THE EFFECTS OF TRAINING IN SMITH'S EVIDENCE-BASED PATIENT-CENTERED INTERVIEWING METHOD ON PHYSICIAN KNOWLEDGE, PHYSICIAN SELF-EFFICACY, AND PATIENT SATISFACTION VIA A NEWLY DEVELOPED PATIENT-CENTERED CODING SCHEME

By

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ABSTRACT

THE EFFECTS OF TRAINING IN SMITH'S EVIDENCE-BASED PATIENT-CENTERED INTERVIEWING METHOD ON PHYSICIAN KNOWLEDGE, PHYSICIAN SELF-EFFICACY, AND PATIENT SATISFACTION VIA A NEWLY DEVELOPED PATIENT-CENTERED CODING SCHEME

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There is a movement in healthcare to train medical workers in patient-centered care due to many positive outcomes resulting from it. Smith's patient-centered interviewing method (Fortin, Dwamena, Frankel, & Smith, 2012) is a behaviorally-defined, evidence-based method that has shown to be easily learned and associated with positive outcomes such as increased patient satisfaction. However, this method was lacking in a systematic, standardized way of rating adopters of the method to discover which patient-centered skills prescribed by the method led to positive outcomes. Therefore, this research effort involved developing a coding scheme comprising 33 items derived from Smith's method which includes 5 steps and 21 sub-steps. This research provided evidence for the coding scheme's validity, as shown through face, content, and construct validity, and inter-rater reliability (Cohen's kappa = .902). The results of the coding scheme were then tested to determine whether training in patient-centered interviewing led to provider knowledge, provider self-efficacy, or patient satisfaction. Providers who received training in patient-centered interviewing used significantly more patient-centered skills than did untrained providers. Similarly, an increase in patient-centered skill use led to provider selfefficacy. The patient-centered coding scheme developed here will provide institutions with an instrument that combines descriptive and evaluative elements of provider patient-centered behaviors and will allow for a standardized way of evaluating those who adopt the method.

This dissertation is dedicated to my parents and to my husband. I would not be who I am today without the love and guidance that my mom and dad have continually provided to me. I thank God every single day for my parents, who taught me that hard work, perseverance, and an occasional tear will allow me to achieve all of my dreams. And of course to my husband, Sam. You make me laugh even when things are not funny, and things have not been very funny during our time in Michigan. Thank you so much for that, and for always believing in me. I love the three of you beyond words, thank you for continually being my biggest fans. XO!

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INTRODUCTION

There is a current movement toward training medical workers in patient-centered (PC) care (Roter, Stashefsky-Margalit, & Rudd, 2001; Smith et al., 1998) due to the many positive outcomes associated with exhibiting PC characteristics (Epstein, Fiscella, Lesser, & Stange, 2010). PC care has been defined in a number of ways, but the Institute of Medicine's Quality Chasm report defined it as care that is "respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions" (Bloom, 2002, p. 6). More specifically, there are three core values associated with a PC philosophy: (1) considering the patients' perspective, needs, experiences, and wants, (2) offering the patient the opportunity to take part in their care and provide input, and (3) enhancing the understanding and the relationship between the provider and patient (McWhinney, 1995). Due to the many positive outcomes associated with this particular type of care, such as patient satisfaction, patient adherence, and cost effectiveness (Stewart et al., 2014), PC care has received increased attention recently and is considered a vital component of high-quality health care organizations (Greene, Tuzzio, & Cherkin, 2012). Training people in patient-centeredness is therefore critical; and part of successful training is assessing whether medical workers are using the style correctly if at all, and whether their use of the style is producing desired outcomes. Such assessments are crucial for potential growth in medicine.

PC interviewing is an effective method for teaching PC provider-patient communication that ultimately results in enhanced patient care (Smith, 2002). Currently, two behaviorallydefined, evidence-based methods exist, Smith's PC interview and Frankel's Four Habits Model of interviewing, (Fortin, Dwamena, Frankel, & Smith, 2012; Frankel & Stein, 2001). Research indicates that training in either method results in learning of the PC skills (Fossli Jensen et al.,

2011; Smith et al., 1998). The current research is focused on Smith's PC interview (Fortin et al., 2012) as its use leads to more satisfied patients compared to untrained providers (Smith et al., 1998), shows clinical improvement of patients with medically unexplained symptoms (Smith et al., 2006), and helps treating patients with somatization (Smith et al., 2009). Smith's method is the only method available associated with positive patient health outcomes¹. Although past research has demonstrated these findings, it was lacking a systematic method for rating interviewers. This research will create a coding scheme based on Smith's PC interviewing model which has five steps with 21 sub-steps. This will allow trained raters the ability to code provider-patient interactions for specific instances of patient-centeredness prescribed by the method. It will provide a standardized way of comparing those trained and untrained in the method and how that relates to patient and physician outcome data, such as patient satisfaction, provider self-efficacy, and provider knowledge. Additionally, the coding scheme will allow for standardized comparisons of medical professionals before and after training. This will show in a precise way what people learned from training, and more importantly, what they use in practice with patients after the training period and how this relates to important health outcomes.

As such, a review of PC care, the history of its development, and its significance in medicine will be offered. Next, an examination of the two evidence-based methods currently available in medicine will be conducted, followed by a thorough review of the method of interest, Smith's PC interview, its components, and the outcomes associated with it. Finally, methods and analyses for developing and testing the coding scheme are offered and results of the impact of PC training, shown via the developed PC coding scheme, on provider knowledge, provider self-efficacy, and patient satisfaction will be discussed. Suggestions for using the coding scheme in the future will be presented.

¹ Research has not looked at patient outcomes associated with Frankel's method.

CHAPTER 1: LITERATURE REVIEW

Patient-Centered Care

Background. PC care has recently been described by the Institute of Medicine as one of the six aims of high quality health care (Bloom, 2002), but the ideals associated with PC medicine date back to the ancient Greek schools of Cos (Crookshank, 1926), indicating that several of these principles have been present for thousands of years. Client-centered therapy (Rogers, 1965), also known as person-centered therapy, was developed in the 1940s and 1950s by Carl Rogers and was foundational in developing many PC ideals into practice. A therapist performing Roger's client-centered therapy has three conditions to establish with their client: (1) empathy, (2) unconditional positive regard for one's client, and (3) therapist congruence, which allows the therapist to help the client correct maladaptive behaviors ("Client-Centered Therapy," 2009). Roger's work was expanded upon and adapted to fit the medical interview context, and PC care was more thoroughly developed.

As PC ideals have been traced far back into history it seems that the development of the concept would be far advanced, but Mead and Bower's (2000) conceptual framework and review of the empirical literature shows the many inconsistencies involved in defining and measuring patient-centeredness. In fact, Mead and Bower (2000) explain that "the term 'patient-centredness' has been used to refer to so many different concepts that its scientific utility may have been compromised" (p. 1102). As a result, the authors synthesized years of research on PC care, and developed five dimensions that encompass the varying definitions and aspects of PC medicine. Mead and Bower's (2000) work has been regarded as "classic" (de Boer, Delnoij, & Rademakers, 2013), as the researchers were able to amalgamate over 30 years of PC conceptualizations into five distinct dimensions that will be reviewed here, as these dimensions

provide the most encompassing definition of what it truly means to be PC. The dimensions are: (1) biopsychosocial perspective, (2) the 'patient as person', (3) sharing power and responsibility, (4) the therapeutic alliance, and (5) the 'doctor as person' (Mead & Bower, 2000).

Due to the complexities involved in treating human patients, the *biopsychosocial perspective* dimension to patient-centeredness encourages viewing patients as a combination of their unique biological, psychological, and social characteristics. The biopsychosocial principles were synthesized by Engel (1977), and the adoption of this model was encouraged over the traditional biomedical model because "a medical model must also take into account the patient, the social context in which he lives, and the complementary system decided by society to deal with the disruptive effects of illness, that is, the physician role and the health care system" (p. 132). Engel (1977) noted that the biopsychosocial model would need to include the psychosocial aspects without sacrificing the advantages that the biomedical model brought to medicine. Patient-centeredness depends on this philosophy, as Stewart et al. (1995) explain that PC care requires that the doctor not just focus on the biomedical problems of the patient, but to also be involved in the full range of difficulties that patients bring with them. The biopsychosocial concept influenced the development of PC care, and is therefore a key dimension of what it means to be PC (Mead & Bower, 2000).

The 'patient as person' dimension stresses that understanding the biopsychosocial perspective is not enough to be PC, as patient-centeredness also requires that the provider must understand the patient's personal meaning of their illness (Mead & Bower, 2000). Smith and Hoppe (1991) explain that integrating both the medical and personal material from the patient's lives are critical to PC care and understanding the patient's biopsychosocial story. This 'patient story' can provide relevant clues to the therapeutic and diagnostic issues involved in treating the

patient's underlying problem (Smith & Hoppe, 1991). This dimension of PC care is concerned with understanding the patient's illness experience, which the doctor can accomplish by attempting to understand their patients as unique individuals in unique settings (Bower, 1998). Additionally, understanding the patient's meaning of their illness through an understanding of how they interpret their illness and the significance the illness has in their lives is vital to a PC approach (Mead & Bower, 2000).

The third dimension, *sharing power and responsibility*, envisions an egalitarian relationship between doctor and patient as opposed to the typical asymmetrical relationship traditionally experienced in medicine where the control and authority belong to the doctor alone (Mead & Bower, 2000). PC care stipulates that mutual participation in the medical interview is important, as shared power and responsibility allows the patient to be involved in the decision making process (Mead & Bower, 2000). This active participation on the part of the patient leads to increased respect and rights to full information regarding their treatment (Mead & Bower, 2000), which in turn enables patients to gain responsibility regarding their health (Grol, de Maeseneer, Whitfield, & Mokkink, 1990). Mead and Bower (2000) indicate that it is uncertain exactly how 'symmetrical' a medical consultation can be in practice; however, the significant point here is that PC medicine promotes the idea of greater patient involvement in care.

A *therapeutic alliance* is the fourth fundamental requirement of PC medicine, where the relationship between the provider and patient is seen as quite important (Mead & Bower, 2000). The therapeutic alliance is not only important for a medical diagnosis and for being PC, but it has been suggested that the relationship itself has therapeutic benefits (Mead & Bower, 2000). In order to produce a therapeutic change in patients, Rogers (1961) proposed that congruence, empathy, and unconditional positive regard for one's patient is a necessity. Further, Crow et al.

(1999) found that due to the 'placebo effect,' patients may actually experience improved health status as a result of positive emotional responses. This aspect of patient-centeredness is distinctly different from biomedical medicine, but it has shown to have positive biomedical outcomes. Thus, the inclusion of a therapeutic alliance is essential to PC care.

Finally, the 'doctor as person' dimension takes the doctor's personal qualities into consideration, and goes against the notion that doctors are interchangeable; i.e. the stance that if a doctor is well-trained, it should not matter which doctor a patient meets at the clinic (Mead & Bower, 2000). The doctor is a distinct part of the patient's care, and viewing the medical interview through this lens creates a more important, integrative role for the doctor. The sensitivity and insight into the reaction of both the doctor and patient have the potential for therapeutic outcomes for both parties, showing the importance of the doctor themselves being a significant part of the relationship (Mead & Bower, 2000). Thus, the assembly of these five distinct dimensions synthesizes the vast literature on patient-centeredness, and the current research adopts an understanding of PC care in the terms created by these dimensions. PC care is defined here as an approach to medicine which encompasses five distinct dimensions of patient-centeredness: biopsychosocial perspective, the 'patient as person', sharing power and responsibility, the therapeutic alliance, and the 'doctor as person.' The importance of adopting PC care in medicine follows.

Importance. PC approaches to care are increasingly being incorporated into the training of healthcare professionals and are supported by both consumers and clinicians (Dwamena et al., 2012), indicating that this approach is important to both. There are three main outcomes that the literature provides for a PC approach to care that indicate the importance of PC care. Each of the

three outcomes will be reviewed here: (1) increased patient satisfaction, (2) patient adherence, and (3) cost effectiveness (Stewart et al., 2014).

Patient satisfaction, or positive evaluations of distinct dimensions of a patient's health care (Linder-Pelz, 1982), is one positive outcome associated with PC care. People interested in PC care should be interested in patient satisfaction, because patient satisfaction has been positively associated with: (1) increased patient adherence to therapy (O'Brien, Petrie, & Raeburn, 1992; Sherbourne, Hays, Ordway, DiMatteo, & Kravitz, 1992), (2) a lower tendency of patients suing for malpractice (Hickson et al., 1994), (3) greater patient adherence to medical treatments (Weingarten et al., 1995), (4) a decrease in patient 'doctor shopping' (Ware & Davis, 1983), and (5) increased patient recall (Falvo & Tippy, 1988). These favorable patient satisfaction outcomes, although not all directly related to health, are all positive and ultimately affect a patient's medical experience and consequently their health. This research is primarily interested in patient satisfaction with PC communication (PSPCC), which is understood as the patient's positive response to the provider-patient interaction in terms of the provider's ability to effectively carry out the interview using the PC skills prescribed in Smith's method (Grayson-Sneed, 2014). The remainder of this paper will focus on PSPCC when referring to patient satisfaction (i.e. no other forms of patient satisfaction outside of the provider-patient interaction will be reviewed).

PC care has been shown to result in PSPCC. Krupat et al. (2000) found that physicians exhibiting a PC approach to medicine garnered higher patient satisfaction than doctors who did not exhibit the approach. Similarly, Fossum and Arborelius (2004) analyzed orthopedic physicians to see what characteristics were associated with patient satisfaction, as most research on PC care is focused on general practitioners. This research found that when the patient was

involved in the consultation, and when the physician and patient were able to arrive at shared understanding, the patient was more satisfied; therefore, the researchers concluded that incorporating PC skills can help physicians maintain their focus on the patient's needs, and ultimately increase their patients' satisfaction (Fossum & Arborelius, 2004). Zyzanski, Stange, Langa, and Flocke (1998) found that patients of high-volume physicians were less satisfied as they reported less attention to their responses, less follow-up on their problems, and inadequate explanations, lending support to the belief that PC care results in higher satisfaction. Finally, Stewart et al.'s (1999) literature review revealed that when patients are dissatisfied and have complaints about their doctors, it is usually due to communication problems rather than technical competency issues, showing the link between a PC approach to medicine and increased patient satisfaction.

Patient adherence, or the degree to which patient behavior coincides with health or medical advice (McDonald, Garg, & Haynes, 2002), has also been positively associated with PC care. Patient adherence is desirable, as a meta-analysis looking at patient adherence and medical treatment outcomes found that patient adherence to medical regimens is linked to more positive outcomes than is non-adherence; specifically, the meta-analysis included effects from more than 19,000 patients in 63 studies, and approximately 26% more patients experienced a favorable medical outcome by adhering than not adhering (DiMatteo, Giordani, Lepper, & Croghan, 2002). Additionally, a comprehensive review on patient adherence to treatment produced three implications for adherence: (1) non-adherence imposes increased financial burdens in health care, (2) adhering to treatment, lifestyle change, or advice is the key connection between process and outcome in medicine, and (3) ignoring levels of adherence can have a negative effect on the conclusions drawn in clinical research, such as in drug trials (Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). Thus, patient adherence is viewed as a positive aspect of medicine.

Research shows that PC care results in greater patient adherence. Robinson, Callister, Berry, and Dearing's (2008) research found that PC communication encouraged adherence and ultimately led to improved health outcomes; in particular, the PC ideals of patient's involvement in their care and individualization of patient care enable patient responsibility and ultimately result in greater patient adherence. Stewart et al.'s (1999) review of patient adherence research found four themes between patient-doctor communication and adherence which illustrate the link between PC care and patient adherence. One theme found that patients who were well educated by their doctor with clear, precise instructions were more likely to adhere. A second theme found that shared expectations between the doctor and patient resulted in adherence, which may have resulted from negotiations to reach shared expectation. Third, patient participation in the treatment decision will enhance patient adherence. Finally, physician's empathy, understanding, and encouragement all increase patient adherence (Stewart et al., 1999). Each of the four themes found in Stewart et al.'s (1999) review show the strong connection between PC care and patient adherence. Finally, Zolnierek and DiMatteo (2009) conducted a meta-analysis on 106 correlational studies that related communication variables to the outcome of patient adherence and found that patient non-adherence was 19% higher when the doctor was a poor communicator. This meta-analysis indicated that when a practitioner is a good communicator, patient adherence is 2.16 times greater (Zolnierek & DiMatteo, 2009).

A third important outcome of PC care is the *reduction of healthcare costs*. Schneider and Guralnik (1990) looked at future healthcare costs, and found that healthcare costs will escalate enormously due to the growth of the oldest age groups, meaning that without changes in the

health of the older population in the United States, healthcare costs will increase vastly. With healthcare costs already high and research showing a growing trend in costs, reducing health care costs is imperative. Lower healthcare costs have been associated with physicians using a PC approach to care. Specifically, physicians using PC communication had fewer expenditures for diagnostic tests, as well as less total standardized expenditures (Epstein et al., 2005). Although PC care will not fix the enormous health care costs in this country, it can attenuate the problem by reducing some costs in health care, while also enhancing the experience for patients. Overall, PC care leading to satisfied patients, patient adherence, and lower healthcare costs provides some justification for adopting this approach. However, the ultimate goal of healthcare is to achieve better patient health outcomes. Identifying positive health outcomes associated with a PC approach is therefore critical and is discussed next.

Health Outcomes. PC care has been linked to better patient health outcomes. Since the overarching goal of medicine is to produce enhanced health outcomes for patients, PC care is especially important in this regard. Research has found the following health outcomes associated with a PC approach to care: a reduction of concern in patients, better self-reported health, and many instances of improved physiological status (Stewart et al., 2014). Each of these will be detailed here.

Stewart et al. (2000) conducted a study where first time visit adult patients with an episode of illness were either seen by a doctor displaying PC characteristics or a doctor performing biomedical care. A goal of their research was to discover if, after 2 months, patients receiving PC care would recover from their illness more frequently than patients receiving biomedical care, and also if they would recover from the concern regarding that symptom. This research found that a PC approach to care was associated with improved health status, including

less discomfort and *less concern*, meaning *better mental health* (Stewart et al., 2000). With mental health illness on the rise in the United States (Whitaker, 2010), reducing medical concern in patients, and in turn bettering their mental health is a positive PC health outcome for patients.

A PC approach to care was also found to result in better *self-reported health* from patients. Stewart et al. (2000) looked at the relationship between patients' perceptions of their physician's patient-centeredness and their health, and found that patients who perceived their doctor to be more PC also viewed their health more positively (Stewart et al., 2000). In another study, Stewart et al. (2007) conducted a randomized controlled trial (RCT)² comparing doctors, including family physicians, surgeons, and oncologists, who received typical education (2 hours of PC education) to an intervention group (6 hours of more detailed PC education) (Stewart et al., 2007). Stewart et al.'s (2000) findings were that patients of doctors from the intervention group reported feeling significantly better than patients whose doctors were from the control condition.

Finally, and most importantly, *physiological health status outcomes* associated with PC care are crucial to the importance placed on adopting a PC approach to care. There have been numerous studies that have shown enhanced health status outcomes for patients as a result of PC care, including: better cancer outcomes (Andersen et al., 2008; Kissane & Li, 2008; Spiegel,

² Randomized controlled trials have been considered the gold standard in medicine for conducting clinical research (Abel & Koch, 1999; Feinstein, 1984). Moher et al. (1995) explained that the design, conduct, and published report of RCTs should be of high quality, which leads to better treatment effect estimates, accurate estimates of the efficacy of treatments, and wider treatment acceptance within healthcare. It is important that high quality research be based in RCTs, as Cook, Guyatt, Laupacis, and Sackett (1992) indicate that RCTs are the most reliable method offered to assess the efficacy of treatment. Begg et al. (1996) suggest that although RCTs can have the most powerful and immediate impacts on patient care, the readers of published reports should be provided with additional information allowing for informed judgments regarding the internal and external validity of the study, such as the design, conduct, analysis, and generalizability of the research.

2012), improved diabetic control (Hojat et al., 2011), shorter and less complicated postoperative courses (de Groot et al., 1997; Egbert, Battit, Welch, & Bartlett, 1964; Kiecolt-Glaser, Page, Marucha, MacCallum, & Glaser, 1998), better perinatal outcomes (Shear, Gipe, Mattheis, & Levy, 1983), and better blood pressure (Kaplan, Greenfield, & Ware, 1989), providing clinical outcome support for the use of a PC approach.

Although these findings of the importance of PC care and the health outcomes associated with it are critical for medicine and have moved the field in a positive direction, there is more work needed. Specifically, PC care has been taught in an array of different ways and has not been measured systematically with an objective rating procedure, requiring caution in interpreting the positive results previously found. The next step in this research is to systematically train people in one method, Smith's PC interview, and to rate them on a coding scheme developed systematically in a standardized way. This will advance the work previously done on PC care by allowing researchers to see specifically which skills providers are using, and of those skills, which produce more positive outcomes in both the providers and patients.

Patient-Centered Interviewing: A Review

The first step in creating a systematic way to perform PC care is to develop a welldefined, specific, repeatable interview (Smith, Fortin, Dwamena, & Frankel, 2013); otherwise an extremely variable PC interview may result (Headly, 2007). Thus, it is important that behaviorally-defined PC skills be collapsed into specific, definable segments that are sequenced and prioritized so that people adopting the method can both easily learn the method and know what to say to patients (Cegala & Lenzmeier Broz, 2002; Headly, 2007; Stewart, Brown, & Weston, 1989). Behaviorally-defined means that actual behaviors are specified, and defined behaviors can be observed for their presence or absence. Once a behavior can be defined, it

becomes the basis of competency based education, which is an approach to education that addresses accountability for education outcomes, specifically aligning workforce needs, occupational expectations, and assessments of educational program competence (Anema & McCoy, 2010). Competency-based medical education (CBME) has gained increased attention in recent years by health profession educators, as CBME is organized around specific competencies, or predefined abilities of medical professionals, that serve as outcomes of curriculum (Frank et al., 2010). Competency-based medical education has six steps required for planning criteria: (1) identify the required abilities of the program, (2) define the required competencies and the corresponding components, (3) define milestones along the program path, (4) decide education activities and instructional methods, (5) decide on assessment and measurement tools, and (6) design the outcomes of the program (Frank et al., 2010). Since many programs now consider PC care to be a core competency, having a behaviorally-defined PC interview is important, as it is one way to move towards and achieve CBME. Frank et al. (2010) suggest that CBME has the potential to transform existing medical education, as it has the possibility of enhancing the way in which physicians are prepared for practice. Thus, a review of behaviorally-defined PC interviews follows.

Smith, Dwamena, Grover, Coffey, and Frankel (2010) conducted a review of the literature looking for RCT intervention studies that examined behaviorally-defined, PC methods. The search produced 1,475 articles that mentioned the term "patient-centered," and of these articles 13 were behaviorally-defined interventions (Smith et al., 2010). The researchers broke the functions of a PC method into two model types: (1) data-gathering and emotion-handling and (2) informing and motivating patients. These two model types are two of the three fundamental functions of the interview (Cole & Bird, 2014), but the data-gathering and emotion-handling

model type (model 1) is the inherently PC aspect of the interview, as this portion of the interview contains explicit PC behaviors and skills, whereas the informing and motivating interview integrates PC skills with the clinician-centered skills needed to accomplish the goal of informing and motivating a patient to alter negative health practices. Three out of the 13 interventions were generalizable, evidence-based methods focused on model type 2, informing and motivating patients. Only Smith's PC method (Smith et al., 2006) included both of these model types (i.e. data gathering/emotion handing and informing/motivating patients), and no study focused only on model type one (Smith et al., 2010). Since the publication of Smith et al.'s (2010) review, the Four Habits Model (Frankel & Stein, 2001) also provided evidence for its efficacy (Fossli Jensen et al., 2011), and focuses on the first model type, data-gathering and emotion-handling. Since the Four Habits Model will briefly be reviewed here in order to ascertain the difference between the Four Habits Model and Smith's PC function.

