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Abstract

This thesis instantiates an initial foray into understanding the relationship between communication and pain. The central role of communication in the pain experience and pain expression remains relatively unexplored and the few existing attempts are disparate inquiries or from outside the communication discipline. This thesis is comprised of two parts. First, a literature review underscores the need to study pain from a communication perspective that acknowledges the influences of cognitive, social, cultural, and interpersonal factors and in terms of communication processes. Second, a message perception study was completed to investigate implicit theories of pain communication. Two message dimensions, person centeredness and empowerment-victimization, were manipulated in messages and evaluated by participants who imagined they were saying the messages to a friend in either chronic or acute pain. Results indicated that people rate messages with high person centered message features, empowering message features and a combination of high person centered-empowering message features higher than all other combinations of message features (high, moderate and low person centeredness; empowering, victimizing), in terms of message quality and in perceived pain management (indicated by perceived efficacy and perceived coping). Future work will test these message features with participants that are in pain or are highly familiar with pain experiences to better understand implicit and informed theories of pain communication.
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Fields Of Study

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Chapter 1: Introduction

Introduction

Pain is an unpleasant and often crippling experience that afflicts everyone. Despite years of medical research on pain, it remains undertreated and poorly assessed across the globe (Jennings, 2003). Pain interferes with a person’s daily life and is associated with detrimental psychological conditions like depression (Huijnen et al., 2010).

Psychologists and sociologists have identified that pain perception and pain coping abilities are influenced by emotional states, anxiety, stress, and pain beliefs (Humphreys, Cooper, & Miaskowski, 2010; Sharp, 2001; Walding, 1991; Zautra, Johnson, & Davis, 2005). If cognitive schemas influence pain perception and related distress, and if these cognitive schemas can be adjusted by communicative practices, then an explication of communication in pain contexts can reveal how certain message characteristics serve as a tool for managing pain distress and subsequently increasing overall well being. Thus, this thesis proposes that communication plays an important, central, and understudied role in pain management practices.

Pain is a personal and subjective experience which is not directly observable. Although research has investigated psychophysiological indicators (e.g., Apkarian, Bushnell, Treede & Zubieta, 2005), the primary moderate for observing pain is the self-
report which is easily distorted by automatic and conscious processes originating from the
pain sufferer or the social context (Craig, 2009; Hadjistavropoulos & Craig, 2002). In
addition, the potential for gaining help from another person and the knowledge of how
that person might react to pain observation can influence pain expression
(Hadjistavropoulos et al., 2011). Studying pain from a communication perspective
permits the observation of pain via its most apparent manifestation (the self-report) and
fields the explication of the myriad influences affecting the
management of said pain.

Prevalence of Pain Problems

The prevalence of pain-related problems in this country is rising dramatically. In
the last 15 years, the prevalence of chronic low back pain sufferers rose from 3.9 to 10.2
percent (Freburger et al., 2009). In 2008, an estimated 12.1 million women over the age
of 18 reported suffering from chronic pain (Agency for Healthcare Research & Quality
[AHRQ], 2011a). Also, in 2008, an estimated 9,400 people per day visited hospital
emergency rooms in the U.S. for back pain (AHRQ, 2011b). In addition to prevalence,
the cost of pain-related conditions is one of the chief causes of rapidly increasing health
care costs. The Agency for Heath Research and Quality reported that in 2007 treating
back pain alone in the United States totaled more that $30 billion, which increased from
$16 billion ten years earlier (AHRQ, 2010). A study examining labor time and money
lost due conditions involving common pain conditions (i.e., headache, back pain, arthritis), revealed that these conditions cost an estimated $61.2 billion per year in lost productive time (Stewart, Ricci, Chee, Morganstein, & Lipton, 2003). According to the U.S. Bureau of Labor Statistics, the number of chronic pain sufferers today holds steady around nine percent.

Since communication is an existing element of the patient experience and not dependent on additional costly products, tests or procedures, focusing studies on communication may be influential in reducing the high cost and prevalence of pain management by improving the quality and efficiency of patient-family-friend-colleague-health care provider communication.

The Role of Communication in Pain Experience Models

Research in pain psychology (e.g., Hadjistavropoulos & Craig, 2004), has established the foundation for multidisciplinary approaches to pain. Achieving better pain management requires the addition of a communication element to current models of the pain experience (Hadjistavropoulos et al., 2011). Although psychologists, sociologists and medical investigators have identified communication as vital to pain research, there lacks a consistent line of pain research by communication scholars. Current communication research related to pain and health contexts coalesces around 4 approaches: developing better scales and guides for assessing pain based on behavior observation and psychological factors (Arif-Rahu & Grap, 2010; Feldman, Downey, Schaffer-Neitz, 1999; Norvell, 1990; Prkachin, 2005; Schwartz, Slater & Birchler, 1996; Wadensten et al., 2010; Zautra, Johnson & Davis, 2005), investigating how the expression and acknowledgement of pain is influenced by social and cultural contexts
(Dickson & Kim, 2003; Jain & Krieger, 2011; Jorge & McDonald, 2011; Kugelmann, 1999; Taylor, 2010) and exploring the ways in which the subtleties and nuances of the immediate conversation reveal the pain experience and confirmation (or denial) or that experience (Beach & Anderson, 2003a; Beach & Anderson, 2003b; Beach & LeBaron, 2002). While these approaches are all valid, they can be combined to contribute a fully developed communication perspective to the growing literature on pain.

Proposal

This thesis proposes an initial investigation into the claim that that communication can help pain sufferers better cope with and manage their pain. It investigates particular dimensions of messages that may be used by individuals to help a friend in pain feel better. Obviously, pain cannot be entirely alleviated by communication alone; however, restructuring pain appraisals and pain beliefs can reduce pain perception (Sharp, 2001). Communication practices can help restructure detrimental appraisals and attributions for other distressful situations (e.g., Holmstrom & Burleson, 2011), so the next step is to investigate which communication practices are perceived to be helpful may help people better manage their pain. Specifically, a message perception study is proposed in which participants will read one of two hypothetical situations in which they are to imagine that their friends are experiencing acute (burn) or chronic (migraine) pain. Participants will then assess six messages that are supposed to help the friend feel better by facilitating better pain management. The six messages will vary along 2 dimensions: high, moderate and low person-centeredness; and empowerment or victimization. It is hypothesized that these dimensions will be systematically related to high message quality,
in terms of supportiveness, sensitivity, and helpfulness, as well as perceived pain management.

Pain management is a branch of medicine that focuses on an interdisciplinary approach to easing suffering and improve the quality of life of those living with pain. As lay persons can also work towards easing the suffering and improving the quality of life of friends and family living in pain, this research assumes that pain management can also be done by non-health professionals. Pain management includes two components: self-efficacy and coping. Self-efficacy is the belief in one’s personal abilities to effect change (Bandura, 1997). Coping is extent to which an individual maintains a desired course of action despite inhibiting factors, such as pain.

In the forthcoming pages, a literature review and methods section will outline the grounding of claims made in this paper and the proposed investigation. The literature review will cover platform assumptions and frameworks of communication, current work in the medical field on pain and psychology, areas in communication that engage pain and issues with the general collection of work in these areas while proposing they be combined for joint study on pain communication. The literature review will also utilize principles of attribution, appraisal, discourse, and message design. Two dimensions of pain management messages are outlined. The methods chapter details participant requirements and tasks. It also reviews the source, characteristics and purpose of the message measures. The results chapter details the findings of the study as to how different message features are related to different ratings of message quality and perceived pain management. The discussion chapter gives further scrutiny to the data interpretation and explores the limitations, implications and importance of these findings.
Chapter 2: Literature Review

Overview

This approach to pain and communication is descendant and draws from several disparate areas of research: pain psychology, health communication related to pain contexts and supportive communication. Pain psychology contains research joining medical research with social psychological processes. This area establishes pain as multidimensional, points out that communication is an important element in pain, but does not take a communication perspective. The second area is a conglomerate of three areas of health communication research united by their relevance to pain contexts. I argue that these areas should be integrated for a more comprehensive and distinct line of pain communication research. The third and final area, supportive communication, provides a history of the relationship between communication and well being, as well as the framework for the initial investigation into pain communication.

The review summarizes an argument for a communication-based approach to pain. This argument’s roots in constructivist theory serve as a segue to the major concepts nominated for the proposed investigation: attributions, appraisals, discourse and messages. This section concludes with a discussion of how accumulated work lays the groundwork for two dimensions of pain management messages.

Communication in the Biopsychosocial Approach to Pain

A Brief History of Pain Theory

In the middle of 20th century, an important shift in pain theory models occurred that illustrates the importance in pursing a multidisciplinary model today. In the last 60
years, many pain models have been developed, but they have their roots in centuries past. The traditional biomedical model, dating back to the 17th century, drew on Cartesian dualism claiming that the mind and body are separate entities. This philosophy influenced the traditional biomedical model in that the model assumes that all disease is directly linked to specific physical pathology and assumes that social, psychological, and behavioral mechanisms of illness are not very important (Asmundson & Wright, 2004). This philosophy poses a problem for those whose pain has no identifiable pathology and persists despite the tissue damage healing. This is also problematic for people who suffer from adverse psychological or social situations that may be a result or amplifier of pain. As reviewed by Asmundson and Wright (2004), scholars (e.g., Bonica, 1954; Hardy, Wolff & Goodell, 1952) have documented that 20th century models, instead, recognize to some degree that pain experience is modulated by cognitive states.

Swinging the pendulum to the other extreme, psychodynamic models of pain assume that pain is an expression of emotional distress (Asmundson & Wright, 2004). Engel shaped these perspectives with two major ideas: pain can occur without physical pathology and sometimes pain is a psychological reaction serving as a defensive mechanism (1959). These models generated terms like *psychogenic* pain and *pain prone-personality* (Engle, 1959). Although these models have decreased in popularity in the psychology field (Asmundson & Wright, 2004), psychodynamic models of pain spawned important current lines of work (e.g., mental illness, child abuse, depression) by highlighting the importance of psychological variables.

The gate control theory of pain was developed a little later (Melzack & Casey, 1968; Melzack & Wall, 1965) and integrated psychological and physiological variables
into a pain model. The current version holds that signals from the site of the injury are moderated by a hypothetical gating mechanism within an area of the spinal cord called the dorsal horn (Melzack & Wall, 1965). While signals from tissue damage (nociception) are sent up to the brain, the brain sends information about current cognition and affect back down. This interplay of forces was monumental in forcing the medical and science community to accept the brain as an active system that filters, selects and modulates inputs (Asmundson & Wright, 2004). Adding to the increasing complexity of pain models, the operant theory (Fordyce, 1976; Fordyce, Shelton, & Dundore, 1982) says people react in certain ways to avoid pain, and can become conditioned into behavioral habit by external and internal forces.

**Current Formulation of Pain Models and Communication**

This leads us to the foundational model of the biopsychosocial formulation of communication: the biopsychosocial approach. Championed through a series of publications, Hadjistavropoulos, Craig and colleagues have argued for a perspective on pain that focuses on the myriad generators, mediators and moderators of pain that lie in all of the anatomical structure of the body, the cognitive structure of the brain and the social environment (Hadjistavropoulos & Craig, 2004). It is predicated on the assumption that nociception (sensory signals of tissue damage) is different from the pain experience. Two persons can have the same injury or physical signals sent through their bodies but have completely different pain experiences and different behavioral patterns. The biopsychosocial model accounts for this difference by claiming that differences in psychological predispositions moderate the perception of pain and variation in the sociocultural atmosphere moderate the expression of pain (Turk & Flor, 1999). This has
been exemplified in a study which found cognitions influence reports of pain intensity and attempts to cope (Jensen, Turner & Romano, 1991). The illness behavior is considered a dynamic process in which biological, psychological and social factors oscillate in dominance through the duration of the condition (Asmundson & Wright, 2004). The biopsychosocial approach has generated useful terms such as the pain appraisal, which refers to the meaning ascribed to pain by an individual as well as pain beliefs: conceptualizations of the pain source, intensity and implications (Sharp, 2001).

In response to previous work noting the importance to think beyond the predominantly biological approach to pain, recent multidisciplinary, collaborative work (Hadjistavropoulos et al., 2011) utilizes the biopsychosocial approach to construct a model detailing the multiple and complicated variables involved in pain experience and expression, including communication. The model encompasses influences from the social environment, nociception (physical signals sent from the damaged areas), emotions, cognitions, motivation, characteristics of the observers of the pain, cultural expectations and communication. The biopsychosocial formulation of pain communication builds off of Craig’s (2009) social communication model of pain that was developed to draw attention to the need to explicate social features of the pain experience. Craig’s model highlights the importance of interpersonal, intra personal, and appraisal processes as highly influential to the pain experience. Also, the social communication model stresses that the pain experience (and subsequent expression and acknowledgement) are necessarily situated in a broader social context (Craig, 2009). The obvious next step to explicate communication processes specifically as part of the pain model was taken up by Hadjistavropoulos and colleagues (2011). According to the authors, the process of pain
communication can be examined in such a way as to reveal the “numerous and complicated interactions among psychological and social determinants of pain” (2011, p. 1). Recognizing that pain is a private, subjective experience that is not directly observable, Hadjistavropoulos and colleagues note that pain communication and its consequences could be profound for the sufferer and observer (2011). They go on to claim that pain communication can exist according to three categories or levels of communication: communication as action, communication as interaction and communication as transaction (Duck & McMahan, 2010). Pain communication as action is an automatic/reflexive expression of pain or an automatic reaction to observation of an expression of pain. Conceptualizing pain communication as interaction pertains to correct or incorrect interpretations of pain experience and the intentions of the person expressing pain. Transaction as communication is a more sophisticated form and, with respect to pain communication, refers to the appropriate interpretation of expression that results in a mutual understanding that is beyond the literal meaning of the language exchanged- a deeper meaning hidden in the symbol system of the person expressing pain (Hadjistavropoulos et al., 2011). This is similar to other scholars’ conceptions of pain behavior as more than an expression of subjective experience; perhaps working alongside empathy processes (Goubert et al., 2005), or implicit methods for gaining attention or assistance (de C. Williams & Craig, 2006). To summarize, pain communication generally occurs in 3 different ways and each of these ways differs with respect to motivation, automaticity, social influences and devotion of cognitive resources.

