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Exploring perceived control and self-rated health in re-admissions among younger adults: A retrospective study

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ABSTRACT

Objective: Although health promotion calls for patient empowerment, it is not integrated in reducing re-admissions. This study examines the link among patient perceived control, self-rated health and fewer hospital re-admissions.
Methods: An empirical explorative retrospective cross-sectional study with 208 respondents aged 40–65 with poor health and identical health plans. All measures hold good psychometric properties.
Results: Self-rated health was strongly related to fewer re-admissions. Perceived control moderated the relationship between self-rated health and fewer re-admissions. Perceived control and self-rated health, together, contributed 5.2% to the variance in re-admissions.
Conclusion: Perceived control and perceived health status each explained a different share of the variance of re-admissions. Together, these perceptions reduced re-admissions by .40. Patient-clinician communication upon discharge may be a new direction to reduce re-admissions, improve delivery of care and promote health.
Practice implications: To reduce re-admissions, managements need to invest in restructuring the patient discharge process. A physician-patient dialogue shaping patient perceptions about their health status, perceived room for health improvement, and available internal and external resources may make a difference. Findings stress the need to allocate more time and resources for discharge communication processes and for physician training on psycho-social skills that may empower patients upon discharge.

1. Introduction

Health systems and physicians increasingly aim to reduce re-admissions. Re-admissions are not profitable to hospitals and leave patients feeling lost and confused [1]. Hospitalizations and re-admissions account for nearly one third of the total $2 trillion spent annually on U.S. hospitalizations adversely impact the economy by affecting budget allocation and higher costs to payers and providers [2]. While adults in the 65–85 age group may be re-admitted due to acute changes in their health conditions (i.e., pneumonia, septicemia, cardiac dysrhythmias), younger adults, in the 40–64 age group, are re-admitted consequent to health deterioration, mostly due to a poor lifestyle [3–6].

The 2013 report of the Agency for Healthcare Research and Quality stated that between 1997 and 2010 the rate of hospitalizations for people in the 40–64 age group increased by 164 percent [7]. Furthermore, about 25% of those hospitalized were re-admitted within 30 days post discharge and 30% were readmitted within 60–90 days post discharge [6].

Although re-admission rates and mortality rates were weakly correlated, frequent re-admissions expose patients to massive, sometimes deadly, infections [7]. In fact, a majority of readmissions are for reasons other than the original conditions for hospitalization [8].

Health systems around the globe implement strategies to reduce re-admissions. These are: the optimization of evidence based drugs, device therapies addressing causes of HF, treating comorbidities and improving management of care [9]. These therapies, however, may be limited with chronically ill patients due to complex drug regimens, multiple concurrent diagnoses and resulting poly-pharmacy [1]. The Medicare Payment Advisory Committee [10] proposed additional strategies to decrease re-admissions. These were: discharge planning, efficiency measures for readmission and public reporting and payment reforms. While these strategies may reduce re-admissions, they do not necessarily promote health.

Health promotion is one of the innovations of public health at the end of the 20th century. The participation of patients in

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support groups online endorses patients' empowerment [11]. Patient empowerment was presented under the Ottawa Charter in 1986 as the 'genetic code' of the movement [12]. Health promotion enables people to improve their health by gaining control over their health determinants through patient empowerment [12]. The Ottawa Charter [12] presented three components to empowerment: a recognition of biological, physical and also social features as affecting health; an objective of leading an active productive life and; an enabling process of dialectic relationship.

The theoretical anchor of empowerment comprises two components [13]. The first, *opportunity* refers to acquiring knowledge and skills. The second, *structure of power* refers to the mobilization of resources, information, and support from one's position in the organization [14–18]. It stresses power sharing between professionals and patients through greater access to information, higher patients' literacy and higher patient involvement in decision making [14,19].

Patient empowerment leads to better patient-provider communication; higher patient involvement in decision making; greater adherence to medical advice; fewer complaints; fewer malpractice claims and; higher health promotion [14]. Empowered patients understand their health status; feel able to participate in decision-making; understand the need to make changes in their lifestyle; take responsibility for their health and actively seek care [20,21].

Empowerment was not yet tested in the context of hospitalizations. This study focuses on patient empowerment and hospital re-admissions.

The heart of the empowerment process, both theoretically and under the Ottawa Charter is the respect of patients as active participants in making healthy choices. Since there are barriers to healthy choices within individuals and in their environment, empowerment works on improving patient capacities. To be empowered, patient must develop an experiential learning style by which different people learn in different ways and interpret and reframe the same situation differently [22–24]. The interpretation of situations, anchored in social learning theory, is based on people's cross-situational perception called locus of control (LOC) [25].