The Four Habits Model is a medical interviewing model for providers, which focuses on four habits, or organized ways of acting or thinking during the medical interview. It includes "(1) invest in the beginning, (2) elicit the patient's perspective, (3) demonstrate empathy, and (4) invest in the end" (Frankel & Stein, 2001, p. 79), see Appendix A. The habits are designed to be conducted in order, as they logically lead the doctor through the medical encounter in an effective way (Frankel & Stein, 2001). Each habit is a crucial PC step assisting people adopting this model in their ability to conduct a PC interview. The first habit, invest in the beginning, encourages the provider to create rapport quickly, obtain patient's concerns, and to plan the appointment with the patient (Frankel & Stein, 2001). The second habit, elicit the patient's ideas, focuses on getting the patient's ideas, their specific requests, and understanding the impact

of the illness on the patient's life (Frankel & Stein, 2001). The third habit, demonstrate empathy, includes being open to patient's emotions, including empathetic statements, as well as nonverbally showing empathy and being cognizant of one's own reactions (Frankel & Stein, 2001). The fourth habit, invest in the end, suggests that the provider deliver diagnostic information and education, include the patient in the decision making process, and end the visit (Frankel & Stein, 2001). The Four Habits Model attempts to enhance the provider-patient relationship by creating a mutually satisfying experience for the provider and patient (Frankel & Stein, 2001).

In order to test this model, a crossover RCT was utilized where all doctors would receive the intervention (i.e. a two day training course on the Four Habits Model), and doctors would serve as their own controls (Fossli Jensen et al., 2011). A coding scheme developed specifically to measure the Four Habits Model (Krupat, Frankel, Stein, & Irish, 2006) was then used in Fossli Jensen et al.'s (2011) crossover RCT, and inter-rater reliability was established on each of the four habits by having four trained raters rate groups of 20 videos until raters reached an acceptable inter-rater reliability (Pearson's r > 0.70), see Appendix B. This research found significant mean score differences before and after the two day Four Habits Model training, where people trained achieved significantly higher scores than those who were untrained (Fossli Jensen et al., 2011). This RCT provided evidence for the utility of the Four Habits Model by showing that the model is quickly learned and can be repeated in practice, making this particular model the only other evidence-based PC model in medicine.

Although the Four Habits Model has produced findings regarding its efficacy, the model is not specific, as it provides very general suggestions for conducting a PC interview. Prior research has shown that the method is easily learned (i.e. providers using the method scored

higher on their developed coding scheme than did untrained providers), but no patient outcomes have been assessed. So although this PC model can be learned, it is less certain what results from using the model. Research indicates that Smith's PC interview is the only PC interview associated with positive outcomes for patients (Smith et al., 2009; Smith et al., 2006), so further work to enhance this method and its use is worthwhile. Smith's PC interview will now be described in detail.

Smith's Patient-Centered Interview

Smith's PC interviewing method was originally developed in 1996 and is detailed in the book *The Patient's Story: Integrated Patient-Doctor Interviewing* (Smith, 1996), the method was updated in the second edition, *Patient-Centered Interviewing: An Evidence-based Method* (Smith, 2002), and is in its current, third edition which was updated to reflect new findings on PC medicine (Fortin et al., 2012). This behaviorally-defined, replicable interviewing method was enhanced and updated under the direction of the original author (Smith, 1996) with newly added coauthors (Fortin et al., 2012) and was based on literature review, empirical evidence (Smith et al., 2006; Smith et al., 1998; Smith et al., 2000), consultations with experts on PC care, and personal experiences with medical care (Fortin et al., 2012). The result is a 5 step, 21-substep method that has shown through research to be an efficient and replicable method (Smith et al., 1998; Smith et al., 1998; Smith et al., 2000). This method has been used in several research studies, all showing the importance of adopting a PC approach to care.

Smith's PC interview is considered integrated interviewing, where the doctor starts the interview with PC interviewing skills, which are the foundational, core skills needed to open the interview successfully in a PC manner. The doctor then moves into the middle of the interview where clinician-centered interviewing predominates, and ends the interview with PC

interviewing skills such as shared decision making and the "end of the interview" steps discussed in Smith's method (Fortin et al., 2012), see Figure 1. Research by Cole and Bird (2013) presents the medical interview as a series of core tasks that are addressed through three functions: (1) building the relationship, (2) assessing and understanding the patient's problems, and (3) collaborating for management. Each of the functions of the medical interview are assessed in Smith's model; specifically, the first two functions of the interview that focus on building the relationship and understanding the patient's problems tend to come at the beginning of Smith's model (which is the focus of this research), and the third function that focuses on shared decision making comes at the end of Smith's model (Fortin et al., 2012).

PC interviewing skills are skills the doctor uses to encourage the patient to express what is most important to them, focusing not just on symptoms, but also on the patients' expressions of personal concerns, feelings, and emotions (Fortin et al., 2012). Clinician-centered interviewing skills are skills that allow the clinician to take charge of the interaction, allowing them to acquire the details of the patient's symptoms and other valuable data that help in identifying a disease, and predominantly avoids nonmedical data (Fortin et al., 2012). During the clinician-centered portion of the interview, some PC skills may be used to help facilitate patient's thoughts and emotions (Fortin et al., 2012). Interviews begin with a PC approach, allowing the doctor to gather the patient's perspective regarding their symptoms and psychosocial information. The clinician-centered portion that comprises the middle of the interview is largely closed-ended, symptom information, with some psychosocial data that is of a more routine type than the data collected at the beginning (Fortin et al., 2012). The doctor then synthesizes these data into a biospsychosocial patient description. Each of the specific steps of

Smith's PC interview, see Appendix C, will be reviewed here followed by a brief description of the middle (clinician-centered) and ending (patient-centered) of the interview.

Step One. The first step in the interview is setting the stage for the interview, which should take between 30-60 seconds (Fortin et al., 2012). The six sub-steps or skills of step one ensure a PC atmosphere and include: (1) welcoming the patient, (2) using the patient's name, (3) introducing oneself and identifying one's role, (4) ensuring readiness and privacy of patient, (5) removing all barriers to communication, and (6) putting patient at ease and ensuring comfort (Fortin et al., 2012). These skills can be adjusted appropriately for follow-up visits or with long-term patients with whom the doctor is already familiar. These skills work together to ensure an appropriate setting for the interview, put both parties at ease, and create or reaffirm the participants' identities (Fortin et al., 2012).

The first sub-step, *welcome the patient*, involves washing one's hands upon entering the patient room and shaking the hand of the patient, or patting the patient's shoulder/arm if a handshake is not possible, when culturally appropriate. Using positive nonverbal skills is also a vital part of this step that will enhance the relationship between the provider and patient, and also helps to make the patient feel like a priority (Fortin et al., 2012). The second sub-step, *using the patient's name*, suggests starting with a formal term of address (e.g. Mr., Miss., Ms., Mrs.) and the patient's last name to begin, as research has shown that patients are divided on how they like to be addressed (Makoul, Krupat, & Chang, 2007). After the formal greeting, it is appropriate to ask the patient how they prefer to be addressed (Fortin et al., 2012). The third sub-step, *introduce yourself and specify your role*, recommends that the doctor introduce themselves with matching identity terms to avoid suggesting power differentials or unequal relationship status

(Fortin et al., 2012). The provider should also specify their role so that the patient is aware of the credentials of the provider (e.g. nurse practitioner).

Sub-steps four, five, and six are all designed to put the patient at ease and create a positive atmosphere for conducting the interview. Specifically, sub-step four, ensure patient *readiness and privacy*, is designed to make sure the timing is appropriate and convenient for the patient, particularly in the hospital setting. For instance, if a patient has severe nausea, severe pain, family visiting, need for medication, etc., the interview may need to be postponed (Fortin et al., 2012). Similarly, monitoring for nonphysical, potentially interfering problems such as lost keys or a recently received disturbing phone call may require a brief delay to the interview. Ensuring readiness of the patient will enhance patients' acceptance of their provider. It is also important to create a private atmosphere by pulling the patient's privacy curtain around their bed or shutting the door (Fortin et al., 2012). The fifth sub-step, remove barriers to communication, involves asking permission to turn off noisy air conditioners or televisions, speaking loud enough so that the patient can hear well, sitting down so as to be eye level with the patient, and only using computers intermittently to avoid disrupting the flow of communication (Fortin et al., 2012). Finally, sub-step six, ensure comfort and put patient at ease, is accomplished by making sure the patient is comfortable where they are sitting and with the exam room itself (e.g. too bright of lights, uncomfortable chair or examination table, etc.). If the patient seems uneasy about starting the interview, asking friendly questions to begin can help the patient to feel comfortable and at ease with the provider (Fortin et al., 2012).

Step Two. The second step in Smith's PC interview includes eliciting the chief concern and setting the agenda, which is done through the next four sub-steps (Fortin et al., 2012). The seventh sub-step, *indicate time available,* is a simple step that has the provider tell the patient

how much time is available for the interview (Fortin et al., 2012). This orients the patient and allows them the ability to gauge what and how much they want to say (White, Levinson, & Roter, 1994). Sub-step eight, *forecast what you would like to have happen in the interview*, is designed to let the patient know what the doctor needs to accomplish during the visit, such as performing a physical exam or asking many routine questions. Sub-step nine, *obtain a list of all issues the patient wants to discuss*, allows the patient the opportunity to list out all of the issues they want to cover in that visit. When done correctly at the beginning, this sub-step helps to minimize the chance that the patient will raise an important concern at the end of the interview when time has run out (White et al., 1994). The final sub-step in step two, *summarize and finalize the agenda*, is typically a summary of the items that the patient would like to address in the visit. In this sub-step, the provider needs to prioritize the issues if too many are raised for the allotted time, to make sure that important issues are covered, and to understand the chief concern of the patient, always beginning with that particular concern (Fortin et al., 2012).

Step Three. The third step of the interview, *begin the interview with non-focusing skills that help the patient to express her/himself*, includes three sub-steps that help the provider to use PC skills to elicit the history of present illness (HPI) and focus on the chief concern. Focusing and non-focusing skills are open-ended skills providers can use to encourage their patients to express freely what is on their mind (Fortin et al., 2012). Focusing skills (e.g. echo, request, summarizing; see below) are used to help patients develop their narrative and to invite the patient to talk more about topics already mentioned (Fortin et al., 2012). Non-focusing skills (e.g. silence, nonverbal encouragement, neutral utterances; see below) are used throughout the interview to encourage the patient to talk freely, but are critical at the beginning of the interview

as the patient provides information regarding their history; non-focusing skills are useful as long as the patient provides a nonrepetitive, coherent history (Fortin et al., 2012).

The 11th sub-step requires the provider to open the HPI with an open-ended beginning question or statement, such as, "So headaches are a big problem, tell me more" (Fortin et al., 2012, p. 40). Sub-step 12, use non-focusing open-ended skills, involves the use of silence, nonverbal gestures (e.g. attentive behavior, eye contact, hand gestures), and neutral utterances (e.g. uh-huh, mmm) that encourage the patient to continue talking. It is suggested that the provider continue using the non-focusing open-ended skills until the patient has finished telling their chief concern story, as the provider is receiving information that will ultimately help learn details about the patient's symptom story or its personal or emotional context (Fortin et al., 2012). The next sub-step of step three, obtain additional data from nonverbal sources, requires that the provider look for nonverbal cues (e.g. arms folded across chest), physical characteristics (e.g. jaundice), autonomic changes (e.g. sweating at outset of interview), accoutrements or accessories (e.g. thick eyeglasses), environment (e.g. greeting cards in hospital setting), and self (e.g. being aware of own emotional reactions to patients) for additional information about the patient, as well as being mentally active and thinking about what the information means (Fortin et al., 2012).

Step Four. The fourth step in Smith's PC interview, *use focusing skills to learn 3 things: physical story, personal story, and emotional story*, involves the three different types of stories, or medical narratives, included in the interview. According to Charon (2006), in order for doctors to effectively treat and care for their patients with trustworthiness, humility, and respect, they must be able to understand to some extent what their patients go through. A current trend in medicine is looking at the patient's medical narrative, or "medicine practiced with these narrative

skills of recognizing, absorbing, interpreting, and being moved by the stories of illness" (Charon, 2006, p. 4). Charon (2006) argues that in order for doctors to grow in their scientific expertise, they need to listen to their patients, to understand the ordeals of illness, to honor the meanings of the medical narratives of their patient's illness, and to be moved by their patient's narrative so that they can act on the patient's behalf. Smith's PC interview focuses on three separate types of medical narratives: physical story, personal story, and emotional story (Fortin et al., 2012). The physical story is the patient's interpretation of what is physically wrong with them, and does not include personal or emotional aspects. The personal story is the personal, non-emotional psychosocial story regarding the context in which the physical disease problem occurs, but does not directly discuss the physical illness. The emotional story is the emotional component of the patient's story regarding what is wrong with them and focuses on the felt emotions and expressed feelings that the patient conveys to their provider during their medical interview. These three medical narratives, referred to in this method as "stories," are also the three components of the biopsychosocial model (Engel, 1981), and Smith's PC interview encourages people adopting the method to facilitate their patients in discussing each story of their medical narrative. People using the method learn to facilitate their patient in addressing these stories through a variety of skills discussed in step four: focusing open-ended skills, direct emotionseeking skills, indirect emotion-seeking skills, and responding to feelings and emotions using the skills of naming, understanding, respecting, and support (Fortin et al., 2012).

The first sub-step of step four, *elicit symptom story*, encourages the provider to aid the patient in describing their symptom or physical story by using three different focusing openended skills. The first skill is echoing, where the provider repeats the patient's words, encouraging the patient to continue talking about something particular the patient has already

mentioned (e.g. if the patient has disclosed that they have strong pain in their left knee, the doctor could echo by saying "pain?" to encourage the patient to elaborate about the pain). This skill allows providers to obtain more information about issues discussed by the patient, without being closed-ended or doctor-centered (Fortin et al., 2012). The second focusing skill that can be used is requests (e.g. "Tell me more about the leg pain"). The provider uses this skill to encourage the patient to continue discussing the current topic (Fortin et al., 2012). The third focusing, open-ended skill is called summarizing, which occurs when the provider summarizes several things that the patient has just disclosed and ends with silence, enticing the patient to continue the conversation (e.g. "First you had a fever, then a few days later nausea set in, and now you feel like you have a cold?"). This skill is also used as a check to ensure that the provider accurately understands the patient, but also encourages the patient to continue telling their physical story.

The next sub-step of step four, *elicit personal context*, helps the provider to obtain information concerning the broader personal/psychosocial context of the patient's symptoms and to start gathering information about the patient's beliefs/attributions (Fortin et al., 2012). Although developing this story relates less to symptoms and may be less important in terms of diagnosing disease, it is important for understanding the patient's illness and critical diagnostic information can arise in this step (Fortin et al., 2012). This sub-step is accomplished by using the same focusing, open-ended skills previously mentioned (i.e. echo, request, summary), but does so by using the focusing skills strategically to move the patient from their physical story to their personal story (Fortin et al., 2012). The provider can do so by echoing a word to help move the patient into the personal story (e.g. "Work?"), to make a request about the personal story (e.g. "Tell me more about the boss you mentioned"), or by summarizing about the personal story (e.g.
"So, the pain you have had has caused you to not be able to go to work, and your boss is getting angry?"). Each of these focusing, open-ended skills can be used repeatedly by the provider throughout the patients' stories, allowing the provider to move the patient in the seemingly most important direction for that particular story (Fortin et al., 2012).

Sub-step 16, *elicit emotional context*, is designed to help the provider obtain the emotional story. There are two types of emotion-seeking skills involved in this step: direct and indirect. The direct emotion-seeking skill involves directly asking the patient how they are feeling or how they are dealing with the problem emotionally (Fortin et al., 2012). The indirect emotion-seeking skills include four types: (1) Inquiring about impact, which asks how the problem has affected the life of the patient, the patient's family, or the patient's friends (e.g. "How has your knee affected your life?"), (2) Eliciting beliefs/attributions, which asks the patient what they believe is causing the problem (e.g. "What do you think might be causing your headaches?"), (3) Demonstrating understanding through self-disclosures, which disclose something personal about how the provider or another person might feel in the patient's circumstance (e.g. "I think I would be frustrated if that happened to me"), and (4) triggers, which helps determine what is going on in the patient's life that made them come in at this particular time (e.g. "Is there anything going on in your life right now that could have triggered this?"; Fortin et al., 2012). The use of direct and indirect emotion-seeking skills will aid in eliciting an emotion from the patient. Once the patient has expressed an emotion, the provider can use additional focusing, open-ended skills to gain a better understanding of the emotion and what may have caused it (Fortin et al., 2012).

The next sub-step in step four, *respond to feelings and emotions*, involves four empathy skills that should be used once the provider has obtained an emotion from the patient and once

the provider thoroughly understands the emotion and how the patient came to that emotion (Fortin et al., 2012). The four skills make up the mnemonic NURS: naming, understanding, respecting, and supporting. These empathy skills can be used together or separately to help the patient feel that their emotion has been heard. Naming, which has also been called labeling, occurs when the provider simply repeats an emotion expressed by the patient, which signals to the patient that the provider has heard or observed the feeling and that it is okay to express the feeling (e.g. "You are upset"; Fortin et al., 2012). Understanding, which is also called legitimating, is used to signify to the patient that their emotional reaction is reasonable (e.g. "You have been through a lot, I totally understand you feeling the way you do."). This skill is used to legitimize, accept, and validate the patient's expressed emotion, and can be used even if the provider does not have personal experience with the particular circumstance (Fortin et al., 2012). The third skill, respecting, can be used to praise (e.g. "I like the way you have hung in there and kept fighting!"), appreciate ("Thanks for being so open with me!"), or to acknowledge the patient's plight (e.g. "This has been a really tough time for you!"; Fortin et al., 2012, p. 22). The final component of NURS is support, or partnership, and is used to signify to the patient that the provider is ready and willing to work with the patient as a team and to form a partnership in order to help the patient (e.g. "Together, I think that you and I can get to the bottom of this and help you to feel better!"; Fortin et al., 2012).

Social support literature also recognizes these skills as foundational in connecting with others, as shown through Tighe and Lemieux's (2004) 'receiver perspective,' which explores the receiver's perspective of comforting messages. To probe this receiver perspective more deeply, the idea of "person centeredness" was explored to discover the type of comforting messages that are typically preferred by recipients (Burleson, 1994). A highly person centered comforting

message legitimizes and recognizes the other person's feelings, assists the other in articulating those feelings, illustrates why such feelings may be experienced, and helps the other person to understand how such feelings fit into their life (Burleson et al., 2005). The similarity between the NURS component of PC interviewing and a person centered approach as described in the social support literature gives further credence to Smith's interview, as other disciplines are prescribing similar ways of connecting with others.

The final sub-step of step four, *expand the story*, is used to elaborate on the personal and emotional stories provided from the patient. These stories are typically incomplete and need further explanation from the patient. This is accomplished by repeatedly cycling through the focusing open-ended skills, the emotion-seeking skills, and the empathy skills, see Figure 2. As the patient provides further information regarding their personal and emotional stories, the provider continues to use the different types of skills to further elaborate the stories and get enough information to feel that they have a firm understanding of the patient's medical narrative. Once the provider feels satisfied with the medical narrative, they move into the final step of Smith's PC interview.

Step Five. The final step is the transition from the PC portion of the interview to the middle, clinician-centered portion of the interview. The first sub-step here is a *brief summary*. The provider briefly summarizes what has been discussed thus far. Next, *check accuracy*, has the provider ask the patient if they have gotten the medical narrative correct after summarizing (Fortin et al., 2012). This ensures that the provider did not miss any important information throughout the expansion of the three stories. The final sub-step of the PC interview, *indicate that both the content and style of inquiry will change if the patient is ready*, suggests that before moving into the clinician-centered portion of the interview, the provider should indicate that the

style of the interview is going to change and should make sure that the patient is ready for that to happen (Fortin et al., 2012). At this point, the provider can move into the middle of the interview and continue in a clinician-centered fashion.

The focus of this research is the PC aspect of the interview described above; however, a brief review of the middle and end of the interview as prescribed by Smith's PC interviewing book (Fortin et al., 2012) will be discussed here. The middle of the interview is used to expand on the information gathered in the PC portion of the interview. The information obtained during the PC portion is likely incomplete, so the provider needs to expand on the information gained by asking more information regarding the patient's HPI and other active problems. The provider will also need to ask questions about other symptoms, the patient's medical history and other aspects of the patient's life, identify other medical issues that may appear, assess the patient for risk of disease, and generally get to know the patient better (Fortin et al., 2012). Appendix D guides the provider through the middle of the interview. A physical exam may follow the middle of the interview, if needed.

The provider then needs to end the interview, and should once again adopt a PC philosophy. There are six steps designated to ending the interview, which can be found in Table 1. The steps include orienting the patient to the end of the interview, explaining the prognosis/diagnosis to the patient, inviting the patient to join in shared decision making, explaining the testing and treatment options to the patient, summarizing the decisions made and providing written instructions to the patient, and acknowledging and supporting the patient before saying goodbye (Fortin et al., 2012). Each stage of the interview and the components of each can be found in the integrated medical interviewing diagram, found in Figure 1.

Smith's PC interview has been used in a number of studies that point to the importance of using the method. The first research conducted on Smith's PC interview (Smith et al., 1998) was an RCT designed to assess the effect of a psychosocial training program for residents. Specifically, residents were assigned to either a one month intensive training program where they were taught PC interviewing skills or to a control group. Residents in the intervention group scored higher on several measures, including: (1) a knowledge questionnaire designed to assess knowledge of interviewing and psychosocial medicine, (2) an attitude questionnaire designed to assess attitudes such as confidence in conducting the skills of the various interviews and provider self-efficacy, (3) somatization management, or management of patients with chronic and unexplained physical complaints (Smith et al., 1998). The authors claim that these results show that Smith's method is easily learned by people adopting the method (Smith et al., 1998).

Another RCT included 206 patients with medically unexplained symptoms, and providers of these patients were randomized to a control group or to an intervention group consisting of cognitive-behavioral, pharmacological, other treatment modalities, and Smith's PC interviewing method (Smith et al., 2006). Patients of doctors in the intervention group had improvements in depression, physical disability, use of antidepressants, and use of controlled substances; similarly, patient satisfaction with their doctor improved. Although this study does not indicate that PC care results in better patient health outcomes, it does show an association between PC care and positive health outcomes for patients receiving such care.

A final study (Smith et al., 2009) randomized patients with medically unexplained symptoms to receive usual care or an intervention treatment, where primary care physicians were trained in cognitive-behavioral, pharmacological, and PC skills. Patients of doctors in the intervention group had better mental functioning and had improved somatization and pain (Smith

et al., 2009). Again, this was a multidimensional intervention so it does not indicate that PC skills alone result in better health outcomes for patients, but it does show an association between PC care and positive health outcomes.

The positive associations found between Smith's PC interview and positive health outcomes for patients provide justification for the continued use of the method. A crucial intermediate step is to evaluate those trained in the method as a way of discovering what skills are being enacted in practice. Equally important, however, is showing that the skills are not only utilized, but also that they lead to positive outcomes. Kirkpatrick and Kirkpatrick (2006) suggest that in order to assess a training program, it is important to evaluate knowledge, attitudes or beliefs, skills, and outcomes of the training program. Holmboe and Hawkins (1998) support this claim, as they discuss evaluation in clinical competence and explain that competence is a broad term often used in medicine that encompasses the domains of knowledge, skills, and attitudes in evaluation. Therefore, each of these aspects of training are included in this study and are discussed below. These outcomes should be impacted positively by provider training in Smith's PC method. The current research aims to examine how these outcomes of training are a result of adopting the PC method through the use of a developed PC coding scheme.

Provider and Patient Outcomes: Knowledge, Self-Efficacy, and Satisfaction

In order to ultimately test a coding scheme created to look at particular PC skills, both the training of providers and the coding scheme itself need to be developed systematically. Smith's previous research (Fortin et al., 2012; Smith et al., 2009; Smith et al., 2006; Smith et al., 1998) has described the method for teaching PC skills. To date, a standardized coding scheme has not been developed. This is an important step that will increase confidence in the method as adopters can be taught in a standardized way and the coding scheme will allow for a systematic

way of rating adopters to show what aspects of the training are most useful in PC care and which skills produce the best outcomes.

The developed coding scheme will be used to assess the effectiveness of the PC training program as a way of discovering if an increase in skills results in better outcomes for both the provider and patient. According to Kirkpatrick and Kirkpatrick (2006), there are four levels to evaluating a training program; this research will focus on levels two and four. Level one, which is evaluating the reaction of adopters of the training, will be assessed in future research through focus groups. Level three looks at the change in job behavior that occurred due to training and assesses a person's performance in the "real world" once the training period has ended and a person can be assessed performing their occupation (Kirkpatrick & Kirkpatrick, 2006). Level three will be assessed once residents have entered their own practice in future research.

