Spring 5-10-2017

Patient Activation Among Diverse Populations: A Systematic Review

Megan Kenney
Chapman University, kenne200@mail.chapman.edu

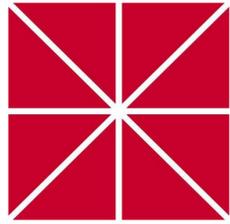Follow this and additional works at: http://digitalcommons.chapman.edu/cusrd_abstracts

Part of the Community Health and Preventive Medicine Commons, Preventive Medicine Commons, and the Public Health Education and Promotion Commons

Patient Activation Among Diverse Populations: A Systematic Review

Megan M. Kenney

Introduction

- In 2012 around 50% of the adult population (117 million people) in the US suffered from one or more chronic health conditions.[1] Chronic diseases now account for seven of the top ten causes of mortality.[2]
- Preventative practices encourage the consumer to manage their own health rather than rely on external supports such as medication, clinicians, or other forms of treatment.
- **Patient activation is defined as an individual's knowledge, skill, and confidence in managing his or her own health and health care.[3]**

Background

The Patient Activation Measure (PAM)

- Hibbard and colleagues (2004) developed a 22-item quantitative measure of patient activation called the Patient Activation Measure (PAM).[3]
- A Rasch model was used to construct an interval-level, unidimensional, Guttman-like scale from the rated responses of statements regarding a patient's knowledge, skill, and confidence.[3]
- A US national probability sample (n=1,515) found the 22-item PAM to be a valid and reliable instrument for measuring patient activation.[3]
- In 2005, Hibbard and colleagues created a shortened form of the PAM consisting of only 13 items (shown in Table 1) in an effort to make administration easier in clinical settings; this version of the PAM was found to be valid and reliable in the same sample.[4]
- The PAM produces a score ranging from 0 (no activation) to 100 (high activation) falling within one of the four levels shown in Figure 1.

Effect of Patient Activation on Outcomes

- Patients with higher levels of activation were less likely to smoke or have a high BMI, and more likely to have received preventative care.[6]
- Higher levels of patient activation have also been associated with regular exercise, following a low fat diet, increased consumption of fruits and vegetables, and readiness to change.[3, 7]

Effect of Patient Activation on Cost

- Consumers at higher patient activation levels of three and four had projected medical costs (inpatient and outpatient care, emergency department, and pharmacy costs) 8% lower than those at level one and 13% lower than those at level two.[8]

Patient Activation Interventions (PAIs)

- The goal of a successful PAI is to increase a patient's knowledge, skill, and confidence in healthcare management.
- Research showed that tailoring PAIs to subjects' baseline patient activation level produced higher gains in activation scores, along with improved clinical indicators and decline in inpatient and emergency department use.[9]
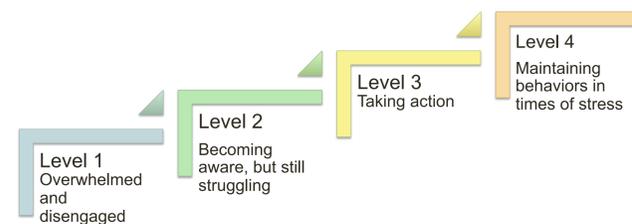
Figure 1. The four levels of patient activation[5]

- Level 4: Maintaining behaviors in times of stress
- Level 3: Taking action
- Level 2: Becoming aware, but still struggling
- Level 1: Overwhelmed and disengaged

Purpose

➢ The purpose of this review was to present the current research regarding patient activation among diverse populations.

Methods

- A total of 62 articles were used in this review (54 primary research articles, six retrospective analyses, and two systematic reviews).
- Articles were obtained using the EBSCO search engine through the Leatherby Libraries at Chapman University.
- A preliminary search using the keywords "patient activation" uncovered 32 articles from the EBSCO search engine.
- A secondary, internal search was performed in which the references of the 32 preliminary articles were searched using the keyword "activation;" this search produced 30 additional articles.
- Only articles published within the last ten years (2007 to 2017) were included to ensure the most current data was examined (two landmark studies from 2004 and 2005 were included as well).
- All articles were required to meet the relevance of the paper: an overview of patient activation among diverse populations.
- Utilization of a unified measurement system, the PAM, was required of all primary research articles.
- Country of publication, age, and population were not restricted.