Although the biopsychosocial formulation of pain communication is meticulous and thorough in its review of pain literature both in the natural and social sciences, the
most important contribution of this and related publications is the call for communication to take a more prominent function in pain research. In light of this, it is important that communication researchers play a primary role in driving research on pain expression, interaction and transaction. The communication discipline has vast amounts of research and theories that could contribute to pain studies. Although other social scientists have made notable gains in developing social psychological approaches to pain, it is necessary for communication researchers to take up where Hadjistavropoulos and colleagues have left off in bringing communication expertise to the communication model of pain. The next steps should focus on developing certain areas of the model utilizing communication theory. For example, the model could be developed with respect to explicating the processes of communication as interaction and communication as transaction; creating tools for differentiating between automatic and cognitively developed pain talk; prioritizing the management of meaning; and, investigating the dimensions of expressions of and responses to expressions of pain.

Current Lines of Work in Pain and Communication

Research on pain and communication exists in four areas. The first of these areas is the code and tool development for better pain assessment. This area is based on a linear model of communication (Grossberg, 1988) and assumes that a comprehensive vocabulary and high literacy rate in the appropriate terms will result in accurate communication and better pain management. The second of these areas is the group of cognitive-behavioral perspectives. This area contains studies that investigate the role of cognitive schemas in pain perception and expression. The third area is a cultural perspective on pain. This area assumes that traditions, social norms and context will
determine how a person perceives, expresses and manages pain. A fourth area details a conversation based approach to pain. Research in this area approaches phenomena as it occurs within the interactional coordination of meaning within conversation.

*Code and Tool Development*

One approach to pain communication relies on the assumption that communication can be improved if knowledge gaps are reduced between interlocutors. Research in this area seeks to identify techniques for discussing pain that ensure that what the patient says and what the other individuals say are the same in language as they are in meaning between persons.

In this approach to pain communication, communication competence is nearly synonymous with the size of scope of one’s knowledge of pertinent vocabularies and the degree of agility with which one is able to move between and integrate them. It is assumed that people have different vocabularies that overlap to different degrees. The extent to which similar term-to-definition pairs are shared between interlocutors directly determines the extent to which communication will be achieved. Increasing communication skills is accomplished by a two-sided adjustment: increasing knowledge of the matter at hand and sharpening sensitivity to the possibility of definition-to-term and behavioral indicator-to-meaning mismatches. If meaning is assumed to be objective and separate from the communicator, perception is problematic only because of some subjective distortion of the real meaning. If meaning is assumed to be inherently subjective, problems occur only in the transmission in which one tries to make the other understand his or her own meaning.
In health communication, this approach is commonly used in scholarly work on generating pain assessment techniques (Arif-Rahu & Grap, 2010; Norvell, 1990; Prkachin, 2005; Wadensten, Fröjd, Swenne, Gordh, & Gunningberg, 2010), measures and attention to health literacy (Cegala, 1997; Smith et al., 2006) and training health care professionals to adjust their messages to the level of the patient’s understanding of health knowledge (de Rond et al., 2000; Sloan et al., 2004). The current research on pain communication utilizing this linear approach is reviewed.

A common theme in the literature is the development and testing of scales in order to facilitate communication between patients and health care providers and between health care providers (HCP). Using a rating scale or other such simple systematic methods combined with education of the health care provider, a common language is created between the patient and the health care provider and is an effective way to improve pain assessment and documentation (de Rond et al., 2000; Farin, Gramm & Kosiol, 2011; Smith et al., 2006; Wadensten et al., 2010). Smith et al. observed that, “interpersonal communication between patient and health care provider represents the foundation of clinical care, and effective communication skills have been acknowledged as a core competency in medical training” (2006, p. 79).

In addition to verbal communication scale creation, a great deal of research has been conducted to assess pain in non-communicative patients, as it is difficult to circumvent the inconsistencies in facial expression (Arif-Rahu & Grap, 2010). To complicate matters in non-verbal pain expression, there is evidence that people tend to assign greater weight to facial expression than verbal communication in the judgment process when estimating the severity of pain being experienced by chronic pain patients.
undergoing a painful procedure (Poole & Craig, 1992). Poole and Craig (1992) observed that people perceive faked expressions of pain as having more pain than genuine expressions of pain, and this recognition of a false expression is still not improved when forewarned of potential deception. It is obvious that more research is needed to hone better techniques in non-verbal pain assessment.

Outside of pain scale usage, researchers have investigated communication in health care settings between medical staff. Norvell et al. (1990) investigated the degree to which physicians and nurses use the same terminology to describe pain. The results showed that physicians and nurses use very similar words to describe pain and to delineate between term use in pain descriptions. They concluded that meaning congruency is evidence that the physicians and nurses have a common understanding of pain (Norvell et al., 1990).

Despite these findings, terminology has been found to be problematic when labeling complex chronic conditions. Fibromyalgia is a term used to classify chronic widespread musculoskeletal pain and tenderness without apparent etiology. However, this term was and remains problematic, as it is difficult to differentiate from other diseases characterized by similar symptoms (Quintner, Buchanan, Cohen & Taylor, 2003). Labels of disease are a necessity in the current medical and social climate for purposes of insurance, legality, policy and fluid social engagement. According to Quintner et al., patients and physicians suffer because the nature of the condition is not clearly differentiated from other conditions and as such does not work well linguistically within a label (2003). Forced by the climate to give this untraditional disease a name, Quintner et al. argue that both physicians and patients are dealing with something that
does not fit into the proper condition category having clear etiology (2003). Without clarity, both physicians and patients struggle not only to categorize but also legitimize the label as well as their pain.

Not only has research found the labeling system of language to be problematic, but investigations into what is studied in pain communication is also relevant to patient outcomes. In a qualitative study of patient-doctor consultations, Rogers and Todd (2000) found that physicians, despite a holistically minded clinical setting, controlled conversations to focus narrowly on matching specific treatments to specific pain complaints by allowing only the communication from the patient falling under the category of a complaint that could be matched to a treatment. The physicians dismissed other pain communication until the patient appropriately tailored his or her message. Physicians often privileged clinical information over patient’s subjective feelings. The researchers concluded that inadequate exploration of patients’ pain is likely to be detrimental to symptom control (Rogers & Todd, 2000).

To summarize, this area of research concludes that pain management is better achieved when we are accurately perceiving another’s pain. To this end, most research focuses on generating systems of reporting and assessing pain that can be used consistently by all parties involved. Although rules and regulations in the medical field are dependent on creating a consistent vocabulary, the speech used is not always ideal for patients who have less familiarity with the system. Individual differences, cultural influences and speech patterns are not considered primary focuses when rectifying communication errors.

*Cognitive-Behavioral Perspectives*
Researchers using this perspective in studying pain assume that identification of the cognitive processes and models at work will result in the ability to predict a communicator’s behavior and level of competence. The onus is on the message creator to generate those elements that are necessary for communication to the extent that said message creator can perceive said elements.

Key elements of this approach are the focus on the emotional, cognitive and behavioral variables, which shape the expression of the pain experience, the responsibility of the message creator to consider the needs of the other in crafting the message, and the mutual adaption between interlocutors.

In this approach, communication competence is achieved to the extent that an individual understands the cognitive processes behind, emotional influences affecting, and behavioral indicators representing the message creation process. Communication is ideal when one is mindful of the other’s attitude structures and emotional situation. Pain communication, in this approach, reveals the essence of the pain experience insofar as we are able to understand the cognitive processes behind the expression.

This approach is common at the intersection of social psychology and communication. There are three topic areas that draw predominantly from this approach: (a) affect and pain (Feldman, Downey, Schaffer-Neitz, 1999; Schwartz, Slater & Birchler, 1996; Zautra, Johnson & Davis, 2005), (b) empathy, validation and social support in chronic conditions (Bongers, de Winter, Kompier & Hildebrandt, 1993; Cano, Barterian & Heller, 2008; Cano & Williams, 2010; Elfering, Semmer, Schade, Grund & Boos, 2001; Matthias et al., 2010; Romano, Jensen, Turner, Good & Hops, 2000; Romano et al., 1991; Uchino, Cacioppo & Kiecolt-Glaser, 1996), and (c) cognitive processes and pain
conception management (Eccelston, 2001; Herbette & Rimé, 2004; Morley, Doyle & Beese, 2000; Shariff et al., 2009; Uysal & Lu, 2011).

The current scholarship on pain communication and affect follows a general trend of tweaking and documenting the relationship between affect (also termed mood or emotion depending on concept explication) and pain levels. In an investigation of the causal role of negative affect in chronic pain patients, Feldman et al. (1999) observed a relationship between pain and mood. Pain leads to increases in anxious, depressed and angry moods, while depressed mood but not anxiety or anger leads to increases in pain (Feldman et al., 1999). Research by Zautra et al. (2005) replicated these findings and also found that lower levels of positive affect predicted lower levels of pain in subsequent weeks. In the context of married couples in which one partner experienced chronic back pain, marital conflict was associated with increased display of pain behaviors which elicited increased negative affect responses and punitive behaviors by the non-pain suffering spouse (Schwartz et al., 1996). These punitive spousal behaviors, according to Schwartz et al., were associated with an increase in patient physical and psychosocial impairment (1996).

In a related vein of research, studies on empathy, validation and social support in chronic conditions tend to investigate pain expression as a function of the patterns perceived to be successful in obtaining empathetic responses, validation and social support. Cano and Williams found evidence for alternative or supplemental explanations for pain interaction patterns in intimacy, which conceptualize verbal expressions of pain distress as emotional disclosures to be validated (or not) by a partner (2010). One study looked at validation as a form of empathetic communication (Cano et al., 2008). Using
couples in which at least one partner was suffering from chronic musculoskeletal pain, researchers found that empathetic communication is different from solicitous spousal responses (Cano et al., 2008).

Pain expression in the context of spousal interaction is a popularly researched area. Romano et al. (2000) have found that patient verbal pain expression is positively related to spousal solicitous responses when the patient ranks in low in measures of depression and that spousal responses to pain expressions is strongly associated with the patient’s level of depression. Other findings indicated that, compared with healthy couples, spouses of chronic pain patients exhibited more solicitous behavior (e.g., “Here, let me help you with that”) and less facilitative behavior (e.g., “I know you can do it”) (Romano et al., 1991). Solicitous behaviors were significantly linked with the generation of verbal and nonverbal pain behaviors, reinforce the pain behaviors and subsequently encourage more pain behavior (Romano et al., 1991). Uchino et al. (1996) investigated the potential of social support as way to relieve patient pain symptoms and found emotional support to be a key element of social support, familial sources of support as important and that mechanisms of stress buffering may also be at work. Finally, patients prefer health care provider services that makes them feel “supported, encouraged and listened to” (Matthias et al., 2010, p. 26) as opposed to health care providers who had “a lack of continuity of care, poor listening skills and under or over-prescribing medication” (p. 26-27). Other studies demonstrated that lack of support from one’s superior and one’s colleagues is associated with musculoskeletal pain (Elfering et al., 2001; Bongers et al., 1993).

The cognitive-behavioral perspective draws heavily on psychological perspectives and rightly so as they provide insight into cognitive processes that accompany the
expression of pain. Research suggests that, utilizing a top-down perspective, cognitive processes guide inhibit, and facilitate the expression of pain (Eccelston, 2001). Pain management is most effective, according to Eccleston (2001) when the strategies of communication fits the “person’s preferred or habitual method” of understanding the pain experience. Noted by Shariff et al. (2009), self-management can help reduce or control some symptoms of chronic pain. In an analysis of interviews with people experiencing chronic pain and rheumatoid arthritis researchers found that patients achieved self-management through mind/body techniques such as “accepting new limits and adjusting the way they related to themselves” (Shariff et al., 2009, p. 1037). Herbette and Rimé (2004) investigated chronic pain patient choices when verbalizing health-related emotions and found that patients will talk more frequently about their health-related emotions with those close to them. Results showed that the certainty of patient health conditions negatively predicted patients’ psychological adjustment to the anxiety brought on by chronic pain condition (Herbette & Rimé, 2004). Herbette and Rimé also found evidence that the behavior and social environment around the patient has a significant influence on patient well-being. Self-concealment was associated with higher levels of pain (Uysal & Lu, 2011). Disclosing pain helps others to understand and accommodate to the patient’s behavioral limitations. However, as found by Morley, Doyle and Beese (2000), pain disclosures come with the potential for not being believed and social ostracisms. In an interview study, Morley and colleagues identified several reasons patients had for concealing their pain, including the other’s inability to sympathize, expectation of being judged negatively, distrusting others, and expectation of other’s disbelief (Morley et al., 2000, p. 1127). Over 60% of patients interviewed reported
having experienced negative consequences after pain disclosure and therefore expected these negative consequences (Morley et al., 2000).