Level two and level four will both be discussed in detail here. Level two is evaluating learning, which should be done before and after the training program with both an intervention and control group, and should look at skills, knowledge, and attitudes (Kirkpatrick & Kirkpatrick, 2006). Kirkpatrick and Kirkpatrick define learning as, "the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the program" (2006, p. 22). It was also noted by the authors that some trainers claim that learning has not taken place until there is a change in behavior through an increase in skill. As such, this research hypothesizes that an increase in PC interviewing training will lead to an increase in provider PC skills, which are defined as specific PC behaviors derived from Smith's interviewing method that are enacted in practice, as determined through a coding scheme developed to determine which PC skills a provider is exhibiting.

H1: Training in PC interviewing will lead to an increase in provider PC skills.

Level two of Kirkpatrick and Kirkpatrick's (2006) evaluation training also includes knowledge. Knowledge is defined as, "information bearing on an event stored in memory" (Mumford, Hester, & Robledo, 2011, p. 27). PC knowledge can be understood as PC information stored in a person's memory via PC training and skill enactment. Kirkpatrick and Kirkpatrick's (2006) indication that learning has not taken place until there is a change in behavior suggests that people do not necessarily possess knowledge on a particular topic until they have enacted that behavior.

Brabeck and Jeffrey's (2015) work for the American Psychological Association supports this claim, as their research indicates that practicing a particular behavior or skill set allows information regarding that behavior to stay in the short term memory long enough for it to move into long-term memory. When people first learn information it is stored for short periods in the short-term memory. Brabeck and Jeffrey (2015) suggest that practice will help increase a person's ability to access that knowledge both automatically and quickly by helping that information move from short to long-term memory. This research indicates that teaching someone PC information may not be enough to advance that knowledge to the long-term memory; rather, teaching knowledge on PC behaviors and allowing a person time to practice those behaviors should make that information more readily available and should therefore increase a person's knowledge regarding that behavior. Thus, it is hypothesized that an increase in a provider's PC skills should lead to an increase in PC knowledge. The more a person participates in a given activity and the more a person becomes familiar with a particular practice, the more knowledge that person should gain and retain regarding that particular activity or practice. People can learn a method and steps of a method in training, but the knowledge

regarding that method and use of that method likely will not fully form and become part of that person's long-term memory until that skill set has been enacted in practice.

H2: Patient-centered skills will lead to an increase in provider knowledge of patient-centered care.

Level two of Kirkpatrick and Kirkpatrick's (2006) training evaluation program also suggests that beliefs regarding a particular behavior can be assessed. Here, beliefs will be studied in the form of a person's self-efficacy regarding their PC abilities, which means that a person should first be taught the PC skills and then that person's self-efficacy regarding their ability to enact those skills should be assessed. Providers with higher scores on a PC coding scheme (i.e. providers using more PC skills) should have higher self-efficacy in their ability to conduct a PC interview. A person's perceived self-efficacy is their "belief in their ability to influence events that affect their lives" (Bandura, 2010, p. 1). According to Bandura (1997), students with high perceived self-efficacy work harder, persist longer, participate more readily, show enhanced interest in learning, and ultimately achieve at higher levels when compared to students with low self-efficacy. Self-efficacy may be influenced by specific outcomes of behavior, such as achievements, and also by input from the environment, such as comparison to peers or feedback from instructors (Bandura, 1997).

Bandura (1997) suggested that people are able to gauge their self-efficacy once information is acquired regarding interpretations of their actual performance, vicarious experiences, social persuasion, and by other physiological indexes. Schunk and Frank (2009) explain that the way in which a student interprets their actual performance will provide the best information for assessing their self-efficacy, as the interpretations made in this fashion are the most tangible indicators of a person's capabilities. The researchers continue by explaining that

when a performance is interpreted as successful, one's self-efficacy should rise; whereas an interpretation of performance as a failure should likely lower self-efficacy (Schunk & Frank, 2009). Similarly, people who feel that they are efficacious in an activity are hypothesized to persist longer and work harder when difficulties are encountered than would a person who doubts their capabilities (Bandura & Adams, 1977). Ultimately, people need to believe that their actions will produce desired outcomes in order for them to have incentive to engage in such actions (Bandura, 1997).

Strecher, DeVellis, Becker, and Rosenstock (1986) reviewed health related research that looked at how skills are affected by self-efficacy, and they suggest that in order to target a behavior, the behavior should be broken down into a series of skills that can be mastered, and through encouragement of the mastered skills, self-efficacy should increase. Particularly important is the notion that as a person's skills training and use of skills increase, so should their self-efficacy (Gilchrist & Schinke, 1983). Therefore, a person with increased PC skill use should lead to higher beliefs in their ability to act PC.

H3: Patient-centered skills will lead to an increase in provider's self-efficacy.

Finally, level four of Kirkpatrick and Kirkpatrick's (2006) evaluation of training programs is the evaluation of results of the training. The evaluator must determine what final results occurred due to the attendance and participation by people in the training program (Kirkpatrick & Kirkpatrick, 2006). A major outcome in the literature of doctors exhibiting PC characteristics is having highly satisfied patients. Here, the focus is PSPCC, which again is defined as the patient's positive response to the provider-patient interaction in terms of the provider's ability to effectively carry out the interview in a PC fashion (Grayson-Sneed, 2014). Since patient satisfaction has shown through research to result in greater adherence to medicine

(O'Brien et al., 1992), enhanced patient recall (Falvo & Tippy, 1988), fewer malpractice lawsuits (Hickson et al., 1994), and less "doctor shopping" (Ware & Davis, 1983), patient satisfaction is an effective indicator for measuring the success of both hospitals and doctors (Prakash, 2010).

It has been suggested that provider-patient interaction may be the most important indicator for determining patient satisfaction (Prakash, 2010), as patient satisfaction increases with improved physician interpersonal skills and thus results in treatment adherence and better health outcomes (Renzi et al., 2001). Smith's PC interview targets specific interpersonal skills, training doctors in the enhancement of these skills by following the specific steps of the method (Fortin et al., 2012). Since a coding scheme developed to look specifically at Smith's method would target the interpersonal skills taught through the PC method, it is likely that someone exhibiting these skills would engender patient satisfaction. As such, this research hypothesizes that an increase in PC skills will lead to more highly satisfied patients.³

H4: Patient-centered skills will lead to an increase in patient communication satisfaction.

Although previous research on PSPCC has not predicted or found that specific aspects of PC interviewing operate in different ways, one additional research question that could be posed is whether training and use of separate PC skills leads to higher patient satisfaction in the six separate PC skills. Each stage of the interview has different, unique components, and some may be more important for the prediction of patient satisfaction than others. This research question would help determine which stage(s) of the interview (i.e. which sets of the separate PC skills) are more likely to be related to patient satisfaction.

RQ1: What is the relationship between the separate PC skills and satisfaction ratings?

³ Results garnered via level four of Kirkpatrick and Kirkpatrick's (2006) evaluation program in this research are only preliminary assessments of level four. The ultimate test of level four will require testing providers again after level three has been properly assessed (i.e. once the provider has been assessed in their own practice outside of this research). However, the results found here will provide an initial insight into the outcomes of training.

CHAPTER 2: METHODS

Participants

The sample comprised 129 residents involved in a grant project testing PC interviewing and the impact of mental health training for residents. The majority of residents indicated that they were male (n = 77, 60%) and married (n = 77, 60%). Following the guidelines of NIH, ethnicity was assessed in the following way: residents were primarily Asian (n = 62, 48%), followed by Caucasian (n = 34, 27%), African American (n = 6, 5%), Hispanic/Latino (n = 2, 1%), and the rest self-described as another race or ethnicity (n = 24, 19%)⁴.

Residents conducted three videotaped medical interviews with standardized patients, or "simulated patients or actual patients who have been carefully coached to present their illness in a standardized way" (Beullens, Rethans, Goedhuys, & Buntinx, 1997, p. 58). Over the course of three consecutive years (2012-2014); residents were aware that they were being videotaped, but were only told that the videotapes were being used as part of a research grant. Standardized patients (n=12) were primarily Caucasian, with one African American, and ranged in age from 38 to 58. Standardized patients were paid for their participation through the Health Resources and Services Administration (HRSA) grant.

Procedure

Training. At the time of posttest data collection, residents had either participated in a one-month, full-time rotation of training, or were part of the control condition⁵ (i.e. no psychosocial or mental health training courses were offered to residents), see Table 2. Some of

⁴ Future research may want to probe race and ethnicity more clearly. Many residents self-reported as 'other' in this research because they did not self-identify with one of the ethnicities provided. For example, residents in this data set from Pakistan self-reported their ethnicity as 'other,' whereas NIH categorizes Pakistan as an Asian ethnicity. This should be probed further in the future to avoid such a high number of people in the 'other' category.

category. ⁵ Pretest data was collected on each condition as well, so that each resident was assessed when they first entered the program, as well as when they were ending their residency.

the residents (n = 76) were from an intervention site where training was executed during the first year of a three year residency program, with intermittent follow up training at a specialized clinic during their second and third years, and the remaining residents were from a control site where no residents received formal psychosocial or mental health training at any point during their three years⁶ (n = 52), see Appendix E for a breakdown of the data. Residents in both locations had similar training in all other aspects, including: approximately 80 hours of work per week that included inpatient and outpatient clinics and specialty rotations, all of which were disease oriented. Although random assignment to condition did not occur, there were no significant differences between the two groups during the pretest on the variables of interest: provider PC skills, provider knowledge, provider self-efficacy, and patient satisfaction. Specifics are provided at the end of the methods section.

The one-month, full-time rotation for residents at the intervention site involved 60 hours of training, including PC interviewing, psychiatry lectures on mental health issues, shadowing psychiatrists on the inpatient psychiatry unit, lectures on somatization, multicultural issues, ethics, and informing and motivating patients to change unhealthy habits. The aim of the rotation was not to transform residents into psychiatrists, but instead was intended to train residents to be as competent with common mental health problems as they are with medical problems (Smith et al., 2014). Five model types were addressed during training, including (1) diagnosis and doctor-patient relationship, (2) basic treatment principles, (3) mental health care, (4) personal awareness, and (5) team based care (see Smith et al., 2014 for complete descriptions of each). The current research is primarily focused on model 1, diagnosis and doctor-patient

⁶ Although control group residents did not receive formal psychosocial or mental health training, their core faculty are all experienced and ideal role models in all facets of training. Thus, residents in the control condition did not receive a formal one-month, full-time training rotation with follow-up training throughout their residency; however, control group residents were potentially getting psychosocial and mental health input in other ways through faculty.

relationship, which taught residents Smith's PC interview as well as detailed emotion-handling skills for establishing the doctor-patient relationship. Future research will probe models 2-5 in detail. Training was conducted in a linear process where residents progressed from one model type to the next until residents were thoroughly trained in all five types.

Data Collection. Residents and standardized patients were videotaped during interviewing in three separate medical cases, including data gathering and relationship building, a Behavioral Healthcare Treatment Model, and informing/motivating a patient; however, this research is solely focused on the PC case, which is the data gathering and relationship building case. The Behavioral Health Treatment Model and informing/motivating a patient cases will be analyzed in future research. Throughout the entirety of the grant, residents always met with a new standardized patient, so that no resident ever met with the same standardized patient twice. Before entering the standardized patient's room, residents were given written instruction; see Appendix F for the data gathering and relationship building instructions. Standardized patients received both in-person training prior to data collection and written instructions describing in detail how to portray their particular case, for standardized patient written instructions on the data gathering and relationship building case see Appendix G. Each medical case was allotted 15 minutes and took place in rooms designed to simulate real examination rooms. Residents saw three standardized patients (each representing the different medical cases mentioned previously), and standardized patients never saw more than six residents per day to minimize the chance of boredom effects and participant fatigue. Video cameras were strategically placed out of the view of both the resident and standardized patient, although both were aware that they were being videotaped and that videotapes would be evaluated in some capacity.

On the same day that the interviews took place, residents had approximately 45 minutes to fill out three questionnaires on a private computer in a separate area of the facility: (1) Demographics, (2) a Knowledge Questionnaire, and (3) an Efficacy Questionnaire assessing the resident's self-efficacy with PC skills, see Table 3, Appendix H, and Table 4, respectively. Directly following each of the medical cases/encounters, standardized patients had approximately 10 minutes to fill out two patient communication satisfaction surveys regarding their communication satisfaction with the resident that had just interviewed them: (1) the 25-item Interview Satisfaction Questionnaire (ISQ) measure, see Table 5, and (2) the Communication will be analyzed using the 25-item ISQ in this study, as the CAT was included for validity purposes only and was analyzed in a separate analysis (see Grayson-Sneed, 2014). Standardized patients were assured anonymity and filled out their forms privately on a computer in their examination room.

The Development of the Patient-Centered Coding Scheme

In order to test research hypotheses, a coding scheme was developed in this research effort to allow for a standardized way of rating people using the method, and it is described here. The interview is the unit of analysis, thus only one instance of each code per interview is reported.

The 33-item coding scheme was derived from core PC skills taught in Smith's PC interviewing method. This coding scheme was devised to test only the first five steps with 21 sub-steps of the PC interview, as these first five steps of the interview comprise foundational skills that set the stage for the rest of the interview, see Appendix C. The coding scheme is built upon the six stages of a PC interview as prescribed by Smith's method: setting the agenda,

physical story, personal story, emotional story (including direct patient-centered skills), indirect patient-centered skills, and general patient-centered skills. Each stage has items designed to measure that particular aspect of PC care, and are each yes/no dichotomous variables, see Appendix I. A more detailed codebook was developed, in which each item in the coding scheme is described in detail and includes examples to help coders understand the items and provides examples of what providers may say in certain instances, see Appendix J. Coders received the conceptual definitions of each stage, as provided below, as well as a glossary of emotional terms, which can be found in Appendix K.

Setting the agenda is defined as the introduction stage at the beginning of a medical interview where the provider orients the patient by ensuring that the patient is comfortable and at ease and by obtaining a full list of issues to cover. This particular category contains three items, all derived from Smith's method: (1) provider uses own and patient's last name or other expressed preference, (2) provider indicates time available, and (3) provider obtains agenda and inquires for additional items.

The physical story is defined as the patient's interpretation of what is physically wrong with them, and does not include personal or emotional aspects. This stage has two items, including (4) the provider starts open-endedly focusing on physical agenda item, and (5) provider addresses only physical issues volunteered by the patient.

The personal story, defined as the personal, non-emotional psychosocial story regarding the context in which the physical disease problem occurs, but does not directly discuss the physical illness, contains six items: (6) provider keeps the patient focused open-endedly on the personal story(ies) to elaborate them, (7) provider addresses only personal topics volunteered by the patient, (8) provider encourages personal information open-endedly when patients do not

volunteer it and patient remains focused on the physical story, (9) provider uses echoing to expand understanding of personal story, (10) provider uses requests to expand understanding of personal story, and (11) provider uses summarizing to expand understanding of personal story.

The emotional story is the most detailed and contains 15 items. *The emotional story* is defined as the emotional component of the patient's story regarding what is wrong with them and focuses on the felt emotions and expressed feelings that the patient conveys to their provider during their medical interview. The emotional story is one of the most unique parts of a PC interview, and is thoroughly captured in Smith's PC interview. The 15 items include (12) provider keeps patient focused open-endedly on emotional story(ies) to elaborate them, (13) provider addresses only emotional topics volunteered by the patient, (14) provider inquires about emotions by using "how does that make you feel?" question, (15) provider inquires about emotions by using other emotion seeking question, (16) provider uses echoing to expand understanding of emotional story, (17) provider uses requests to expand understanding of emotional story, (18) provider uses summarizing to expand understanding of emotional story, (19) provider uses "naming" statement in response to expression of emotion, (20) provider uses specific "I understand" statement in response to expression of emotion, (21) provider uses other understanding statements in response to expression of emotion, (22) provider uses "praise" statement in response to expression of emotion, (23) provider uses "acknowledge plight" statement in response to expression of emotion, (24) provider uses "direct support [from interviewer]" statement in response to expression of emotion, (25) provider uses "indirect support [from others]" statement in response to expression of emotion, and (26) provider uses "joining language" that indicates support to the patient in response to expression of emotion.

Indirect patient-centered skills are defined as tools that the physician uses to try and elicit expressions of feeling or emotion from the patient. These indirect PC skills are used to help the provider obtain an emotion from their patient when the patient has not directly discussed emotion. Direct emotion seeking skills are frequently used first (i.e. "How does that make you feel?"), but these indirect skills can also be used to help the provider obtain an emotion from their patient. Once an emotion is obtained, the emotion skills listed above can be used to help the provider explore the emotion further. This stage of the interview contains four items; including, (27) provider uses "impact on self" statement, (28) provider uses "impact on others" statement, (29) provider uses "beliefs/attributions" statement, and (30) provider uses "self-disclosure" statement.

General patient-centered skills are important to the PC interview but do not fall into one of the previously defined categories. They are defined as tools that the provider uses to guide the patient through the PC portion of the interview. Three items comprise the general PC skills, including (31) provider indicates change in direction of questioning at end of interview to disease focus, (32) provider interruptions are appropriate or nonexistent, and (33) resident determines content and direction of interview.⁷ All items comprising each of these stages are derived directly from Smith's PC interview (Fortin et al., 2012), and are described in detail in the codebook, see Appendix J.

Assessing the Validity of the Developed Coding Scheme

An important step in this research was to provide evidence for the validity of the PC coding scheme, which is one way to assess whether a coding scheme is a good measure of the PC process. The validity was established in a number of ways. According to Pedhazur and

⁷ This item will be reverse coded. The patient should determine the content and direction of a patientcentered interview, not the provider; however, many providers do control the interview making this an important code.

Schmelkin (1991), a widely used method for validating a measure is a tripartite classification, including the content, construct, and criterion forms of validation, and each will be discussed here. Similarly, Riffe, Lacy, and Fico (2014) discuss establishing validity in content analysis quantitative research and discuss face, concurrent, predictive, and construct forms of validity; face, predictive and construct validity are applicable to the current research and will be assessed here.

Content Validity. Content validity is "the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose" (Haynes, Richard, & Kubany, 1995, p. 238). The importance of content validity for the purposes of validating a particular construct depends on the degree to which experts agree about the domain and facets of the construct and on how precisely a construct is defined (Haynes et al., 1995). Haynes et al. (1995) note that although research involving content validity has primarily focused on self-report questionnaires, content validity is important for assessments such as behavioral observation assessments because the results can affect clinical judgments (Haynes et al., 1995). This makes content validity especially important in the current research, as the given coding scheme is a behavioral observation assessment. In order to establish content validity, or the degree to which experts agree about the domain and facets of the construct, it was important to ensure that the developed PC coding scheme stayed true to Smith's PC interviewing method. Smith's PC interviewing method was not only developed based on empirical evidence and literature review, but also with the experiences and knowledge of several PC experts (Fortin et al., 2012) who agreed on the steps and inclusion criteria for the PC method. The developed coding scheme includes all major components of the PC interviewing method, and was carefully

examined and approved by two leading PC interviewing experts. This process provided evidence for the content validity of the developed PC coding scheme.

Construct Validity. Construct validity, or the "validity of inferences about unobserved variables (the constructs) on the basis of observed variables (their presumed indicators)," is made up of three components: (1) logical analysis, (2) internal-structure analysis, and (3) cross-structure analysis (Pedhazur & Schmelkin, 1991, p. 52). Riffe, Lacy, and Fico (2014) explain that constructs exist but are only observable through measures; therefore, "some change in the underlying abstract concept will cause observable change in the measures" (p. 127). Only the logical analysis aspect of construct validity will be discussed here.⁸

The first aspect of the logical analysis is to scrutinize the definition of the construct (Pedhazur & Schmelkin, 1991). Each of the stages, or variables, of the developed PC coding scheme and their corresponding conceptual definition were developed by carefully examining Smith's PC method and creating the definition based on what the method prescribes. Each variable was constructed by carefully reading Smith's method and including all facets of the method that pertain to each of the variables included in the coding scheme devised to test Smith's method. PC literature was also reviewed to ensure that each of the variables not only correspond to Smith's method, but also the greater PC literature. This process produced clear definitions that are logically consistent with Smith's method and the greater PC literature, see Appendix K.

The second aspect of the logical analysis is the item content. Item content involves ensuring that items reflect their given construct's definition and are appropriate and consistent with that definition (Pedhazur & Schmelkin, 1991). Each item of the coding scheme was created

⁸ The internal-structure analysis cannot be performed on a dichotomous measure. A cross-structure analysis will be performed in future research.

after the construct and construct's definition were established. This allowed for precise items to be constructed based on the PC method that directly reflect their corresponding construct and accurately reflect that construct's definition.

The process of assessing item content as described by Pedhazur and Schmelkin (1991) is similar to the concept of face validity, but face validity takes the process one step further. Face validity asks the question "on the face of things, do the investigators reach the correct conclusions" ("Face Validity," 2010, p. 471), and further ensures that a researcher provides a persuasive argument that the measure of a construct make sense on its face (Riffe, Lacy, & Fico, 2014). Face validity is a test of common sense, and is a way of integrating the laypersons' nontechnical, unique insights into the evaluation of a measure or research endeavor ("Face Validity," 2010). A typical way to assess the face validity of an instrument is to obtain evaluations of the measure from current or future individuals who will be directly affected by the measurement or research ("Face Validity," 2010). The coding scheme was a direct reflection of the PC method, which was based on recommendations from major conferences regarding what a PC interview and PC communication should include, taking into account the people (i.e. the patients) who would be affected by the adoption of PC care (Makoul, 2001; Makoul & Schofield, 1999). Additionally, the people involved in this research using the coding scheme (i.e. the coders) were asked to review each item in conjunction with the item's definition to ensure that the item not only made sense in its given context, but also that the person felt able to use the item accurately while rating people. Examples were added to the coding scheme to help ensure that the coders understood the item in the medical interview context. Any item that was confusing or that the coder felt unable to use accurately was re-phrased or dropped from the measure. This resulted in

33 items that all coders and researchers felt were clear items that accurately reflected the variable they were purporting to assess.

The final aspect of the logical analysis is the measurement procedures, which includes examining the method of measurement, directions to respondents, and the scoring procedures (Pedhazur & Schmelkin, 1991). Each of the variables included in the PC coding scheme contains multiple items, which Pedhazur and Schmelkin (1991) endorse. The items on the coding scheme were created to tap into the constructs that the method attempts to measure. All items are measured the same way, as dichotomous (i.e. yes/no) items, and raters were given indepth instructions during intensive training sessions regarding how to rate the residents. In particular, coders were not only given multiple examples and descriptions of the items on the coding scheme, but they were also given a codebook complete with descriptions and examples that could be referred to as needed, see Appendix J.

Criterion Validity. Criterion validity refers to an outcome of the measure of interest (Pedhazur & Schmelkin, 1991). More specifically, "criterion-related validation focuses on prediction, the overriding concern being the degree of successful prediction of a criterion, regardless of whether or not it is possible to explain the process or processes leading to the phenomenon that is being predicted" (Pedhazur & Schmelkin, 1991, p. 32). Riffe, Lacy, and Fico (2014) refer to criterion validity as predictive validity, which is a test that correlates a measure with a predictive outcome, such that when the outcome occurs, confidence placed in the measure can increase. The selection of a particular criterion is primarily determined by the person making the selection, including their values and goals; thus, what is important is decided by the person who is selecting the criterion for the given setting for given individuals (Pedhazur & Schmelkin, 1991).

There are two types of criteria as determined by Pedhazur and Schmelkin (1991): ultimate and intermediate criteria. An ultimate criterion is what is deemed important and warrants the efforts necessary to predict it; in other words, an ultimate criterion is a final goal (Pedhazur & Schmelkin, 1991). The ultimate criteria of this particular research would be improved health status for people receiving PC care; however, as noted by Pedhazur and Schmelkin (1991), there are difficulties in defining and measuring ultimate criteria, so many people resort to measuring intermediate criteria instead. Intermediate criteria are easier to define and measure, more economical to obtain, and require less time to collect than ultimate criteria (Pedhazur & Schmelkin, 1991). In order to choose an intermediate criterion, the most important consideration is their relevance to the ultimate criteria of interest. Since the ultimate criterion of this research, improved health status, is not attainable due to standardized patients being used as the subjects of this research, the intermediate criterion of patient satisfaction will be used to provide evidence for the criterion validity of this measure. Past research has shown the connection between PC care and patient satisfaction, as well as between PC care and improved patient health outcomes (Andersen et al., 2008; Hojat et al., 2011; Kaplan et al., 1989; Kissane & Li, 2008; Spiegel, 2012); thus, patient satisfaction was deemed an acceptable criterion for validation purposes. The results of the criterion validation will be discussed in the results section of this paper.

