

**PATIENT-PHYSICIAN CLUE COMMUNICATION DURING PRIMARY
CARE VISITS: EXAMINING PSYCHOSOCIAL BENEFITS OF
EMPATHIC PHYSICIAN COMMUNICATION**

by

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*Dedicated to Ember, Sarah, Maddie, Chloe, and Annie- without your help I never would've made
it to the finish line!*

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ABSTRACT

I performed a secondary analysis of existing data and determined that when interacting with physicians during primary care visits for chronic illness treatment, patients using opioids are less likely to continue presenting concerns designed to reinforce their social and emotional uniqueness during the second half of primary care visits when physicians provide empathic support of their concerns in the first half of visits.

INTRODUCTION

Research Problem

Chronic pain management carries a significant financial and social cost for individuals and national economies (Phillips, 2009). Individual perceptions play a significant role in experiencing and processing chronic pain (Bär et al., 2005; Costa et al., 2016). Patients who struggle to process their response to chronic pain may develop catastrophic pain perceptions, which is associated with higher subjective reports of pain centrality (Elvery et al., 2017; Picavet, 2002). Pain centrality is a measure of how central pain is to patient self-identity (Sucher, 2020) and can amplify the presence of pain and mental illness in the lives of patients (Nicolaidis et al., 2011). Greater patient rumination about their pain is associated with increased self-identification as a person experiencing chronic pain, which can overshadow other, equally meaningful patient identities. Higher subjective pain centrality is associated with increased expression of pain behaviors in primary care settings (Kroska, 2016; Thorn et al., 2004).

Pain behaviors of particular interest to this study are verbal clues from patients (Cano & de C. Williams, 2010). These clues can be direct or indirect; patients often report the emotional impact of their chronic pain or describe the ways in which their social support network members support or fail to support them. These clues are meant to convey the uniqueness and individuality of chronic pain patients to their physician. These pain behaviors are more common in patients who report higher pain catastrophizing and higher pain centrality, indicating that these patients are responding *non-adaptively* to their pain and are struggling to affirm their identities as individuals beyond their experience of pain.

Non-adaptive pain perceptions are associated with higher reports of pain centrality, which often manifests as persistent pain related thoughts (Tan et al., 2011). These *non-adaptive* pain perceptions include beliefs that pain cannot be controlled, that pain will persist across the life course, and fears that daily activities will exacerbate pain (Turner et al., 2000). These emotional and psychological reactions to pain can have a greater influence on behavior than physical reports of pain (Vlaeyen, Crombez, et al., 2016) and can influence reports of pain centrality (Rosier et al., 2002).

The Communal Coping Model suggests that patients who have *non-adaptive* pain perceptions display pain behaviors in the form of direct and indirect clues in an attempt to elicit support from members of their social support networks (Sullivan, 2012), which can include healthcare providers. When patients receive social support, they report lower nonadaptive perceptions and present clues less frequently (Osborne et al., 2007). When healthcare providers do not *acknowledge* the clues presented, patients are likely to continue presenting clues to elicit support.

Experiencing chronic pain damages patient's sense of self (Smith & Osborn, 2007; Vlaeyen, Morley, et al., 2016), leading them to seek validation of their unique pain experience from their social support network. Communicating this experience is prioritized over relieving pain for many patients with non-adaptive perceptions (Prenevost & Reme, 2017; Sullivan et al., 2006). Greater acknowledgement of patients' experiences is associated with lower non-adaptive pain perceptions (Kerns et al., 2002; Lee et al., 2016).

This perception of acknowledgement is important for successful management of non-adaptive perceptions (Bloom & Spiegel, 1984; Farin, 2015). In this study, I propose that patients reporting higher pain catastrophizing and pain centrality in the form of non-adaptive perceptions will display greater pain behaviors in the form of clue presentation when communicating with their physicians (Roberts et al., 2015).

Background of the Problem

The primary purpose of this study is to examine whether more physician positive responses to patient clue statements early in a visit are associated with fewer patient clue statements later in the visit. Secondly, I will examine whether more patient clue statements decrease the likelihood of non-adaptive pain perceptions. Thirdly, I will examine whether physician positive responses to patients' clues are associated with a decreased likelihood of negative physician psychosocial variables.

