

The Patient Activation Measure (PAM): Its Relation to Employee Characteristics and Further Validation

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Funder: Centers for Disease Control and Prevention, Grant # DP000104-01

AcademyHealth
June 5, 2007

Overview of Presentation

1. What is the problem we are trying to solve?
2. What is the PAM?
3. Source of the data
4. Results
 - Psychometric validation
 - PAM and employee characteristics
 - Further construct validation
5. Interpreting PAM scores
6. Haunting questions

What is the Problem We Are Trying to Solve?

- Chronic illness prevalence is increasing
- Chronic illness management depends on self-management
- Health care, and its measurement tools, are built for acute problems
- What are the monitoring tools appropriate for chronic care?

What is the PAM?

- Patient/person self-report
- 13 item scale (disagree strongly...agree strongly)
- Success at chronic illness management
 - knowledge, skill, confidence in self-management
- Rasch psychometric model (underlying interval measurement)

What is the PAM?

Selected Items

1. “When all is said and done, I am the person who is responsible for managing my health condition.”
4. “I know what each of my prescribed medications does.”
9. “I know how to prevent further problems with my health condition.”
13. “I am confident that I can maintain lifestyle changes, like diet and exercise, even during times of stress.”

Today's Data

- Baseline survey data from RCT of 2 worksite health promotion programs:
 - Population, plus traditional coaching for high risk
 - Population, plus activated consumer coaching for high risk
- Employees of 2 companies
 - Airline reservationists (n = 312)
 - Health care workers (n = 313)
- Spring 2005

Psychometric Validation

- Adjusted mean scores were higher than national sample (72.2, 65.1 vs. 61.9)
- Person and item reliability statistics comparable to national sample
- Raw scores for employees had wider range than national sample
 - At the low end (35.2, 32.7 vs. 38.3)
 - At the high end (63.9, 65.6 vs. 52.6)

PAM and Employee Characteristics: Independent Variables

- Demographics: age, gender, race, education, income, marital status
- Work Environment: company, job category, job satisfaction, relative hours worked, presenteeism
- Health Risks: BMI, smoking, composite risk score
- Health Status: SF-12 components (physical, mental), general health status, one or more of 10 chronic conditions

Multivariate analysis (1 of 2)

$$R^2 = .26$$

- Significantly related to:
 - Demographics: gender
 - Work Environment: job satisfaction (or presenteeism)
 - Health Risks: body mass index
 - Health Status:
 - Physical component summary (SF-12)
 - Mental component summary (SF-12)

PAM and Employee Characteristics

Multivariate analysis (2 of 2)

- Not related to:
 - Demographics (age, race, education, family income, marital status)
 - Some work environment (company, job category, relative hours worked)
 - Some health risks (composite risk score, smoking status)
 - Some health status (general health status, chronic disease)
- Questionable:
 - Presenteeism (20% missing cases)

Validation of PAM (1 of 2) (controlling for age, gender, race)

- Significantly related to:
 - Readiness to change to an overall more healthy lifestyle
 - Healthy behaviors:
 - Aerobic exercise 4+ days
 - Breakfast every day
 - 3-5 fruits and vegetables
 - Personal physician
- But not related to:
 - Health or fitness classes
 - Member of health club
 - Enrollment or retention in coaching

Validation of PAM (2 of 2)

- Significantly related to health information seeking:
 - Recognize reliable health websites
 - Use health resource book
 - Subscribe to health magazine
 - Know where to find comparative hospital information
 - Know how available health plans compare
- But not related to:
 - Use Internet for health information

**What is a meaningful
difference in PAM scores?**

Meaningful Differences in PAM Scores

| Readiness to Change | Mean Adjusted PAM Score |
|---------------------|-------------------------|
| No interest | 62.4 |
| In 6 months | 61.2 |
| This month | 62.4 |
| Just started | 70.1 |
| Already do | 73.9 |

Meaningful Differences in PAM Scores

| Variable | MEAN PAM | MEAN PAM | DIFF |
|--|----------|----------|------|
| Exercise (0-3, 4+) | 68.2 | 73.3 | 5.1 |
| Breakfast (<7, 7) | 66.3 | 72.0 | 5.7 |
| Fruits and vegetables (<=2, >2) | 64.6 | 70.0 | 5.4 |
| Recognize website (disagree, agree) | 66.2 | 71.0 | 4.8 |
| Use health resource book (no, yes) | 66.8 | 70.5 | 3.7 |
| Subscribe to health magazine (no, yes) | 67.4 | 72.3 | 4.9 |
| Find hospital quality info (disagree, agree) | 67.1 | 72.1 | 5.0 |

Summary Findings

- Confirmation:
 - Negative relation to health status
 - Positive relation to health information seeking
- New findings:
 - Positive relation to BMI
 - Positive relation to job satisfaction
 - More related to personal activities than group activities
 - Five point spread on positive vs. negative behaviors

Limitations

- 2 large employers
- English speaking
- Not poor
- Insured
- Relatively small samples
- Cross-sectional

Haunting Questions

- How does the PAM relate to health status?
- How 'global' is patient activation?
- Is PAM responsive to interventions? If so, which?
- If you saw a person's PAM score, would you know what intervention was appropriate?
- Can we use PAM as a measure of patient performance?