Training and Reliability

A second way to assess whether a coding scheme is a good measure of a particular method is to assess its reliability, which was another component of this research. Two undergraduate students were trained as coders by two people highly trained in Smith's PC interviewing method. Coders started training by reading Smith's PC interviewing book (Fortin et al., 2012), and were asked to

re-read the PC chapters of the book. Over the course of two months, coders met with trainers two times per week for two hours per visit. Coders were trained on a small selection of videotapes from the grant project and subsequently on additional medical student tapes provided by the university for training purposes only. Coders spent approximately two hours rating student videotapes outside of training sessions, resulting in around six hours of training per week (i.e. around 48 hours of training total). Videotapes coded outside of the training sessions were reviewed in person, and discrepancies in coder's answers (both from each other and from the trainers themselves) were discussed until coding agreements could be reached. The unit of analysis was the entire interview.

Riffe, Lacy, and Fico (2014) discuss assessing reliability in quantitative content analysis research, and explain that the reliability coefficient between coders is "a summary statistic for how often coders agreed on the classification of the content units" (p. 114). The authors suggest that using a reliability coefficient that takes into account chance agreement is important, as some coder agreements might occur among untrained coders who are not guided by a protocol (Riffe, Lacy, & Fico, 2014). One reliability coefficient endorsed by the authors that takes into account chance agreement is Cohen's Kappa (Cohen, 1960), and is the statistic used for inter-rated reliability in this research. Inter-rater reliability was established by having coders independently rate 25 randomly selected videotapes (i.e. 20% of videotapes from the total number of videotapes to be rated). The overall reliability for the entire coding scheme was calculated using Cohen's Kappa (Cohen, 1960). This included all items for all 25 videotapes; and Kappa was .902. Overall percent of agreement for all items for all 25 videotapes was 97.5%; percent of agreement for each individual item can be found in Table 7. Cohen's Kappas are also reported for each variable. Cohen's Kappa for the *Agenda Setting* variable was .941. The two coders agreed

100% of the time for the *Physical Story* and *Indirect PC Skills* variables for Kappas of 1.00. The *Emotional Story* variable had a Kappa of .86, and the *General Patient-Centered Skills* variable had a Kappa of .868. The percent of agreement for the *Personal Story* variable was 99.3%.⁹ After establishing reliability, the coders then recoded all instances where there had been disagreement. Once agreement on all PC variables was consistently reached between both trainers and coders, coders began coding videotapes on their own.

Instrumentation

Patient-Centered Training. The PC training variable is a dichotomous variable indicating that a resident was either trained or untrained at the time of data collection (0 = untrained, 1 = trained)¹⁰. This is one of the independent variables of this research.

Patient-Centered Skills. The PC Coding Scheme developed in this research contains six categories of PC interviewing, or areas of PC interviewing as prescribed by Smith's method (Fortin et al., 2012), and 33 behavioral items were developed to measure each of these six areas, see Appendix I. Stage 1, setting the agenda, contains three items that focus on opening the interview using PC skills (e.g. "Resident indicates time available."). Stage 2, physical story, comprises two items regarding the patient's physical story (e.g. "Resident addresses only physical issues volunteered by the patient."). Stage 3, personal story, contains six items focused on the patient's personal story (e.g. "Resident uses 'echoing' to expand understanding of the personal story."). Stage 4, emotional story, comprises 15 items regarding the patient's emotional story (e.g. "Resident uses 'naming' statement in response to expression of emotion."). Stage 5,

⁹ Percent of agreement was used for the Personal Story variable because Cohen's Kappa cannot be calculated if either coder is constant, meaning that the coder uses the same code for all items of a particular variable. Therefore, percent of agreement was deemed an acceptable statistic of inter-rater reliability for this variable.

¹⁰ Eventually, the PC training variable will be a continuous variable, as training will include multiple components at the end of the grant (e.g. psychosocial rotation, one year of complex patient clinic, two years of complex patient clinic). At the present time, however, PC training will be measured as either present or absent, since complex patient clinic data was limited.

indirect PC skills, contains four items focusing on indirect skills (e.g. "Resident uses 'impact on self' statement."). Stage 6, general PC skills, contains three general PC skills (e.g. "Resident indicates change in direction of questioning at end of interview to disease focus."). Each item is a dichotomous (0 = no, 1 = yes) variable indicating that the resident either exhibited the behavior or did not, and a higher score denotes more PC skills used. This aggregated measure serves as a second independent variable.

Patient-Centered Knowledge. Resident knowledge regarding the PC care techniques was assessed through three multiple choice questions (e.g. "It is inappropriate to interrupt the patient when being patient-centered."), see Appendix H (Smith et al., 1998). The full knowledge questionnaire contains 27 items regarding PC and mental health knowledge, but only the PC items were used in this assessment. Correct answers were aggregated into a proportion of correct answers to serve as one of the primary dependent variables. Munck and Verkuilen (2002) explain that the choice of aggregation of one's measure is a balance between the need for parsimony and the concern with underlying dimensionality. These three items should be reflecting only one dimension, PC knowledge. The aggregation of this scale was deemed appropriate, as the three items reflective of PC interviewing are each derived from the model, so although an aggregate correct score for each individual will not display which items a person answered correctly, it will give an overall PC knowledge score in which a higher score signifies greater PC knowledge. In this context, an overall correct score is more meaningful than breaking the construct apart.

Self-Efficacy. Twenty 5-point Likert-type items ranging from strongly disagree to strongly agree with 5 signifying high self-efficacy and 1 signifying low self-efficacy (e.g. "I am confident that I can respond to emotion by naming, understanding, respecting, and supporting

it.") were used to measure resident's perceived self-efficacy regarding mental health knowledge and PC skills, see Table 4 (Smith et al., 1998). Seven of these items were developed to measure a person's self-efficacy with PC interviewing (items 1-7, see Table 4). These self-efficacy items were used to create a PC self-efficacy scale with a higher score indicating greater perceived PC interviewing self-efficacy, and served as the second primary dependent variable. A CFA was conducted on these seven PC self-efficacy items and revealed that two items were weak indicators of PC interviewing efficacy; thus, a five item scale was used in this research. The CFA conducted on the remaining five items (1, 2, 4, 5, 6) had ample factor loadings and small residuals (RMSE goodness of fit = .07). The reliability (α = .80), factor loadings, and descriptive statistics of the PC interviewing efficacy factor can be found in Table 8. These five self-efficacy items averaged to create a PC self-efficacy scale.

Patient Satisfaction with Communication. The final dependent variable was patient satisfaction with communication, which was measured using the ISQ. The ISQ is a 25-item measure designed to measure four dimension of satisfaction: opportunity to disclose concerns, physician's empathy, confidence in doctor, and general satisfaction. All five-point Likert-type items with one indicating strongly disagree and five indicating strongly agree (e.g. "Overall, I am satisfied with my doctor.") were collected to measure standardized patient's satisfaction with their resident. Previous research reduced the measure to a 12-item scale and also found the measure to be second order unidimensional (Grayson-Sneed, 2014), see Table 5. This 12-item scale representing patient communication satisfaction was utilized for the current study. A CFA was conducted and the scale had ample factor loadings and small error in all four factors (overall RMSE = .084); the reliability, factor loadings, and descriptive statistics for each of the factors can be found in Table 9. The second order unidimensional measure was subsequently analyzed

using CFA and demonstrated acceptable fit, as factor loadings were ample and errors were small (RMSE = .014), see Table 10 for the reliability ($\alpha = 0.89$), factor loadings, and descriptive statistics. The second order unidimensional ISQ will be used as the patient satisfaction dependent variable in this research, and a higher score indicates higher patient satisfaction.

Measurement Analysis

In order to test the research hypotheses, a path model is proposed to depict the PC causal process, see Figure 3. The proposed path model predicts that PC training will lead to an increase in PC skills, and then PC skills will lead to greater provider PC knowledge, greater provider self-efficacy, and higher patient satisfaction.

Additionally, in order to answer RQ1 which asks what the relationship is between the separate PC skills and patient satisfaction ratings, the separate components of the PC interview will be analyzed as proportions due to the varying number of items included in each of the variables (e.g. personal story has six items whereas emotional story has 15 items, so 10/15 on emotional story would be 0.66, whereas 3/6 on personal story would be 0.5). The research question will be answered by correlating each of the skill component proportions with scores on the overall patient satisfaction scale to discover which, if any, of the variables are significantly related to overall patient satisfaction.

Finally, since random assignment to condition did not occur, independent samples t-tests were conducted for each of the variables included in this research (i.e. provider PC skills, provider knowledge, provider self-efficacy, and patient satisfaction) in order to show that there were no significant differences between the intervention and control conditions at the beginning of research (i.e. at pretest). Table 11 includes the descriptive statistics for the pretest intervention group versus the pretest control group for each of the variables. Results indicate that the

intervention group and the control group were not significantly different from one another on any of the variables at the time of pretest. Specifically, results show that there was not a significant difference in PC skill use between the intervention pretest group (M = 3.75, SD = 2.18) and the control pretest group (M = 3.42, SD = 2.32, t (69) = .616, p > .05). Results also indicate that at the time of pretest there were no significant differences in provider knowledge between the intervention group (M = 0.43, SD = 0.25) and the control group (M = 0.53, SD = 0.27, t (70) = -1.56, p > .05).

Further, results show that there were no significant differences at the time of pretest between the intervention and control groups for the variables provider self-efficacy or patient satisfaction. Specifically, there were no significant differences in provider self-efficacy between the intervention pretest group (M = 4.02, SD = 0.46) and the control pretest group (M = 4.11, SD= 0.46, t (70) = -0.88, p > .05), and there were no significant difference for patient satisfaction between the pretests of the intervention (M = 4.09, SD = 0.81) and control groups, (M = 4.12, SD= 0.83, t (70) = -0.186, p > .05). These findings indicate that at baseline, the intervention and control conditions were equivalent, alleviating concerns regarding the limitation of not having had random assignment to condition.

CHAPTER 3: RESULTS

The path model tested in this investigation posited that PC training leads to an increase in PC skills, and PC skills lead to an increase in provider knowledge, provider self-efficacy, and patient satisfaction. The causal model provided in Figure 3 was tested using an ordinary least squares criterion to estimate model parameters, examine parameter size, and to assess the fit of the model (see Hunter & Gerbing, 1982). Ordinary least squares is a procedure which generates predicted correlations that can be compared to obtained values of correlations. A global test for goodness of fit was assessed by examining the difference between the predicted and obtained correlations using a chi-square statistic. A significant chi-square specifies that the predicted model departs substantially from the data obtained. Thus, a non-significant chi-square indicates that the predicted path model is consistent with the data. Table 12 contains the correlation matrix used to estimate the model parameters, and Figure 4 presents the path coefficients.

Figure 4 indicates that some, but not all, path coefficients were in the predicted direction. The coefficient linking the PC training and PC skills was .54 [$P(.426 \le \rho \le .66) = .95$], indicating that those who received PC training increased in PC skills, relative to those who did not receive PC training. These results provide support for hypothesis one. The coefficient linking PC skills and provider self-efficacy was .127, .144 when corrected for attenuation due to error of measurement [$P(-.012 \le \rho \le .3) = .95$], indicating that this path coefficient is approaching significance and is in the predicted direction of the path model, such that people using more PC skills have greater PC self-efficacy. These results indicate support for hypothesis three. The coefficient linking provider PC skills to provider PC knowledge was -.108 [$P(-.278 \le \rho \le .062) = .95$], which was not in the predicted direction and indicates that the size of the parameters were not substantial; therefore, this path and hypothesis two fail. Similarly, the coefficient linking

provider PC skills to patient satisfaction was .108, .11 when corrected for attenuation due to error of measurement [$P(-.06 \le \rho \le .28) = .95$]; again, the size of the parameters were not substantial, and this path and hypothesis four also fail.¹¹ Therefore, the original model is rejected¹².

Figure 5 presents an altered version of the path model presented in Figure 4 that will be probed further here. Figure 5 assesses the only path from Figure 4 that appeared viable. The original path model (Figure 3) proposed that an increase in PC skills would lead to provider knowledge, provider self-efficacy, and patient satisfaction. Since provider knowledge and patient satisfaction failed, they were dropped from the model. Provider self-efficacy was retained and the new path model was further assessed. Figure 5 specifies that PC training will lead to PC skill, and PC skills will lead to an increase in provider self-efficacy. The coefficient linking the PC training and PC skills was .54 [$P(.426 \le \rho \le .66) = .95$], showing that people trained in PC care increased in PC skills. Although the coefficient linking the PC skills and provider efficacy was marginal, .144 [$P(-.012 \le \rho \le .3) = .95$], this simple causal string will be explored further. Specifically, the difference between the predicted and obtained correlation for the constrained correlation (i.e. the correlation between PC training and provider self-efficacy) was examined. The residual was of very small magnitude, .012, and well within sampling error of zero. A chi-square was thus employed as a global test for goodness of fit. This model yielded a small and insignificant chi-square [$\chi^2(1) = 0.01, p > .05$]. Thus, although the path coefficient linking PC skills and provider self-efficacy was marginal, the overall model is a good fit. Specifically, the path coefficient linking PC training and PC skills was large, and the model and

¹¹ In order to probe this path model more closely, the first two factors of patient satisfaction, openness and empathy, were looked at separately in the path model to see if the model was a better fit with the factors that contained items based solely on provider-patient communication. The model still failed with the inherently communication-based factors.

¹² A global test for goodness of fit was not conducted due to the model parameters not being met.

parameter estimates accurately predicted the unconstrained correlations; therefore, the model and data are judged to be consistent with one another.

Research question one asks what the relationship is between the separate PC skills and patient satisfaction ratings. Presented in Table 13 are the correlations between each of the skill component proportions with the overall rating of patient satisfaction. Descriptive statistics for each of the PC skill variables for each group (i.e. pretest and posttest for the control and intervention conditions) are presented in Table 14. Patient satisfaction descriptive statistics for each group (i.e. pretest and posttest for the control and intervention conditions) are presented in Table 14. Patient satisfaction descriptive statistics for each group (i.e. pretest and posttest for the control and intervention conditions) as well as the overall patient satisfaction score and all other PC outcome variables discussed are presented in Table 11. None of the skill component proportions were significantly related to patient satisfaction, so this research question was not probed further.

CHAPTER 4: DISCUSSION

Overview of Findings and Practical Implications

This work centered on the development of an objective PC coding scheme that could be used with Smith's PC interviewing method. This was an important contribution to the existing PC literature and research, as there has been much time and effort dedicated to understanding what PC care is, why it is important, and ultimately how to achieve it. Smith's PC interview filled a gap in the literature by presenting a behaviorally-defined, evidence-based method that providers could easily learn and implement into their practice. The method has been shown in past research to be associated with patient satisfaction and enhanced outcomes for patients. For these reasons, this method has received attention from PC advocates in the healthcare realm. The next needed step was to develop a way of assessing people adopting the method.

This research sought to establish a systematic way to objectively rate individuals using the PC method via a developed coding scheme. A dichotomous coding scheme rating specific PC behaviors specified by the PC interviewing model allows for an objective way of determining whether training in the method leads to enacted skills, and if the use of those skills leads to other positive outcomes such as provider knowledge, provider self-efficacy, and patient satisfaction. Moreover, it was important to provide evidence for the validity of the measure, and to ensure that the coding scheme was reliable. Both the validity and reliability were established here; specifically, the validity was ensured in a number of ways (i.e. face, content, and construct), and inter-rater reliability between two trained coders was very high across the coding scheme (Kappa = .902), showing that coders were seeing the same PC behaviors in the provider-patient interactions. This research was able to develop a meaningful coding scheme that adopters of Smith's PC interview can use to assess providers using the method.

Of considerable importance here was the fact that results indicated that training providers to use Smith's PC interview via a psychosocial rotation focusing on PC skills and mental health issues results in a significant increase in PC skill use by providers, which provided support for hypothesis one in this research. Additionally, people using a higher number of PC skills had higher self-efficacy regarding using PC skills, lending support to hypothesis three. These results are depicted in the path model in Figure 5, which shows that training in PC interviewing leads to an increase in PC skill use, and PC skills lead to provider PC self-efficacy. The correlation, and thus path coefficient, between PC skills and provider's PC self-efficacy was moderate (r = .144, when corrected for attenuation due to measurement error); however, Abelson (1985) explains that even small correlations may be extremely important, and suggests that researchers tend to rely too heavily on statistical significance tests as a basis for making substantive assertions. In light of this, the path indicating that PC skills leads to an increase in provider self-efficacy is informative, but may be interpreted with caution. Confidence in this path will increase with additional data. The current research is ongoing for several more years; thus, if the trend continues in the direction currently seen, the parameters of the path coefficient linking PC skills and provider PC self-efficacy will be ample. This path will be re-examined when additional data is obtained.

The preliminary results showing that PC skills lead to provider self-efficacy are important for a number of reasons. Research shows that students with high self-efficacy tend to persist longer, work harder, participate more readily, show enhanced interest in learning, and achieve at higher levels (Bandura, 1997). This is extremely important in the PC realm because many health facilities want their employees to adopt a PC approach to care. Since people with high selfefficacy tend to persist longer and achieve at higher levels, it is logical that a person with high

PC self-efficacy would continue using the skills in practice after the training period, and that is confirmed here with these results. The point of training is not merely to show that people can learn the PC skills; but more importantly, institutions training in PC care are striving for a behavior change in their trained personnel, whereby PC care becomes habitual in practice. Therefore, a training program focused on PC care needs to ensure that people are leaving training with a strong sense of self-efficacy, as this will increase the likelihood that learned skills will continue with the provider into their practice and become the norm.

Moreover, a meta-analysis examining the relationship between self-efficacy and performance indicates that there is a strong , positive relationship between self-efficacy and work-related performance (Stajkovic & Luthans, 1998), such that a person with high selfefficacy will be more inclined to perform well at work than a person with low self-efficacy. The authors claimed that self-efficacy may be a better predictor of work-related performance than other personality-based constructs commonly found in the literature (Stajkovic & Luthans, 1998). This meta-analysis is particularly important here, as this finding indicates that a person with high PC self-efficacy will be more likely to perform PC care in practice than a person low in self-efficacy. Since an overarching goal of this research is to have trained people adopt a PC approach to care after the training period, the findings from Stajkovic and Luthan's (1998) suggest that high self-efficacy will result in performance. Therefore, the results showing that an increase in PC skills led to provider self-efficacy is an important step, as this will hopefully lead to PC performance in the workplace.

One additional important note to make regarding self-efficacy is that the directionality of self-efficacy and PC skills could have been reversed, such that a provider with high self-efficacy leads to greater skill performance. According to Stajkovic and Luthans (1998), a person with

high self-efficacy will be more inclined to perform at work. This finding could have meant for the current research that the providers with the highest self-efficacy regarding their PC abilities would lead to the highest PC skill use; this is the opposite of the prediction made in this research, which said that a greater use of PC skills would lead to greater provider self-efficacy. The path model in the given research shows that the direction posed in this research (i.e. greater PC skills leads to higher self-efficacy) was the accurate prediction. Past research supports the prediction found in the current research. Ammentorp, Sabroe, Kofoed, and Mainz (2007) found that communication training focusing on skill use can improve doctors' and nurses' ability to perform some of the essential communication demands they face, and the communication skills lead to an increase in provider self-efficacy. Therefore, hypothesis three, which stated that an increase in PC skills would lead to an increase in provider self-efficacy, was supported.

There were two surprising findings of note in this research; specifically, PC skills did not lead to provider PC knowledge or patient satisfaction, as the literature posits and this research hypothesized. Although this was unanticipated, there are plausible explanations for these discrepant findings. To begin, the researchers discovered during the data analysis process that the different groups involved in this research (i.e. the control group and intervention group) received different versions of the knowledge questionnaire across the times of the data collection. The control group is located in a different city from the control group, making data collection in the respective cities of the different groups clear; however, this split in location resulted in two different versions of the knowledge questionnaire being administered.

The original 78-item knowledge questionnaire was reduced to 49 items after data was collected on the pilot group. The justification for the reduction in items was twofold: (1) several of the items on the questionnaire were not being addressed in training and therefore would not
contribute meaningful outcome data, and (2) boredom effects on participants were visible during data collection. It was observed that participants started showing signs of fatigue halfway through the questionnaire, so a reduction in items was reasoned to be necessary. When asked to adjust the knowledge questionnaire to reflect these changes, the different data collection facilities included different items on the new version(s) of the knowledge questionnaire. After careful examination of the items remaining on each version, there were only 27 common items that all residents received across time; of those 27 items, only 3 items were PC related. The original version contained 13 PC items, which more fully encompassed a measure of well-rounded, PC knowledge. This major glitch in the research resulted in a knowledge questionnaire that was no longer an accurate assessment of PC knowledge. For these reasons, the link between PC skills and PC knowledge is not considered a viable reflection of the PC training process or of PC knowledge in general.

Similar to self-efficacy, the directionality in PC skills leading to provider knowledge could have been reversed, such that a prediction could have been made that suggests provider knowledge leads to an increase PC skills. Past research suggests that people learn general, declarative, verbal knowledge to begin, and through practice, turn knowledge into usable, procedural skills (Ackerman, 1988; Anderson, 1993). However, Sun, Merrill, and Peterson (2001) suggested that in some domains, a bottom-up skill learning process may happen, whereby some knowledge is constructed only after a skill is at least partially developed. This type of learning was hypothesized to happen in the current research due to the longitudinal nature of the research. Specifically, provider PC skills were hypothesized to lead to an increase in provider knowledge due to the time lag between training and data collection. Residents went through PC training in the first year of their residency. Data collection did not occur for an additional one to

two years. For this reason, it was believed that a resident would need to continue enacting the prescribed skills in practice in order for them to do well on a knowledge questionnaire administered years later. If a resident went through training and never enacted a PC skill after the training period ended, it is unlikely that the resident would retain PC knowledge and perform well on a written test covering the topic. In contrast, a resident who goes through training and adopts the skills taught in training into their practice should retain the PC knowledge because they have incorporated PC care into their practice and are therefore using the PC knowledge with regularity. In contrast to either of these predictions, however, the current research found a negative relationship between PC skills and PC knowledge (r = -.11, see Table 12), such that an increase in one leads to decrease in the other, causing hypothesis two to fail. Future research should probe further to discover how the path between PC skills and knowledge functions in medicine, as the research here is limited due to the faulty PC knowledge questionnaire.

Similarly, and in contrast to what was hypothesized, PC skills did not lead to an increase in patient satisfaction. This was unexpected, as the literature clearly shows this relationship (Fossum & Arborelius, 2004; Hall, Roter, & Katz, 1988; Krupat et al., 2000; Smith et al., 1998; Zyzanski et al., 1998); however, the literature also shows that most surveys report high patient satisfaction levels, calling to question the interpretation of satisfaction as an outcome of an active evaluation due to a possible ceiling effect (Williams, Coyle, & Healy, 1998); the overall patient satisfaction mean in this research was 4.09 out of 5.0, showing that standardized patients were rating residents highly across all conditions, see Table 11. A common factor found in the patient satisfaction literature is that few patients are critical of their care to the point of expressing dissatisfaction (Abramowitz, Cote, & Berry, 1987; Hopton, Howie, & Porter, 1993; Sitzia & Wood, 1997). Moreover, Sitzia and Wood (1997) point out that although such favorable patient

satisfaction data may please healthcare educators, the lack of variability in patient satisfaction responses is a problem in research, as researchers must compare positive with slightly less positive responses. This lack in variability makes patient satisfaction difficult to analyze. However, research has also shown that when specific components of care are specified, specifically noted was communication in primary care, substantial dissatisfaction exists and is exemplified in research (Williams & Calnan, 1991); therefore, the current research hypothesized that skills in provider-patient communication would lead to an increase in patient satisfaction. Nonetheless, the current research failed to find any significant differences between the pretest and posttest or between the control group and intervention group, supporting past research that shows patient satisfaction consistently being positive, see Table 11.