Altogether this area of research identifies cognitive structures and the behavioral expression thereof as the primary influence in pain management. Conflicting, misinterpreted, and destructive cognitions and behaviors are the chief culprits in unsatisfactory pain management. Changing cognitive structures can influence behavior, and, likewise, changing behavior can influence cognitive structures. Therefore, there are better and worse cognitive states and behavioral expressions for pain management. Better cognitions produce positive affect and self-efficacy, and better behaviors discourage the overt expression of distress.

*Cultural Perspectives*

Another dominant influence on communication practices is culture. Within this approach, people express and manage their pain in accordance with sociocultural norms and rules. Researchers examine cultural appropriateness, traditions, and metaphors about pain. Although there is an element of code sharing in this perspective, the cultural perspective focuses on larger structural constraints on pain expression and perception. These larger structures are more difficult to identify and change than simple differences in terminology.

An example of this approach is evident in intercultural encounters within the health care area. If a patient expresses his pain using a metaphor, it is important that the health care provider understand the meaning of that metaphor as it works for the patient’s relationship to the pain and as it is nested within a broader web of social experience (Keponen & Kielhofner, 2006). If the health care provider does not properly understand
the meaning and function of the pain expression, then the health care provider may misinterpret the nature of the patient’s pain, resulting in an incorrect diagnosis.

This approach is heavily focused on social moderators of communication practice. A central assumption is that communication is most heavily influenced by membership to cultures and the structures and norms that characterize those cultures. Such memberships can complicate the communication process as it increases the possible source for an individual’s set of norms, habits and structures of communication. It is very important to recognize, in this approach, the centrality of culture and cultural membership to understanding communicative processes. Although culture can complicate communicative acts, speech codes and metaphors used in the expression of pain help speakers align their understandings to common understandings of the pain experience.

The cultural approach is quite common in qualitative inquiries in health, ethnographic investigations of health care in certain regions and populations, and participatory-action research. Communication accommodation theory fits well within this approach and arguably is a characteristic theory in this category as it accounts for the different perspectives and strategies for individuals like patients, doctors and specialists (Baker, Gallois, Driedger & Santesso, 2011). With respect to pain, these studies investigate the psychosocial shapers of pain expression (Kirmayer, 2008), types of pain expression that are characteristic of specific cultures (Dickson & Kim, 2003, Jorge & McDonald, 2011; Jain & Krieger, 2011; Kugelmann, 1999; Taylor, 2010) and the necessarily nested expression of the pain experience (Baker et al., 2011; Borkan, Reis, Hermoni & Biderman, 1995; Keponen & Kielhofner, 2006; Saris, 1995; Sparkes & Smith, 2008).
In the cultural approach to pain communication, the literature indicates that pain expression (in type, volume and existence) is shaped by the culture of the sufferer, the observer and the parity between them. Automatic processes activated by pain result in expression and behavior that is an authentic product of the socialized self. According to Kirmayer (2008), we express that which is salient to us (the pain) through filter of that from which we take strength and with which we identify in order to maintain a sense of self and control. Our communication patterns and our pain expressions are evidence to our cultural situation as well as to how we are approaching the pain experience (Kirmayer, 2008).

Certain expressions of pain and certain pain experiences can only be understood and accessed if one uses a specific cultural lens. Cultural/ethnic background determines a patient’s perceptions of control (placement of fault, responsibility, ability) and in turn their responses to chronic pain experiences (Bates & Ranken-Hill, 1994). As observed by Dickson and Kim (2003), the reconstruction of the meaning of pain depends on a patient’s cultural background and experiences. This reconstruction is a fundamentally human social process and forms a foundation for culturally sensitive pain management strategies. Additional research has found similar conclusion related to the specific cultural influence manifested in expression and experience of pain (Kugelmann, 1999; Saris, 1995; Taylor, 2010).

In a more clinical thread, understanding patient belief systems, health beliefs, experiences and behaviors as well as noting the diverse social constructions of pain can result in improved clinical outcomes (Borkan et al., 2011). For example, women experiencing chronic pain describe their trials with daily occupations using four basic
metaphors: “moving forward”, “slowing down”, “fighting” and “standing still” (Keponen & Keilhoftner, 2011). Current research findings indicate that attention to such factors will improve clinical outcomes (Baker et al., 2011; Jain & Krieger, 2011; Jorge & McDonald, 2011; Sparkes & Smith, 2008). There is strong evidence that shared views and values between patient and health care provider in a context of mind-body integration in illness can lead to less treatment-related stress (Bates et al., 1997).

Common to all research in this area, it is assumed that culture is the primary factor in achieving satisfactory pain management. Culture is defined in its broadest sense encompassing religions, nationalities, ethnicities, social roles, sex and even job specialization. Cultural norms and rules dictate expression and the response of the pain observer. Cultural norms not only defines how pain is managed but with whom the pain is managed. Pain management is at its best when cultural norms are respected. When pain management is unsatisfactory, it is assumed to be because reality is in opposition to cultural norms.

However, the cultural approach does not take into consideration the alignment and coordination that can take place within conversation despite interlocutor’s varying backgrounds and cultural memberships. Without that possibility, intercultural interactions would be nearly impossible, and rarely would patients find cooperative relationships with health care providers. As such, it may not be a sufficient to explore pain with a cultural approach to communication.

Conversational Perspectives

In this approach, communication happens when the interlocutors are attuned to the subtleties and nuances of the immediate presentation of message and goals in the
communication event. This approach assumes the pain experience is most richly apparent in the everyday utterances used to achieve “diverse, inevitable local and delicately managed social actions” (Beach, 1992, p. 563). Larger cultural discursive tendencies and attitude structures do not factor into communication as much as the characteristics of the immediate setting. Communication, in this approach, is the delivery, the receipt and the management of information both positive and negative in the framework of pre-existing and evolving goals for the self and shaped by the dynamic conception of the other. For researchers operating in this approach, the pain experience is expressed and expression is shaped in this focused, dynamic interaction space.

The literature related to pain communication is not as rich in this approach as in others; however it is necessary to note the few significant pieces at the intersection. Referenced by Beach and Anderson (2003a), Barraclough says that in the cancer context, problems in caregiving, emotional support and healing derive from communication barriers but how that communication is achieved is wanting of definition. Self-report studies (survey research, questionnaires and interviews) in chronic condition contexts like cancer dominate the research field, but are limited in their effectiveness in studying communication and psychosocial oncology (Beach & Anderson, 2003a) which often involves talk about pain and pain management. A patient’s expressed and exhibited problems are a valuable source for “generating a comprehensive understanding of psychosocial and biomedical circumstances” (Beach & LeBaron, 2002, p. 617). Utilizing conversation analysis (CA) as a method and as a perspective in this approach to pain communication, CA can lead to better diagnostic practices (Drew & Collins, 2000). Potential applications of CA in health would be extremely fruitful in “patient
participation”, “health care processes, including those relating to (unnecessary) medication”, and “health care outcomes, especially relating to patient satisfaction” (Drew & Collins, 2000, p. 68). That is, the CA method is argued to have the ability to look at the nuances of what specific practices results in patient satisfaction and positive outcomes (Beach & Dixson, 2000); an essential angle of inquiry in an area like pain communication where much is subjective and multidimensional.

*Current Lines of Work Should be Integrated*

As there is a large body of research for each of the aforementioned perspectives, an integrative view is proposed in order to develop a more comprehensive and communicative approach to pain management. Acknowledging the importance of code development, cognitive-behavioral research and cultural studies, we propose investigating pain management as a communication process. As Craig notes, “communication, from a communicational perspective, is not a secondary phenomenon that can be explained by antecedent psychological, sociological, cultural or economic factors; rather, communication itself is the primary, constitutive social process that explains all these other factors” (Craig, 1999, p. 126). Similarly, as has been demonstrated, pain management, is a process that is influenced by all those factors, and as such should be studied as a process. Since pain management is primarily a communicative endeavor, communication perspectives should be used in pain management research.

This argument for communication perspectives must not be misconstrued as dismissing the importance of codes, cognitive-behavioral factors, culture, and conversation. Quite the contrary. This integrative approach acknowledges the influence
of all of these on the interpersonal interaction where pain management occurs. Aligning linguistic terms and definitions is important to satisfy industry pressures, facilitate healthcare professional training and ease the transitions between facilities and personnel for referred and transferred patients. Cognitive-behavioral based research is important because of the contributions made to establishing pain research in the social sciences. This research has established a link between affective states, self-efficacy and pain perception as well as accounted for some inconsistencies in pain expression. Cultural influences on pain management must also be retained because they are another way to account for differences in pain perception and expression. A comprehensive study of pain management not only acknowledges the foci of current lines of work, but situates pain management as a communication process.

To introduce a communication perspective to pain management, social support literature is used as a framework. Although supportive communication and pain management are not the same, they are similar enough to use supportive communication as a starting point.

Proposing an Integrative Approach to Communication When Studying Pain

It is already apparent from the literature reviewed above that communication in pain contexts is an important context, yet it is important to also note the communicative assumptions brought to the table in the research process. As there is legitimate and fruitful research on these two dynamic, multidimensional constructs (pain and communication) utilizing all four of these approaches, an integrative view utilizing all these approaches is proposed in order to take advantage of a communication perspective in a topic important across cultures, economies and generations. Similarly, as has been
demonstrated, pain expression of the pain experience, which is the primary clay from which diagnoses are shaped, exists, also, as constituting all such factors, but simultaneously operates as a separate process. This pain expression is a product of a layering process of all the aforementioned factors. It is not yet known and cannot yet be assumed just how dominant each approach is and in what contexts. Surely, for methodological efficiency and simple constraints of time and resources, research endeavors may choose to focus on one approach’s specific mechanisms, but this narrow lens must proceed cautiously. It must be understood, in all angles of inquiry to pain communication that both pain and communication cannot be simplified to a variable of one mechanism. It is the nature of pain and communication, and so pain communication, to be multidimensional, dynamic, and operates in a give and take between the four groupings of influencing mechanisms.

Social Support and Supportive Communication

While there are studies involving communication and pain, a well-established line of research in social support has begun to detail the effects individuals have on others, and the types and characteristics of messages that lead to increased well-being (Burleson & MacGeorge, 2002). Supportive communication research is used as a framework for this investigation, but is conceptually only one part of pain management. As such, there are elements of social support literature that are taken up and those that are not. A history of supportive communication research is detailed, and the similarities and differences with pain management communication are outlined.

Supportive communication is a derivative of a much broader body of research on the concept, social support. Social support is typically defined in a two party
conceptualization that is reflective of two dominant perspectives: psychological and sociological. Social support is conceptualized as “generalized perceptions of the availability and adequacy of supportive behaviors (psychological perspective), or as the enmeshment of individuals in social roles and networks (the sociological perspective)” (Burleson & MacGeorge, 2002, p. 375).

Sociological perspectives in social support create research that operationalizes social support as social integration to (e.g., Berkman & Syme, 1979). This research coalesces around the documentation of the positive effects of social integration on health outcomes and longevity (e.g., Berkman, Glass, Brissette & Seeman, 2000). Related lines of work link social integration with biological mechanism that influence physical health (e.g., Uchino, Cacioppo & Kiecolt-Glaser, 1996) and with psychological outcomes (e.g., Schwarzer & Leppin, 1992).

The psychological perspective has generated work that emphasizes support’s role as information which guides the individual to believe that he or she is cared for, valued and has the resources available that are helpful (Moss, 1973; Cassel, 1976). Research operating from this perspective focuses on enacted, received and recently more so on perceived support (Burleson & MacGeorge, 2002). Enacted support has been given a number of sub-classifications including: emotional support, appraisal support, informational support, and instrumental support (Cutrona & Russell, 1990). The second approach to support in the psychological perspective, received support, has produced mixed research conclusions. Received support has been found to be positively related to stress (e.g., Cohen & Hoberman, 1983). Such findings motivated researchers to explore and conclude that perceived support accounted for more of the variance in health
outcomes (e.g., Antonucci & Israel, 1986; Wethington & Kessler, 1986). The shift to focusing on perceived outcomes was also a result of greater focus on the cognitive mechanisms that generated positive or negative outcomes (Burleson & MacGeorge, 2002). These mechanisms derive from appraisal theory (Lazarus, 1991).

