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Patient Education and Counseling 57 (2005) 39–45

Patient Education and Counseling

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Variation in perceived competence, glycemic control, and patient satisfaction: relationship to autonomy support from physicians

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Received 18 September 2003; received in revised form 3 April 2004; accepted 14 April 2004

Abstract

There is considerable variation in care provided to patients with diabetes related to metabolic control, preventive services, and degree of patient-centered support. This study evaluates the relation of self-determination theory (SDT) constructs of clinician autonomy support, and patient competence to glycemic control, depressive symptoms, and patient satisfaction from baseline surveys of 634 patients of 31 Colorado primary care physicians participating in a program to improve diabetes care.

Spearman correlations of autonomy support from one's clinician with patient competence, HbA1c, depressive symptoms and satisfaction were significant ($r = -0.11$ to 0.55, $P < 0.05$). Structural equation modeling demonstrated that autonomy support was significantly related to perceived competence, depressive symptoms, patient satisfaction, and indirectly to glycemic control. Perceived competence was significantly related to depressive symptoms, patient satisfaction and glycemic control. Further, the motivation constructs from SDT accounted for 5% of the variance in glycemic control, 8% of the variance in depression, and 42% of the variance in patient satisfaction.

Quality improvement efforts need to pay greater attention to patient competence, satisfaction, and depression, in addition to glycemic control. Clinician autonomy support was found to be reliably measured and moderately correlated with psychosocial and biologic outcomes related to diabetes self-management. These results suggest training clinicians to increase their support of patient autonomy may be one important avenue to improve diabetes outcomes.

Keywords: Diabetes self-management; Autonomy support; Social support; Self-efficacy; Patient satisfaction; Glycemic control

1. Introduction

Outcomes for treatment of patients with diabetes need to include patient-centered measures such as quality of life as well as physiologic measures in order to meet patients' biopsychosocial needs [1,2]. Self-determination theory (SDT) is a theory of human motivation that provides a framework to understand how practitioners, researchers, and policy makers can improve patients' biological and psychosocial outcomes. SDT researchers assume that human beings are innately oriented toward growth and health, and that humans are more motivated when they feel more autonomous, competent, and related to important others [3,4].

SDT distinguishes between autonomous and controlled motivation, and between perceived competence and perceived incompetence. Autonomy involves experiencing a sense of choice and volition when one behaves in a way that is congruent with one's deeply held values. Controlled motivation, in contrast, involves people behaving because of a demand or threat from an external agent (e.g., family member), or from a rigidly held belief that they must behave to avoid guilt or shame. People with diabetes perceive themselves to be competent when they feel personally able to control important outcomes such as maintaining their blood glucose levels in a healthy range. They perceive themselves to be incompetent when they feel they are unable to keep their blood glucose in a healthy range. Locus of control [5], on the other hand, relates to whether people believe there is a contingency between the diabetes control behaviors (checking blood glucose, physical activity, following a diabetes diet, and taking medications) and the outcome of keeping their blood glucose in a healthy range. People have an internal locus of control if they believe that can control the outcome with behavior, while people with an external locus of control

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doi:10.1016/j.pec.2004.04.001

believe that they cannot control the their blood sugar with behavior. Perceived competence assumes that a contingency between behavior and outcome does exist—that is, competence assumes that people believe that if they behave in specific ways such as eating the right foods in the right amount, being physically active, and taking medications, the outcome of stable blood sugar will be achieved. Therefore, the question that competence addresses is, does the person perceive him/herself to be competent (or able) to do those things.

Perceived competence is measured on the Perceived Competence for Diabetes Scale (PCS) [6], and it is closely related to the concept of self-efficacy [7]. Autonomy is measured on the Treatment Self-Regulation Questionnaire (TRSQ) [6]. Research has indicated that autonomy and self-efficacy are correlated with improved glycemic control and quality of life [8] suggesting that perceptions of autonomy and competence may underlie improvements in glycemic control, and be associated with a better quality of life for patients with diabetes.

