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The Relationship of Medical Provider Humility, Empathy, and Competency on Patient Satisfaction

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The Relationship of Medical Provider Humility, Empathy, and Competency on Patient Satisfaction

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Abstract

Previous research has shown that provider humility, empathy, and competency all impact patient satisfaction. However, the research lacks in examining how all three elements, when examined together, impact patient care. This study surveyed patients and providers from two primary care clinics to examine the relationship between provider humility, empathy, and perceived competency and patient satisfaction. The brief HEXACO Inventory humility measure, the Jefferson Scale of Physician Empathy, and a single question to identify providers perceived competence were used in this study. It was hypothesized that providers with the highest levels of all three characteristics (humility, empathy, and perceived competence) would have the highest patient satisfaction scores as well as the highest perceived competence ratings. Overall, our data did not support this hypothesis, due to the limited range of patient satisfactions scores. Therefore, we were unable to find significant results confirming our hypothesis.

*Keywords***:** provider humility; provider empathy; provider competency; patient satisfaction

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The Relationship of Medical Provider Humility, Empathy, and Competency on Patient Satisfaction

Chapter 1

Over the past ten years, there has been a surge in the literature exploring the positive psychology trait of humility. With new ways of measuring humility (Wright et al., 2017), new understandings of humility in action (Huynh & Dicke-Bohmann, 2020), and clarifications being made between general humility, intellectual humility (Davis et al., 2016; Barrett, 2017) or even political humility (Hodge et al., 2021) psychologists are providing compelling reasons to consider the positive impacts of this prosocial trait. Specifically, within the medical field, authors have begun to urge providers (doctors, nurses, physicians' assistants, and medical staff) to understand the importance of humility in the care they provide (Crigger & Godfrey, 2010; Garchar, 2012). Alongside the compelling evidence for provider humility, provider empathy also has been found to be a factor necessary to providing satisfactory patient care (Spiro, 2009).

Although humility and empathy could be considered related traits, each has unique characteristics that impacts how individuals interact with others. Very limited research has examined these two prosocial traits' combined effects. One study suggests that when an individual possess high levels of humility and empathy together, the traits' combined effects work to accentuate each other's prosocial qualities (Krumrei-Mancuso, 2017).

When examining how these traits may impact patient-provider interactions in the medical field, it is also important to consider provider competence. The early years of patient satisfaction research incorporated provider competence with other prosocial traits to see which combination was necessary to achieve best patient satisfaction (Ben-Sira, 1976; Hulka et al., 1970). These studies produced various results; however, no study has yet examined humility, empathy, and

provider competence on patient satisfaction. Therefore, the purpose of this study is to examine how medical provider humility, empathy, and competency are related to patient satisfaction.

Medical Setting Patient Satisfaction

History has shown that well executed medical expertise it is not the only factor related to patient satisfaction in the medical setting (DiMatteo & Hays, 1980). When patients enter a hospital, they are not only bringing their medical issues, but they also carry with them trauma, mental health difficulties, social stressors, and fears of the unknown. In fact, studies have shown that as many as 70% of primary care visits are related to behavioral health needs, not strictly medical issues (Fries et al., 1993). Although hospitals are seen as places for healing, finding hope, and recovery (Skinner et al., 2018), one poor interpersonal interaction with a provider can send a patient away very dissatisfied with their care; despite the quality of medical expertise, they were provided. Dr. Gregory House, the lead character in an American medical tv drama series, described this paradox stating, “treating illnesses is why [we] became doctors; treating patients is what makes most doctors miserable” (Ruberton et al., 2016, p. 1138). The media and culture have highlighted physician characteristics of assertiveness, arrogance, and authoritarianism to be positive and necessary to be a good physician. However, given what we know of human connection and care, traits such as humility and empathy are far more necessary for individuals to feel cared for than the traits media and culture ascribe to physicians (Lavelock et al., 2017; Overholser, 2007). Therefore, understanding physician’s humility and empathy may help us better understand what it takes to achieve patient satisfaction.