Distinct from psychological and sociological perspectives, a communication perspective has also been developed and introduced, supportive communication – “verbal (and nonverbal) behaviors intended to provide or seek help” (Burleson & MacGeorge, 2002, p. 384). Supportive communication has roots in diverse academic disciplines but is distinguished by, as Burleson and MacGeorge outline (2002), five unique features. The first feature is the central role of communication. Placing communication as a primary factor identifies supportive communication as distinct from social support. Second, supportive communication assumes that there is a direct connection between communication and well-being. In contrast, both the sociological and psychological perspectives assume that increased or decreased well-being is a fortunate (or unfortunate) byproduct but not the primary intent of the support. A third distinguishing feature of supportive communication is its focus on explicit responses to (as opposed to assumed effect on) perceived needs. Fourth, Burleson and MacGeorge argue that supportive communication tends to take a normative approach in research (2002). This assumption of diverse and contingent propriety accounts for the variability in the effectiveness of supportive behavior. Lastly, although social support research in both perspectives focuses on health and psychological outcomes, supportive communication research also directs its attention toward interaction and relationship outcomes (Burleson & MacGeorge, 2002).
Pain Management as Distinct From Supportive Communication

Although distinct, pain management communication and supportive communication do overlap in some regards. In both, communication plays a central role, the focus is on intentional responses to a target’s perceived needs, and there is a normative approach taken in both lines of research. However, there are two important differences. First, although the study of both pain management messages and supportive messages focuses on interaction outcomes, studies in pain management messages are also very concerned with mental and physical health outcomes. Second, emotional distress may accompany pain but is not the same as pain. Pain, at it simplest, is a sensory experience that we often conceive of as acting on us even though it is within the realm of our own bodies. Pain is different from emotional distress. Although both pain perception and emotion-related distress occur within the human mind, the way we talk about pain versus emotion conceptualizes pain as an outside threat and emotional distress as a condition resulting from some internal consistency, as in self-discrepancy research (e.g., Higgins, Klein & Strauman, 1985). For example, when someone is emotionally distressed, they may say, “I am scared”, “I feel rejected” or “I just feel so sad”. These phrases situate the distress as a result of something within the self being off or broken. The self is the object that lacks in a quality that he or she should have (i.e., contentment, acceptance, courage). In contrast, a person in pain may use language that phrases the self as the subject being acted upon by pain (the object). The pain is a foreign entity that should not be there. This is represented in such language as, “I just want the pain to go away” and “My back is killing me”. The phrase, “My back hurts”, on the surface seems like it thwarts the proposed difference. However, the unspoken object pronoun, “me”, returns
pain back to its role as a foreign actor on the self’s state of being- “My back hurts [me]”. This is still even different from grieving distress because the real cause of the problem is a negative force that happened to another person. Although the self is affected, it is not the central casualty. Therefore, supportive communication and pain management communication are related but distinct concepts.

Theoretical Assumptions

The assumptions about communication in this investigation come from the constructivist tradition, which characterizes communication as a process of interaction in which individuals express themselves through an ongoing coordination of intention expressions and recognitions of those intentions (Delia, O’Keefe, & O’Keefe, 1982). In line with this perspective, O’Keefe & Delia (1982) argue that messages are produced with regard to individuals’ specific goals, which are tailored by and pursued in specific situations, and contributes to the variety of messages produced. Communication is a situated and strategic ordering of behavior by which individuals coordinate their shared interpretive schemas to achieve some end (Delia et al., 1982). This view provides a way to conceptualize the dynamic integration of interactional, cultural, cognitive and symbolic resources for managing meanings that surround the expression and understanding of pain.

Using constructivism as a theoretical platform, this investigation proceeds with particular assumptions for a communication based approach to pain management: communication is symbolic, rhetorical and situated. First, communication in pain management is a symbolic, meaningful action. Messages do not generate effects simply by their utterance, but rather through individuals’ interpretations and evaluations of those messages (Goldsmith, 2004). For this context, a pain management messages will not
serve to elicit the practices or benefits of pain management unless it is perceived as a
good pain management message. The jointly constructed meaning between interaction
partners is of primary focus. Second, communication in pain management is rhetorical.
Reflecting the rhetorical tradition that investigates communication features that are more
or less successful at achieving some goal in a particular context (Clark & Delia, 1979),
this aspect of communication highlights the constitutive power of language (O’Keefe,
1988). Successful pain management communication, similar to normative approaches to
social support (Goldsmith & Fitch, 1997), uses linguistic and discursive resources to
adapt communication to variation in the demands of the situation to achieve multiple
goals. The rhetorical take on communication also recognizes that interpretations of
messages are shaped by situational, conversational, and cultural contexts (Goldsmith &
Fitch, 1997). The recognition of context segues to the third assumption: individuals draw
on the resources of the situation or context in which a conversation takes place to
coordinate action and meaning. Although context can be defined widely and narrowly
(e.g., Duranti & Goodwin, 1992), pain management is recognizable in and allocated
expectations by the contexts in which the pain management communication is enacted.

In summary, while acknowledging the perspectives that prioritize the mechanisms
at the level of local management of interaction, it is assumed that cognitive schemas and
sociocultural structures play an equally important role in the shaping of communication.
For pain management, this means that an individual generating a message must make
known his or her cognitive representations with respect to the given situation in a manner
that fits in with the established order and expectations of interaction. Through talk, the
pain is, as in regulative message research, made subject to reasoned cases whose
“articulated claims and reasoning are the grist for creating new beliefs in others and coordinating others’ views” (Kline, 1991, p. 4). Pain management, especially with its persuasive and redefining functions, is entrenched in communication.

Concepts

There are several concepts that are important to the argument forwarded by this thesis: meaning management, attributions, appraisals, discourse, messages, message outcomes. While some of these concepts are key elements of theory, others serve to establish the basic assumptions of this investigation.

Pain Management Communication

Pain management is a relatively new area of medicine having been established by a surge of pain research and clinical developments in the late 1960s and early 1970s (Loeser, 2001). It is important to distinguish pain management from two related concepts: pain relief and analgesia. Analgesia is the removal or pain and pain relief is a reduction of the pain level (Hardy, 1997). While analgesia and pain relief are usually possible with acute pain, chronic pain necessitates the need for pain management. Pain management is a set of practices and beliefs concerned with the “reduction of suffering and enhanced quality of life rather than a reduction in the pain complaint” (Hardy, 1997, p. 10). Industry standards maintain that good pain management includes techniques such as: demedicalization and reconceptualizing the problem (Jacobson & Mariano, 2001), recognizing the psychological and social context of the interaction (Mariano, Jacobson, Chabal & Chaney, 1991) and treating the patient as a “person” while challenging dysfunctional beliefs about pain (Jacobson & Mariano, 2001, p 248). Demedicalization and re-conceptualizing are terms referring to efforts by health care professionals to
reeducate patients that their disability and life problems are influenced by many other factors in addition to pain (Jacobson & Mariano, 2001). Mariano and colleagues found that ensuring the acknowledgement of psychological and social factors reduced misinterpretation between patients and health care providers (1991). All of these core elements of pain management are intrinsically tied to communication, and so the verbal and non-verbal behaviors passed between interaction partners with reference to the pain of a person are pain management messages. The pain management message is a unit of verbal and non-verbal communication that is crafted to achieve and shape mutual understanding of the pain experience of an individual so as to enable that individual to better deal with that pain with and without reference to his or her sociocultural context and interpersonal demands. Pain management messages may be constructed by the pain sufferer or by the pain observer. They function to redefine the pain, the distress related to the pain and the role of the pain sufferer with respect to the pain.

There is a large amount of medical literature affirming that communication is an essential part of pain management. It is recommended that physicians establish meaningful, long-term relationships with chronic pain patients that include social and interpersonal interactions (Turner, Deyo, Loeser, Von Korff & Fordyce, 1994). Another communication relevant practice is to replace “compliance with treatment” with “cooperation” to indicate that the medical consultation is a “process of negotiation between the perspectives of the provider and the patient” as a way to generate a mutual orientation toward common objectives (Jacobson & Mariano, 2001, p. 248). Pain management, thus, requires communication in order for perceptions and meanings of pain
to be known and subsequently renegotiated to facilitate better pain management. The outcome of pain management is ultimately a better version of pain management.

**Attributions**

Drawing from theories of cognitive emotion, attributions are conceptualized here in line with Weiner’s attributional theory of achievement motivation and emotion (1985). The theory holds that individuals’ cognitive states and emotions are determined by the extent to which an individual ascribes cause and effect of an outcome (Weiner, 1985). The nature of the objects to which the individual attributes blame can vary on multiple dimensions including, locus, stability, controllability and globality (Weiner, 1986). When an individual attributes his or her distress to an internal, stable, uncontrollable and global cause, increased anxiety and decreased self-efficacy result (e.g., Weiner, 1985; McDonald & Bavin, 2001). Since self-efficacy and anxiety are linked to increased pain perception (Mosher, Duhamel, Smith & Egert, 2010; Cornwall & Donderi, 1988), such attributions can have a strong impact on a sufferer’s cognitive and behavioral responses and perceptions of intensity (Gatchel, Peng, Peters, Fuchs & Turk, 2007). For example, research with cancer patients has demonstrated that patients who attributed some of their pain to causes other than cancer reported less intense pain than patients who attributed their pain directly to cancer (Smith, Gracely & Safer, 1998).

**Appraisals**

Appraisal theory holds that negative affect derives, not from states of external affairs, but from cognitive interpretations, or *appraisals*, of situations as distressing (Lazarus, 1991). Primary appraisals deal with goal relevance and congruence. Secondary appraisals deal with examining coping abilities. Sharp et al. claim, “the difference
between patients who are distressed and/or disabled, and those for whom pain is not markedly problematic, lies not necessarily in the sensory activity, but rather in the patients’ appraisals and interpretations of the pain” (2001, p. 792). It is widely known that chronic pain patients are often depressed and report more pain (Von Korff & Simon, 1996). However, since there are pain patients who are not depressed, many researchers believe that “appraisals of the effects of the pain on their lives and appraisals of their ability to exert any control over their pain and lives” mediate the pain-depression relationship and even the sensory pain itself (Gatchel et al., 2007).

**Discourse**

Although there are many different ways discourse is defined and many more ways to analyze it, discourse is defined here rather broadly as the talk which constitutes the reality within which interactions take place and functions to generate locutionary meaning, illocutionary force, perlocutionary force or all three (Wood & Kroger, 2000). Discourse plays a key role in this investigation as an orientation point in order to keep the focus on the communication aspect of pain management. Although the influence of social psychological structures is important in the construction of meaning between interaction partners, the words, phrases and tones used to accomplish this are just as important. Therefore, it is very important to ensure that, as communication scholars, the discourse itself is assumed to be a complex and important factor in shaping and channeling expression and meaning making.

**Messages**

Pain management messages are the particular focus of this investigation. Different from discourse, pain management messages are a smaller unit of a larger discourse
structure, but reflect their membership to discourse in their component parts. Research has indicated that pain intensity and other pain-related distress is influenced by factors that, though not labeled as communication in the studies, are shaped by and constituted by communication processes. The argument made here is that although many psychosocial factors in pain are examined, the messages that shape, channel and give life to these factors are influential factors themselves. Examples include the positive relationship between pain catastrophizing and pain intensity (Pinto, McIntyre, Almeida, & Araújo-Saores, 2012). Reducing catastrophizing schemas (i.e. “I feel my life isn’t worth living”, “It’s terrible and I feel its never going to get any better”, Riley & Robinson, 1997) is linked with decreased risk for chronic and acute postoperative pain (Burns & Moric, 2011; Kahn et al., 2011). Taking a message perspective in pain management alludes to clinical breakthroughs in psychosocial approaches to pain management such as hypnosis, relaxation training, mindfulness mediation training, and motivational interviewing (Jensen, 2011). More closely, however, are findings that positive wording can reduce discomfort and adverse effects in a therapeutic intervention (Lang et al., 2000). Also, preparing patients for procedures by using language that refers to negative experiences may not make the patients feel better in terms of pain or anxiety (Lang et al., 2005). Focusing on the message takes up the spirit of more established psychosocial approaches to pain management, but explicates the specific communication practices and processes by and through which these approaches affect pain.

Outcomes of Pain Management Messages

As good pain management occurs when pain sufferers feel efficacious, feel somewhat motivated to engage in pain management, recognize their pain in terms of a
larger perspective, and carry out better coping practices, a good pain management message should generate these practices and perceptions which should lead to better well-being. The specific message outcomes dealt with here are: perceived efficacy and perceived coping. These have all been demonstrated as key factors in facilitating effective pain management (e.g., Fernandez & Turk, 1995; Keefe et al., 2004; Verhoeven et al., 2010). Self-efficacy refers to an individual’s confidence in his or her ability to engage in a course of action sufficient to accomplish a desired outcome, such as control of his or her pain (Keefe et al., 2004). Coping ability refers to the extent to which an individual maintains a desired course of action despite inhibiting factors, such as pain. Therefore, a successful pain management message would generate and/or affirm high self-efficacy and coping ability. In communication processes, perceived efficacy and perceived coping ability as indicators of perceived pain management are important influences on what type of message is constructed.

Another message outcome is perceived understanding, or the extent to which the person in pain feels that the person responding to their pain can accurately interpret the nature of the pain sufferer’s experience. Extensive evidence shows that a basic desire of pain sufferers is for people, especially health care providers, to understand what and to what extent they are experiencing (e.g., Farin, Gramm & Kosiol, 2011; Smith et al., 2006). As physicians are warned that patients need to have their pain acknowledged and understood and be treated as a contextualized person instead of a condition (Bendelow, 2006; Jacobson & Mariano, 2001), it is equally important for family and friends with whom pain sufferers interact daily to recognize this. A good pain management message should be crafted bearing in mind this need.
Dimensions of Pain Management Messages

Drawing on disparate pockets of literature, two dimensions of pain management messages are proposed: person centeredness and empowerment-victimization. Person centeredness is taken from the social support literature (i.e., Burleson, 2010). The empowerment-victimization dimension is an original dimension that derives the medical literature on care vs. cure and disease vs. illness, (e.g., Asmundson & Wright, 2004; Crowley-Matoka, 2009). Messages varying on these two dimensions are theorized to operate in moderating pain experience according to appraisal and attribution theories (Lazarus, 1991; Weiner, 1987). By reappraising the pain source and the effects of the pain experience in different ways, one can guide the pain sufferer to think differently about the pain experience and even mitigate the pain (Sharp, 2001).

