

The relationship between health literacy and patient activation or quality of life among frequent users of primary care

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BACKGROUND

- Frequent users of primary care services form a unique population that deserves special attention due to their higher costs for healthcare systems and worse health outcomes¹.
- The implementation of the Chronic Care Model implies an understanding of the factors associated with patient activation particularly in this population². Health literacy could be such a factor, but the relationship between health literacy and patient activation remains to be explored.
- Quality of life is an important health outcome. Health literacy has been linked to several health outcomes, but the link between health literacy and quality of life is unclear for frequent users of primary care services³⁻⁴.

OBJECTIVE

- To examine the relationship between health literacy and patient activation or quality of life, while controlling for potential confounders, in a population of frequent users of primary care services.

METHODS

- Descriptive study: Secondary analysis of the baseline data from a sample of frequent users of primary care services in the V1sages project (case management and self-management support for frequent users of hospital services in primary care)⁵.
- Recruitment through four (4) Family Medicine Groups (FMG) in the Saguenay-Lac-Saint-Jean region based on a mixed case-finding approach (electronic list of frequent users and opinion of the primary care physician).
- Participants were adult patients with chronic diseases, considered frequent users of emergency room services and/or hospitalization services.
- Measures:
 - Health literacy was measured with the Newest Vital Sign (NVS)⁶.
 - Patient activation was measured with the Patient Activation Measure-13 (PAM-13)².
 - Quality of life was measured with the Short Form of the Health Survey version 2: 12 items measuring physical and mental health (SF-12V2)⁷.
 - Potential confounders (age, sex, education, and family income) were evaluated with a sociodemographic questionnaire.
 - Multimorbidity was measured using the Disease Burden Morbidity Assessment (DBMA) by self-report⁸⁻⁹.
 - Mental health was assessed using the Hospital Anxiety and Depression Scale (HADS)¹⁰⁻¹¹.
- Analysis: The association between health literacy (independent variable) and patient activation or quality of life (dependent variables) were examined in bivariate and multivariate analysis.
- Ethics approval for the V1sages study was obtained by the ethics committee of the Centre de santé et des services sociaux de Chicoutimi.

RESULTS

Table 1. Characteristics of the sample

Characteristic	Participants n=257
Mean (SD) age, years	59.9 (13.4)
NVS, %	
NVS < 4	67.2
NVS ≥	32.8
PAM-13, %	
Level 1	16.7
Level 2	20.6
Level 3	32.5
Level 4	30.2
SF-12v2, mean (SD)	
Physical component	37.3 (11.7)
Mental component	44.3 (11.7)
Male, %	41.6
Education, %	
< 8 y	14.4
8 to 12 y	49.4
College	20.2
University	11.3
Professional/trade school	4.7
Household income in Canadian dollars, %	
< \$10,000	10.4
\$10,000-29,999	32.6
\$30,000-\$49,000	30.7
≥ \$50,000	26.3
Multimorbidity, mean (SD)	
DBMA	13.4 (8.5)
Mental health, %	
HADS < 16	65.2
HADS ≥ 16	34.8

*Level 1 : low patient activation – Level 4 : high patient activation

In bivariate analyses, health literacy and patient activation as well as health literacy and quality of life were not associated. Multivariate analyses were not performed.

Table 2. Results of bivariate analyses

	NVS	
	Correlation coefficient	p value
SF-12v2		
Physical component	0.093	0.102
Mental component	0.083	0.145
PAM-13	0.081	0.124

STRENGTHS

- First study to examine health literacy and patient activation or quality of life among frequent users of services in primary care Family Medicine Groups.

LIMITS

- Secondary analysis
- Descriptive transversal design

CONCLUSION

- This study suggests that there is no relationship between health literacy and patient activation or quality of life among frequent users of primary care services.

ACKNOWLEDGEMENTS

- We would like to thank all clinicians and patients who participated in this research. Special thanks go to my directors for their precious support.

REFERENCES

- Althaus, F., et al. Interventions to improve management of frequent users of emergency departments: a systematic review. *Annals of emergency medicine*. 2011; 58(1):52 e1-42.
- Hibbard, J., et al., Development of the patient activation measure (PAM): conceptualizing and measuring activation in patients and consumers. *HSR*. 2004; 39(4):1005-1026.
- Wang, C., et al., Health literacy and ethnic disparities in health-related quality of life among rural women: results from a Chinese rural minority area. *Health and quality of life outcomes*. 2013; 11:153.
- Hung, D., et al., The chronic care model and relationship to patient health status and related quality of life. *Am J Prev Med*. 2008; 35(5s).
- Chouinard, M.-C., Hudon, C. et al., Case management and self-management support for frequent users with chronic disease in primary care: a pragmatic randomized controlled trial. *BMC Health Services Research*. 2013; 13:49.
- Weiss, B.D., et al., Quick assessment of literacy in primary care: the newest vital sign. *Ann Fam Med*. 2005; 3(6): 514-522.
- Ware, J. et al., A 12-item Short Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Medical care*. 1996; 34(3): 220-233.
- Bayliss EA, Ellis JL, Steiner JF. Subjective assessments of comorbidity correlate with quality of life health outcomes: Initial validation of a comorbidity assessment instrument. *Health Qual Life Outcomes*. 2005; 3:51.
- Poitras M-E, Fortin M, Hudon C, Haggerty J, Almairal J. Validation of the disease burden morbidity assessment by self-report in a French-speaking population. *BMC Health Serv Res*. 2012; 12:35.
- Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand*. 1983; 67(6):361-370.
- Roberge P, Dore I, Menear M, et al. A psychometric evaluation of the French Canadian version of the Hospital Anxiety and Depression Scale in a large primary care population. *J Affect Disord*. 2013; 147:171-179.