An explanation for this finding could be that providers who are still in training programs and are being evaluated tend to have high patient satisfaction (Hall & Dornan, 1988). A metaanalysis examining satisfaction with medical care indicates that patient satisfaction is higher for providers who are still in training; specifically, such providers engage in more behaviors that have shown to result in patient satisfaction than do providers not in training (Hall & Dornan, 1988)¹³. Hall and Dornan (1988) suggest that this finding could be due to these providers increasing behaviors taught during training because they feel they are being evaluated. This could have affected the results in the current study, as the residents were aware that they were being evaluated. Residents knew they were being videotaped with standardized patients on particular medical scenarios, and they were in the same facility that many evaluation tests were performed throughout their residency. For these reasons, residents were likely on their "best behavior," which could have contributed to the inflated patient satisfaction scores seen in the data. The inflation in the current research provided little to no variation in patient satisfaction

¹³ The specific behaviors being discussed in this research were not discussed.

scores across the different conditions, see Table 11, thus hypothesis four failed to find support. The proposed relationship would establish scientific evidence for the criterion validity of the PC coding scheme by showing that PC skills (i.e. a higher score on the PC coding scheme) would lead to the outcome variable of patient satisfaction. However, as this relationship was not established by showing that PC skills lead to patient satisfaction, the criterion validity of the coding scheme was not established.

An additional concern regarding patient satisfaction was that a close examination of the items on the questionnaire showed that not all items were directly focused on communication (e.g. "I have a good deal of confidence in the doctor"), and it was considered that because of this, the patient satisfaction questionnaire was flawed. This concern was explored further by looking at only patient satisfaction factors, openness and empathy, that had items based solely on communication (e.g. "I was able to tell the doctor what was bothering me") in the originally posed path model, see Figure 3; the model failed with only communication-based patient satisfaction items. After further consideration, it was decided that the items that were not inherently communication based were not problematic. The only way for a person to have the perceptions found in the questionnaire (e.g. "The doctor treated me with a great deal of respect") is through communication. Although the items may not be directly based on communication, the items are a result of the interaction and only communication in the interaction would result in patient satisfaction as deemed by the patient satisfaction questionnaire used in this research. Some of the items are more specific regarding the actual communication that took place, but all of the items come about because of communication. Therefore, the questionnaire itself was decided to be acceptable.

Finally, a research question posed in this research asked whether there was a relationship between any of the PC skills prescribed by the PC interviewing method and patient satisfaction ratings; there were no significant relationships found. This finding is also a likely reflection of the inflated patient satisfaction scores across all levels of data, making any relationship between specific skills and patient satisfaction undetectable.

Directions for Future Research

Future research should explore how the coding scheme will be best used in actual practice. Currently, the coding scheme is 33 items that trained providers can learn and implement, but a more important question is how best to use the skills in practice, both at a first time visit and with long-time patients the provider knows well. Future research should address this issue by exploring what is ideal when using the method. The method's main addition to a traditional medical interview is the personal and emotional stories. It is going to be important in the future to find out what is the ideal number of skills to use in an interview to be efficient yet patient-centered. Once the ideal number of skills is determined, it will be important to adapt the coding scheme to fit that ideal. Important here is the fact that a provider should not try and use all 33 behavioral skills included on the coding scheme, this would result in an interview where the provider sounds forced in their conversational technique, which would have the opposite effect for which the method strives. Therefore, it is going to be important to determine how best to use the coding scheme, what the ideal number of skills to use will be, and what patients seem to like best.

Research by Horner, Rew, and Torres (2006) discusses how intervention fidelity needs to be an integral component in study design, and explains that the validity of the outcomes of research is based on the degree to which intervention fidelity is evaluated and maintained. Part

of the training of residents in the present study was that residents should tailor material learned in the intervention to be appropriate for their skill set and their personal PC interactions. This means that some providers may effectively carry out a PC interview with fewer skills because the skills used are far advanced, whereas another provider with less PC abilities may need to use several skills to achieve the same outcome with their patient. Both of these examples would stay true to the fidelity of the intervention, making it difficult to determine an ideal number of skills to use in practice, and further, how to effectively use the PC coding scheme. Therefore, future research needs to study the training process and the coding scheme thoroughly to determine how best to adapt the coding scheme to be used in actual practice with providers. This iterative process will be both informative and impactful for the method and the coding scheme.

Similarly, although the face validity of the coding scheme was established by having the coders in this research review the scheme in full, a next step will be taking the coding scheme to providers and patients in focus groups to determine what is important to them. Since the medical interview is performed by providers and impacts patients, getting feedback from both will be crucial to the future of the coding scheme. Discovering what is important to both the provider and patient will help make significant updates to the coding scheme, and possibly the PC method, that will ultimately enhance both and result in a medical interview that the provider and patient both find ideal.

Another aim of future research should be to create and validate a reliable provider PC knowledge questionnaire. The literature is lacking in this regard as many people are expending effort on PC care and teaching PC interviewing, but there are no validated, reliable questionnaires designed to measure a person's knowledge on this topic that has received much attention. The literature has many definitions of PC care, examples of what it means to be PC,

and ways to enact PC care via PC interviewing; however, research has yet to consolidate this literature into a reliable and valid questionnaire that would aim to measure a person's knowledge regarding what PC care or PC interviewing entails. In order to accomplish this, conceptual agreement among PC researchers regarding what constitutes good PC care is needed. Once good PC care and PC skills are agreed upon and behaviorally-defined, a questionnaire regarding a person's PC knowledge could be developed. The creation of a standardized knowledge measure would allow for reliable comparisons across studies, which would be a better indication to researchers of how to best train providers in PC care in terms of gaining PC knowledge.

Additionally, in order to accurately assess patient satisfaction, researchers should collect patient satisfaction data of providers in their respective clinics. In the research setting, providers know they are being evaluated so they may act differently than they would in their own practice. Once providers are in their own practice after the training and evaluation period, patient satisfaction data could be collected routinely to obtain a gestalt patient satisfaction score for providers. Such non-videotaped, non-evaluated interactions between providers and their patients would likely give a more accurate patient satisfaction rating. The fact that providers were aware that they were being evaluated in the current research could have added to the inflated patient satisfaction scores received. Collecting patient satisfaction data in the provider's respective clinics and comparing providers trained in PC care to untrained PC providers would give a more robust indication of the hypothesized path leading from PC training to PC skills to patient satisfaction. This research has shown that PC training leads to PC skills, so discovering if those skills lead to higher patient satisfaction in actual practice would be enlightening.

Limitations

This research had several limitations that should be addressed. To begin, the number of participants involved in this research was limited. Each condition had an average of 34 people, which is not large. This made it difficult to draw conclusions based on the findings. The current research is part of a larger project, and once all data are collected the results will be re-analyzed. The major contribution of the current research was the development of the PC coding scheme and establishing the validity and reliability of the scheme. The current research, involving only half of the data of the larger project, was used for preliminary analyses to ensure that the coding scheme was reflecting the PC interviewing method accurately. Since PC training led to a significant increase in PC skills, confidence can be placed in the PC coding scheme which measured PC skills. Once all data have been collected, the path model will be reanalyzed, and patient satisfaction data will be reassessed to ensure that the current findings are reflective of the larger project.

A second limitation was that people in the trained intervention condition were not trained in full at the time of data collection. A large portion of the full training for this project in PC care involves several hours¹⁴ at a Complex Patient Clinic where residents receive individual attention from core faculty and PC experts regarding their mental health and PC interviewing skills. The resident data included in the current project was lacking in these additional PC training hours, as the first several years of this project involved teaching the core faculty who would subsequently teach residents. For this reason, most residents involved in this research received limited to no additional training at the Complex Patient Clinic. Future residents receiving additional training may produce different outcomes, so re-analyzing data at the end of

¹⁴ Residents will attend the Complex Patient Clinic approximately six times per year during their second and third years of residency for a total of 48 additional hours of training by the completion of their residency.

the entire project is critical. The current research was able to show that PC training leads to PC skills as shown via the PC coding scheme; therefore, confidence placed in the PC coding scheme is high and it will be used in the final data analysis of this project.

Finally, the results regarding provider knowledge are severely limited due to the different data collection facilities administering different versions of the knowledge questionnaire. This resulted in only three PC questions that were used with regularity across sites, which were not encompassing of what would be considered robust PC knowledge; provider knowledge should therefore be interpreted with caution.

CHAPTER 5: CONCLUSIONS

With the increased attention PC care has received in the past decade due to the many positive outcomes associated with it, creating a standardizing way of evaluating people adopting a PC approach to care was a gap this research sought to fill. The primary aim of this research was to develop a reliable, valid PC coding scheme to be used as a standardized way of rating providers adopting Smith's PC interviewing method, since this is currently the only evidencebased method available. Having a standardized way of rating adopters of the method will be useful to both providers and institutions choosing to adopt the PC method, as having a coding scheme to go hand-in-hand with the method will ensure that all people using the PC method are conceptualizing and measuring PC interviewing and the appropriate skills in the same way. This research indicates that the developed coding scheme is both valid and reliable and is accurately measuring Smith's PC interview, as the results of a path model show that PC interviewing training leads to an increase in PC skills, and an increase in PC skills leads to an increase in provider PC self-efficacy. These results not only indicate that PC training can effectively teach PC skills and that the developed coding scheme is accurately assessing those skills, but also that trained providers have greater self-efficacy than untrained providers regarding their ability to enact PC skills. This is important, as research shows that people with higher self-efficacy regarding particular skills tend to use those skills more frequently than people low in selfefficacy. These findings will offer providers and medical institutions interested in adopting a PC approach to care with vital information on how to improve provider's PC self-efficacy. Educators of students and residents would similarly be interested. Ultimately, this will provide teaching facilities with the needed tools to assess their provider's PC abilities in a standardized, reliable way.

APPENDICES

Appendix A

Four Habits Coding Scheme (Krupat et al., 2006)

- 1. Invest in the Beginning
 - a. Shows familiarity with patient
 - b. Greets patient warmly
 - c. Makes small talk
 - d. Uses primarily open-ended questions
 - e. Encourages expansion of patient's concerns
 - f. Elicits the full range of concerns
- 2. Elicit the Patient's Perspective
 - a. Interested in patient's understanding of problem
 - b. Asks about patient's goals for visit
 - c. Shows interest in impact on patient's life
- 3. Demonstrate Empathy
 - a. Encourages expression of emotion
 - b. Accepts/validates patient's feelings
 - c. Helps to identify/label feelings
 - d. Displays effective nonverbal behavior
- 4. Invest in the End
 - a. Frames information using patient's perspective
 - b. Allows time for information to be absorbed
 - c. Explains clearly/uses little jargon
 - d. Explains rationale for tests and treatments
 - e. Effectively tests for comprehension
 - f. Encourages involvement in decision making
 - g. Explores acceptability of treatment plan
 - h. Explores barriers to implementation
 - i. Encourages additional questions
 - j. Makes clear plans for follow-up

Appendix B

Four Habits Coding Scheme Extended (Krupat et al., 2006)

Habit 1. Invest in the Beginning

A1. Clinician indicates clear familiarity with patient's history/chart (e.g., mentions recent tests performed or visit information based on previous chart notes)

3. Clinician makes some reference to past visits or history, but familiarity with these does not seem strong

5. Clinician needs to refer to chart continually to familiarize self with case or does not relate current visit with patient's history or chart (or doesn't even have chart).

B1. Patient is greeted in manner that is personal and warm (e.g., clinician asks patient how s/he likes to be addressed, uses patient's name)

3. Patient is greeted in manner that recognizes patient, but without great warmth or personalization

5. Greeting of patient is cursory, impersonal, or non-existent

C1. Clinician makes non-medical comments, using these to put the patient at ease

3. Clinician makes cursory attempt at small talk (shows no great interest, keeps discussion brief before moving on)

5. The clinician gets right down to business without any attempt at small talk (or cuts patient off curtly and abruptly, or if later in visit, shows only passing interest)

D1. The clinician tries to identify the problem(s) using primarily open-ended questions (asks questions in a way that allows patient to tell own story with minimum of interruptions or closed ended questions)3. The clinician tries to identify the problem(s) using a combination of open and closed ended questions (possibly begins with open-ended but quickly reverts to closed ended)

5. The clinician tries to identify the problem(s) using primarily closed-ended questions (staccato style)

E1. The clinician encourages the patient to expand in discussing his/her concerns (e.g., using various continuers such as Aha, Tell me more, Go on).

3. Clinician neither cuts the patient off nor expresses great interest in learning more (listens, but does not encourage expansion or further discussion)

5. The clinician interrupts or cuts the patient off in his/her attempt to expand (is clearly not very interested).

F1. The clinician attempts to elicit the full range of the patient's concerns by generating an agenda early in the visit (clinician does other than simply pursue first stated complaint)

3. The clinician makes some reference to other possible complaints, or asks briefly about them before pursuing the patient's first complaint, or generates an agenda as the visit progresses.

5. The clinician immediately pursues the patient's first concern without an attempt to discover other possible concerns of the patient's .

Habit 2. Elicit the Patient's Perspective

A1. Clinician shows great interest in exploring the patient's understanding of the problem (e.g., asks the patient what the symptoms mean to him/her).

3. Clinician shows brief or superficial interest in understanding the patient's understanding of the problem

5. Clinician makes no attempt/shows no interest in understanding the patient's perspective

B1. Clinician asks (or responds with interest) about what the patient hopes to get out of the visit (e.g., can be general expectations or specific requests such as meds, referrals).Clinician shows interest in getting a brief sense of what the patient hopes to get out of the visit, but moves on quickly.

5. Clinician makes no attempt to determine (shows no interest in) what the patient hopes to get out of the visit.

C1. Clinician attempts to determine in detail/shows great interest in how the problem is affecting patient's lifestyle (work, family, daily activities).

3. Clinician attempts to determine briefly/shows only some interest in how the problem is affecting patient's lifestyle.

5. Clinician makes no attempt to determine/shows no interest in how the problem is affecting patient's lifestyle.

Habit 3. Demonstrate Empathy

A1. Clinician openly encourage/is receptive to the expression of emotion (e.g., through use of continuers or appropriate pauses (signals verbally or nonverbally that it is okay to express feelings)

3. Clinician shows relatively little interest or encouragement for the patient's expression of emotion; or allows emotions to be shown but actively or subtly encourages patient to move on

5. Clinician shows no interest in patient's emotional state and/or discourages or cuts off the expression of emotion by the patient (signals verbally or nonverbally that it is not okay to express emotions)

B1. Clinician makes comments clearly indicating acceptance/validation of patient's feelings (e.g., I'd feel the same way... I can see how that would worry you...)

3. Clinician briefly acknowledges patient's feelings but makes no effort to indicate acceptance/validation

5. Clinician makes no attempt to respond to/validate the patient's feelings, or possibly belittles or challenges them (e.g., It's ridiculous to be so concerned about...)

C1. Clinician makes clear attempt to explore patient's feelings by identifying or labeling them (e.g., So how does that make you feel? It seems to me that you are feeling quite anxious about...)

3. Clinician makes brief reference to patient's feelings, but does little to explore them by identification or labeling

5. Clinician makes no attempt to identify patient's feelings

D1. Clinician displays nonverbal behaviors that express great interest, concern and connection (e.g., eye contact, tone of voice, and body orientation) throughout the visit.

3. Clinician's nonverbal behavior shows neither great interest or disinterest (or behaviors over course of visit are inconsistent).

5. Clinician's nonverbal behavior displays lack of interest and/or concern and/or connection (e.g., little or no eye contact, body orientation or use of space inappropriate, bored voice)

D. Invest in the End

A1. Clinician frames diagnostic and other relevant information in ways that reflect patient's initial presentation of concerns

3. Clinician makes cursory attempt to frame diagnosis and information in terms of patient's concerns

5. Clinician frames diagnosis and information in terms that fit physician's frame of reference rather than incorporating those of the patient

B1. Clinician pauses after giving information with intent of allowing patient to react to and absorb it3. Clinician pauses briefly for patient reaction, but then quickly moves on (leaving the impression that the patient may not have fully absorbed the information).

5. Clinician gives information and continues on quickly with giving patient opportunity to react (impression is that this information will not be remembered properly or fully appreciated by the patient)

C1. Information is stated clearly and with little or no use of jargon

3. Information contains some jargon and is somewhat difficult to understand

5. Information is stated in ways that are technical or above patient's head (indicating that the patient has probably not understood it fully or properly).

D1. Clinician fully/clearly explains the rationale behind current, past, or future tests and treatments so that patient can understand the significance of these to diagnosis and treatment

3. Clinician only briefly explains the rationale for tests and treatments

5. Clinician offers/orders tests and treatments, giving little or any rationale for these.

E1. Clinician effectively tests for the patient's comprehension.

3. Clinician briefly or ineffectively tests for the patient's comprehension

5. Clinician makes no effort to determine whether the patient has understood what has been said.

F1. Clinician clearly encourages and invites patient's input into the decision making process

3. Clinician shows little interest in inviting the patient's involvement in the decision making process, or responds to the patient's attempts to be involved with relatively little enthusiasm.

5. Provider shows no interest in having patient's involvement or actively discourages/ignores patient's efforts to be part of decision making process

G1. Clinician explores acceptability of treatment plan, expressing willingness to negotiate if necessary

3. Clinician makes brief attempt to determine acceptability of treatment plan, and moves on quickly

5. Clinician offers recommendations for treatment with little or no attempts to elicit patient's acceptance of (willingness or likelihood of following) the plan

H1. Clinician fully explores barriers to implementation of treatment plan

3. Clinician briefly explores barriers to implementation of treatment plan

5. Clinician does not address whether barriers exist for implementation of treatment plan

I1. Clinician openly encourages and asks for additional questions from patient (and responds to them in at least some detail)

3. Clinician allows for additional questions from patient, but does not encourage question

asking nor respond to them in much detail

5. Clinician makes no attempt to solicit additional questions from patient or largely ignores them if made unsolicited

J1. Clinician makes clear and specific plans for follow-up to the visit

3. Clinician makes references to follow-up, but does not make specific plans

5. Clinician makes no reference to follow-up plans

Appendix C

Smith's Patient-Centered Interviewing Method (Fortin et al., 2012)

5-STEPS, 21-SUBSTEPS

STEP 1 -- Setting the Stage for the Interview

- 1. Welcome the patient
- 2. Use the patient's name
- 3. Introduce self and identify specific role
- 4. Ensure patient readiness and privacy
- 5. Remove barriers to communication
- 6. Ensure comfort and put the patient at ease

STEP 2 -- Chief Complaint/Agenda Setting

- 1. Indicate time available
- 2. Indicate own needs
- 3. Obtain list of all issues patient wants to discuss; e.g., specific symptoms, requests, expectations, understanding
- 4. Summarize and finalize the agenda; negotiate specifics if too many agenda items

STEP 3 -- Opening the HPI

- 1. Open-ended beginning question
- 2. 'Nonfocusing' open-ended skills (Attentive Listening): silence, neutral utterances, nonverbal encouragement
- 3. Obtain additional data from nonverbal sources: nonverbal cues, physical characteristics, autonomic changes, accouterments, and environment

STEP 4 -- Continuing the Patient-Centered HPI

- 1. Physical Story -- Obtain description of the physical symptoms [Focusing open-ended skills]
- 2. **Personal Story --** Develop the more general personal/psychosocial context of the physical symptoms [Focusing open-ended skills]
- 3. Emotional Story -- Develop an emotional focus [Emotion-seeking skills]
- 4. Empathic Responses -- Address the emotion(s) [Emotion-handling skills: NURS]
- 5. Expand Story and Responses -- Expand the story to new chapters (focused open-ended skills, emotion-seeking skills, emotion-handling skills)

STEP 5 -- Transition to the Doctor-Centered Process

- 1. Brief summary
- 2. Check accuracy
- 3. Indicate that both content and style of inquiry will change if the patient is ready

Appendix D

The Seven Descriptors of Symptoms (Fortin et al., 2012)

- 1. Onset and Chronology ("When does (did) it begin?" "How long does it last")
 - a. Time of onset of symptom and intervals between recurrences
 - b. Duration of symptom
 - c. Periodicity and frequency of symptom
 - d. Course of symptom
 - i. Short-term
 - ii. Long-term
- 2. Position and radiation ("Where is it located?" "Does it travel anywhere?")
 - a. Precise location
 - b. Deep or superficial
 - c. Localized or diffuse
- 3. Quality ("What is it like?")
 - a. Usual descriptors
 - b. Unusual descriptors
- 4. **Q**uantification ("How bad is it?")
 - a. Rate of onset
 - b. Intensity or severity
 - c. Impairment or disability
 - d. Numeric description
 - i. Number of events
 - ii. Size
 - iii. Volume
- 5. Related symptoms ("Have you noticed anything else that occurs with it?")
- 6. Setting (Circumstances that contribute to or precipitate the symptom)
 - a. Environmental factors
 - b. Social factors
 - c. Activity
 - d. Emotions
- 7. Transforming factors ("What brings it on?" "What makes it better?")
 - a. Precipitating and aggravating factors
 - b. Relieving factors

Appendix E

Total Videotapes Available Chart

Residents from Intervention Site with NO TRAINING (i.e. resident JUST entered the program): 41

Residents from Intervention Site with training: 43

Residents from Control Site with NO TRAINING (entering first years): 31

Residents from Control Site with NO TRAINING, but have been in program for 3 years: 21

Total Tapes: 136

Residents from Intervention Site = 84Residents from Control site = 52

Appendix F

Christina Smith Instructions for Provider

Michigan State University Learning and Assessment Center HRSA Grant

McFee Internal Medicine Practice

Patient:

Christina Smith

Chief Complaint: Pain in Left Leg

Your Task:

You have not previously seen this woman, but are filling in for a colleague who is out of town and the office staff thought she needed to be seen before he returned because of recent leg pains and being "upset." You will have 15 minutes to evaluate her problems.

Appendix G

Data Gathering Instructions to Standardized Patient

DATA-GATHERING SP INTERVIEW: Christina Smith

THIS WILL BE A VISIT TO A DOCTOR SUBSTITUTING FOR THE PATIENT'S REGULAR DOCTOR IN THE CLINIC

Initial History: Christina Smith is a 38 year old woman who has come to the clinic today because she has had a pain in her left leg for the last three days (points to her calf). She also has been having right-sided chest pain for several weeks, needs her birth control patch refilled, would like some medications for the pain, and needs a job-related form completed to indicate that she's healthy.

When asked for more information about the chief complaint: Christina has noticed a small amount of swelling in her calf. Also, it has felt slightly warm to the touch, even though she has not had a fever. At least her cold is much better now, except she does feel a bit short of breath when walking (in actuality, limping).

When asked for more information about the chief complaint: Christina describes the leg pain as an ache, not a sharp pain. The pain does not travel anywhere else. It feels a bit better at night. It feels worse when she is walking or standing. It also hurts more if she squeezes her calf or presses along the slightly red area on the inside of her knee. The other leg feels normal. Tylenol© (two extra strength) has not helped. She thinks the leg may be slightly swollen but just at the ankle. The chest pain occurs in right lateral chest near the lower aspect of the ribs. It hurts to take a breath but is somewhat better over the last week; no rib injury or fall but this did seem to begin after she lifted a heavy piece of equipment at work, and it hurts when she pushes on it. The shortness of breath is more needing to take a deep breath rather than being winded; if she takes a deep breath, she's ok, but that makes her chest pain worse, so she avoids it. There is no history of leg injury or other muscular pains, and she has not had a fever or chills or coughed up anything, especially no coughing blood. Her appetite has been good and she feels well otherwise. The leg pain and chest pain and shortness of breath have never occurred before.

When asked she gives this Personal Story: She works as a home health care aide, which means lots of walking and standing, and she is having trouble doing that due to her leg pain. She doesn't get paid when she is sick, like her friend does who is a patient care tech at the hospital. She already missed work last week, when she had a bad cold. She didn't get out of bed for three days except to go to the bathroom. Christina lives with her four-year-old son, Elijah, and her mother, who helps her with childcare.

When asked, she gives this Emotional Story: Christina <u>is worried</u> about finances and also feels <u>tired and overwhelmed</u>. She has been taking night classes at the local community college in hopes of becoming a patient care technician at a hospital, like her friend, or working in a nursing home. Her son is very smart but has been acting out lately. She's not sure why, or what to do about it. She is <u>very worried</u> about him turning out "like his dad," who hooked up with one of

her friends as soon as she got fat during her pregnancy. Christina has no interest in having her son's father be a part of their lives, but wouldn't mind the help financially. "All he ever did was buy a few boxes of Pampers© when the baby was born." She has mostly given up on men, since her son was born, but recently had started seeing Kevin, who works construction and likes to play with her son. But she broke it off because little Elijah threw tantrums when Kevin spent the night. Christina is <u>lonely</u> and would like to hang out with people her own age. She is <u>unhappy</u> with her life. On the other hand, she enjoys her work, going to church, and her son. She does not feel depressed and has no sleep problems. She's confident that, with God's help, her current situation will improve. Her mother and older sister provide considerable support for her when she needs it. Her emotional reactions are as follows: loves her mother and sister; angry at her father; "feels strongly" about Kevin but is still "very doubtful" about men and their intentions and "not sure you can trust them."