*Person Centered Dimension*

Person centered messages are “functionally and structurally more complex forms of behavior that present greater accommodative challenges” to one’s interaction partner so that one’s partner reasons about the situations and “selects behaviors based on considered needs, wants and responsibilities” (Applegate, Burleson & Delia, 1992, p. 8). Person centered communication research is rooted in the theory of speech codes developed by Basil Bernstein, which parses out differing characteristics and consequences of systems of schemes that function to organize appropriate social use of language (1974). Bernstein developed a distinction between elaborated and restrictive codes. Elaborated codes are used when the meaning being communicated requires greater detail, explanation with reference to the hearer’s perspective, and assumes that the hearer’s experience is different from the speaker’s experience. In contrast a restricted
code is employed when the speaker and hearer have common experiences and understandings. Bernstein also observed that communication can focus on either positional or personal attributes of persons (1973), which also structures relevant meanings and interpretations. A positional orientation focuses on role attributes, while an personal orientation focuses on a person’s beliefs and feelings. Applegate (1980) combined Bernstein’s concepts of elaborated code use with a personal orientation to form the concept of person-centeredness, which he contrasted with restricted code and positional speech.

Studies on person centered messages have taken up lines of research on the relationship between social cognitive schemas and the complexity of expression O’Keefe & Delia, 1982; O’Keefe, 1982). Applegate’s integration of Bernstein’s theory of speech codes and constructivism led to the addition of cognitive complexity as a significant predictor of the use of speech codes. A rich line of research has developed the link between cognitive complexity and communication competence (for a review see Coopman, 1997; Kline & Delia, 1990; O’Keefe & Delia, 1982). Collectively, this research has demonstrated that individuals with highly differentiated and abstract interpersonal construct systems produce both regulative and comforting messages that are person centered in a variety of domains, including the medical domain (e.g., Kline & Ceropski, 1984; Bodie et al., 2010). The definition of person centeredness in this investigation is “the extent to which messages explicitly acknowledge, elaborate, legitimate, and contextualize the feelings and perspective of a distressed other,” (Burleson, 2010, p. 161). Person-centered messages have been studied in informative, persuasive, regulative and comforting domains. Persuasive person centered messages are
characterized by attempts to take into account the goals and desires of one’s interaction partner (Clark & Delia, 1976; Delia, Kline & Burleson, 1979). Regulative person centered messages encourage an offender to reflect on and reason through consequences of undesired behavior (Applegate, Burleson & Delia, 1985; Kline, 1991). Comforting person centered messages exhibit some degree of acknowledgment, elaboration and legitimization of negative affect (Applegate, 1980; Burleson, 1982). Pain management is proposed as a new domain for investigation.

In accordance with past literature (e.g., Applegate, 1980; Burleson, 1982) the concept is operationalized into major levels of high (HPC), moderate (MPC), and low (LPC) person centered messages. This three level hierarchy originates from a 9 level coding system that includes three major levels that each have 3 sublevels (Applegate, 1980). The coding system is derived from Bernstein’s distinction between “restricted” and “elaborated” codes and between “personal” and “positional” codes (1974). Applegate adapted these codes utilizing a constructivist perspective (Delia, O’Keefe & O’Keefe, 1982) into a “single developmental continuum reflecting a progression from globality, concreteness, and lack of integration to differentiation, abstractness and integration in both individuals’ cognitive structure and their repertoire of communicative strategies” (1980, p. 162). This continuum is the basis for the 9 level (3 major level) person centeredness coding system.

Messages assessed with the comforting person-centered system at the first major level (low person centeredness) are characterized by denial of the other person’s perspective by explicitly denying or ignoring his or her “feelings motives, intentions, etc. as a legitimate basis for defining the situation” (Applegate, 1980, p. 165). Within this
level, the three sublevels (1, 2, and 3) instantiate finer graduations of the hierarchy. Level 1 includes messages that explicitly rebuke the perspective of the other, level 2 includes messages that challenge the legitimacy of the other person’s perspective and level 3 messages ignore the perspective of the other (Burleson, 1982).

In the second major level, messages implicitly recognize the other’s perspective and sometimes encourage the person to elaborate on the situation by thinking through consequences of the general rules governing the situation (Applegate, 1982). Three more sublevels (4, 5 & 6) in this hierarchy represent more detailed differentiations within the major level. Level 4 includes messages that try to distract the other from the immediate situation and the feelings being experienced, level 5 acknowledges the other’s feelings without elaboration and level 6 messages are characterized by attempts to alter feelings about the situation by referencing non-emotional circumstances or characteristics of the situation (Burleson, 1982).

At the highest and third level of person centeredness, HPC messages are characterized by showing sensitivity to the “unique features of the context” and to the other person’s perspective (Applegate, 1980). These messages also explicitly acknowledge and encourage elaboration of these elements (Applegate, 1980). There are also three levels within the third major level (7, 8 & 9). Messages at level 7 contain explicit recognition of the other’s feelings; level 8 messages facilitate the articulation of those feelings and elaborating reasons why the feelings are felt; and level 9 messages are characterized by situating the perspective and the perspective of other parties in a larger, interrelated context (Burleson, 1982).
Given the substantial research indicating high person centered messages are evaluated more positively and have more positive outcomes that moderate or low person centered messages (Burleson, Holmstrom & Gilstrap, 2005; Kline, 1991), the following hypotheses are proposed:

H1: High person centered messages will be rated higher than moderate and low person centered messages in message quality in terms of politeness, helpfulness, supportiveness & sensitivity.

There are three reasons why HPC messages would be more likely to produce high perceived pain management in the form of perceived coping and efficacy. First, by noting the perspectives of others and the broader context, a HPC message establishes a link between the self and others and situates the self in a system. Conceptualizing one’s problem in relation to other factors highlights processes of cause and effect, and the potential for altering patterns thereof. In pain contexts, this may lead to a discovery of processes with negative consequences. This knowledge gives the pain sufferer the opportunity to decide whether or not to continue to facilitate that process. Bandura has stated that “those who believe they can exercise control over potential threats do not conjure up apprehensive cognitions and, hence, are not perturbed by them” (1989, p. 419). Recognition of options is linked with increased coping ability (Vowles et al., 2008). Second, HPC messages primarily legitimize the perspective of the other and so the message dispels concerns that the pain sufferer might have about being believed. If the suffering person feels that the observer accepts and believes the perspective of the suffering person, he or she is then free to move from establishing the state of the present self to achieving a better future self. Third, specific problem elaboration in terms of pain
sufferer perspective is an aspect of HPC messages that helps to organize and evaluate
thoughts for problem solving (Stöber, 1998).

H2-3: High person centered messages will be rated higher than moderate and low
person centered messages in enhancing pain management in the form of (H2) perceived
coping and (H3) perceived efficacy.

**Empowerment-Victimization Dimension**

This message dimension is derived the mounting evidence in clinical studies for
self-efficacy as an important element of illness management and behavior (e.g., Rokke,
Fleming-Ficek, Simens & Hegstad, 2004; Keefe, Rumble, Scipio, Giordani & Perri,
2004). Victimization-empowerment encompasses extent to which a message either
ratifies the victimization or encourages empowerment of the pain sufferer relative to the
sufferer’s relationship with the pain.

This dimension has also been developed with regard to standing literature in self-
efficacy. In medical psychology, self-efficacy has been demonstrated as a powerful
influencing variable on an individual’s perception of pain and ability to cope (Rokke et
al., 2004). In addition, low self-efficacy could negatively affect the body’s immune
system (Weisenberg, 1998). High self-efficacy would be preferred, according to the
standing research, in order to achieve greater well-being. That is, empowering a pain
sufferer (rather than confirming his or her helplessness) is of greatest help.

Such problems may result from detrimental cognitive pain attribution and
appraisal architectures. Attribution theory holds that we think and act in certain ways
based on the objects to which we ascribe responsibility for certain aspects of situations
(Weiner, 1985). Attributions about pain (loci, stability, control; Weiner, 1985) can have a
strong impact on a sufferer’s cognitive and behavioral responses and perceptions of intensity (Gatchel, Peng, Peters, Fuchs & Turk, 2007). Appraisal theory holds that negative affect derives, not from states of external affairs, but from cognitive interpretations of situations as distressing (Lazarus, 1991). Primary appraisals deal with goal relevance and congruence. Secondary appraisals deal with examining coping abilities. Sharp et al. claims, “the difference between patients who are distressed and/or disabled, and those for whom pain is not markedly problematic, lies not necessarily in the sensory activity, but rather in the patients’ appraisals and interpretations of the pain” (2001, p. 792).

Together, self-efficacy, appraisals and attributions combine to form the following two types of messages on the ends of the victimization orientation. These orientations assume that a pain experience is undesirably distressful and that the sufferer prefers a state of well-being.

Victimization

Messages formulated in this end of the dimension support, maintain or generate, or otherwise ratify the appraisal that the pain experience is always incongruent with all relevant goals. Given, it is always true that the pain experience is incongruent with the relevant goal of complete well-being. However, this appraisal is rather detrimental due to its catastrophizing language (King, 1991). Victimization messages are characterized by extremist and superlative language (e.g., “always”, “never”, “worst”, “in my life”, “not in months”). This language is used to convey sincerity, is easy to generate and reveals that the message producer has sensed that empathy may be a way to help the sufferer.
However, these types of goal relevance and congruence assessments (appraisals) solidify conceptions of totality with regard to the pain experience and deny nuance.

Another element of victimization is the emphasis of the uncontrollability of the situation. For example, an individual may tell a suffering friend, “You can’t do anything about it. It’s not your fault. There’s nothing you can do so you can just focus on getting by.” The wannabe helper has attempted to relieve the stress of the responsibility of action from his or her friend, but has innocently enacted the same detrimental totality of language. Instead of seeking reattribution of distressful cognitive structures, the wannabe helper has emphasized the uncontrollability and so also the powerlessness of the sufferer. The wannabe helper thought that emphasizing the sufferer’s lack of control and means takes pressure off the sufferer. Yet, since self-efficacy is related to coping abilities (Hadjistavropoulos, H. & Craig, 1994), this strategy should backfire.

Empowerment

Messages formulated in this way support, maintain or generate the appraisal that the pain experience is incongruent with the relevant goal of well-being, but it is not always incongruent with all relevant goals. These messages emphasize a personal redefinition of “relevant goal”. They are characterized by language that compartmentalizes suffering and emphasizes the incompleteness of pain’s dominance over life.

The empowerment term derives from the messages’ defense of the claim that a true victim does not have power, freedom, ability or choice. This is a nod to the connection between gaining control over one’s pain and controlling the impact of pain in one’s life (Gatchel et al., 2007). Although they are different, they are certainly connected.
In some cases, adjusting a patient’s energy to gaining control over the effect the pain has in one’s life versus gaining control over the pain itself, is a much more productive and health orientation (McCracken, Carson, Eccleston & Keefe, 2004). Perceived helplessness has been identified as a primary contributor to disability and pain level (Samwel, Evers, Cruel, & Kraaimaat, 2006; Jensen & Karoly, 1991). On the other hand, increases in the belief that one has control over pain is linked to reducing pain and disability (Jensen, Turner & Romano, 2001). In secondary appraisals, empowerment messages emphasize a positive view of coping ability and reappraise future expectancy to expect increased well-being. Empowerment messages rely on attribution theory mechanisms. These messages ensure that distress is attributed to multiple, unstable loci and not just the sensory pain experience. The message helps reattribute the cause of the distress and build in nuance and variability that provides opportunity for multiple avenues to well-being. Controllability is increased. For someone in pain, this relieves anxiety brought on by situations that are perceived to have one, unobtainable solution. One becomes able to, so to speak, control the controllables. Empowerment messages re-attribute the control of the problem to the person in trouble and cast that person as one who is able and motivated to take advantage of this control giving them hope, confidence and a sense of purpose in a situation in which they may have previously felt helpless. Empowerment messages are concerned with bringing the more desirable future self into the present and establishing the potential to achieve this more desirable state is comforting and inspiring to a person in pain. Given the advantages of this reattribution and reappraisal process produced by empowering messages and the ease of producing ratification messages, the following research questions are proposed for inquiry:
H4: Empowerment messages will be evaluated higher than victimizing messages in message quality in terms politeness, helpfulness, supportiveness and sensitivity.

H5-6: Empowerment messages will be rated higher than victimizing messages in effecting perceived pain management in the form of perceived (H5) coping and (H6) efficacy.