One component of patient non-adaptive perceptions is pain catastrophizing, which is a cognitive-behavioral response to chronic pain characterized by magnification of pain sensation and feelings of helplessness regarding ability to manage pain (Sullivan et al., 1995). Catastrophizing influences patient pain behavior during interactions with primary care physicians (Swinkels-Meewisse et al., 2006). These patients experience more intense emotional responses to

thoughts of pain and present clues related to reduced reported ability to function (Fritz & George, 2002), leading to increased reliance on social support network members. These patients are also more likely to express negative affect (Keefe et al., 2003), leading to the presentation of emotional clues regarding their experiences.

Pain centrality is the other component of nonadaptive perceptions and represents how core chronic pain is to patient self-concept (Nicolaidis et al., 2011) (Van Damme et al., 2004). Pain centrality is modestly correlated with pain catastrophizing. Perceptions play a strong role in the subjective experience of pain centrality (Quartana et al., 2009).

The interaction between non-adaptive perceptions and pain behaviors is conceptualized using the Communal Coping model. Current pain management theory suggests that increased presentation of pain behaviors due to non-adaptive perceptions is intended to solicit social support (Severeijns et al., 2004)- for the purposes of this study, social support comes in the form of acknowledging the clues patients may present. This provision of support suggests an interpersonal style of pain coping (Romeo et al., 2017; Sullivan et al., 2001) in which confirmation of social support is prioritized over other forms of relief (Keefe et al., 2003).

Communal Coping Model

The Communal Coping Model is a model designed specifically to understand pain catastrophizing and pain communication (Sullivan, 2012). Rather than presuming that pain communication is intended to *solicit material aid* from members of a chronic pain patient's social network, the communal coping model suggests that exaggerated pain displays are meant to *elicit support* or *empathic responses* from members of social support networks (Sullivan et al., 2001).

The communal coping model provides a framework for understanding how patient non-adaptive perceptions motivate specific pain behaviors when interacting with physicians. These patients may express distress in the form of verbal emotional clues in a bid for support from physicians (Boothby et al., 2004; Zajdel & Helgeson, 2020), seeking acknowledgement that their experience of pain is real (Tsui et al., 2012). Lack of acknowledgement is associated with continued clue presentation in a continuing attempt to communicate the dominance of pain in patient perceptions (heightened pain centrality) (Gauthier et al., 2011).

The communal coping model further suggests that when social network members provide social support by acknowledging the pain behaviors of chronic pain patients, these patients

experience greater pain relief. These patients also seek support from both spouses and physicians (Cho et al., 2012).

Social Support and Controlling Non-Adaptive Perceptions

The provision of social support counters the effects of non-adaptive perceptions. Physicians who fail to recognize patient clue presentation as a bid for support may respond to clues with additional biomedical information (Street, 1991) without providing a response that acknowledges patients' lived experiences (Ishikawa et al., 2017). Properly acknowledging patient clues by responding to their content is associated with lower non-adaptive perceptions (Vangronsveld & Linton, 2012).

Patients with non-adaptive perceptions often perceive a failure to acknowledge their experiences as an explicit invalidation of their pain (Kool et al., 2009; Nicola et al., 2019). The communal coping model suggests that increased expression of pain behavior through clue presentation may be a response to lack of acknowledgement. This lack of acknowledgement leads patients to increase clue presentation (Cano & de C. Williams, 2010) in bids to achieve acknowledgement and empathetic understanding of their experiences as individuals (Frantsve & Kerns, 2007).

Physician-Patient Communication and Provision of Social Support

Physicians provide more social support to patients when they present more pain behaviors and greater non-adaptive perceptions (Finset, 2012; Street, 1992); depending on specialization, physicians directly acknowledge patient clues in 13-45% of encounters, with primary care providers (Mjaaland et al., 2011) acknowledging patient clues directly most often.

Patients with non-adaptive perceptions may also not be satisfied by initial attempts at acknowledgement (Al-Abri & Al-Balushi, 2014) because primary care physicians often believe that they must convince patients that their illness is not serious (Linton et al., 2008). Patients often seek acknowledgement that their pain *is* serious and being taken seriously by those around them, especially their primary physician. Patients who catastrophize are preoccupied with their pain and feel intense fear, anxiety, and helplessness (Theunissen et al., 2012), which can impair their ability

to communicate their experiences. This can often prolong their interviews as they struggle to explain their circumstances to their physician (Mjaaland et al., 2011).

Increased patient clue presentation is associated with lower pain centrality (Wideman & Sullivan, 2011). Physician acknowledgement of patient clues reduces non-adaptive perceptions and encourages patients to view their physicians as genuinely concerned about their pain (Matthias et al., 2013). This acknowledgement of concern leads to reduced pain centrality (Butow & Sharpe, 2013).