Other Background Information – IF NEEDED

Past and Family Medical History: The only time Christina has been in the hospital was when her son, Elijah, was born.

He was a big baby, weighing 9 1/2 pounds, and she needed a C-section. She has wheezing and coughing several times a year and sometimes had bad headaches. She's been told she may have asthma. Her father died of an alcohol-related illness and her mother says she is in pain all of the time, though Christina doesn't know why.

Medications and Allergies: Christina has a birth control patch because she used to forget when she was on the pill.

She takes Tylenol[©] for headaches and drinks a lot of Coca Cola[®] because it gives her more energy. She has no allergies.

Tobacco, Alcohol and Street Drugs: Christina has smoked one pack of cigarettes a day for about five years (before that about one-half-a-pack-a-day for two years). She knows too much about alcoholism and drug addiction to touch anything.

Her stepfather did crack and alcohol and her mother did crack, but is now "clean." She has an alcoholic stepsister and both the stepsister and her "real" sister smoke "a lot of weed."

Social History: She hadn't seen her father since she was six until his death or her stepfather since that marriage fell apart when she was a junior in high school. Christina used to live alone but was overwhelmed. She got pregnant her senior year in high school, but did finish. She gets no child support payments and is not able to afford health insurance on what she makes working as a home health care aide. Her son is on Medicaid. She was on Medicaid too when her son was born, but she no longer is allowed to have the coverage. Someone said she worked too much, which makes no sense, since they were the ones who told her she had to work. She regularly attends church and many older people there have taken an interest in her and Elijah and are supportive and sometimes help out with baby-sitting when her mother and sister are not available.

Appendix H

Knowledge Questionnaire

Instructions: Choose only one answer for each of the following questions.

*Indicates item was used for the PC scale

1. ____*It is <u>inappropriate</u> to interrupt the patient when being patient centered

- a. True
- b. False

2. ____Which of the following is most accurate when diagnosing disable chronic pain

patients as having unexplained symptoms

- a. You have to be honest with the patient that you can never really be sure there is no underlying disease
- b. When many psychological symptoms are present, this is a good clue there is no disease basis for the chronic pain
- c. You often need to repeat previous diagnostic studies because a disease explanation often has developed in the interim
- d. A high false positive rate using just physical and psychological symptoms as diagnostic criteria means that most require a full diagnostic work-up

3. ____*All but one of the following is a clue that counterproductive(harmful)

countertransference is present

- a. An intense emotional response towards the patient
- b. Similar reactions, such as anger or fear, to many different patients
- c. The failure of a physician to use skills s/he is known to possess
- d. A positive reaction a patient reminding one of a much loved parent or grandparent
- e. An emotional reaction to the patient similar to that of other doctors

4. ____*Which of the following statements would be the LEAST effective when interacting

with a severe, chronic somatizing patient

- a. We may be able to help you live a more normal life
- b. Things seem especially bad for you right now; how are you able to cope?
- c. I think we're on top of this and you're going to get better and better
- d. I'd like to see you on a regular basis. How about every two weeks? Be sure to take the acetaminophen with each meal and at bedtime, not just when you think you need it

5. ____The depression often seen in somatizing patients typically is unresponsive to antidepressants

- a. True
- b. False

6. ____When attempting to convince a patient to change an undesirable health behavior

(e.g., smoking) a physician should <u>begin by</u>

- a. Asking a patient's understanding of the problem
- b. Encouraging the patient to verbally commit to quitting smoking
- c. Explaining to the patient why quitting smoking is necessary
- d. Employing emotional handing skills repeatedly

7. ____In the US suicide is the 4th leading cause of death for adults between the ages of 18 and 65 years. The following statement is true regarding the epidemiology of suicide.

and 05 years. The following statement is <u>true</u> regarding the epidemic

- a. Men complete suicide less often than women.
- b. The suicide rate decreases in men over the age of 60 years
- c. HIV, cancer, and asthma are associated with the highest risk of suicide attempts among those with medical diseases
- d. The presence of young children living in a household increases the risk of suicide

8. ____In the sleep disruption of depression, the following statement is <u>accurate</u>

- a. Sedative hypnotics are counterproductive and are likely to perpetuate sleep difficulties
- b. Caffeine may be helpful in countering daytime tiredness and improving alertness
- c. Sleep hygiene methods including daily exercise, avoiding naps, and a relaxing sleep time routine are not beneficial
- d. Sedative antidepressants such as mirtazapine and trazodone have no role

9. ____In the longitudinal course of bipolar disorder, depressive episodes often precede manic episodes. This can lead to misdiagnosis. Which one of the following clinical features is more common in bipolar depression as opposed to major depressive disorder.

disorder

- a. Insomnia more than hypersomnia
- b. Postpartum episodes
- c. Psychomotor agitation more than retardation
- d. Later onset (30s vs. teens)
- e. Insidious vs. abrupt episode onset

10.____Which of the following interventions would not be acceptable as first line in the initial treatment of an acute episode of bipolar (Type 1) depression?

- a. Antidepressant monotherapy
- b. A combination of lithium and lamotrigine
- c. Olanzapine and fluoxetine
- d. Quetiapine

11.____In panic disorder, which of the following statements is <u>not true?</u>

- a. 90% of patients present with physical symptoms
- b. 30-50% of patients develop agoraphobia
- c. 25% of patients who present to ERs with chest pain have panic disorder
- d. 10% of patients with panic disorder have major depressive disorder

12.____The pharmacotherapy of panic disorder includes <u>all but one</u> of the following options

- a. SSRIs/SNRI antidepressants
- b. Atypical antipsychotics
- c. Beta-blockers
- d. Buspirone

13.____Patients with major depression who experience a partial response to the initial antidepressant drug may benefit from augmentation with one of several different agents. Which of the following compounds is not commonly used as an adjunctive drug in managing depressed patients

- a. Lithium carbonate
- b. Triiodothyronine
- c. Buspirone
- d. Metoprolol

14.____Risk factors for the development of Post-Traumatic Stress Disorder include <u>all but</u> one of the following

- a. Inadequate social support
- b. Severity of stressor
- c. History of childhood abuse
- d. Male gender

15.____ The pharmacotherapy of Social Anxiety Disorder includes which one of the

following options

- a. Sedative serotonin-dopamine antagonist antipsychotics
- b. Lithium carbonate
- c. SSRI antidepressants
- d. Stimulants

16.____Delirium is commonly observed in hospitalized patients. Which of the following clinical features is <u>not characteristic</u> of delirium

- a. Disruption of the sleep wake cycle
- b. Auditory hallucinations are more common than visual hallucinations
- c. Can be missed in children, wherein the hallucinations can be misattributed to "fantasizing"
- d. Symptoms fluctuate from hour to hour

17.____Which of the following statements is acceptable regarding use of antidepressants in non-depressed patients taking interferon for hepatitis C

- a. All patients should receive antidepressant therapy
- b. Only patients with a past history of depression should receive antidepressants
- c. Antidepressants should be reserved for patients with suicidal ideation
- d. Patients with a past history of any psychiatric disorder

18. Corticosteroids are commonly associated with neuropsychiatric sequelae. Which of the following statements is true

- a. Serious psychiatric sequelae are observed in 50% of patients receiving steroids
- b. Manic and hypomanic states are more commonly observed with prolonged exposure
- c. Depressive symptoms are more commonly observed with short courses
- d. A dose dependent relationship is observed

19.____Which of the following statements is incorrect

- a. Varenicline is the antidepressant of choice in the depressed smoker
- b. Depressed patients have a higher prevalence of cigarette smoking than others
- c. Smoking cessation is more likely to trigger a depressive relapse in patients with depression than others
- d. Depressed patients have more difficulty quitting and often require a combination of bupropion, varenicline and nicotine replacement methods along with supportive psychotherapy

20.____Delirium can be distinguished from dementia by the following clinical features.

Choose the single correct answer

- a. The presence of hallucinations, delusions and ideas of reference
- b. Agitated behavior that requires antipsychotic medication and physical restraint
- c. An acute onset, fluctuating course and a change of consciousness
- d. Disorientation to time and place is generally more severe than disorientation to person and situation

21.____In managing hospitalized patients with delirium the following is an appropriate <u>first</u> choice

- a. Cognitive restructuring
- b. Antipsychotics such as olanzapine
- c. Disulfiram for alcohol withdrawal states
- d. Sedative antidepressants

22.____In managing late-onset depression, which of the following is <u>correct</u>

- a. Antidepressant medications should be used at lower doses and should be discontinued after the remission of depressive symptoms to minimize adverse effects
- b. Psychosocial approaches such as interpersonal and cognitive behavior therapy are preferred to pharmacotherapy, because of the risk of antidepressant-induced seizures
- c. Electroconvulsive is a reasonable therapeutic option when patients fail to respond to antidepressant medications
- d. Adequate management of hypertension, diabetes and dyslipidemia have a profound effect upon mood

23.____Major depression is associated with comorbid psychiatric disorders less than one half the time

- a. True
- b. False

24.____Which of the following is incorrect about the antidepressant discontinuation

syndrome

- a. An increased death rate has been reported
- b. Fluoxetine is least likely to do this
- c. It is unrelated to the serotonin syndrome
- d. The best treatment is to reinstitute the antidepressant

25.____Which of the following antidepressants is most likely to have all these side-effects: sedation, weight gain, sexual dysfunction

- a. Citalopram
- b. Paroxetine
- c. Venlafaxine
- d. Buproprion
- e. Fluoxetine

26.____Which of the following side effects are more likely with SNRIs

- a. Elevated blood pressure
- b. Sexual side effects
- c. Weight gain
- d. Cardiac arrhythmias

27.___Stimulants such as Ritalin have no place in managing depression

- a. True
- b. False

Appendix I

Simple Coding Sheet

Setting the Agenda

- 1. Uses own *and* patient's last name or other expressed preference (1 = No 2 = Yes)
- 2. Indicates time available $(1 = No \quad 2 = Yes)$
- 3. Obtains agenda *and* inquires for additional items $(1 = No \quad 2 = Yes)$

Physical Story

- 4. The resident starts open-endedly focusing on physical agenda item $(1 = No \quad 2 = Yes)$
- 5. Addresses only physical issues volunteered by the patient $(1 = No \ 2 = Yes)$

Personal Story

- 6. Keeps patient focused open-endedly on personal story(ies) to elaborate them $(1 = No \quad 2 = Yes)$
- 7. Addresses only personal topics volunteered by the patient $(1 = No \ 2 = Yes)$
- 8. Encourages personal information open-endedly when patients do not volunteer it and patient remains focused on the physical story $(1 = No \quad 2 = Yes)$
- 9. Uses echoing to expand understanding of personal story $(1 = No \ 2 = Yes)$
- 10. Uses requests to expand understanding of personal story $(1 = No \quad 2 = Yes)$
- 11. Uses summarizing to expand understanding of personal story $(1 = No \quad 2 = Yes)$

Emotional Story

- 12. Keeps patient focused open-endedly on emotional story(ies) to elaborate them $(1 = No \quad 2 = Yes)$
- 13. Addresses only emotional topics volunteered by the patient $(1 = No \ 2 = Yes)$
- 14. Inquires about emotions by using "how does that make you feel?" question $(1 = No \ 2 = Yes)$
- 15. Inquires about emotions by using other emotion seeking question (1 = No = 2 = Yes)
- 16. Uses echoing to expand understanding of emotional story $(1 = No^{-2} = Yes)$
- 17. Uses requests to expand understanding of emotional story (1 = No 2 = Yes)
- 18. Uses summarizing to expand understanding of emotional story (1 = No = 2 = Yes)
- 19. Uses "naming" statement in response to expression of emotion (1 = No = 2 = Yes)
- 20. Uses specific "I understand" statement in response to expression of emotion $(1 = No^{-1} = Yes)$
- 21. Uses other understanding statements in response to expression of emotion (1 = No = 2 = Yes)
- 22. Uses "praise" statement in response to expression of emotion (1 = No = 2 = Yes)
- 23. Uses "acknowledge plight" statement in response to expression of emotion (1 = No = 2 = Yes)
- 24. Uses "direct support [from interviewer]" statement in response to expression of emotion (1 = No 2 = Yes)
- 25. Uses "indirect support [from others]" statement in response to expression of emotion (1 = No 2 = Yes)
- 26. Uses "joining language" that indicates support to the patient in response to expression of emotion $(1 = No \quad 2 = Yes)$

Indirect Patient-Centered Skills

- 27. Uses "impact on self" statement $(1 = No \ 2 = Yes)$
- 28. Uses "impact on others" statement $(1 = No \quad 2 = Yes)$
- 29. Uses "beliefs/attributions" statement (1 = No = 2 = Yes)
- 30. Uses "self-disclosure" statement (1 = No 2 = Yes)

General Skills

- 31. Indicates change in direction of questioning at end of interview to disease focus (1 = No 2 = Yes)
- 32. Interruptions are appropriate or nonexistent $(1 = No \quad 2 = Yes)$
- 33. Resident determines content and direction of interview $(1 = No \quad 2 = Yes)$

Appendix J

Smith's Patient-Centered Interviewing Codebook

Setting the Agenda: Code 1

1. The resident uses own *and* patient's last name or other expressed preference (Code: 1=No, 2=Yes)

The resident uses the **patient's name** at the start of the interaction. The resident <u>MUST</u> use the <u>last name</u>; so, they can use only last name or both the first and last name. In some instances, the resident may need to ask how to pronounce the patient's name. This is okay, and would count in this category. This should occur at the very beginning of the interview when the resident walks into the patient room.

The resident also must **introduce themselves** to the patient, by name, for this category to receive a "yes". The <u>last name</u> of the doctor must be included here to count.

Examples:

"Hello, Mrs. Smith! I am Dr. Robinson, it's nice to meet you" "Mr. Smith? Hello, I am Dr. John Robinson, feel free to call me John." "Hello, I am Dr. Robinson. Mrs....I am sorry, can you please instruct me on how to pronounce your last name?"

Setting the Agenda: Code 2

2. <u>The resident indicates the time available</u> (Code: 1=No, 2=Yes)

The resident positively or neutrally indicates how much time is available for interaction. The resident could actually specify a time frame (such as 10 minutes), or they may use phrases that indicate time, such as short, medium, or long.

If the resident uses the word "only," as in, "We only have 10 minutes together to day" this is a negative statement and would count as a "No" – the resident should never use the word ONLY when indicating time available or otherwise convey negativity about the duration of the visit. The resident should not make a negative impression by conveying shortage of time – if they do, score as "no."

Examples:

"We have about 20 minutes together today"

"We have about 15 minutes to chat today, so let's get started right away!"

"We have plenty of time to discuss your issues today, so let's get started"

Setting the Agenda: Code 3

3. <u>The resident obtains the agenda from the patient *AND* inquires for additional items (Code: 1=No, 2=Yes)</u>

At the beginning of the interview, the resident needs to obtain a list of the issues the patient wants to discuss to ensure that the most important concerns are addressed during the encounter and to minimize the chance of an important concern being raised at the end of the conversation when time has run out. Possible patient agenda items include, but are not limited to symptoms, requests (e.g. prescription for a sleeping pill), expectations (e.g. get sick leave), and understanding about the purpose of the interaction (e.g. perform an exercise stress test)

This category <u>only</u> receives a "yes" when the resident inquires about a second problem and has asked, <u>at least once</u>, what <u>else</u> the patient wants to cover after having obtained the first agenda item. The resident thus helps the patient enumerate all of the problems. The resident may use their fingers to indicate that a list is being made (i.e. as the patient lists their problems, the resident may hold up a new finger for each concern the patient wants to talk about). Also, it should be noted here that the resident may need to, and in some instances SHOULD, interrupt the patient in order to get all of the information needed. Interruption is part of a patient-centered interview, but should be done in a respectful manner (see last example below).

Examples:

"Let's start by making a list of all of the things you want to discuss." "Can you tell me what you would like to cover today?"

THEN:

"What else?"

"Is there anything else you want to discuss today?"

"Are there any other issues you want on our agenda this afternoon?"

"Sorry to interrupt, that is important and we will get back to your leg pain in a minute, but first I need to know if there is a second problem you would like to discuss. I want to be certain that we get a list of all of your concerns."

Physical Story: Code 4

4. <u>The resident starts open-endedly at the beginning of the interview, focusing on the physical agenda item</u>

(Code: 1=No, 2=Yes)

The resident opens the "history of present illness" (HPI) with a physical item. The resident will choose the chief concern that the patient brought up in their agenda, and focuses on that item to start the interview. The resident could do this asking one open-ended question, or by making one open-ended request, and then allowing the patient to talk. It establishes an easy flow of talk from the patient, conveys that the clinician is attentively listening, and gives a feeling for "what the patient is like."

This is scored 'no' if the resident begins with a personal/emotional item, such as 'tell me more about the stress," or "So, tell me about your wife." To code this item 'yes,' it MUST come before the personal and emotional story, after the agenda is set.

Examples:

"So headaches are the big problem, tell me more"

"Tell me all about the headache, starting at the beginning and bringing me up to now"

Physical Story: Code 5

5. <u>The resident addresses only the physical issues volunteered by the patient</u> (Code: 1=No, 2=Yes)

The resident does not introduce any new physical issues, such as symptoms, medications, doctors, hospitals, or referrals. The resident focuses only on the physical issues/symptoms that are volunteered by the patient. It would be inappropriate (i.e. receive a "no") if the resident brings up things that the patient does not volunteer (e.g. "So you said the headache hurts, is there any back pain associated with that?" when patient has not previously mentioned back pain). Everything that the resident addresses in the physical story is something that the patient has already brought up.

There can be no closed-ended questions used in the physical story, or this obligatorily receives a "no." Closed ended questions insert new information, so if a closed-ended question is asked, this category is a "no"!

Examples:

"So you are getting headaches every single day, can you tell me more about them?"

"Tell me more about the headaches"

"What more can you tell me about the headaches and nausea" (the patient has mentioned both headaches and nausea).

Personal Story: Code 6

6. <u>The resident keeps the patient focused open-endedly on personal story to elaborate them</u> (Code: 1=No, 2=Yes)

The resident uses many open-ended skills to maintain the flow of information, leading eventually to the personal story.

Open-ended skills of "Focusing" are used here to develop and elaborate the patient's personal story.

Focusing skills including reflecting/echoing, requesting, and summarizing.

- *Reflecting/Echoing*: signals that the interview has heard what the patient said by repeating a word or phrase that was just said by the patient. It encourages the patient to proceed and focuses the patient on the word or phrase echoed (e.g. P: "My boss expects so much out of me, and when my back is hurting, it's hard for me to do everything she wants." R: "Boss?")
- *Requesting*: Can be general ("Tell me more" or "Go on"), or can focus the patient in an already mentioned area that the interviewing wants to expand on ("Tell me more about the coworker you mentioned")
- *Summarizing*: Instead of echoing only a word or phrase, the interviewer echoes a wider range of talk by summarizing it. This invites the patient to focus on the material summarized and express deeper levels of her/his story. ("So your boss requires you to do things that are not part of your job description and which you believe are adding significantly to your troubles?")

Personal Story: Code 7

7. <u>The resident only addresses personal topics volunteered by the patient</u> (Code: 1=No, 2=Yes)

The resident does not provide any new personal topics; i.e., does not mention 'wife' if not already introduced by the patient. The resident focuses only on the personal topics/symptoms that are volunteered by the patient. It would be inappropriate (i.e. receive a "no") if the resident brings up things that the patient does not volunteer (e.g. "How does your wife feel about this?" when the patient has not mentioned their spouse). Everything that the resident addresses in the personal story is something that the patient has already brought up.

Examples:

"You mentioned your children, tell me more about them" (Patient already mentioned children)

"Tell me more about your coworkers" (Patient already mentioned coworkers)

"What more can you tell me about your wife? (Patient already mentioned wife)

"Tell me what a typical day at work looks like?" (Patient mentioned their job)

Personal Story: Code 8

8. <u>The resident encourages personal information open-endedly when patients do not volunteer it</u> <u>and patient remains focused on the personal story</u> (Code: 1=No, 2=Yes)

The resident uses any of the indirect emotion seeking skills to encourage the patient to provide personal information (indirect emotion seeking skills actually encourage personal information, not emotional...thus, they are coded here). Indirect emotion seeking skills include the following: inquiring about impact, eliciting beliefs/attributions, demonstrating understanding through self-disclosure, and triggers. The resident may use any of these skills to help the patient develop their personal story. This may include the use of some closed-ended skills, but the closed-ended skills should be used less often than the indirect emotion-seeking skills to generate the personal story.

*In order for this code to receive a "yes," the patient cannot say ANYTHING personal during the physical story. The resident either uses indirect skills to get to the personal story, OR the resident "primes the pump" by asking other questions besides the indirect emotion seeking skills that still get at the personal story (e.g. "What do you do for work?"). Although this is not technically patient-centered (because the resident is inserting new information), sometimes this is necessary in order for the resident to get the patient away from the physical and into the personal story.

Indirect Emotion Seeking Skills:

- *Inquiring about impact*: Inquiring about how the physical symptom or disease in question has affected the life of the patient, family member, or friend uncovers important information and increases emotional expression. Examples:
 - "How has the back pain impacted your life?"
 - "How have your headaches affected your life?"
- *Eliciting beliefs/attributions*: Asking what the patient thinks caused the problem is not only helpful for understanding the patient's medical explanatory model, but it may also uncover an underlying feeling or emotion, particularly if the patient believes that a serious condition may be causing the symptom. Examples:
 - "What do you believe caused your pain?"
 - "What do you think caused the cancer?"
- *Demonstrating understanding through self-disclosure*: Sharing how the resident or others might feel in similar circumstances can help the patient identify her or his own emotions and feelings. The resident avoids strong affective terms like "angry" or "depressed" because the patient may not feel comfortable endorsing them; instead, resident uses neutral words like "upset" or "frustrated." Examples:
 - "I think if that happened to me I would feel upset"
 - "I feel strongly that anyone in a similar situation would be frustrated"
- *Triggers*: Determining why the patient is seeking care at this precise time, especially if the problem has been present for more than a few days, can uncover the underlying reason for the visit and provide a window into the patient's feelings/emotions. Examples:
 - "What made you decide to see me today for _____"
 - "What else is going on in your life?"
Personal Story: Code 9

9. The resident uses echoing to expand understanding of personal story (Code: 1=No, 2=Yes)

The resident uses this focusing, open-ended skill to maintain the focus on the personal story. Reflection (echoing) signals that the interviewer has heard what the patient said by repeating a word or phrase that was just said. It encourages the patient to proceed and focuses the patient on the word or phrase echoed. For Code 9, the echo must be about the personal story (not the physical or emotional story).

An echo involves the resident echoing a word or a couple of words the patient has just said, and then remains silent, enticing the patient to go on. It is not considered an echo if the resident repeats a word, but then asks a new statement after the word, such as "Tired? When did all of that start?" Although the resident echoed a word, they were not using the echo as an open-ended skill to expand the patient's personal story.

Examples:

Patient: "Well, my boss has been nagging me constantly this week" Resident: "Nagging?"

Patient: "My wife and I have four children, and I work at the local grocery store while she takes care of the kids"

Resident: "Grocery store?"

Patient: "I was at the baseball game when my back really started hurting, we were sitting in the stands and the pain jolted down my back" Resident: "Baseball game?"

BAD Example:

Patient: "I have just been so tired recently" Resident: "Tired? When did that start?"

Personal Story: Code 10

10. <u>The resident uses requests to expand understanding of personal story</u> (Code: 1=No, 2=Yes)

Open-ended requests can be general, for example "Tell me more" or "Go on," or they can focus the patient in an already mentioned area that the interviewer wants to expand upon, such as, "Tell me more about the daughter you mentioned." Here, the request MUST be about the personal story, not the physical or emotional stories.