LOC relates to a general expectancy about whether outcomes are controlled by one's behavior or by external forces. People are classified along a continuum of perceived control that ranges from internal to external locus of control [24–26]. People with a strong internal locus of control (ILOC) believe that success or failure is due to their own efforts and therefore, support self- directed actions [27]. Externals believe that reinforcements are controlled by luck, chance, or powerful others [28].

Traditionally, ILOC reflected a personal mastery [26] exhibited by patient information-seeking, alertness and decision making. These behaviors were attributed to people with ILOC who actively relied on internal resources to deal with difficult circumstances. In 2007, however, the concept of ILOC was extended from a personality trait to one's tenacity to use both internal and external resources (i.e. knowledge, experts, community) in order to deal with challenging circumstances [29]. People who were guided to assertively identify and use external resources in their environment scored higher on ILOC. Thus, ILOC is modifiable [29,30]. It may be gained through better education, a stronger belief in internal health control and the efficacy of treatment [30]. The enhancement of locus of control was presented as an empowering psychosocial-based intervention that improves health outcomes [30].

1.1. ILOC and Health

Previous studies pointed towards ILOC as related to overcoming health-damaging behaviors and to preventing health problems [31–34]. ILOC was related to greater adherence to treatments regimens [35]. ILOC was also related to a lower cumulative burden of diseases, better reported health status, less pain, better functioning, less visits to general practitioners and lower costs to the respondent and the health system [36,37]. Furthermore, coronary patients who returned to work had stronger ILOC than chronically ill patients who did not return to work [38].

Patients' perception of controllability of their illness powerfully discriminated depressed from non-depressed psychotic patients. Depressed patients accepted their diagnosis and reported a lower perceived control over illness [39]. Last, recently, ILOC was related to higher patient-physician trust which is linked to higher adherence [40]. Another perception related to patient empowerment that was found to improve health outcomes is self-rated health (SRH) [41].

1.1.1. SRH and health promotion

SRH is a one's subjective perception of one's health status. It was found to ultimately affect whether one stays healthy or becomes ill [41–44]. SRH was related to more preventive health behaviors, less risky behaviors and less abnormal illness behaviors [45]. Older adults with poor health, with a stable or improved SRH, had a more physically and socially active lifestyle leading to a higher survival rate [46,47]. SRH was associated with a higher physical activity, regardless of the number of diseases with which one coped [48]. In some cases SRH even affected short term mortality [49–53]. Interestingly, the link between SRH and health behaviors exists regardless of the truth of the perception [49,50,54]. SRH has often been associated with education and optimism. Positive perceptions of one's health status in light of indicators of poor 'objective' health, was related to less depression and greater social support [55].

Despite known positive effects of ILOC and SRH on health outcomes [30–55], to date, the effects of ILOC and SRH on patient re-admissions were not tested. The relationship between SRH and ILOC, which may lead to different trajectories of future health outcomes among adults with initially poor health [52], is yet to be tested. Does higher ILOC predict higher SRH and better health outcomes? Does optimism reflected by a positive SRH in light of indicators of poor 'objective' health, leads to greater ILOC? This study explored the relationship between ILOC and SRH and the potential effect of ILOC, and good SRH on fewer re-admissions among younger adults with objective poor health.

The contribution of this pioneer study is threefold. First, it explores ILOC and SRH in reducing re-admissions among young adults with poor health. This enables us to deduce means for public health promotion based on relationships among variables that promote health among patients with poor health. Second, this study tests the relationship between ILOC and SRH. Last, this study tests ILOC as a moderator of the relationship between the SRH and

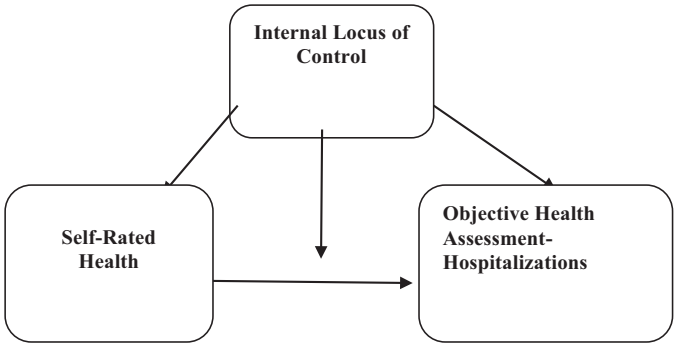

Fig. 1. Study model: locus of control, SRH and re-admissions.