Physicians can provide this acknowledgement by attending to patient verbal and nonverbal communication (Halpern, 2007)- potentially by managing patient emotional and social clues as well. Acknowledging individual patient emotions and concerns moderates non-adaptive perceptions, validating the personhood of their patients and their unique pain-related experiences.

Patient Acknowledgement-Seeking Behavior

Patients may seek acknowledgement of their unique experiences by expressing clues in the form of concerns about social support networks (Giardino et al., 2003) and complaints about the emotional consequences of chronic pain (Sullivan et al., 2004). The communal coping model of chronic pain suggests that these behaviors, caused by non-adaptive perceptions that increase discomfort, also increase social proximity and support (Thorn et al., 2003).

Greater initial expression of pain behaviors is associated with higher perceptions of provisioned social support (Keefe et al., 2003) which reassures patients that their pain will be acknowledged if requested (Helgeson et al., 2018). Perceiving that a physician is more likely to acknowledge patient clue presentation is also associated with higher perceptions of provisioned social support (Gao et al., 2013). These perceptions of social support are associated with reduced non-adaptive perceptions (López-Martínez et al., 2008).

Patient ‘Clues’ in Communication

Patient clues are often indirect and are either emotional or social. Emotional clues occur when a patient uses emotion words or present an opportunity for their physician to respond to how they feel about their pain (Levinson, 2000). Social clues occur when a patient mentions a topic of

common interest, such as weather, sports, vacations, or family and friends without emotional content.

Both of these clue types are opportunities for patients to express themselves as unique individuals and for physicians to acknowledge that uniqueness. Emotional clues allow patients to establish themselves as unique individuals with unique reactions to their pain and social clues allow patients to establish themselves as unique individuals with lives beyond their pain experience; social clues also allow patients to make bids for support based on the clues they provide on how their pain interferes with their daily lives. See Appendix D for an example of the template used to categorize patient clues and physician responses.

Physicians who see these clues as opportunities to provide social support to chronic pain patients are more likely to respond with acknowledgement. They may also interpret clues as distractions and avoid acknowledging them (Levinson, 2000). Acknowledgement from these physicians is essential for management of non-adaptive perceptions by chronic pain patients (Burns et al., 2015; Dunkel-Schetter et al., 1987). Patients presenting with chronic pain and/or other medical issues in primary care settings will continue presenting clues if initial clues are not acknowledged, producing the distraction physicians attempt to avoid (Suchman et al., 1997). Physicians are overall unlikely to respond positively to patient clues (Pollak et al., 2007).

Patient income, ethnicity, and self-reported education all have a significant influence on communication between patients and physicians (Long et al., 2014; Verlinde et al., 2012). Higher patient income and self-reported education are both associated with higher presentation of social and emotional clues to physicians (Cox et al., 2012). Higher income and education are also associated with increased positive responses from physicians. Patients of ethnicities different than physicians both tend to report fewer positive responses to their presented clues (Hagiwara et al., 2013).

Physicians who treat patients with chronic pain often experience burnout due to the effort their work requires. Sixty percent report emotional exhaustion and 30% report depersonalization (Kroll & Macaulay, 2016). Depersonalization refers to a reduced capability to feel empathy for coworkers, patients, friends, and/or family members (West et al., 2012). Physician emotional exhaustion reduces physician ability to empathize and depersonalizing their patients reduces satisfaction (Kumar, 2016). Both burnout symptoms are associated with less exploration of patients' perceptions of their chronic pain (Shanafelt et al., 2009).

Previous conceptual models of non-cancer chronic pain management did not account for nonphysical characteristics (Borrell-Carrió et al., 2004; Engel, 1977). Physician psychological and social interaction with patients is an important part of pain management- greater willingness to acknowledge patient psychosocial issues and clue presentation is associated with lower physician burnout (Travado et al., 2005).

We will code transcripts of primary care visits for clues offered by patients and physician responses to these clues to examine physician and patient interaction with patients with non-cancer chronic pain who are using opioids.

HYPOTHESES

Aim 1: To examine associations between physician responses to patient clues and patient clue presentation during the first and second half of primary care visits.

H1.1: Greater positive physician responses to patient clues during the first half of transcripts will be associated with decreased patient presentation of clues during the second half of primary care visits.

Aim 2: To examine likelihoods between patient clue presentation and patient psychosocial variables during healthcare visits.