According to SDT, when practitioners support patient autonomy, patients are expected to become more autonomous and to feel more competent. Autonomy support refers to the extent to which providers elicit and acknowledge patients' perspectives, support patients' initiatives, offer choice about treatment options, and provide relevant information while minimizing pressure and control. Autonomy support is measured by patient perceptions reported on the Health Care Climate Questionnaire [9]. Autonomy support is somewhat related to the concept of patient-centeredness in that in order to be autonomy supportive it is necessary for the practitioner to elicit and acknowledge patient perspective, to support patient initiatives, and to avoid being controlling or judgmental of the patient. However, the concept of autonomy support differs from patient-centeredness in that, by specifying specific human needs, it gives greater guidance for a clinician's behavior. For example, an autonomy supportive practitioner would: (1) in order to support the patients' perceived competence, offer as much structure as is needed by each patient, and (2) in order to support the patients' perceived autonomy, focus on the patient making their own choices about what to do after carefully considering their own feelings and values as well as the available options. Thus, a practitioner might provide information about the likely outcomes of various behaviors without providing pressure to do one of those behaviors. The practitioner would make a specific recommendation based on his/her best judgment for the patients' consideration. The patients' would then consider the pros and cons of each behavior from their own perspective, and the practitioner would support that process. When a patient makes a choice, the practitioner would respect the choice, asking only if he or she could revisit the issue in a future appointment to see how that has gone for the patient.

The concept of autonomy support is likely related to motivational interviewing [10]. Motivational interviewing (MI) is a directive, patient-centered counseling technique, originally developed for the treatment of addictive behavior. MI promotes a structure that focuses on minimizing practitioner behaviors that are more likely to elicit patient resistance [11], and to this end it is consistent with practitioners being autonomy supportive. However, in traditional medical settings (e.g., treatment of chronic diseases like diabetes), where the majority of patients want physicians to make direct recommendations, patients are less likely to perceive these recommendations as controlling [12]. Autonomy support allows for a structure that is optimal given the patient's knowledge and competencies. Advice in this context in not necessarily minimized, but is given as a provision of information about what outcomes are likely to follow from the patient's behaviors, and may include what the practitioner feels has worked best for patients. An example of this type of advice would be, "As your physician, I recommend that you exercise more regularly because research has shown that regular exercise contributes to maintaining a healthy glucose level". Indeed, practitioners who work to minimize the chances of eliciting patient resistance and fail to provide a recommended course of action to improve their patients' health may be experienced as controlling. Thus, autonomy support shares elements with patient-centeredness, and motivational interviewing, but differs because it is structured as the provision of information specifically aimed at bringing patients to a place where they can make an clear and informed choice about treatment (including accepting no treatment), and in supporting them in reaching their health goals.

In summary, we would expect that measures of autonomy support and measures of patient-centeredness (e.g., patient satisfaction) or of motivational interviewing would be related, but that autonomy support would be a better (i.e., more specific) predictor of motivation, behavior, and health outcomes.

Studies have shown that patient autonomy and competence in diabetes self-management are enhanced by an autonomy supportive patient/provider relationship [6,13]. Other studies of health care have shown that autonomy support by health care practitioners affected patients' motivation and health-relevant behaviors including smoking abstinence [14,15], weight loss [9], and medication adherence [16]. Thus, previous studies of health motivation have been successful in predicting health outcomes from SDT constructs of motivation.

The overall aim of this study is to confirm and extend the relations between the motivation constructs of autonomy support and competence, and glycemic control, depressive symptoms, and patient satisfaction. The current study is intended to extend findings in three ways: First, by studying a larger number of patients and physicians in different settings from those of the original SDT research; second, by assessing autonomy support in the primary care setting, where greater variation in autonomy supportiveness is expected; and third, by including a wider range of other variables and outcomes than have previous diabetes studies on SDT.

The present article tests four primary hypotheses derived from the SDT process model (see Fig. 1) and evaluated via