Patient Education and Counseling xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Research paper

Do patient perceptions of provider communication relate to experiences of physical pain?

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ARTICLE INFO

Article history:
Received 31 January 2017
Received in revised form 31 July 2017
Accepted 2 August 2017

Keywords:
Pain intensity
Pain interference
Self-efficacy
Patient-provider communication
Patient-centered care

ABSTRACT

Objectives: Patient-provider communication is an important component of the medical interaction yet little research has examined the relationships between perceptions of communication and health outcomes or the mechanisms by which communication may ameliorate the pain experience. This is the first study to examine the relationships between patients' perceptions of provider communication, pain intensity and self-efficacy for managing chronic disease.
Methods: The total sample contained 1027 (85.8% male) Veteran patients. Patients responded to surveys about their experiences and outcomes of care, including measures of patient-provider communication, self-efficacy and pain outcomes including pain intensity and pain interference.
Results: Results showed more positive perceptions of provider communication were related to lower levels of pain intensity and pain interference and that this relationship was significantly mediated by higher levels of self-efficacy for managing chronic disease.
Conclusion: More positive provider communication was related to higher levels of self-efficacy, which in turn was related to lower levels of pain intensity and pain interference.
Findings suggest that providers may be able to elicit higher levels of self-efficacy in their patients by providing patient-centered communication, which in turn will reduce pain intensity and interference in their patient's lives.

1. Introduction

Communication is a crucial component of the medical visit for both providers and patients. Among the various communication styles in medical care, patient-centered communication is recognized as the standard for high-quality healthcare [1]. Patient-centered communication emphasizes patients' needs and goals, encouraging patients to express what is most important to them, and recognizing patients' expressions of personal concerns, feelings, and emotions [2]. The beneficial effects of quality patient-centered communication on patients have been studied widely and have been found to enhance the patient-provider relationship, which, in turn, improves patient health outcomes [3–10].

For those suffering from pain, there appears to be an opportunity for improvement in patient-provider communication given low levels of satisfaction with management and communication around pain reported by patients [11,12]. Additionally, there may be an ability to reduce suffering among pain patients because of the subjective [13] and malleable nature of pain, that does not necessarily exist among other health outcomes (e.g., serum levels). Among 51 randomized or quasi randomized control trials included in a 2016 systematic review on the effect of patient-practitioner communication in general on acute pain, results showed a small effect of more positive communication reducing pain [14]. As Street [15,16] proposed, often times the effects of communication on health are linked through an indirect or mediated route. These psychological mechanisms whereby patient-centered communication may reduce pain are still not known. Street has proposed that self-efficacy, an individual's sense of personal control over behavior change [16,17], may play an indirect role in patient health

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http://dx.doi.org/10.1016/j.pec.2017.08.002
0738-3991/

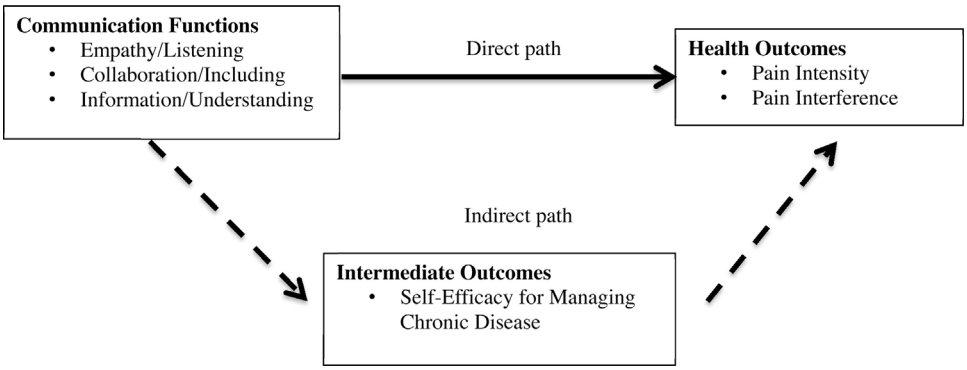

Fig. 1. Adapted direct and indirect pathways from communication to health outcomes [15,16].

outcomes including physical pain; see Fig. 1. Self-efficacy plays a critical role in patient self-management [18–21], and higher levels of self-efficacy are related to both lower levels of pain [22] and better communication with providers [23].