H2.1: Greater patient presentation of social and emotional clues will increase the likelihood of higher initial patient pain catastrophizing

H2.2: Greater patient presentation of social and emotional clues will increase the likelihood of higher initial patient pain centrality

Aim 3: To examine likelihoods between increased physician positive responses to patient clue presentation and physician psychosocial characteristics during interactions with patients.

H3.1: Greater physician positive responses to patient clue presentation will increase the likelihood of lower initially reported physician emotional exhaustion

H3.2: Greater physician positive responses to patient clue presentation will increase the likelihood of lower initially reported physician depersonalization

H3.3: Greater physician positive responses to patient clue presentation will increase the likelihood of lower initially reported physician psychosocial burden

METHODS

Design

My thesis is a secondary analysis of data from an observational study patients with non-cancer chronic pain who were prescribed opioids (Matthias et al., 2017; Shields et al., 2019). In the original study, eight physicians consented to have three visits with thirty patients audio recorded. Patients were eligible for the study if they were 18+, had non-cancer chronic pain, and were taking opioids.

Thirty patients were enrolled, and 24 patients had all three transcripts available for analysis- only patients with all three transcripts were included in the analysis, providing a total of 72 analyzable transcripts. Patients and physicians had an established relationship. Thus, 'Visit 1' was not the first interaction between each patient and each physician. The transcripts only recorded chronic pain discussion between patients and physicians and captured 5-15 minutes of dialogue each. Each transcript was analyzed separately to determine whether patient and physician psychosocial characteristics lead to differences in clue presentation over the course of the visit.

Communication Variables

I developed a coding system to assess patient clues and physician responses from transcripts. Patient clues consisted of social and emotional disclosures. Physician responses consisted of positive responses such as acknowledgment and supportive.

Outcome Measures

The dependent variable for Hypothesis 1 was the difference between the number of patient clues uttered in the first half of the session in the number of patient clues numbered in the 2nd half of the session ($CLUE_DIFF = PT_PRES_2 - PT_PRES_1$) and the total physician positive responses to patient clues in the first half of visits ($PHYS_RESP_1_POS$). A negative score for clue difference indicated that patients reduced their clue statements in the second half of the visit.

The dependent variable for Hypothesis 2 was patient total clue presentation (TOT_CLUE). The dependent variable for Hypothesis 3 was positive physician responses to patient clue presentation ($PHYS_POS_RESP$). Table 1 summarizes my coded variables.

Table 1. Coded Variables for Analyses

Variable Name	Explanation
<i>Hypothesis 1</i>	
<i>First half of visit</i>	
PHYS_RESP_1_POS	(all physician POSITIVE responses to patient clues)
PT_PRES_1	(all patient clues presented to physicians during first half of visits)
<i>Second half of visit</i>	
PT_PRES_2	(all patient clues presented to physicians during second half of visits)
CLUE_DIFF	(difference between clue presentation in first and second half of visits- (PT_PRES_2 – PT_PRES_1))
<i>Hypothesis 2</i>	
TOT_CLUE	(all patient clues presented to physicians across all visits)
<i>Hypothesis 3</i>	
PHYS_POS_RESP	(total physician positive responses to patient clues presented across visits)

Dichotomous Coding

For Aims 2 and 3, PHYS_POS_RESP and TOT_CLUE were not normally distributed; to fix this, they were recoded to be dichotomous. If there were no physician positive responses in the first half of the visit, then physician positive responses were equal to zero; if there was at least one or more responses the variable was coded one. Total clues were coded slightly differently; if there was one or less clue, it was coded zero. If there was two or more it was coded one.

The analysis for Aim 1 used multiple regression analysis. I used logistic regression analysis to examine Aims 2 and 3. Analyses were controlled for demographic variables when demographic variables were correlated with the outcomes.

RESULTS

The standardized intraclass correlation coefficient (ICC) was 0.89, showing that the undergraduate student research assistants reliably coded the transcripts. The ICC is a measure of how well the coding system differentiates cases between coders; an ICC greater than 0.70 is considered good (Shrout & Fleiss, 1979).

Sample Demographics

Table 2 shows the descriptive statistics of the study variables. We identified each clue that patients presented to their physicians and assessed whether physicians provided positive responses to patient clues. Physicians responded to patient clues positively 57% of the time.

Patients averaged scores of 23.43 (SD = 15.25) on pain catastrophizing on a 52-point scale and averaged similar scores of 27.3 (SD = 8.7) on pain centrality on a 43-point scale. Patients averaged scores of 3.32 (SD = 1.7) on education on a 7-point scale, an average of 2.29 (SD = 0.79) on income on a 3-point scale, and an average of 2.00 (SD = 1.38) on race on a 6-point scale.