Table 1. The 13-item Patient Activation Measure[4]

The 13-Item Patient Activation Measure

1	When all is said and done, I am the person who is responsible for managing my health condition
2	Taking an active role in my own health care is the most important factor in determining my health and ability to function
3	I am confident that I can take actions that will help prevent or minimize some symptoms or problems associated with my health condition
4	I know what each of my prescribed medications do
5	I am confident that I can tell when I need to go get medical care and when I can handle a health problem myself
6	I am confident I can tell my health care provider concerns I have even when he or she does not ask
7	I am confident that I can follow through on medical treatments I need to do at home
8	I understand the nature and causes of my health condition(s)
9	I know the different medical treatment options available for my health condition
10	I have been able to maintain the lifestyle changes for my health that I have made
11	I know how to prevent further problems with my health condition
12	I am confident I can figure out solutions when new situations or problems arise with my health condition
13	I am confident that I can maintain lifestyle changes like diet and exercise even during times of stress

Results

Table 2. A summary of the key results regarding patient activation (PA)

Population	High Levels of PA are associated with:	Low Levels of PA are associated with:
Normal	Higher education, greater family income, being married, higher-ranking professional jobs, greater job satisfaction; the distribution of patient activation levels among US adults is shown to the right in Figure 2.	Lower levels of education, lower family income
Low SES/ Minorities	Non-Hispanic white populations	African American populations, patients of health centers, Spanish-speaking populations
Older Adults	Higher functional status, health care quality, adherence to select health behaviors	Older age, decreased health-related quality of life, difficulties with ADLs and IADLs, depression
Chronic Conditions	Self-management services, self-management behavior, medication adherence, satisfaction of care, quality of life, functional status, decreased emergency department visits; Self-management theory of "being in control"	More frequent visits at primary care settings; Self-management theory of "compliance"
Obese	Increased fruit and vegetable intake	*More research needs to be conducted in obese populations
Diabetic	Decreased likelihood of progressing to pre-diabetes or diabetes; Better systolic blood pressure, diastolic blood pressure, HDL, LDL, and TG at three years follow-up; HbA1c and LDL testing, and HbA1c control at 2 years follow-up; More likely to perform feet checks, receive eye exams, and exercise regularly; Less difficulty in managing diabetes	Increased likelihood of progressing to pre-diabetes or diabetes; Increased hospitalization rates
HIV-Infected	Increased viral suppression, greater antiretroviral adherence, increased odds of having a CD4 cell count greater than 20 cells/ml	Lower levels of educational attainment
Mental Health	Reduction in PHQ-9 score, increased remission, better response to treatment one year later	Higher PHQ-9 scores, decreased rates of remission
Neurological	Self-efficacy and quality of life	Lower levels of educational attainment, non-employment
Orthopedic Surgical	Greater pain relief, satisfaction, and improved activity after surgery; Increased participation and engagement in physical therapy post surgery	Low self-efficacy, hope, and external locus of control
Hospitalized	Planned hospital admissions	Unplanned hospital admissions; 1.3 -1.4 times more likely to have visited the emergency department; 1.8 - 2.3 times increased likelihood of hospital reutilization
Clinicians	Utilizing self-management support tools and strategies to change patient behavior; Female primary care providers	Decreased likelihood of indicating beliefs about the importance of patient knowledge and involvement in his/her care; Male primary care providers
Parents	Younger parents, those with higher individual PAM, and those with children who had been sick longer	Lower individual PAM scores

Figure 2. Distribution of patient activation levels among US adults[10]

- Level 1: 7%
- Level 2: 15%
- Level 3: 37%
- Level 4: 41%

Discussion

- Patient Activation was shown to be significantly associated with a wide range of positive health outcomes.
- Higher patient activation scores were associated with lower healthcare costs, beneficial health behaviors, use of self-management tools, and improved confidence.
- More research should be conducted on patient activation to bolster its reliability and validity as a means to improved health outcomes and decreased healthcare costs.