Adding Altercasting

Since scholars have investigated person centeredness in depth and breadth, it is not difficult to argue for an exploration of its use in the pervasive, distressing and costly context of pain management, but this combination may warrant additional explanation. Messages have multiple dimensions that could be chosen for this initial investigation. In addition to the reasons outlined above for the choice of dimensions individually, this particular set of permutations was chosen for its potential for a more efficient and comprehensive influence on pain management. Person centered speech is linked with increased comforting (Samter & Burleson, 1984), helpfulness (Rack, Burleson, Bodie, Holmstrom & Servaty-Seib, 2008), and with facilitation of realistic and positive approaches to mental, physical and social well being (McWilliams, 2009). While person centeredness makes a person feel better, extending that well-being beyond the echoes of the person centered message requires an additional component to the message. The victimization-empowerment dimension of pain management messages invokes altercasting to legitimate or reconstruct a particular identity for the pain sufferer. Although this dimension is theorized to operate within theories of attribution and appraisal, reconstructing cognitive schemas is only part of the task to facilitate better pain management. Constructive and positive attributions and appraisals give the sufferer the
ability to operate in a certain way but not necessarily the motivation. Drawing on Weinstein and Dutschberger (1963), altercasting is a compliance gaining technique that projects an individual (the pain sufferer) into a particular role that is consistent with one’s goals for the individual (e.g., “You’re a fighter, so you wouldn’t let this stop you”). When an individual is cast in a certain role, he or she faces pressure to comply with the request to behave in a manner that is consistent with that role (Turner et al., 2010). Scholars have investigated altercasting speech phrased in abstract and non-specific ways drawing on social norms (e.g., Turner et al., 2010).

The victimization-empowerment dimension of messages works in a particular message strategy phrasing by casting the pain sufferer specifically as victims or as empowered actors (e.g., “Someone who just had knee surgery can’t be expected to perform all those tasks” vs. “You just had knee surgery, so you can’t be expected to perform all those tasks”). As such, this dimension contributes specific, contextualized reasons for the altercasting. Therefore, person centered messages should be made more powerful by adding this second dimension. Considering that self-efficacy is related to pain intensity and psychological adjustment (Keefe et al., 1997; Keefe et al., 2004), it is expected that empowerment messages, combined with high person centeredness would be rated highest in message quality and be expected to most successfully facilitate coping, and increase efficacy.

H7: High person centered empowerment messages will be rated highest in message quality in terms of increased supportiveness, helpfulness, and sensitivity, compared to moderate or low person-centered victimization messages.
H8-H9: High person centered empowerment messages will be rated highest in terms of effecting perceived pain management in the form of (H8) perceived coping and perceived (H9) efficacy, compared to moderate or low person-centered victimization messages.

In order to test the above mentioned hypotheses and seek answers to the abovementioned hypotheses, a message perception study is outlined in the next chapter.
Chapter 3: Method

Participants

Participants were 100 students enrolled at a large mid-western university over the age of 18. Participants were recruited from communication courses and given extra credit in those classes for their voluntary participation. There were 35 males and 65 females. The mean age was 23.18 (SD=0.45). Distribution of race showed a majority of white/non-Hispanic students (72%) with multiple minorities represented (Asian: \( n=12, 12\% \); Black: \( n=8, 8\% \); Hispanic: \( n=2, 2\% \); Other: \( n=6, 6\% \)).

Design & Procedure

The study was a within-subjects design examining perceived pain management (perceived efficacy & perceived coping) and message quality (supportiveness, helpfulness, sensitivity, politeness) as a function of a message’s degree (high, moderate, or low) of person centeredness and whether the message empowered or victimized the pain sufferer. Participants were asked to give their thoughts and judgments of particular communication instances. After providing informed and voluntary consent, participants were asked to read one of two hypothetical situations in which they were to imagine that they noticed a friend experiencing either chronic migraines (chronic pain) or burned his or her hand (acute pain). The participants then read 6 researcher-constructed responses to this situation. The 6 responses were messages that participants were asked to consider as things they
might say to their friend in pain in order to help him or her feel better. Participants rated each of the 6 response messages for perceived efficacy, perceived coping, and message quality. Participants rated the realism and likelihood of the situation and messages. They also reported basic demographic characteristics (age, sex, and ethnicity).

Independent Variables

*Pain Situations*

Each participant was given one of two paragraphs describing a pain situation. The two types of pain situations were chronic and acute pain. These divisions are taken from the current categorizations in medical literature (IASP Taxonomy, International Association for the Study of Pain, 2011). One situation (chronic migraines) was created to represent a *chronic* pain condition, or pain that endures beyond the healing of the initial injury and/or resists treatment for an extended period of time. The second situation was created to represent an *acute pain* circumstance: a burn. Participants were asked to imagine that a same sex-friend was experiencing the described situation. In the migraine situation, the participant notices the friend begin to experience the migraines, go to the doctor and continue to suffer the pains of the migraines. In the burn situation, the participant is to imagine that his or her friend has burned his or her hand very badly while at work at a restaurant. The burn is so severe that the friend cannot go to work for a short period of time.

*Message Dimensions*

After reading the hypothetical situation, participants were asked to evaluate six messages that they might say to help their friend feel better. Each message was created by a different combination of high, moderate, or low person centeredness and victimization
or empowerment altercasting (HPC-empowerment, HPC-victimization, MPC-empowerment, MPC-victimization, LPC-empowerment, LPC-victimization). A set of stem phrases was created to represent high, moderate, and low person centeredness and each adjusted to fit to the context of the situation. In accordance with previous work done by Applegate (1980) and Burleson (1982), LPC messages included directives and denial of the pain sufferer’s perspective (e.g., “Stop whining. It’s not that bad”). LPC messages explicitly condemn the other person’s feelings, challenge the foundation of those feelings and sometimes ignore his or her feelings entirely (Burleson, 1982). MPC messages included implicit recognition of the pain sufferer’s perspective (e.g., “I’m sorry. I’ve heard that can be really uncomfortable”). MPC messages are characterized by dealing with the other person’s feelings by diverting his or her attention from the issue and negative feelings. MPC messages also include attempts to explain the situation in terms of external or indirect factors (Burleson, 1982). HPC messages explicitly legitimize the pain sufferer’s perspective (e.g., “I would feel awful too if I had such terrible headaches”). HPC messages also include attempts to explain those feelings, and to relate the situation to the feelings that other people involved might be having (Burleson, 1982).

Another set of phrases was created to represent victimizing or empowering message components. Victimizing phrases used words like “unlucky” and language that situated the pain sufferer as unable to control forces acting upon him or her (e.g., “It’s just unlucky to have to deal with something so unpredictable and outside your control”). Empowering message components phrased the pain sufferer’s relationship with his or her condition as one that could be controlled, predicted and managed (e.g., “So long as you decided to take charge of the things you can control”). Examples of all six messages
types and how they conform to each level of their respective dimensions appear in Appendix A.

To combine all of these elements, a general formula for message creation was developed. Each message began with a phrase that represented the desired level of person centeredness. The next phrase was one that was either empowering or victimizing. A third phrase combined the two elements. Within a set of responses to a situation, the same phrases were used when possible. For example, a high person centered-empowering message would have the same initial phrases representing person centeredness as a high person centered-victimizing message. Across situations, phrasing and word choice was kept as similar as possible and altered only to account for the changes in the pain situation. For example, the burn situation was only slightly different (“It’s really unlucky that your hand got burned”) from the migraine situation (“It’s really unlucky that your migraines won’t stop”). Where possible, the exact same words were used for messages of the same dimension in different pain situations. In all low person centered messages, for example, the phrase, “stop whining. It’s not that bad”, was always used.

Dependent Variables

Perceived Pain Management Ability

Successful pain management requires communication that (especially in chronic pain situations) is considerate of patient sensitivities and fears, encourages coping, situates the patient as capable of dealing with the situation and establishes self-management as a requisite for better well-being (Gatchel et al., 2007; Jacobson & Mariano, 2001). Perceived pain management is the observer’s conclusions about how well the pain sufferer is coping and how much the pain sufferer feels efficacious about
dealing with the pain. Unlike most pain research, this investigation was focused on the pain observer’s (and potential message producer’s) perception of the other and of how he or she affects the other. Perceived pain management is operationalized as a combination of two subscales of perceived efficacy and perceived coping in the pain sufferer. Research has demonstrated that guiding patients toward acceptance of their pain situation leads to better cognitive control of their pain (Viane et al., 2003). Efficacy and coping, as suggested in the medical literature, were reinterpreted as perceived efficacy and perceived coping to act as two indicators of perceived pain management. They were operationalized as two 3-item, 7-point Likert scales of coping and efficacy (1= “strongly disagree”, 7= “strongly agree”). Participants were instructed to evaluate messages for the extent to which participants thought the messages would invoke cognitions and beliefs associated with productive coping and efficacy.

Perceived Coping

The coping subscale was drawn from the cognitive coping factor of the Coping Strategies Questionnaire (Rosenstiel & Keefe, 1983) which remains a popular scale in pain management research (Harland & Georgieff, 2003). Three items were selected from the cognitive coping sub questionnaire and modified to match the study design of looking at perceived faculties (e.g., “Although it hurts, I just keep on going” changed to “This message will help my friend keep on going”). The reliability of the scale for all message types was acceptable (all \( \alpha > .77 \)). Scale items were averaged to form a single coping measure for each message type (LPC Emp. \( \alpha = .81 \); MPC Emp. \( \alpha = .77 \); HPC Emp. \( \alpha = .83 \); LPC Vict. \( \alpha = .92 \); MPC Vict. \( \alpha = .82 \); HPC Vict. \( \alpha = .84 \)).

Perceived Efficacy
Efficacy was operationalized into a subscale by drawing on the Pain Self-Efficacy Questionnaire (Nicholas, 2007). Three items were taken from this questionnaire and adjusted to be relevant to chronic and acute pain situations. Items were also adjusted to account for the investigation of perception of others rather than self-report (e.g., “I can gradually become more active, despite the pain” changed to “This message will convince my friend that he/she will gradually become more active despite the pain”). The reliability of the scale for all message types was acceptable (all αs >.83). Scale items were averaged to form a perceived efficacy measure for each message type (LPC Emp. α=.88; MPC Emp. α=.84; HPC Emp. α=.84; LPC Vict. α=.90; MPC Vict. α=.85; and HPC Vict. α=.89).

Message Quality

In crafting a message for a person in pain, it is important for that person to be sensitive to the pain sufferer’s vulnerabilities and insecurities in order to maintain trust and credibility (Crowley-Matroka et al., 2009). Such stipulations for messages have been previously assessed in supportive communication and advice-giving literature (e.g., Goldsmith & MacGeorge, 2000; MacGeorge et al., 2004). After reading the responses to the pain situation, participants evaluated each message for its quality with respect to perceived pain management.

The measure of message quality was derived from previous work in supportive communication (e.g., Goldsmith & MacGeorge, 2004; Feng & MacGeorge, 2010). Participants rated each of the six messages on politeness, supportiveness, helpfulness, and sensitivity according to a four item 7-point semantic differential scale (e.g., 1=“impolite”, 7=“polite”; 1=“unhelpful”, 7=“helpful”). The reliability of the scale for all message types
was acceptable (all $\alpha > .75$). Scale items were averaged to form message quality measure for each message type (LPC Emp. $\alpha = .75$; MPC Emp. $\alpha = .87$; HPC Emp. $\alpha = .91$; LPC Vict. $\alpha = .93$; MPC Vict. $\alpha = .825$; and HPC Vict. $\alpha = .87$).

Realism of Pain Situations

Participants rated the given pain situation for perceived realism (“To what extent is this situation similar to how you would expect pain to manifest itself in the real world?”), as done in similar methods of previous work (e.g., Caughlin et al., 2009, p. 177). The intent was to get a measure of participant’s beliefs of how possible it was that the message could exist. Perceived realism was assessed using one item on a 7-point Likert scale (1 = “strongly disagree”; 7 = “strongly agree”). Participants also reported their experience with the pain situation on a 7-point, one item measure (“I have had a friend/family member in this situation or a similar one before”) in the form of a Likert scale. The intent of this measure was to understand how familiar participants were with the pain described in the situation.
CHAPTER 4: Results

Overview

This chapter presents the descriptive findings and tests of the hypotheses. Overall the hypotheses were tested with a set of repeated measures MANOVAs or ANOVAs, with the message measures entered as with-subjects repeated measures factors and type of pain situation (chronic or acute) entered as a between groups factor. First, preliminary analyses are presented on participant familiarity with experience with the situations and participant evaluation of message and situation realism. Second, the main analyses test the effects of person centeredness, empowerment/victimization message features and the combination of the two dimensions on message quality and pain management outcomes.

Preliminary Analyses

Participants supplied two evaluations of the pain situations and message responses. They reported their experience with the situation and their ratings as to how realistic the message responses were. Participants indicated their feelings with regard to the statement “I have had a friend/family member in this situation or a similar one before” in order to assess participants’ experience. Participants were moderately familiar with the situation \( (M = 4.92, SD = 1.72) \) with 79% reporting having had a similar experience. Participant evaluation of message realism revealed an average rating for all messages at 4.86, ranging from 3.51 to 5.75 \((SDs \text{ ranged from 1.31 to 2.14}).\) All messages were considered fairly realistic except for the low person centered-victimizing message in the chronic pain situation group \((M = 3.51, SD = 1.97).\) Situation type (chronic or acute) did not have an effect on ratings of realism, \(F(3.14,\)
307.44) = 1.53, ns. Situation type did not have an effect on reports of familiarity, $F (1, 98) = 1.11$, ns.

Effects of Person Centered Message Features

Three hypotheses tested the role of person centeredness in evaluations of message quality, perceived coping and perceived efficacy. Hypothesis 1 predicted that LPC, MPC, and HPC messages in a pain management message would be rated significantly higher in message quality. Prior to assessment of H1, empowering and victimizing versions of LPC, MPC and HPC messages were averaged together to create one measure of each level of person centeredness. H1 was then tested with a 3 x 2 repeated measures ANOVA with the average of LPC, MPC, and HPC messages entered as repeated measures, and situation (acute and chronic pain) entered as the between groups factor.