Like other focusing skills, open-ended requests should be used to move patients to deeper levels of their stories by focusing on something that the patient has already mentioned. They should not be used to direct the patient to a topic they have not already mentioned, for example, "Tell me about your family" when the patient has not said anything about her or his family. No new information should be inserted from the doctor (that is not patient-centered); rather, a request is used to help the patient to expand/elaborate their story.

Examples:

"Tell me more"

"Go on"

"I'd like to hear more about your boss"

"Tell me about not being able to afford it"

Personal Story: Code 11

11. <u>The resident uses summarizing to expand understanding of personal story</u> (Code: 1=No, 2=Yes)

Instead of echoing only a word or phrase, the interviewer echoes a wider range of talk by summarizing it. This invites the patient to focus on the material summarized and express deeper levels of her or his story. It signals that she or he has been heard and that she or he should proceed beyond that point. For this code to receive a "yes," the summary must be about the personal story (not the physical story or emotional story).

Here, the resident must be enticing the patient to give more information (i.e. this is not a recap. This is a summary that is looking for more information at the end.)

Examples:

"So your husband helped you get into the car and your children were able to stay with your friend?"

"So your boss was angry and it made you want to leave, which you did, and then you ended up on the bus?"

12. <u>The resident keeps the patient focused open-endedly on emotional story to elaborate it</u> (Code: 1=No, 2=Yes)

The resident pursues an extended story from the patient regarding their particular emotion/emotions, and encourages the patient to continue sharing information to get a wellrounded, descriptive emotional story. The resident can do this by using open-ended skills repeatedly. This will allow them to not just get a single emotion from their patient, but the entire story that surrounds that particular emotion.

Open-ended skills Focusing Skills are used here to develop and elaborate the patient's physical story.

Focusing skills including reflecting/echoing, requesting, and summarizing.

- *Reflecting/Echoing*: signals that the interview has heard what the patient said by repeating a word or phrase that was just said by the patient. It encourages the patient to proceed and focuses the patient on the word or phrase echoed (e.g. P: "It made me so sad that I had to miss work for a week." R: "Sad?")
- *Requesting*: Can be general ("Tell me more" or "Go on"), or can focus the patient in an already mentioned area that the interviewing wants to expand on ("Tell me more about your frustration")
- *Summarizing*: Instead of echoing only a word or phrase, the interviewer echoes a wider range of talk by summarizing it. This invites the patient to focus on the material summarized and express deeper levels of her/his story.

13. <u>The resident addresses only emotional topics volunteered by the patient</u> (Code: 1=No, 2=Yes)

The resident addresses only emotional topics volunteered by the patient. In other words, the resident does not ask about emotions that the patient has not said, and instead, only focuses on emotions that the patient has mentioned themselves.

Good examples:

"You mentioned feeling sad?"

"Tell me more about that anger..."

Bad examples (would receive a "no"):

"It sounds like you were frustrated?" (The patient never mentioned being frustrated) "Did that make you mad?" (The patient never mentioned being mad even though they may appear that way; the patient must actually have said it)

"Were you worried?" (The patient did not mention being worried even if looking worried)

14. <u>The resident actively inquires about emotions and feelings by using a specific "How does</u> <u>that make you feel?" question</u> (Code: 1=No, 2=Yes)

The patient has not offered an emotion, so the resident directly inquires about the emotion to try and draw it out of the patient. For this category to a receive a "yes," the resident must use the word FEEL in their statement. If they are asking purely about emotions (without saying the word "feel" or "feeling"), rate that statement on code 15.

Emotion Seeking: Because emotions are so important, the resident must actively seek them even when they are not frankly presented, or when only hinted at.

Direct Inquiry: The resident allows the patient to identify the specific feeling by asking how she or he is feeling about the situation. Examples:

"How did that make you feel?"

"I noticed you have been looking away, can you tell me how you are feeling?"

"What emotions are you feeling?"

Examples:

Patient: "And then, to top it all off, my husband stormed out and we have not spoken since." Resident: "How does that make you feel?"

Patient: "Well, my daughter said that she would help me, but then she got so wrapped up in her own life that she forgot to even show up" Resident: "How does that make you feel, you know, emotionally?"

Patient: "My friends said that they were not going to meet for drinks, and when I was going to the grocery story, I saw them all in the car together, headed out" Resident: "How did that make you feel emotionally?"

15. <u>The resident inquires about emotions by using other emotion seeking question</u> (Code: 1=No, 2=Yes)

The resident may use a different phrase other than "How does that make you feel?" to try and elicit an emotion from the patient. For this category, if the resident uses any word other than FEEL or FEELING, this would receive a "yes"

Examples:

"How are you doing emotionally?"

"What emotions go along with this?"

"Tell me about any emotions you are experiencing regarding this issue"

16. <u>The resident uses echoing to expand understanding of emotional story</u> (Code: 1=No, 2=Yes)

The resident uses this focusing, open-ended skill to maintain the focus on the emotional story. Reflection (echoing) signals that the interviewer has heard what the patient said by repeating a word or phrase that was just said. It encourages the patient to proceed and focuses the patient on the word or phrase echoed. For Code 16, the echo must be about the emotional story (not the physical or personal story).

An echo involves the resident echoing a word or a couple of words the patient has just said, and then remains silent, enticing the patient to go on. It is not considered an echo if the resident repeats a word, but then asks a new statement after the word, such as "Tired? When did all of that start?" Although the resident echoed a word, they were not using the echo as an open-ended skill to expand the patient's emotional story.

Echoing is used to EXPAND what the patient is saying. Echoing can apply to a statement of emotion that the resident is trying to fully understand (i.e. the resident is drawing out the emotion). This DIFFERS from "naming" because naming is used as a "wrap up" statement – the resident is no longer trying to understand the emotion, but rather, is re-stating the emotion in a closing statement to show the patient they understand.

Examples:

Patient: "Well, my boss has been nagging me constantly this week, which seriously frustrates me"

Resident: "Frustrates you?"

Patient: "It just makes me so sad to think that my own husband is not trying to help out more" Resident: "Sad?"

Patient: "I am the caretaker for my grandkids, and I just love them so much, I do not want them to be burdened by me, I get depressed even thinking about it" Resident: "Depressed?"

Patient: "After the pain let up, I still couldn't find him, and I got super worried" Resident: "Worried?"

Bad Example:

Resident: "So, you were angry at your boss, which I understand because you work really hard and you were having trouble that particular day due to your leg pain. I think you and I can work together to get to the bottom of this pain." (*This is an example of NAMING!)

17. <u>The resident uses requests to expand understanding of emotional story</u> (Code: 1=No, 2=Yes)

Open-ended requests can be general, for example "Tell me more" or "Go on," or they can focus the patient in an already mentioned area that the interview wants to expand upon, such as, "Tell me more about your sadness."

Like other focusing skills, open-ended requests should be used to move patients to deeper levels of their stories by focusing on something that the patient has already mentioned. They should not be used to direct the patient to a topic they have not already mentioned, for example, "Tell me about how stressful this is" when the patient has not said anything about being stressed. No new information should be inserted from the doctor (that is not patient-centered); rather, a request is used to help the patient to expand/elaborate their story.

For this to receive a "yes," the request must be about the emotional story, not the physical or personal stories.

Examples:

"Tell me more about being sad"

Patient: "I just want to cry, it makes me so sad" Resident: "Go on"

"I'd like to hear more about you being worried"

"Tell me about this anger"

"What exactly are you concerned about?"

18. <u>The resident uses summarizing to expand understanding of emotional story</u> (Code: 1=No, 2=Yes)

Instead of echoing only a word or phrase, the interviewer echoes a wider range of talk by summarizing it. This invites the patient to focus on the material summarized and express deeper levels of her or his story. It signals that she or he has been heard and that she or he should proceed beyond that point. For this code to receive a "yes," the summary must be about the emotional story (not the physical story or personal story).

Here, the resident must be enticing the patient to give more information (i.e. this is not a recap. This is a summary that is looking for more information at the end.)

Examples:

"So you watched your son walk away from you, which made you incredibly sad?"

"So your boss yelled at you in front of everyone, which made you really sad and embarrassed, and you started to cry?"

"So you said that you walked to work, your leg hurt, and you wanted to leave but you were afraid of your boss?"

Bad Example:

"So you had a rough week with bad leg pain and it is frustrating you. Did I get that correct?" – Here, the resident is recapping, and is not trying to get more information. They are fact checking, but not enticing the patient to go on with more information.

19. <u>The resident uses "naming" statement in response to patient's expression of emotion</u> (Code: 1=No, 2=Yes)

NURS: NURS can be understood as a mnemonic which helps provider's respond to the emotions that their patients are feeling, as providers should be responding verbally to their patients about emotions. Responding verbally to emotions can help the patient to feel understood and cared for, and the NURS skills are important when developing a positive relationship and being patient-centered (Fortin et al, 2012).

Here, the resident is using "naming" as a "wrap up" statement, where they are responding to the emotion. This differs from "echoing" in that the echo is more of a question, enticing the patient to go on. Naming is used to respond to the emotion, and the resident is typically not looking for more information. In other words, the doctor DOES NOT insert an emotion, the patient must bring it up. Also, naming is usually used with other components of NURS.

*Naming should not be used until the resident can legitimately say that they understand. Unless the resident can truly say that they understand the emotion (because the patient has explained it thoroughly and the resident has asked sufficient questions to ensure their understanding), then naming should not be used.

Examples:

"You said you are sad" "You're upset" "This made you frustrated"

20. <u>The resident uses specific "I understand" statement in response to patient's expression of</u> <u>emotion</u> (Code: 1=No, 2=Yes)

The resident uses an "I understand" statement in the interview. Here, the resident's understanding statement focuses on "I" versus "Other" (which is the next code).

Understanding (also called legitimating): An "understanding" statement is one that acknowledges that the patient's emotional reaction is reasonable. It legitimizes, accepts, and validates the patient's expressed emotion. It is not necessary to have sufficient experience with the particular issue to be able to understand it.

Examples:

"Given what happened it makes sense to me, I can sure understand why you feel that way"

"I have never had that happen, but I can understand how that would scare you"

"I totally understand you feeling sad about this."

21. <u>The resident uses other understanding statement in response to patient's expression of</u> <u>emotion</u> (Code: 1=No, 2=Yes)

The resident uses an "other understanding" statement in the interview. Here, the resident's understanding statement focuses on the other.

Understanding (also called legitimating): An "understanding" statement is one that acknowledges that the patient's emotional reaction is reasonable. It legitimizes, accepts, and validates the patient's expressed emotion. It is not necessary to have sufficient experience with the particular issue to be able to understand it.

Examples:

"I cannot understand, because that has never happened to me, but I certainly see where you are coming from."

"I have never been through this so I cannot possibly understand what you are going through, but I do understand you feeling the way you do."

22. <u>The resident uses a "praise" statement in response to patient's expression of emotion</u> (Code: 1=No, 2=Yes)

The resident RESPECTS the patient specifically by using a praising statement, which is a statement that praises the patient's efforts. The resident is complimenting the patient for their efforts.

Examples:

"I like the way you have hung in there and kept fighting!"

"You are a diligent working person, even in the toughest of times. Good for you!"

"Where do you find your strength?" (Here, the resident is indirectly praising the patient. The resident is showing that they admire the patient for the way they are handling the situation.)

"I really respect you for sharing that story with me"

23. <u>The resident uses an "acknowledgement plight" statement in response to patient's expression</u> <u>of emotion</u> (Code: 1=No, 2=Yes)

The resident RESPECTS the patient by specifically acknowledging the patient's plight at some point in the interview. The resident, here, acknowledges how difficult things have been for the patient, or may indicate future difficulties that the patient may face as a result of treatment/illness.

Examples:

"You have really been through a lot!"

"Things have been so difficult for you recently, you have been through so much!"

"I understand that this is going to be tough for you" (responding to patient feeling upset about the treatment path they have decided on).

24. <u>The resident uses "direct support [from interviewer]" statement in response to the patient's</u> <u>expression of emotion</u> (Code: 1=No, 2=Yes)

The resident gives direct support to the patient in the interview.

Supporting statements signal to the patient that the resident is prepared to work together with her or him as a team (i.e. form a partnership with her or him) and help in whatever way the resident can.

Examples:

"I am here to help in any way I can. I will make sure that your attending physician is aware of your specific concerns."

"Sometimes it helps to talk about it, I am here for you!"

"I think that together, you and I can figure this out and help to alleviate the pain you are feeling, I am here to help you through this"

25. <u>The resident uses "indirect support [from others]</u>" statement in response to patient's <u>expression of emotion</u> (Code: 1=No, 2=Yes)

The resident may not be the person who will work directly with the patient at all times, so the resident may need to indicate that the patient has support coming from elsewhere.

Here, the resident must CLEARLY be indicating support, not just a passing comment regarding joint support between the patient and others. The resident needs to indicate some form of personal or group support beyond describing a treatment plan (i.e. the following statement would not count for indirect support: "I can connect you with a counselor")

Examples:

"You have a lot of help from your team. Your doctor and nurse and there for you, you have a lot of support."

"I know your doctor is on your side and is going to be there to support you through this"

"The nurses here are outstanding, I know that they are going to work closely with you to get your through this."

BAD examples (Would receive a "no"):

"Well, I suppose we can run some tests to see what is going on with your leg, that is something that you could maybe have done this afternoon" (resident uses the word "we," but does not do so in a way that indicates that the patient is receiving joint support)

"We will send you to counseling"

26. <u>The resident uses "joining language" that indicates support to the patient in response to the patients expression of emotion</u>

(Code: 1=No, 2=Yes)

The resident <u>supports</u> the patient by signaling to the patient that the resident is prepared to work together with her or him as a team.

The resident merely using the word "we" does not count as a "yes" for this category – the resident must actively show that the two are working together as a team, and that the resident is supporting the patient in helping them to get better.

In order for this code to receive a "yes," code 25 also must be a yes!

Examples:

"Together, you and I can get to the bottom of this" "I will certainly do my share of the work here if you will" "You and I make a great team, let's work on this together!"

Bad Example (would receive a "no"):

"Well, we can run tests to figure out what is going on, I think that would be the logical first step." (Although the resident says "we", there is no sense of working together here).

27. <u>The resident uses "impact on self" statement</u> (Code: 1=No, 2=Yes)

The resident uses the indirect inquiry type "inquiring about impact" as it pertains to the self.

Inquiring about impact: Inquiring about how the illness or other situation in question has affected the life of the patient uncovers important information and increases emotional expression.

Examples:

"How is this affecting your life?" "How has your wife's death affected your life?"

28. <u>The resident uses "impact on others" statement</u> (Code: 1=No, 2=Yes)

The resident uses the indirect inquiry type "inquiring about impact" as it pertains to another person.

Inquiring about impact: Inquiring about how the illness or other situation in question has affected the life of the patient's family or friends uncovers important information and increases emotional expression.

Examples:

"How has your depression affected your family?" "How has your wife's death affected your daughter?" "How has your being laid off affected your husband?"

This can also include feelings:

"How is you husband feeling about all of this?" "What emotions is your child feeling as a result of all of this?"

29. <u>The resident uses "beliefs/attributions" statement</u> (Code: 1=No, 2=Yes)

The resident uses a specific beliefs/attribution statement in the interview.

Eliciting beliefs/attributions: Asking what the patient thinks caused the problem is not only helpful for understanding the patient's medical explanatory model, but it may also uncover an underlying feeling or emotion, particularly if the patient believes that a serious condition may be causing the symptom.

Examples:

"What do you believe caused your depression?" "What do you think caused the tension at work?"

30. <u>The resident uses "self-disclosure" statement</u> (Code: 1=No, 2=Yes)

The resident specifically uses a self-disclosure statement in the interview at some point.

Demonstrating understanding through self-disclosure: Sharing how the resident or others might feel in similar circumstances can help the patient identify her or his own emotions and feelings. The resident avoids strong affective terms like "angry" or "depressed" because the patient may not feel comfortable endorsing them; instead, resident uses neutral words like "upset" or "frustrated."

Examples:

"I think if that happened to me I would feel upset"

"I feel strongly that anyone in a similar situation would be frustrated"

General: Code 31

31. <u>The resident indicates change in direction of questioning at the end of the interview</u> (Code: 1=No, 2=Yes)

The resident indicates to the patient that the content of the interview and, more importantly, the patient-centered style is about to change. This occurs towards the <u>END</u> of the interview.

Examples:

"If it's okay then, I'd like to shift gears and ask you some different types of questions about your headaches and back pain. I'll be asking a lot more questions about specifics. Is that okay with you?"

"Alright, I feel confident now that I have a firm understanding of what brought you in today. If it's okay with you, I would like to switch gears a little bit and ask you some specific questions about your physical pain"

General: Code 32

32. <u>Interruptions are appropriate or nonexistant</u>

(Code: 1=No, 2=Yes)

The resident may interrupt the patient at times; however, the interruptions are used to focus the patient on something that they have already said (i.e. it must not interrupt the flow of the conversation by changing the focus).

Similarly, the resident may (and often should) interrupt the patient during the Agenda Setting stage. If the patient jumps right into the story, it is appropriate (and necessary) for the resident to interrupt to obtain the full agenda.

Finally, the resident gets a "no" when they did not interrupt when they SHOULD have. For instance, when a patient goes on and on for far too long about an issue and the resident never cuts them off, this is seen as a negative aspect of patient-centered care. The resident should not allow the patient to take up the entire time talking about one thing. If the resident does this, they would be coded as "no."

Examples:

"One second, I want to hear more about your physical story, but first I do want to get a full list from you of everything you want to cover today. You said back pain, what else?"

General: Code 33

33. Doctor determines content and direction of interview (Code: 1=No, 2=Yes)

Most of the interaction throughout the entirety of the interview is focused on what the doctor wants to discuss (i.e. mostly closed-ended questions bringing up new information that the patient did not introduce). This is NOT patient-centered. This is a reverse-coded item to show that the doctor determined what was discussed, and not the patient.

Appendix K

Patient-Centered Definitions, Glossary, and Emotion Guide

- <u>Setting the Agenda</u>: Setting the agenda is the introduction stage at the beginning of a medical interview where the provider orients the patient by ensuring that the patient is comfortable and at ease and by obtaining a full list of issues to cover.
- **<u>Physical Story:</u>** The physical story is the patient's interpretation of what is physically wrong with them, and does not include personal or emotional aspects.
- <u>**Personal Story:**</u> The personal story is the personal, non-emotional psychosocial story regarding the context in which the physical disease problem occurs, but does not directly discuss the physical illness.
- **Emotional Story:** The emotional story is the emotional component of the patient's story regarding what is wrong with them and focuses on the felt emotions and expressed feelings that the patient conveys to their provider during their medical interview.
- **Indirect Patient-Centered Skills:** Indirect patient-centered skills are tools that the physician uses to try and elicit expressions of feeling or emotion from the patient.
- <u>General Patient-Centered Skills:</u> General patient-centered skills are tools that the provider uses to guide the patient through the patient-centered portion of the interview

Operational Definitions

- <u>Setting the Agenda</u>: This is the first step of the interview. Setting the agenda is a step that includes the following components: (1) the resident introduces themselves by using their own last name and the patients last name, (2) the resident indicates how much time they have available to speak with the patient, and (3) the resident obtains an agenda from the patient and inquires for additional items to discuss. These three steps are necessary for setting a complete agenda.
- <u>**Physical Story**</u>: The physical story is the patient's interpretation regarding what is physically wrong with them. A story will go with this (how long the pain has been occurring, when it started, when it is at its worse, etc.) The physical story is ONLY physical (i.e. the patient is not discussing a personal or emotional story).
 - **<u>Physical Clue words</u>**: Disease, symptom, doctor, medication, tests, prescriptions, hospital, nurses, pain, surgery, treatments
- <u>**Personal Story**</u>: *Psychosocial, Non-Emotional Topics:* These are personal "stories" that are the context in which physical disease problems occur but do not directly talk about the physical illness (e.g. A patient talks about how difficult their job is and that they cannot keep up. Although these are not medical features, they will aid the resident in making key observations about the patient that may lead to a better medical diagnosis and treatment). These have two features: 1) they do not relate directly to the patient's physical disease problem: physical symptoms (e.g., pain, short of breath), doctors,

hospitals, treatments/medications/surgeries. 2) they are not rated when they refer to emotion; emotion is rated separately even though it is a psychosocial topic.

- Personal Clue words: Anything NOT physical and NOT emotional
- <u>Emotional Story:</u> This is the story the patient tells regarding their emotional response to what is happening in their lives. It can be embedded in the other two types of stories (more frequently in the personal story). Many times the patient is hesitant to share this story, so the physician will need to try and elicit this part of their story. <u>Emotions:</u> Emotions have been defined as, "internal mental states representing evaluative, valenced reactions to events, agents, or objects that vary in intensity" (Ortony, Clore, & Collins, 1998). Eckman (1999) distinguishes feelings from emotions, explaining that feelings are cognitive and internal whereas emotions are expressed and are visible. Feelings are the conscious, subjective experience of emotion, and are more nuanced and numerous (Fortin et al., 2012). For this topic, the emotions are the responses (laughing, crying, etc) that one can observe in the patient, while feelings are what the patient says (the more conscious elaboration of the emotion).
 - **Emotional Clue Words:** See attached Emotion Sheet.
- **Indirect emotion seeking skills** include the following: inquiring about impact, eliciting beliefs/attributions, demonstrating understanding through self-disclosure, and triggers. The resident may use any of these skills to help the patient develop their emotional story.
 - *Inquiring about impact*: Inquiring about how the illness or other situation in question has affected the life of the patient, family member, or friend uncovers important information and increases emotional expression. Examples:
 - "How has your divorce impacted your life?"
 - "How has your wife's death affected your life?"
 - *Eliciting beliefs/attributions*: Asking what the patient thinks caused the problem is not only helpful for understanding the patient's medical explanatory model, but it may also uncover an underlying feeling or emotion, particularly if the patient believes that a serious condition may be causing the symptom. Examples:
 - "What do you believe caused your divorce?"
 - "What do you think caused the tension at work?"
 - *Demonstrating understanding through self-disclosure*: Sharing how the resident or others might feel in similar circumstances can help the patient identify her or his own emotions and feeling. The resident avoids strong affective terms like "angry" or "depressed" because the patient may not feel comfortable endorsing them; instead, resident uses neutral words like "upset" or "frustrated." Examples:
 - "I think if that happened to me I would feel upset"
 - "I feel strongly that anyone in a similar situation would be frustrated"
 - *Triggers*: Determining why the patient is seeking care at this precise time, especially if the problem has been present for more than a few days, can uncover the underlying reason for the visit and provide a window into the patient's feelings/emotions. Examples:
 - "What made you decide to see me today for _____"
 - "What else is going on in your life?"

GLOSSARY

Agenda – A complete list of the issues to be considered during the interview.

Antidepressant – Zoloft, Prozac, Cymbalta, Wellbutrin, Remeron, Celexa, Effexor, Paxil, Lexapro,

Baseline – The patient's level of knowledge about a particular topic at the beginning of the interview.

Behavioral Outcomes – The specific behaviors the physician desires the patient to exhibit (e.g. lose 10 pounds, stop smoking)

Biomedical Portion - The segment of the interview which focuses on disease and its symptoms, chief presenting complaint, treatment/management options, examination, etc.

Chapters of Story – one chapter is a distinct event, a second one is related but clearly different content, etc.

Commitment – An explicit statement by the patient to attempt a particular behavior or course of action.

Course of Action – A plan for achieving desired outcomes.

Jargon – Technical language.

Mind-body link – how disease and personal/emotional life link together

***NAMES Feelings** – Explicitly naming an emotional response exhibited or implied by the patient's behaviors or comments. (e.g. "You seem sad.")

Narcotics – Percocet, morphine, vicodin, oxycodone, hydrocodone, methadone, dilaudid, narco, Lortab, fentanyl

Negotiate – Mutual decision-making. (e.g. regarding treatment)

Nonverbal Facilitators – Nonverbal cues which encourage the patient to continue talking.

Pace – The speed at which the interview moves.

Patient Comfort – Physical and emotional ease.

Patient Cues - Verbal and nonverbal signs exhibited by the patient during the interaction.

Patient Understanding – The degree to which the patient comprehends information provided by the physician.

Physical Therapy – a formal referral to a physical therapist where exercises are performed

Psychosocial Cues – Information (verbal or nonverbal) provided by the patient that indicates his/her psychological state or social circumstances. (e.g. "I'm really worried about having surgery." "I was telling my husband the other day..." "People at my church have been very supportive of me." Crying, fidgeting)

Psychosocial Portion – The segment of the interview that focuses on gathering psychosocial information about the patient. Psychosocial data includes information about the emotional and psychological state of the patient as well as contextual information such as personal background, living arrangements, information about family and friends, daily activities, etc.