Conclusion

- The goal of this article was to organize the findings regarding patient activation into respective populations.
- Patient activation seeks to flip the paradigm of healthcare by empowering the consumer and removing unnecessary reliance on external medical services.
- Patient activation holds potential in creating a more sustainable healthcare system in which patients actively manage and optimize their health.
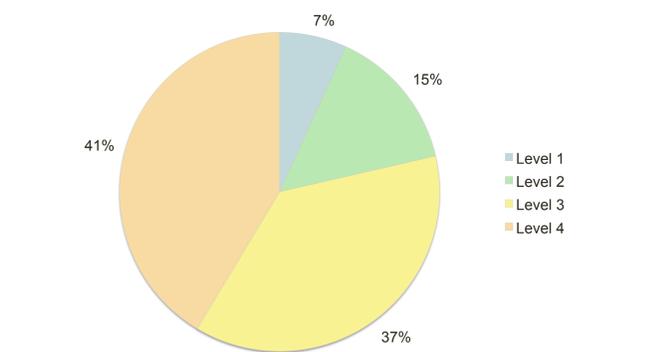
References

1. Ward, B., Schiller, J., & Goodman, R. (2014). Multiple chronic conditions among US adults: A 2012 update. *Prev Chronic Dis., 11*
2. Death and mortality. (2017). Retrieved from https://www.cdc.gov/nchs/fastats/deaths.htm
3. Hibbard, J. H., Stockard, J., Mahoney, E. R., & Tusler, M. (2004). *Development of the patient activation measure (PAM): Conceptualizing and measuring activation in patients and consumers* Retrieved from http://libproxy.chapman.edu/login?url=http://search.ebscohost.com.libproxy.chapman.edu/login.aspx?direct=true&AuthType=ip,uid&db=edswsc&AN=000226710600017&site=eds-live
4. Hibbard, J. H., Mahoney, E. R., Stockard, J., & Tusler, M. (2005). Development and testing of a short form of the patient activation measure. *Health Services Research, 40*(6), 1918-1930. Retrieved from http://libproxy.chapman.edu/login?url=http://search.ebscohost.com.libproxy.chapman.edu/login.aspx?direct=true&AuthType=ip,uid&db=rzh&AN=106002926&site=eds-live
5. Insignia Health ®. 2015. http://www.insigniahealth.com/news/2015/the-patient-activation-measure-and-acos
6. Greene, J., & Hibbard, J. H. (2012). *Why does patient activation matter? an examination of the relationships between patient activation and health-related outcomes* Retrieved from http://libproxy.chapman.edu/login?url=http://search.ebscohost.com.libproxy.chapman.edu/login.aspx?direct=true&AuthType=ip,uid&db=edswsc&AN=000302869300010&site=eds-live
7. Fowles, J. B., Terry, P., Xi, M., Hibbard, J., Bloom, C. T., & Harvey, L. (2009). Measuring self-management of patients' and employees' health: Further validation of the patient activation measure (PAM) based on its relation to employee characteristics. *Patient Education & Counseling, 77*(1), 116-122. doi:10.1016/j.pec.2009.02.018
8. Greene, J., Hibbard, J. H., Sacks, R., Overton, V., & Parrotta, C. D. (2015). When patient activation levels change, health outcomes and costs change, too. *Health Affairs (Project Hope), 34*(3), 431-437. doi:10.1377/hlthaff.2014.0452
9. Hibbard, J. H., Greene, J., & Tusler, M. (2009). *Improving the outcomes of disease management by tailoring care to the patient's level of activation* Retrieved from http://libproxy.chapman.edu/login?url=http://search.ebscohost.com.libproxy.chapman.edu/login.aspx?direct=true&AuthType=ip,uid&db=edswsc&AN=000267292600003&site=eds-live
10. Hibbard, J. H., & Cunningham, P. J. (2008). How engaged are consumers in their health and health care, and why does it matter? *Research Brief*, (8), 1-9. Retrieved from http://libproxy.chapman.edu/login?url=http://search.ebscohost.com.libproxy.chapman.edu/login.aspx?direct=true&AuthType=ip,uid&db=cmedm&AN=18946947&site=eds-live