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Eat 5 fruits &amp; vegetables per day</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>11%</td>
</tr>
<tr>
<td>Know what Cholesterol level doctor wants me to have</td>
<td>Patient Activation**</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
</tr>
</tbody>
</table>

Adj for education and age, ** p < .01, *** p < .001
## How Much do Patient Activation and Health Literacy Explain Behaviors?

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>Amount of variation accounted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take meds as recommended</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Keep diary of BP readings</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>8%</td>
</tr>
<tr>
<td>Know what BP doctor wants me to have</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy</td>
</tr>
<tr>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Exercise to manage arthritis</td>
<td>Patient Activation***</td>
</tr>
<tr>
<td></td>
<td>Health Literacy*</td>
</tr>
<tr>
<td></td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>7%</td>
</tr>
</tbody>
</table>

Adj for educatin and age, ** p < .01, *** p < .001
Confidence in decision Medicare Decisions

- I prefer not to have the responsibility for making decisions about my Medicare
- When it comes to making Medicare choices, I prefer to have someone decide for me
- I have difficulty understanding the information about Medicare coverage
- I am more likely to make a wrong choice if I have lots of different options to choose from.
Below is the information about how five plans differ (in terms of member ratings and costs). Use the information in this table to pick the health plans you are most likely to enroll in.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Co-pay per office visit</th>
<th>Co-pay per prescription</th>
<th>Overall member ratings of the plan</th>
<th>Member ratings of how well doctors in the plan communicate</th>
</tr>
</thead>
</table>
| Plan C | $8                      | $8                      | 76                               | Poor
| Plan D | $10                     | $8                      | 72                               | Fair
| Plan E | $8                      | $8                      | 85                               | Good
| Plan F | $10                     | $10                     | 71                               | Excellent
| Plan G | $8                      | $8                      | 78                               | Excellent

1. Please indicate the health plan you’d be most likely to enroll in below. Put an “X” in the box next to your first choice – the plan you are most likely to pick.
   - Plan C
   - Plan D
   - Plan E
   - Plan F
   - Plan G

2. Please indicate your second choice. Put an “X” in the box next to your second choice.
   - Plan C
   - Plan D
   - Plan E
   - Plan F
   - Plan G

3. How much more do you prefer your first choice over your second choice? Please check one box below.
   - Very slightly prefer my first choice over my second choice
   - Slightly prefer my first choice over my second choice
   - Strongly prefer my first choice over my second choice
   - Very strongly prefer my first choice over my second choice
   - 1
   - 2
   - 3
   - 4
How Much Does Patient Activation and Health Literacy Explain Decision-making?

<table>
<thead>
<tr>
<th>Decisions</th>
<th>Amount of variation accounted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence in making Medicare choices</td>
<td>Patient Activation*** Health Literacy***</td>
</tr>
<tr>
<td></td>
<td>5% 9%</td>
</tr>
<tr>
<td>Can use comparative information to make Medicare choices</td>
<td>Patient Activation Health Literacy***</td>
</tr>
<tr>
<td></td>
<td>7%</td>
</tr>
</tbody>
</table>

Adj for education and age, ** p < .01, *** p < .001
Consumeristic behaviors, literacy and activation

- Seeking out health information
- Bring a list of questions to doctor visit
- Read about side effects with new drug
- Is persistent in asking questions
- Find out qualifications when choosing doctor

- Literacy accounts 8% of variation
- Activation accounts for 17% of variation
Literacy vs Patient Activation

- For most of the behaviors, activation plays an equal or larger role than literacy.
- Taking on and maintaining new behaviors requires self-efficacy as well as knowledge.
- Taking on new behaviors also requires a belief that this is one’s “job” to manage health.
- Where information is the primary requirement (e.g. making Medicare choices), literacy plays a larger role.
2nd Hypothesis:

Health Literacy

Patient Activation

Healthy Behaviors
Differences

- Health literacy is necessary for understanding written information and finding and using information in choice.
- Becoming activated is a process of gaining knowledge, skill, and confidence.
- It is understanding that one must take charge of their health and that their actions will determine their health outcomes.
- To some extent becoming activated is dependent on having some level of basic literacy skills, but it is possible to gain knowledge and through means other than written materials.
Implications: Tailoring based on activation and literacy

- In activation stage 1 and 2 patients need to understand that their role in important in their outcomes. They also need to understand the basics of their condition and their treatment options.
- In stage 3 and 4 patients need to gain skills in acquiring and maintaining behaviors.
- At all stages information that is appropriate to their literacy level will help to support increasing activation.
Measuring both literacy and activation are important
tailor on literacy
Activation can be used for tailoring, but it is also a metric that will assess if the patient is making progress in becoming a competent self manager (a diagnostic tool as well as an evaluation tool).