Table 2. Descriptive Statistics

Characteristic	N	M/%	SD	Range
<i>Physician Coded Communication</i>				
Pos_Response (Yes = 1, No = 0)	72	57%		0 - 1
<i>Patient Coded Communication</i>				
Total Patient Clues	72	5.10	6.19	0 - 39
Patient Clue Difference = (2 nd Half Clues – 1 st Half Clues)	72	-0.54	2.06	-7 - 5
<i>Patient Self-Report</i>				
Patient Pain Catastrophizing	23	24.56	15.09	0 - 52
Patient Pain Centrality	23	27.01	8.12	0 – 41
Patient Education	23	3.31	1.7	1 – 7
Patient income	23	2.29	0.72	1 – 3
Patient Race	23	2.00	1.38	1 – 6
<i>Physician Self-Report</i>				
Physician Psychosocial Burden	8	2.55	0.40	0 – 7
<i>Physician Burnout</i>				
Emotional exhaustion	8	2.40	1.15	0 – 7
Depersonalization	8	1.51	1.11	0 – 7
Achievement	8	5.01	0.64	0 – 7

Correlational Analysis

Table 3 shows the correlational analysis among study variables. Patient clue presentation was significantly associated ($r = 0.28$, $p \leq 0.05$) with sufficient income for survival and significantly associated ($r = -0.28$, $p \leq 0.05$) with patient ethnicity.

Physician positive responses to patient clues were also significantly associated ($r = 0.27$, $p \leq 0.05$) with sufficient patient income for survival *and* significantly associated ($r = -0.29$, $p \leq 0.05$) with patient ethnicity. Physician positive responses to patient clues during the first half of visits were also significantly associated ($r = -0.28$, $p \leq 0.05$) with patient ethnicity.

Table 3. Correlations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1 Difference in patient clue presentation between first and second half of transcripts											
2 Total patient clue presentation	-0.34										
3 Physician positive response to patient clues	-0.29	0.95									
4 Physician positive response to patient clues first half of visits	-0.52	0.92	0.94								
5 Patient pain catastrophizing	-0.07	-0.03	-0.03	-0.03							
6 Patient pain centrality	-0.15	0.03	0.05	0.05	0.74						
7 Physician emotional exhaustion	0.01	-0.06	-0.04	0.00	0.13	0.27					
8 Physician depersonalization	0.02	-0.11	-0.14	-0.09	0.08	0.21	0.64				
9 Physician psychosocial burden	0.06	-0.16	-0.19	-0.17	0.10	0.10	0.13	0.59			
10 ≥ 2 years of college education	-0.16	0.21	0.16	0.16	-0.50	-0.48	-0.01	-0.06	-0.05		
11 Sufficient income to survive	-0.05	0.28	0.27	0.23	-0.38	-0.16	-0.36	-0.25	-0.45	-0.01	
12 Black	0.21	-0.28	-0.29	-0.28	0.33	0.20	0.28	0.18	0.16	-0.30	-0.27

Regression Analysis

Aim 1: Differences in Patient Clue Statements from the 1st to the 2nd Half of Visits Regressed on Physician Positive Responses in the 1st Half of the Visit

Physician positive responses to patient clues during the first half of visits were positively associated ($\beta = -0.51$, $\alpha < 0.001$) with decreased patient clue statements in the second half. Patient race and income were not associated with physician positive responses to patient clues. Table 4 summarizes my findings.

Table 4. Difference in Patient Clues from 1st Half to 2nd Half of Visit Regressed on Physician Positive Responses and Patient Depression and Anxiety

Variables	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>P</i>
Physician Positive Responses 1st Half Transcripts	-2.12*	0.44	-0.52	-4.82	<.00
Patient Race	0.11	0.43	0.03	0.27	0.78
Patient Income	0.26	0.44	0.04	0.37	0.71

Key * $p \leq .05$

Aim 2: Patient Clue Presentation and Patient Pain Catastrophizing and Centrality

Patients who report higher catastrophizing were more likely to report higher presentation of clues to physicians (OR = 1.075)- if they have sufficient income to survive on (OR = 0.151) and at least two years of college education (0.148), they were also more likely to present clues to physicians. Table 5 summarizes my findings.

Table 5. Patient Total Clue Statements Logistic Regression On Patient Pain Catastrophizing And Centrality And Income And Education.