Using quantitative, cross-sectional data from a study of patient perceptions of patient-centered care at 8 US Department of Veterans Affairs (VA) medical centers, we sought to examine the relationship between patient perceptions of the patient-centeredness of provider communication and pain-related outcomes, and the intermediate role that self-efficacy for managing chronic disease may play. For the remainder of the paper, we simply refer to perceptions of provider communication as provider communication, and to self-efficacy for managing chronic disease as self-efficacy.

2. Methods

The study involves the secondary analysis of data from a quality improvement survey project funded by the VA's Office of Patient Centered Care & Cultural Transformation. The local Institutional Review Board designated this study exempt from review as part of this larger quality improvement project. Patients were surveyed by mail at 8 VA facilities across the United States that were either testing innovations in patient-centered care or serving as control sites to evaluate their experiences of care at these facilities which allowed for variation in the amount of patient-centered care received.

2.1. Patient characteristics

Of the 2777 Veteran patients contacted, 1027 (36.98%) patients responded, with 951 of those providing complete data for purposes of the present study. Patients were predominantly male (85.8%), White (57.8%) and 65 years old or older (47.7%) who had received outpatient care within the past 6 months. For further demographic characteristics see Table 1.

2.2. Materials

Patients completed mailed surveys about their visits to VA primary care medical appointments during the past 6 months, including measures of provider communication, self-efficacy for managing chronic disease and self-reported pain intensity and interference.

The Communication Assessment Tool (CAT) [24] asked patients to rate dimensions of the communication and interpersonal skills of the primary care medical team during office visits over the past 6 months on 15 items using a 5-point rating scale (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent). An example item includes, "the primary care team showed care and concern." The CAT includes three subscales: empathy, collaboration, and information. All three domains were highly correlated (all r's >0.92, $p < 0.001$), so in the present study we simplified the analysis by using a single overall score of patient-reported provider communication (Cronbach's alpha = 0.97).

The Self-Efficacy for Managing Chronic Disease 6-item Scale (SECD6) [25] measures the level of confidence of patients with chronic disease in their ability to engage in key activities to manage their health. The measure consists of 6 items that are rated on a 10-point scale ranging from 1, not at all confident, to 10, totally confident. An example item includes, "How confident are you that you can do the different tasks and activities needed to manage your health condition so as to reduce your need to see a doctor?" Other items asked patients about their confidence in managing fatigue, physical discomfort, emotional distress, other symptoms/health problems, and medication (Cronbach's alpha = 0.95).

The Patient Reported Outcome Measurement System's 29 (PROMIS) item summary instrument was used to assess patient–reported health status for physical, mental, and social well–being. This included measures of two pain-related outcomes: pain intensity and pain interference [26]. The pain intensity measure was a single-item, 0–10 numeric rating scale (NRS) that assessed pain on average in the past 7 days. Pain interference refers to the degree to which pain limits or interferes with an individual's physical, mental, and social activities in the past 7 days and was measured with a single-item scale from 1, not at all, to 5, very much.

Table 1
Characteristics of sample ($N = 1027$).

Characteristic	Mean (SD; range) or %
Age, %	
20–29	0.5
30–39	2.7
40–49	7.5
50–59	22.1
60–64	17.2
65 or older	47.7
Male, %	85.8
White, %	57.8
Black/African American, %	29.0
Asian, %	1.4
Native Hawaiian/Other Pacific Islander, %	0.5
American Indian/Alaska Native, %	1.1
Multiracial, %	2.6
Hispanic/Latino, %	15.1
Health status	2.43 (0.97; 1–5)
Pain intensity	5.42 (2.45; 0.17–10)
Pain interference	3.11 (1.24; 1–5)
Self-efficacy for managing chronic disease	5.54 (2.61; 0–10)

Note. CAT stands for Communication Assessment Tool. SE stands for self-efficacy.

Please cite this article in press as: M.A. Ruben, et al., Do patient perceptions of provider communication relate to experiences of physical pain?, Patient Educ Couns (2017), http://dx.doi.org/10.1016/j.pec.2017.08.002