The Mauchly’s test detected a violation of sphericity, so the Huynh-Feldt (1976) correction was applied. Sphericity in repeated measures ANOVA occurs when the variances of differences between combinations of the repeated measures are equal, which is similar to the assumption of homogeneity of variance in a between subjects ANOVA. Unfortunately, in the analysis of message quality the Mauchly’s sphericity test indicated that sphericity had been violated, $\chi^2 (2) = 46.04, p < .001$. To correct for the potential increase in Type 1 error, the recommendation has been to apply a correction, by either interpreting the MANOVA results in the analysis or by applying the Huynd-Feldt correction when the statistic, epsilon ($\epsilon$), (indicating the degree of sphericity) is around .75. In this case, $\epsilon$ was .74, so the Huynd-Feldt correction was applied, which altered the degrees of freedom and $p$ value for significance. However, the degree of significance for the findings ($p < .001$) remained the same. In fact, the significance of the
findings remained the same regardless of whether the Huynd-Feld correction was applied, or if the MANOVA results were used.

As hypothesized, there was a significant main effect of the degree of person centeredness on message quality, $F(1.48, 145.47) = 475.23.72$, partial $\eta^2 = .83$. Contrast tests revealed that HPC messages ($M = 6.06, SD = .83$), were significantly higher in message quality than MPC ($M = 5.31, SD = .808$), $F(1, 99) = 84.34$. In turn, MPC messages were significantly higher on message quality than LPC messages ($M = 2.32, SD = 1.02$), $F(1, 99) = 447.84$. There was not a significant effect for situation, $F(1, 98) = 1.07$, ns, nor was there a significant interaction effect for the situation and person-centeredness on message quality, $F = (2, 145) = .092$, ns. Higher levels of person centeredness were consistently associated with higher ratings of message quality, and, as such, Hypothesis 1 was supported.

Hypotheses 2 and 3 predicted that LPC, MPC, and HPC messages in a pain management message would be rated significantly higher in perceived coping and perceived efficacy. As in the analyses for Hypothesis 1, results for perceived coping in the empowering and victimizing versions of LPC, MPC and HPC messages were averaged together to create one measure of each level of person centeredness. The same was done to create averaged version of LPC, MPC and HPC values of efficacy. Since coping and efficacy are theorized to be related parts of perceived pain management, they were examined together in a MANOVA. Descriptive statistics for these tests are presented in Table 1.

<table>
<thead>
<tr>
<th>Degree of Person Centeredness</th>
</tr>
</thead>
</table>

60
Table 1. Effect of person centeredness dimension on message quality and pain management outcomes

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Low</th>
<th>SD</th>
<th>Moderate</th>
<th>M</th>
<th>SD</th>
<th>High</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message Quality</td>
<td>2.32</td>
<td>1.02</td>
<td>5.32</td>
<td>0.81</td>
<td>6.06</td>
<td>0.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Coping</td>
<td>2.57</td>
<td>1.13</td>
<td>4.46</td>
<td>0.89</td>
<td>5.01</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Efficacy</td>
<td>2.65</td>
<td>1.13</td>
<td>4.37</td>
<td>0.88</td>
<td>4.98</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The first part of the analysis was a repeated measures MANOVA on pain management measures of perceived coping and perceived efficacy. The average of LPC, MPC and HPC messages were entered as repeated measures and pain situation was entered as the between-groups factor. The main effect of person centeredness on pain management (jointly represented by perceived coping and perceived efficacy) was significant, Wilks’ Lambda = .32, $F(4, 95) = 50.93, p < .001$. Follow up univariate tests showed that that the main effect for person-centeredness on perceived coping was significant, $F(2, 196) = 155.73, p < .001$, as well as on perceived efficacy, $F(2, 196) = 151.21, p < .001$. Contrast tests showed that HPC messages ($M = 5.01, SD = 1.04$) were significantly higher on perceived coping than MPC messages ($M = 4.46, SD = .89$), $F(1, 98) = 33.85, p < .001$, and LPC messages ($M = 2.57, SD = 1.12$), $F(1, 98) = 199.32, p < .001$. There was not a significant effect for situation, $F(1, 98) = .183, ns$, nor was there a significant interaction effect of situation and person-centeredness on perceived coping, $F(2, 196) = 1.83, ns$.

A second univariate test for the main effect of person-centeredness on perceived efficacy was also significant, $F(2, 196) = 151.21, p < .001$. Contrast tests showed that
efficacy from high person centered messages ($M = 4.98$, $SD = .995$) was significantly higher than moderate person-centered messages ($M = 4.37$, $SD = .878$), $F (1, 98) = 44.72$, $p < .001$, and significantly higher than low person centered messages ($M = 2.65$, $SD = 1.13$), $F (1, 98) = 192.81$, $p < .001$. There was not a significant effect for situation, $F (1, 98) = 1.96$, $ns$, nor was there a significant interaction effect of situation and person-centeredness on perceived efficacy $F (2, 196) = 1.50$, $ns$.

To summarize, H1, H2 and H3 were supported across two types of pain situations. High person centered messages are rated higher in message quality and in increasing perceived coping and perceived efficacy than messages containing moderate or low levels of person centeredness.

Effects of Empowerment-Victimizing Message Features

Hypotheses 4, 5 and 6 were concerned with the differences between empowering and victimizing message features in message quality, perceived coping and perceived self efficacy. All three hypotheses predicted that empowerment messages would be evaluated higher on the three outcomes than victimizing messages. Before analysis, empowerment and victimizing message values were averaged across levels of person centeredness to create two message types: empowering and victimizing messages. The hypotheses were tested in similar fashion as message quality, with a series of repeated measures ANOVAs and a MANOVA, with the average of empowerment and victimizing messages entered as repeated measures, and situation entered as the between groups factor. Descriptive statistics for these tests are presented in Table 2.
Specifically, Hypothesis 4 predicted that empowerment messages would be perceived as having higher message quality than victimizing messages. However, the main effect for message quality in the repeated measures ANOVA was just over the standard significance level, $F(1, 98) = 3.67, p = .058$. There was not a significant effect for situation, $F(1, 98) = 1.06, ns$, nor was there a significant interaction effect for the situation and person-centeredness on message quality, $F = (1, 98) = 1.11, ns$. Although empowerment messages drew higher ratings than victimizing messages, the difference is approaching the conventional significance level of $p < .05$. Therefore, Hypothesis 4 was not strongly supported.

Hypotheses 5 and 6 predicted that empowerment messages would be rated higher on perceived coping and efficacy than victimizing messages. Both hypotheses were tested with a repeated measures MANOVA on the pain management measures of perceived coping and efficacy as joint indicators, followed by univariate 2 x 2 ANOVAs to assess individual measures of perceived coping and perceived efficacy. Similar to the message quality test, the average of empowerment and victimizing messages were entered as repeated measures, and situation entered as the between groups factor.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Empowering M</th>
<th>Empowering SD</th>
<th>Victimizing M</th>
<th>Victimizing SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message Quality</td>
<td>4.65</td>
<td>0.66</td>
<td>4.47</td>
<td>0.72</td>
</tr>
<tr>
<td>Perceived Coping</td>
<td>4.14</td>
<td>0.65</td>
<td>3.89</td>
<td>0.87</td>
</tr>
<tr>
<td>Perceived Efficacy</td>
<td>4.20</td>
<td>0.69</td>
<td>3.80</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Table 2. Effect of empowerment-victimization dimension on message quality and pain management outcomes
In line with what was hypothesized, the overall main effect for empowerment on pain management was significant, Wilks’ Lambda = .91, $F(2, 97) = 5.11$, $p < .01$, partial $\eta^2 = .10$. Follow up univariate analyses showed that the main effect for empowerment on perceived coping was significant, $F(1, 98) = 6.35$, $p < .05$, partial $\eta^2 = .06$. Empowerment messages ($M = 4.136$, $SD = .647$) were significantly higher on perceived coping than victimizing messages ($M = 3.89$, $SD = .87$). There was not a significant effect for situation, $F(1, 98) = .18$, ns, nor was there a significant interaction effect for the situation and person-centeredness on perceived coping $F(1, 98) = 2.17$, ns.

Hypothesis 6 was also confirmed as the main effect for empowerment on perceived efficacy was significant, $F(1, 99) = 10.47$, $p < .01$, partial $\eta^2 = .01$. Empowerment messages ($M = 4.19$, $SD = .69$) were significantly higher on perceived efficacy than victimizing messages ($M = 3.80$, $SD = 1.01$). There was not a significant effect for situation, $F(1, 98) = 1.96$, ns, nor was there a significant interaction effect for the situation and person-centeredness on perceived coping, $F(1, 98) = .15$, ns.

To conclude, empowerment messages drew higher ratings than victimizing messages in message quality, but the difference between means was not conventionally satisfactory ($p = .058$). As such, acceptance of Hypothesis 4 is defendable but the data are not sufficient for full confirmation. However, empowerment had significantly higher ratings than victimizing messages in perceived pain management as indicated by perceived coping and perceived efficacy. Thus, Hypotheses 5 and 6 were supported.

Combined Effects of Person Centeredness and Empowerment-Victimization Message Features of Pain Management Outcomes
The last set of analyses focused on the combined effect of empowerment and person-centeredness on pain management outcomes. Hypothesis 7 predicted that high person centered empowerment messages would be rated highest in message quality in terms of increased politeness, supportiveness, helpfulness, and sensitivity, compared to low person centered-victimization messages. Hypotheses 8 and 9 predicted that high person centered empowerment messages would be rated the most effective perceived pain management in the form of perceived coping and efficacy, compared to low person-centered victimization messages.

To test Hypothesis 7, a 6 x 2 ANOVA was conducted, with the six pain management messages entered as a repeated measures factor, and situation entered as the between groups factor. Adjusting for a significant violation of sphericity (Mauchly’s test, $\chi^2(14) = 163.57, p < .001$), Huynh-Feldt’s correction was applied ($\varepsilon = .63$). The main effect on message quality was significant, $F(3.03, 310.60) = 282.63, p < .001$, partial $\eta^2 = .74$. Neither the situation factor, $F(1,98) = 1.066, ns$, or the interaction between situation was significant, $F(5, 310) = .370, ns$. Table 3 presents the means and standard deviations.
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<th>Message Type (Person Centeredness x Empowerment-Victimization Dimensions)</th>
<th>LPC-E</th>
<th>LPC-V</th>
<th>MPC-E</th>
<th>MPC-V</th>
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<td>2.58</td>
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</table>

Table 3. Effects of combined person centeredness and empowerment-victimization message dimensions on message quality and pain management outcomes.

Note: LPC-E = low person centeredness and empowerment; LPC-V = low person centeredness and victimization; MPC-E = moderate person centeredness and empowerment; MPC-V = moderate person centeredness and victimization; HPC-E = high person centeredness and empowerment; HPC-V = high person centeredness and victimization.
There was a significant main effect of the combination of person centered and empowering-victimizing message features, $F (3.17, 310.56) = 282.63$, $p < .001$, $partial \eta^2 = .74$. Contrast tests showed that Hypothesis 7 was confirmed, in that the highest ratings on message quality were obtained from HPC-empowerment messages ($M = 6.19; SD = .936$) which were significantly higher than HPC-victimizing messages ($M = 5.93; SD = 1.07$), MPC-empowering messages ($M = 5.41; SD = 1.09$), MPC-victimizing messages ($M = 5.22, SD = 1.00$), LPC-empowering messages ($M = 2.36, SD = 1.07$) and LPC-victimizing messages ($M = 2.26, SD = 1.27$). Since messages with empowerment message features were consistently rated higher in message quality than victimizing message features at each level of person centeredness, there may be an additional mechanism at work resulting from the combination of empowerment with person centeredness.

Hypotheses 8 and 9 were tested with a similar set of 6 x 2 ANOVAs, with the six pain management messages on perceived coping and efficacy as the repeated measures factor, and situation entered as the between groups factor. Violation of sphericity (Mauchly’s, $\chi^2 (14) = 114.63, p < .001$) was adjusted by using the Huynh-Feldt correction ($\varepsilon = .68$). The main effect on coping was significant, $F (3.41, 337.59) = 92.17$, $p < .001$, $partial \eta^2 = .49$, but neither the situation factor, $F (1, 98) = .18, ns$, or the interaction was significant, $F (3.44, 337.54) = 1.58, ns$. Contrast tests showed that Hypothesis 8 was confirmed in that the high person-centered empowerment message was rated the highest on coping ($M = 5.17, SD = 1.16$), and significantly different from each of the lower levels: LPC-V, $F = 175.39$; LPC-E, $F = 187.78$; MPC-V, $F = 38.75$; MPC-E,
\[ F = 15.68; \text{all } df (1,99), p < .001 \text{ except HPC-V, } F= 6.32, p < .05. \]
Specifically, low person centered victimizing and empowerment messages were the lowest on coping \((Ms = 2.58, 2.55; SDs = 1.39, 1.21)\), the moderate person-centered victim and empowerment messages, as well as high person centered victim message were moderate on level of coping \((Ms = 4.24, 4.68, 4.85; SDs = 1.32, 1.10, 1.28)\), and significantly different from one another \((ps < .001)\).