***RESPECT** – Statements providing praise or reinforcement for the patient's ability to cope with various circumstances. (e.g. "You've been handling this very well." "I'm impressed with how well you've been holding up.")

Responds to Feelings – Responding either verbally or nonverbally to the patient's implicit or explicit expression of emotion. ("I'm sorry." "It's OK." Reaching out physically, handing someone a tissue.)

***SUPPORT** – Any indication that the patient is not alone and is not going to be abandoned; also providing any material or social support. (e.g. "Together, I think we can figure this out." "That's what I'm here for." "Would you like me to call social services?"

Tracking – Following the patient's lead: not interrupting the patient or changing the subject presented by the patient.

Transition – Smoothly moving from the psychosocial portion to the biomedical portion of the interview. This ideally includes summarizing information discussed to this point, giving the patient the opportunity to give additional information, and previewing the shift to biomedical topics.

***UNDERSTANDING** – Any acknowledgement that the patient's responses to his/her experiences are legitimate. (e.g. "I can understand that you are upset." "Most people in your shoes would feel anxious too.")

*<u>NURS</u>

EXAMPLES OF EMOTIONS/FEELINGS

Many people use the words "feelings" and "emotions" interchangeably, as we do throughout the text, but there are important distinctions and several theories drawn from more than a century and a half of research, beginning with Charles Darwin. To summarize, feelings are cognitive and internal and emotions are "expressed" and are visible.

Paul Ekman has described fifteen distinguishable emotions (Ekman, 1999):

Amusement Anger Contempt Contentment Disgust Embarrassment Excitement Fear Guilt Pride in achievement Relief Sadness/distress Satisfaction Sensory pleasure Shame

These emotions are all visible and discernable from one another by facial expression and other non-vocal cues.

Feelings are the conscious, subjective experience of emotion, and are more nuanced and numerous. Examples of some feelings are listed below.

This dichotomous approach to feelings and emotions may be useful to you as a beginning student because it gives you visible sign posts for emotion that you can observe in patients and see yourself exhibit on video recordings. You can then process the feelings your observations trigger in you, thereby increasing your personal awareness and improving your mindful practice.

Appendix L

Tables

Table 1

Pathway for the End of the Interview (Fortin et al., 2012)

Pathway for the End of the Interview
Throughout the end of the interview elicit the patient's perspective and ask permission before giving advice or unexpected news. Include some or all of the following as you deem appropriate.
1. Orient patient to close of visit
2. Summarize the information that you gathered a) from the interview and b) the physical examination.
3. With permission, explain your thoughts about diagnosis, in plain language.
4. With permission, offer suggestions as to tests and treatment.
5. Address any counseling issues that may be present.
6. Collaboratively develop a plan for any tests, treatment, self-care, and follow-up that may be appropriate.
7. Give instructions and confirm understanding and agreement.
8. Ask if there are any further questions or concerns
9. Acknowledge and support patient before saying goodbye

<u>Grant</u>	<u>Grant</u>	Resid calendar	<u>Pre</u>	Post	Pilot-	Pilot-	Pilot-
Year	<u>dates</u>	(resident class)			<u>Y1</u>	<u>Y2</u>	<u>Y3</u>
1	9/11→9/12	7/11 → 7/12	+/-	0	+	+	+
		(2014) (2012)	Α		(2014)	(2013)	(2012)
2	9/12→9/13	7/12 → 7/13	+	0			+
		(2015) (2013)	В				(2013)
3	9/13→9/14	7/13 → 7/14	+	+/-			+
		(2016) (2014)	С	Α			(2014)
4	9/14→9/15	7/14 → 7/15	+	+			
		(2017) (2015)	D	В			
5	9/15→9/16	7/15 → 7/16	+/-	+			
		(2018) (2016)	Ε	С			
6 (no	9/16→9/17	7/16→7/17	DEL	+			
cost				D			
ext.)							
				+/-			
				(pgy2)			
				Ε			

Resident Training Level by Grant Year

1. Pre-post links: **B-B; C-C; D-D.** Incomplete pre-post links: *A-A; E-E*

- 2. First data collection point May of Year One where all three years completed measures. Thereafter, data obtained pre/post for only PGY-1 and PGY-3 residents. Thus, Y1 pre data obtained in May 2012 after PS rotation [but also have had mental health lectures and clinical experiences in some clinics]; Y3 post data on same group (A) has had CPC for just one year = opportunity to compare impact of just one CPC without either PS rotation of second year of CPC for class of 2014. This is not a good test of hypothesis and better as pilot.
 - PS Rotation running for all five years of grant
 - CPC training began 7/13 and continues to end of grant: 2014 class will have had only one year CPC; later years have had both
- 3. Y6 is no-cost extension, carrying over any available funds

Demographic Information Resident Questionnaire

Demographic Information (DI)

<u>Instructions</u>. The following questions ask you to provide some information about yourself. These questions are for statistical purposes only and your responses are completely anonymous and confidential.

1. What is your year of birth? 19 (NS)									
2. PLEASE INDICATE YOUR GENDER:							() Male (NS)		
3. PLEASE INDICATE YOUR RACE (If you consider yourself to be multiracial , please check all that apply):	[] AFRICAN -AMERICAN (NS)	[] AMERICAN INDIAN/ALASK A NATIVE (NS)	[] ASIA N (NS)	[] HISPANIC/LATIN O (NON-WHITE) (NS)	[] NATIVE HAWAIIN/PACIFI C ISLANDER (NS)	[] WHITE (NS)	[] OTHE R (NS)		
4. WHAT IS YOUR CURRENT MARITAL STATUS? () MARRIE () NOT D (NS) MARRIED (NS)									
5. Is English	your native la	anguage? If no, p	lease indic	cate your native langu	age. (NS)				
6. Where we	ere you born (City/ State/ Cou	ntry)? (NS)					
7. If you we	re not born in	the United State	es, how old	d were you when you	moved to this cour	itry? (NS)			
8. Where did	l you attend r	medical school? (NS)						
9. Do you intend to complete a fellowship? If so, in which sub-specialty? (NS)									
10. What is your mother's occupation? (NS)									
11. What is your father's occupation? (NS)									

Efficacy Questionnaire

For each statement below, circle the number that best represents your degree of **confidence** with \underline{every} patient encounter.

I am <u>c</u>	onfident that I can:	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1.	Indicate the time available for the interview	1	2	3	4	5
2.	Obtain a list of all issues the patient wants to discuss	1	2	3	4	5
3.	Use open-ended skills to obtain a description of the patient's physical symptoms	1	2	3	4	5
4.	Use open-ended skills to develop a general personal context of the physical symptoms	1	2	3	4	5
5.	Use emotion-seeking skills to develop an emotional focus	1	2	3	4	5
6.	Respond to emotion by naming, understanding, respecting, and supporting it	1	2	3	4	5
7.	Recognize when my own negative emotional reactions to the patient occur	1	2	3	4	5
8.	Give bad news, such as a cancer or AIDS diagnosis, to a patient	1	2	3	4	5
9.	Determine if a patient is ready to change an adverse health habit, such as smoking	1	2	3	4	5
10.	Inform and motivate patients to change adverse health habits, such as smoking	1	2	3	4	5
11.	Conduct a complete diagnostic history in a psychiatric patient	1	2	3	4	5
12.	Diagnose a patient as somatization (unexplained symptoms)	1	2	3	4	5
13.	Distinguish unipolar from bipolar depression	1	2	3	4	5
14.	Initiate effective treatment in a newly diagnosed patient with bipolar depression	1	2	3	4	5
15.	Diagnose and manage a suicidal patient	1	2	3	4	5
16.	Treat a patient with disabling chronic pain where there is no underlying disease explanation for the pain	1	2	3	4	5
17.	Identify misuse of alcohol and prescription opiates	1	2	3	4	5
18.	Treat misuse of prescription opiates	1	2	3	4	5
19.	Know and can utilize community resources, including mental health referral, for managing patients with mental health problems	1	2	3	4	5
20.	Work effectively with nurses and other caretakers	1	2	3	4	5

Interview Satisfaction Questionnaire

*Indicates item was used for patient satisfaction scale

Plea	se indicate how much you agree or disagree with each ement regarding your visit with this doctor	Strongly disagree	Somewhat disagree	Undecided	Somewhat agree	Strongly agree
1.	I told the doctor everything that was on my mind	1	2	3	4	5
2.	*I was able to tell the doctor what was bothering me	1	2	3	4	5
3.	I felt understood by the doctor	1	2	3	4	5
4.	The doctor made me feel rushed	1	2	3	4	5
5.	*I had confidence in the doctor's abilities	1	2	3	4	5
б.	The doctor made me feel comfortable enough to tell everything that was bothering me	1	2	3	4	5
7.	*The doctor made it easy to understand what, if anything, was wrong with me	1	2	3	4	5
8.	*The doctor gave me undivided attention	1	2	3	4	5
9.	I got to ask the doctor all the questions I wanted	1	2	3	4	5
10.	*The doctor spent the right amount of time with me	1	2	3	4	5
11.	*I was pleased with my visit with the doctor	1	2	3	4	5
12.	*The doctor always seemed to know what he/she was doing	1	2	3	4	5
13.	*I have a good deal of confidence in the doctor	1	2	3	4	5
14.	The doctor really cared about me as a person	1	2	3	4	5
15.	The doctor acted like I didn't have any feelings	1	2	3	4	5
16.	*The doctor treated me with a great deal of respect	1	2	3	4	5
17.	The doctor "talked down" to me	1	2	3	4	5
18.	The doctor was kind and considerate of my feelings	1	2	3	4	5
19.	*The doctor tried to make me feel relaxed	1	2	3	4	5
20.	The doctor relieved my worries about medical conditions	1	2	3	4	5
21.	*The doctor made it easy for me to ask questions	1	2	3	4	5
22.	The doctor listened to me closely	1	2	3	4	5
23.	I trust the doctor	1	2	3	4	5
24.	The doctor did not spend enough time with me	1	2	3	4	5
25.	*Overall, I am satisfied with the doctor	1	2	3	4	5

Communication Assessment Tool (Makoul et al., 2007)

Communication with patients is a very important part of quality medical care. We would like to know how you feel about the way your doctor communicated with you. Your answers are completely confidential, so please be as open and honest as you can. Thank you very much.

1	2	3	4	5	
poor	fair	good	very good	excellent	

Please use this scale to rate the way the doctor communicated with you. Circle your answer for each item below.

e doctor	poor			3	excellent
Greeted me in a way that made me feel comfortable	1	2	3	4	5
Treated me with respect	1	2	3	4	5
Showed interest in my ideas about my health	1	2	3	4	5
Understood my main health concerns	1	2	3	4	5
Paid attention to me (looked at me, listened carefully)	1	2	3	4	5
Let me talk without interruptions	1	2	3	4	5
Gave me as much information as I wanted	1	2	3	4	5
Talked in terms I could understand	1	2	3	4	5
Checked to be sure I understood everything	1	2	3	4	5
Encouraged me to ask questions	1	2	3	4	5
Involved me in decisions as much as I wanted	1	2	3	4	5
Discussed next steps, including any follow-up plans	1	2	3	4	5
Showed care and concern	1	2	3	4	5
Spent the right amount of time with me	1	2	3	4	5
e doctor's staff	poor			3	excellent
Treated me with respect	1	2	3	4	5
	<u>e doctor</u> Greeted me in a way that made me feel comfortable Treated me with respect Showed interest in my ideas about my health Understood my main health concerns Paid attention to me (looked at me, listened carefully) Let me talk without interruptions Gave me as much information as I wanted Talked in terms I could understand Checked to be sure I understood everything Encouraged me to ask questions Involved me in decisions as much as I wanted Discussed next steps, including any follow-up plans Showed care and concern Spent the right amount of time with me <u>e doctor's staff</u> Treated me with respect	e doctorpeerGreeted me in a way that made me feel comfortable1Treated me with respect1Showed interest in my ideas about my health1Understood my main health concerns1Paid attention to me (looked at me, listened carefully)1Let me talk without interruptions1Gave me as much information as I wanted1Talked in terms I could understand1Checked to be sure I understood everything1Encouraged me to ask questions1Involved me in decisions as much as I wanted1Discussed next steps, including any follow-up plans1Showed care and concern1Spent the right amount of time with me1e doctor's staffpeorTreated me with respect1	e doctorpoorGreeted me in a way that made me feel comfortable12Treated me with respect12Showed interest in my ideas about my health12Understood my main health concerns12Paid attention to me (looked at me, listened carefully)12Let me talk without interruptions12Gave me as much information as I wanted12Talked in terms I could understand12Checked to be sure I understood everything12Involved me in decisions as much as I wanted12Discussed next steps, including any follow-up plans12Showed care and concern12Spent the right amount of time with me12e doctor's staffpoorreorTreated me with respect12	e doctorpoorGreeted me in a way that made me feel comfortable123Treated me with respect123Showed interest in my ideas about my health123Understood my main health concerns123Paid attention to me (looked at me, listened carefully)123Let me talk without interruptions123Gave me as much information as I wanted123Talked in terms I could understand123Checked to be sure I understood everything123Involved me in decisions as much as I wanted123Discussed next steps, including any follow-up plans123Showed care and concern123Spent the right amount of time with me123e doctor's staffpoorTreated me with respect123	e doctorpoorGreeted me in a way that made me feel comfortable1234Treated me with respect1234Showed interest in my ideas about my health1234Understood my main health concerns1234Paid attention to me (looked at me, listened carefully)1234Let me talk without interruptions1234Gave me as much information as I wanted1234Talked in terms I could understand1234Checked to be sure I understood everything1234Involved me in decisions as much as I wanted1234Discussed next steps, including any follow-up plans1234Showed care and concern1234Spent the right amount of time with me1234e doctor's staffpoor1234

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Percent of Agreement for Each Item in Smith's Patient-Centered Interview Coding Scheme

#	Item	Percent of Agreement
	Setting the Agenda (Kappa = .941)	
1	Uses own and patient's last name or other expressed preference	100
2	Indicates time available	100
3	Obtains agenda and inquires for additional items	91.7
	Physical Story (Kappa = 1.00)	
4	The resident starts open-endedly focusing on physical agenda item	100
5	Addresses only physical issues volunteered by the patient	100
	Personal Story (Percent of Agreement = 99.3%)	
6	Keeps patient focused open-endedly on personal story(ies) to elaborate them	100
7	Addresses only personal topics volunteered by the patient	100
8	Encourages personal information open-endedly when patients do not volunteer it and patient remains focused on the physical story	100
9	Uses echoing to expand understanding of personal story	96.0
10	Uses requests to expand understanding of personal story	100
11	Uses summarizing to expand understanding of personal story	100
	Emotional Story (Kappa = .86)	
12	Keeps patient focused open-endedly on emotional story(ies) to elaborate them	100
13	Addresses only emotional topics volunteered by the patient	100
14	Inquires about emotions by using "how does that make you feel?" question	100
15	Inquires about emotions by using other emotion seeking question	96.0
16	Uses echoing to expand understanding of emotional story	100
17	Uses requests to expand understanding of emotional story	96.0
18	Uses summarizing to expand understanding of emotional story	100
19	Uses "naming" statement in response to expression of emotion	100
20	Uses specific "I understand" statement in response to expression of emotion	96.0
21	Uses other understanding statements in response to expression of emotion	96.0
22	Uses "praise" statement in response to expression of emotion	92.0
23	Uses "acknowledge plight" statement in response to expression of emotion	84.0
24	Uses "direct support [from interviewer]" statement in response to expression of emotion	96.0
25	Uses "indirect support [from others]" statement in response to expression of emotion	92.0
26	Uses "joining language" that indicates support to the patient in response to expression of emotion	92.0
	Indirect Patient-Centered Skills (Kappa = 1.00)	
27	Uses "impact on self" statement	100
28	Uses "impact on others" statement	100
29	Uses "beliefs/attributions" statement	100
30	Uses "self-disclosure" statement	100
	General Patient-Centered Skills (Kappa = .868)	
31	Indicates change in direction of questioning at end of interview to disease focus	100
32	Interruptions are appropriate or nonexistent	100
33	Resident dominates content and direction of interview	84.0

Confirmatory Factor Analysis for the Patient-Centered Interviewing Self-Efficacy Variable Including Factor Loadings, Means, and Standard Deviations

#		Factor		
	Item	Loading	M	SD
1	Indicate the time available for the interview	.60	4.11	.55
2	Obtain a list of all issues the patient wants to discuss	.53	4.21	.59
3	Use open-ended skills to develop a general personal context of the physical symptoms	.75	4.15	.60
4	Use emotion-seeking skills to develop an emotional focus	.79	4.06	.71
5	Respond to emotion by naming, understanding, respecting, and supporting it	.65	4.09	.62

Note: Patient-Centered Interviewing Self-Efficacy scale reliability ($\alpha = .80$).

Confirmatory Factor Analysis for the Data Gathering and Relationship Building (Smith) Case Patient Satisfaction Items Including Factor Loadings, Means, Standard Deviations, and Scale Reliabilities

		Final Factor		
#	Item	Loading	М	SD
	Factor 1: Opportunity to Disclose Concerns ($\alpha = .813$)	¥		
2	I was able to tell the doctor what was bothering me.	.79	4.12	1.09
10	The doctor spent the right amount of time with me.	.86	3.65	1.30
21	The doctor made it easy for me to ask questions.	.68	4.11	.99
	Factor 2: Physician's Empathy ($\alpha = 745$)			
8	The doctor gave me undivided attention.	.55	4.75	.45
16	The doctor treated me with a great deal of respect.	.77	4.43	.85
19	The doctor tried to make me feel relaxed.	.81	3.74	1.12
	Factor 3: Confidence in Physician's Abilities ($\alpha = .945$)			
5	I had confidence in the doctor's abilities.	.85	4.18	.97
12	The doctor always seemed to know what he/she was doing.	.94	4.12	1.00
13	I have a good deal of confidence in the doctor.	.98	4.03	1.00
	Factor 4: General Satisfaction ($\alpha = .826$)			
7	The doctor made it easy to understand what, if anything, was wrong with me.	.56	3.98	1.17
11	I was pleased with my visit with the doctor.	.86	3.83	1.15
25	Overall, I am satisfied with the doctor.	.96	3.91	1.10

Secord Order Unidimensional Factor Analysis for the ISQ Including Factor Loadings, Means, and Standard Deviations

	Factor		
Item	Loading	М	SD
Factor 1: Opportunity to Disclose Concerns	.79	3.81	1.01
Factor 2: Physician's Empathy	.64	4.22	.69
Factor 3: Confidence in Physician's Abilities	.85	4.00	.99
Factor 4: General Satisfaction	.97	3.80	1.02
$N_{\rm c}$ ($S_{\rm c}$ = $s_{\rm c}$ d $s_{\rm c}$ d $s_{\rm c}$ = $s_{\rm c}$ d $s_{\rm c}$ = 1 s)		

Note: Second order unidimensional scale reliability ($\alpha = .89$).

Descriptive Statistics of all Patient-Centered Outcome Variables by Condition

				Range		
Variables by Condition	п	M	SD	Potential	Actual	
Overall PC Skills	136	4.99	3.95	0-33	0-22	
Pretest Intervention	41	3.75	2.18	0-33	1-10	
Posttest Intervention	43	8.12	4.92	0-33	1-22	
Pretest Condition	31	3.42	2.32	0-33	0-9	
Posttest Condition	21	3.29	2.30	0-33	0-9	
Overall Provider Knowledge	136	.46	.25	0-3	0-1	
Pretest Intervention	41	.43	.25	0-3	0-1.0	
Posttest Intervention	43	.38	.24	0-3	0-1.0	
Pretest Condition	31	.53	.27	0-3	.33-1.0	
Posttest Condition	20	.58	.18	0-3	.33-1.0	
Overall Provider Self-Efficacy	136	4.12	.46	1-5	3.0-5.0	
Pretest Intervention	41	4.02	.46	1-5	3.4-5.0	
Posttest Intervention	43	4.17	.47	1-5	3.0-5.0	
Pretest Condition	41	4.11	.46	1-5	3.0-5.0	
Posttest Condition	20	4.21	.41	1-5	3.6-5.0	
Overall Patient Satisfaction	136	4.06	.80	1-5	1.92-5.0	
Pretest Intervention	41	4.09	.81	1-5	1.92-5.0	
Posttest Intervention	43	3.97	.84	1-5	2.50-5.0	
Pretest Condition	31	4.12	.83	1-5	2.42-5.0	
Posttest Condition	21	4.10	.68	1-5	2.75-5.0	

Correlations among All Variables

	1	2	3	1	5
1 Physician Training	1 00	54			08
2. Physician PC Skills	.54**	1.00	22	.07	.00
3. Physician Knowledge	22*	11	1.00	07	.18
4. Physician Efficacy	.08	.13	07	1.00	.02
5. Patient Satisfaction	08	.11	.17*	.02	1.00

Note: Correlations corrected for attenuation due to measurement error in upper quadrant. *Correlation significant at the p < .05 level. **Correlation significant at the p < .001 level.

Correlations among the Separate Patient-Centered Skills and Patient Satisfaction Ratings

	1	2	3	4	5	6	7
1. Agenda Setting	1.00						
2. Physical Story	.41**	1.00					
3. Personal Story	.31**	.27**	1.00				
4. Emotional Story	.23**	.14	.17	1.00			
5. Indirect Patient Centered Skills	.21*	.19*	.3**	.45**	1.00		
6. General Patient-Centered Skills	.35**	.16	.59**	.43**	.37**	1.00	
7. Patient Satisfaction	.13	02	03	.12	007	.05	1.00

*Correlation significant at the p < .05 level. **Correlation significant at the p < .001 level.

Descriptive Statistics of Patient-Centered Variables by Condition

			Range		
Patient-Centered Variables by Condition	М	SD	Potential	Actual	
Setting the Agenda					
Pretest Intervention	1.07	.61	0-3	0-3	
Posttest Intervention	1.77	.99	0-3	0-3	
Pretest Control	.71	.53	0-3	0-2	
Posttest Control	.90	.44	0-3	0-2	
Physical Story					
Pretest Intervention	.41	.50	0-2	0-2	
Posttest Intervention	.84	.48	0-2	0-2	
Pretest Control	.35	.49	0-2	0-1	
Posttest Control	.24	.44	0-2	0-1	
Personal Story					
Pretest Intervention	.15	.36	0-6	0-1	
Posttest Intervention	.47	1.03	0-6	0-5	
Pretest Control	.19	.60	0-6	0-3	
Posttest Control	.19	.51	0-6	0-2	
Emotional Story					
Pretest Intervention	1.83	1.63	0-15	0-6	
Posttest Intervention	3.77	3.15	0-15	0-11	
Pretest Control	1.81	2.1	0-15	0-7	
Posttest Control	1.81	1.94	0-15	0-7	
Indirect PC skills					
Pretest Intervention	.18	.45	0-4	0-2	
Posttest Intervention	.56	.63	0-4	0-2	
Pretest Control	.16	.37	0-4	0-1	
Posttest Control	0	0	0-4	0-0	
General PC Skills					
Pretest Intervention	.13	.33	0-3	0-1	
Posttest Intervention	.44	.63	0-3	0-2	
Pretest Control	.16	.37	0-3	0-1	
Posttest Control	.14	.36	0-3	0-1	

Appendix M

Figures

Figure 1

Integrated Medical Interviewing

(Fortin et al., 2012)



Key:

PTC – Patient-Centered CC – Chief Complaint/Concern HPI – History of Present Illness OAP – Other Active Problems PMH – Past Medical History SH – Social History FH – Family History ROS – Review of Symptoms Figure 2

Patient-Centered Core Skills (Fortin et al., 2012)



A Proposed Patient-Centered Path Model to Test

The model proposes that patient-centered training will lead to an increase in patient-centered skills. A provider exhibiting increased patient-centered skills will have higher patient-centered knowledge and higher self-efficacy. Similarly, patients of providers exhibiting patient-centered skills will be more satisfied.



Figure 4

Path Model of the PC Training Process

This path model contains path coefficients and path coefficients corrected for attenuation due to error of measurement in parentheses.



Figure 5

Updated Path Model of the PC Training Process

This path model contains path coefficients and path coefficients corrected for attenuation due to error of measurement in parentheses.



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