Variable	Odds Ratio	95% CI
Patient Pain Centrality	1.020	0.922-1.128
Patient Pain Catastrophizing	1.075	1.007-1.146 *
Patient Income	6.605	1.530-28.514 *
Patient Education	6.747	1.260-36.117 *

Key * $p \leq .05$

Aim 3: Physician Positive Responses to Patient Clues and Physician Psychosocial Variables

Higher emotional exhaustion was associated with an increased likelihood of positive physician responses to patient clues (OR = 2.853). Black patients were less likely to receive positive physician responses to their clues (OR = 0.213). Table 5 summarizes my findings.

Table 6. Physician Positive Clue Responses Logistic Regression on Physician Depersonalization, Emotional Exhaustion, Psychosocial Burden, and Patient Income and Race

Variable	Odds Ratio	95% CI
Physician Emotional Exhaustion	2.853	1.203 - 6.765 *
Physician Depersonalization	0.454	0.172 - 1.196
Physician Psychosocial Burden	1.761	0.175 -17.768
Black Patient	0.213	0.063 - 0.717 *
Patient Income	3.246	0.677 - 15.568

Key * $p \leq .05$

DISCUSSION

Physician positive responses to patient clues in the first half of visits were positively associated with a decrease in patient clue presentation in the second half of visits, as we predicted. Just one positive response to a patient clue in the first half of a visit is associated with more than two fewer clues in the second half of a visit. Providing the opportunity for further emotional discussion with patients is associated with improved outcomes (Adams et al., 2012) regardless of whether patients act on the provided opportunities. Physicians are also more likely to respond to the first clue a patient provides (Finset et al., 2013); a positive response to this first clue is likely to improve patient satisfaction and likely decrease future clue presentation.

Patient clue statements were not associated with patient pain centrality, contrary to our predictions. However, pain catastrophizing was associated with a higher likelihood that patients would make clue statements, as we had hypothesized. Thibault et al. (2008) also drew on the communal coping model and found a positive association between increased catastrophizing and increased pain communication behaviors. However, they measured pain communication from video recordings noting nonverbal and verbal indicators of pain.

When patients had a sufficient income and at least two years of college education they were almost 7 times more likely to make clue statements. Other studies have found similar results that patients with higher income and education produce more clues (Siminoff et al., 2006) and that physicians respond more positively to patients with higher income and education (Allen et al., 2018).

Physicians were less likely to provide positive responses to African-American patients (Park et al., 2019). The disparities in communication with Black patients may be synergistic because Black patients are also less likely to make clues statements (Gordon et al., 2006) and physicians are less likely to respond positively (Park et al., 2020). Training in patient-specific communication skills may be a method of improving cross-racial patient-physician communication by improving physician positive responses to clues from patients of different races (Ruben et al., 2020).

I found that increased physician emotional exhaustion was associated with increased positive response to patient clues, which was the opposite of what I had predicted. There were no significant associations between physician positive responses to patient clues and physician

depersonalization or psychosocial orientation. It may be that physicians who respond positively to patient clues also experience greater emotional exhaustion; however, a recent review found only one study out of ten found a positive relationship between burnout and empathy (Wilkinson et al., 2017).

Recognition of patient clues is valued by patients (Blanch-Hartigan, 2013). Positive physician responses to patient emotional expressions also leads to increased trust and improved communication and treatment agreement (Adams et al., 2012). Physicians can be trained to display more of these behaviors (Blanch-Hartigan & Ruben, 2013; Lundebj et al., 2017), suggesting that systematic improvements in physician education may lead to systematic improvements in patient satisfaction.

Strengths and Limitations

Students coded the transcripts with high interrater reliability. While our sample was small, it was racially diverse and focused on the problem of pain management and opioids. Our data was also non-independent- visits were nested within patient and patients were nested within eight physicians, but my analysis did not control for nesting. My study was also limited to transcripts that had no video or nonverbal behaviors. Thus, our inability to find a relationship between pain centrality and clue presentation may be a result of my less rich information about patient and physician communication. Future studies should include larger samples from more than one healthcare site. Diverse types of healthcare professionals should also be considered, as specialization may play a role in physician willingness to respond to patient clues.

CONCLUSION

My study found that when physicians respond to patient emotional or social clues during the first half of the session patients make fewer clue statements during the second half. Many physicians avoid responding to emotional or social clues because they fear that they will be overwhelmed by patient emotions (Shapiro, 2011). However, my results suggested that patients are satisfied with an acknowledgment of their emotional and social concerns during the first half of visits and do not escalate them in the second half of the session.

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