Hypothesis 9 was also confirmed for perceived efficacy. The main effect on perceived efficacy was significant, \(F (3.77, 369.76) = 76.64, p < .001, partial \eta^2 = .44\), but neither the situation factor, \(F (1, 98) = 1.96, ns\), or the interaction was significant, \(F (5, 369) = .905, ns\). Contrast tests showed specific support for H9 in that the high person-centered empowerment message was rated the highest on perceived efficacy \((M = 5.20, SD = 1.05)\) and significantly different from each of the lower levels: LPC-V, \(F = 178.72;\) LPC-E, \(F = 158.08;\) MPC-V, \(F = 51.09;\) MPC-E, \(F = 18.16;\) all \(df (1,98), p < .001\) except for HPC-V, \(F= 7.63, p < .01.\)

Low person centered victim and empowerment messages were the lowest on perceived efficacy \((Ms = 2.61, 2.68; SDs = 1.42, 1.36)\), while the moderate person-centered victim and empowerment messages, as well as high person centered victim message were significantly higher on level of perceived efficacy, \((Ms = 4.02, 4.71, 4.77, SDs = 1.38, 1.13, 1.43).\)

Evidence confirming Hypotheses 6, 7 and 8 signify that the combination of high person centered messages with empowerment messages is the most highly rated junction of the two message dimensions.

Subsidiary Analyses
In a final analysis, Pearson correlations were computed to examine the interrelationships between the pain management measures. These correlations are presented in Table 4. Three patterns of correlations are worth noting. First, the measures of perceived coping and efficacy were highly correlated across the two different message dimensions ($r_s = .76$ to $ .86$), which indicate that these two measures are functioning the same way. Second, victimization and empowerment were not significantly related to one another, across either of the two message dimensions (e.g., $= r = .01$). This is evidence that the components of the dimension are distinct as was theorized in their creation. Third, while low person-centered messages were negatively related to moderate person-centered messages across the empowerment and victimization message dimensions (e.g., $= r = -.19$), high person-centered messages were associated with moderate person-centered messages at moderate levels of magnitude (e.g., $= r = .51$). The latter sets of correlations show that each message dimension is operating in a distinctive manner, with each level potentially contributing differently to pain management outcomes.
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Table 4. Pearson Correlations of the Pain Management Outcomes

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Note. LPC = Low Person-Centered; MPC = Moderate Person-centered; HPC = High Person-Centered; V = Victimization; E = Empowerment; C = Coping; Ef = Efficacy
CHAPTER 5: Discussion

Overview

This chapter deals primarily with establishing the larger significance of the findings within pain and communication scholarship, clinical practice and every day life. The results are reviewed. Findings are linked to existing research, and positioned as an indicator of a lacuna in literature. Person centeredness is explored in a new domain, and empowerment-victimization is established as an independent message feature. The clues to implicit theories of communication are reviewed. Finally, practical applications from, limitations of and future research inspired by this study are identified.

Summary of Findings

Person centeredness was consistently linked positively to message quality and empowerment messages were always ranked higher on average in message quality than victimizing messages confirming H1 and generally supporting H4. Together and supporting H7, high person centered-empowerment messages generated the highest ratings of message quality of all permutations of the two dimensions. Hypotheses 2 and 3 predicted and results confirmed that person centeredness is positively related to perceived coping and efficacy as components of pain management and that empowerment messages rates higher in pain management than victimizing messages, respectively. Supporting H6 and validating the core of this study’s predictions, high
person centered empowerment messages were more effective in terms of pain management in the form of perceived coping and efficacy than all other message dimension combinations.

Significance of the Findings

The purpose of this investigation was to explore person centered message features in the domain of pain management, understand the role of empowerment as a message feature, discover implicit theories about communication in pain contexts and begin to close the gap between communication and pain research.

The results mirrored similar findings in other research. In this study, participants rated high person centered messages better on all dependent variables, and in other studies high person centeredness has been found as more effective and rated as more effective than moderate and low person centered messages in different contexts (e.g., Kline, 1991; Burleson & Samter, 1985; for reviews see Burleson & Caplan, 1998; and Burleson, 2010). A meta-analysis by High and Dillard demonstrated that high person centered messages were consistently rated highest in actual and perceived effectiveness in social support outcomes (2012).

Although it might seem that the findings of this study showing that HPC messages were again rated the highest in generating perceived outcomes and message quality was predictable, there are two twists to the study. First, the study looks at direct assessments of person centered message features in a new domain: pain communication. The pain experience and pain expression are distinct from esteem loss, advice giving and emotional contexts since they are rooted by a very real physical feeling (whether or not the pain has a discrete pathology is irrelevant). Although person centered message
features are found to operate similarly in a new domain across function, it could not previously be taken for granted. Second, this study examines evaluations of person centered message features combined with empowerment-victimization message features. The results are interesting because when the level of person centeredness is the same, empowering message features were consistently rated higher than victimizing messages. This indicates that empowerment-victimization message features, rather than being another facet of person centeredness, are distinct from person centered message features. To further solidify this point, it is important to note that, as evidenced by the study design, it is possible for empowerment and victimization message features to exist independently of the level of person centered message features.

Expanding on the investigation of the empowerment-victimization message features, the results establish empowerment and victimization as message features rather than as psychological processes or clinical psychotherapies. Although empowerment has typically been viewed as a psychological process (Timulak & Elliott, 2003), this study establishes empowerment as a message feature bringing communication to the center of talk about the pain experience. Since empowerment messages were consistently rated higher, the trend indicates that these message features (along with person centeredness) are triggering core parts of implicit theories of communication. This demonstrates, not only, that empowerment and victimization are message features, but, also, that non-health professionals are sensitive to these features.

Although the high ratings of empowering and high person centered messages are welcomingly consistent with theoretically grounded hypotheses, the more significant contribution of this study is the understanding gained on peoples’ implicit theories of
communication in the pain context. As participants rated HPC, empowering and HPC-empowering messages highest in generating perceived pain management and message quality, it is not too far a leap to suppose that there exists a common, pedestrian pattern of reasoning for what to say to friends who are in pain. That is, for one reason or another, people may think that the use of high person centered and empowering message features are the preferred communicative tools to use in pain situations. As to why people prefer these messages, theoretical arguments have been made for why HPC messages work and are expected to work better (Burleson & Goldsmith, 1998). Messages with HPC features are better than those with LPC features at guiding one’s interaction partner to a cognitive reappraisal of the circumstance (Burleson & Goldsmith, 1998). Perhaps, then, people are, consciously or unconsciously, recognizing appraisals as having a large but malleable role in the pain experience. To explain the preference for empowerment messages, the literature previously reviewed has indicated that a person who feels that they have command over his or her situation is more likely to bear the pain experience with less discomfort (King, 1991). Because participants rated empowerment messages higher than victimizing messages, it is possible that these research findings are also part of a common understanding that pertains to pain contexts.

Practical Implications

Understanding implicit theories of communication are important especially in pain contexts because (a) pain affects everyone, (b) we spend most of our time interacting with non-health professionals, and, (c) talking to a person in pain can be very difficult. Considering the findings of this study, a small part of the pain communication conundrum is addressed. The results are evidence that people generally think messages
that are best for talking to a friend in pain explicitly recognize the pain experience, situate the experience within a larger and more detailed frame of reference, and guide the friend to thinking about those feelings in terms of that larger context. Also, the data indicate that people may generally assume that messages cast the pain sufferer as someone able to control the pain experience are better those that cast him or her as someone at the mercy of the pain experience. Understanding people’s implicit theories of pain communication can help pain sufferers understand why friends and family talk to them in certain ways. This information can also inform those attempting to communicate with another in pain as to how to construct messages that are commonly perceived to be the most appropriate. In situations where finding the right words while in fear of upsetting another can be difficult, this can be very valuable information.

Limitations

This study is limited by several features. First, the questionnaire was not sufficiently pre-tested, resulting in issues concerning participants’ interpretation of the realism item. Variance in participant response to realism of messages and situation indicates that participants might not have understood the nature of the question or were influenced by the item’s unvaried placement at the end of message quality, perceived coping and perceived efficacy evaluations. Second, although differences in measurements between situations were not statistically significant, a larger sample size would increase the power to better determine the effect of situation on the message ratings. A third limitation is that the questionnaire items were not presented in random order because of the limitations of the survey software. Although there is not a substitute for randomization, there are three aspects of this study that mitigate the issues posed by the
consistent presentation. There were two different sets of messages (one for each pain situation) used. Participants were presented with the situation and all the messages to read through before moving on to any evaluation tasks. In addition, participants were able to go back and change evaluations of messages at any time as all messages and evaluation tasks were presented in the same stream of questions. Fourth, the sample is drawn from college students. Although painful conditions tend to affect age groups older than the average college student, this study examined pain observers’, not pain sufferers’, communication processes to get at implicit theories of communication. Fifth, the need to refine a measure of perceived pain management is noted and a goal of future research.

The measures used were adapted from previous work but were originally designed to measure self-report of own experience, not to measure perceived experience of the other. Finally, participants were asked to evaluate how they thought their friends would feel and some people may not be capable or comfortable with those estimations. However, the study sought to investigate implicit theories about how to communicate. If there was no discomfort, uncertainty or variance in what people thought is best to say to help their friends in pain, this study would not have a purpose.

Future Research

Inspired by the results of this study, additional participants’ are solicited to replicate the findings on a larger scale. As an expansion of the current investigation, additional pain situations will be added to the current data set to increase generalizability. Beyond the immediate expansion and improvement of this study, plans for future work centers around validating these messages by testing them with various pain populations. Assessments of researcher-constructed messages and responses to open-ended questions
would aid in increasing ecological validity of the entire line of investigations and help corral the development of theoretical assumptions. A field-based study is foreseen to see if high person centered-empowering messages are being used in practice by doing interviews with patients, practitioners and family members. Also, an adaption of the current study to see how laboratory created messages (using person centered and empowerment-victimization dimensions) are received by one particular illness community such as those suffering from rheumatoid arthritis or chronic low back pain. Future work into the theoretical aspects of pain management communication will revolve around discourse analyses of pain-based interactions to explicate processes that will form the framework of a communication approach to pain models.

Conclusion

It was the intent of this study to explicate dimensions of pain management messages as an initial move in crafting a foundation for research at the intersection of pain and communication. Identifying person centeredness, a well researched and developed concept, and empowerment-victimization, a new, but theoretically grounded dimension, as important parts of pain communication sets the stage for future work while simultaneously contributing to knowledge about every day talk about pain. The most notable contribution of this paper is the contribution of knowledge toward understanding individual’s implicit theories of pain communication. Although the concepts and underlying processes need to be explicated and the message features themselves need to be tried with those in pain, these general inclinations appearing in the data that can inform message production and message processing in every day talk to those in pain, as well as future research. This initial step in generating empirical knowledge about pain
communication exemplifies what type of work needs to be done to begin to understand
the communicative processes and phenomena surrounding pain experience and
expression. Since every person experiences pain and every person knows another person
who has been or is in pain, the need to continue such investigations in pain
communication is relevant, universal, timeless and imperative.
References


Wadensten, B., Fröjd, C., Swenne, C.L., Gordh, T., & Gunningberg, L. (2011). Why is pain still not being assessed adequately? Results of a pain prevalence study in a


### Appendix A: Situation and Message Examples

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<tr>
<th>Pain situation type:</th>
<th>Chronic Pain</th>
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<tr>
<td>Situation:</td>
<td>Migraines</td>
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<td>Description:</td>
<td>Imagine that one of your same-sex friends has been experiencing very painful headaches. These headaches last for a few hours sometimes and happen regularly enough that your friend has stopped doing things he/she normally does. After you come back from break, you see your friend again and the problem has gotten worse. The doctor said that your friend is having chronic migraines. Migraines are so painful that they cause vomiting and those suffering them can't light or sound. Although your friend is receiving treatment, you can tell that he/she is very upset by this.</td>
</tr>
</tbody>
</table>

| LPC/Empowerment:     | Stop whining. It’s not that bad. You’re being too sensitive. You’ll get back to your normal schedule as long as you decide to take charge of the things you can control. You need to take your medicine and get your work done so you can get to bed early. |

| MPC/Empowerment:     | I’m sorry you’re having migraines. I’ve heard they can be really painful. You’ll get back to your normal schedule as long as you decide to take charge of the things you can control. I’ve read that it helps to, take Ibuprofen and get your work done so you can get to bed early. |

| HPC/Empowerment:     | I would feel awful too if I had such terrible headaches. I know you’re struggling with being around any noise and light. That’s awful! Is there anything that I can do? You’ll get back to your normal schedule as long as you decide to take charge of the things you can control. Maybe it would make you feel better to take Ibuprofen and get your work done so you can get to bed early. |

| LPC/Victimize:       | Stop whining. It’s not that bad. It’s just unlucky to have to deal with something so unpredictable and outside your control. Since there’s really nothing you can do, you need to just relax. |

| MPC/Victimize:       | I’m sorry you’re having migraines. I’ve heard they can be really painful. It’s just unlucky to have to deal with something so unpredictable and outside your control. Since there’s really nothing you can do, I’ve heard that it’s good to just relax. |

| HPC/Victimize:       | I would feel awful too if I had such terrible headaches. I know you’re struggling with being around any noise and light. That’s |
awful! Is there anything that I can do? It’s just unlucky to have to deal with something so unpredictable and outside your control. *Since there’s really nothing you can do, maybe it would make you feel better to just relax.*