What is Humility?

Humility research has yielded a variety of definitions that work to concisely define this multifaceted trait. One simple definition provided by Dr. McMinn (2017) in his book *The*

Science of Virtue is "[a] reasonably accurate view of oneself, a concern for others, and an openness to various ideas" (p. 95). Dr. Joshua Hook has also been one of the most recent researchers to further the investigation on humility and has brought some important nuances to understanding the trait. He expressed two key components to humility. "[The] first part is more internal and involves an accurate view of the self, including awareness and acknowledgment of one's limitations. The second part is more interpersonal and involves being other-oriented rather than self-focused" (Aten, 2019). This explanation furthers our understanding of humility's multidimensional characteristics. Both intrapersonal (emphasizing personal) and interpersonal (emphasizing relational) components of humility are necessary to fully express the trait (Huynh & Dicke-Bohmann, 2020; Chancellor & Lyubomirsky, 2013). The literature also suggests that there are five hallmarks to humility that give further clarity to the already stated definition. The five hallmarks are: (a) stable and accepting self-concept (secure, accepting identity), (b) an ability to accurately manage self-relevant information (freedom from distortion), (c) remaining open to discovering new insights about oneself and the world (openness to new information), (d) a lack of self-focus and increased awareness of and appreciation for others (other-focused), and (e) seeing others as having the same intrinsic value and importance as oneself (egalitarian beliefs; Chancellor & Lyubomirsky, 2013). These five components make up what is necessary for an individual to be considered truly humble.

Studies examining humility's effect on individuals' interactions with others have found that, "humble individuals are more likely to help a peer in need, be more generous with time and money, and are more forgiving and grateful" (Ruberton et al., 2016, p. 1139; Davis et al., 2013). Each result mentioned above, if applied to provider-patient interactions could positively impact the medical providers provide.

Provider Humility

As researchers have applied humility's already stated definition to providers in the medical setting, they have found it important to add the specific caveat of "caring for the sick" to the definition. One such researcher implemented this by declaring that provider humility is "unflinching self-awareness; empathetic openness to others; and a keen appreciation of, and gratitude for, the privilege of caring for sick persons" (Coulehan, 2011, p. 208). Studies have begun to observe the positive impact that physician humility has on their effectiveness in communication and on the patient's subjective health. Ruberton et al. (2016) research indicated that providers with the highest level of humility were also rated by their patients as the providers with the most effective care provided. Then as a follow-up study in 2020, Ho Phi Huynh and Amy Dicke-Bohmann examined the relationship between clinician humility and patient outcomes. They too, found that clinician humility had a significant impact on their patients, increasing their patient's satisfaction, trust, and self-reporting. Therefore, the literature seems to suggest that provider's humility can directly impact patients' overall satisfaction with care.

In addition, when considering the patient's experience in the medical setting, Caroline Lavelock et al., (2017) pointed out that, "humility [is] a potentially necessary component for any kind of personal transformation, particularly in response to an intervention, wherein one must abandon pride and embrace help from another person or resource" (p. 287). In order for patients to receive care from providers, they must first demonstrate humility in the very act of seeking help. To receive best care, patients must set aside their pride, be vulnerable, and admit their pain or weakness. If a provider responds to this humble act by dismissing the patient's concerns or acting with harshness, then it is likely the patient will not be satisfied with their overall care.

Historical View of Humility

Historically, researchers have discovered that humility may have been misunderstood or improperly defined. Weidman et al. (2018) conducted a literature review on humility and summarized that research previously proposed, "humility may in fact have two dimensions: one characterized by a lack of egotism about one's successes and linked to prosocial and affiliative tendencies and another involving a negative self-view and linked to withdrawal oriented behavioral tendencies" (p. 155). This review identifies previous misunderstandings of humility including a negative self-view rather than a proper regard for self. This would inform why individuals, who were previously seen as "humble," may also have been seen withdrawing from others and acting in self-disparaging ways. As the research has continued to define humility more properly, it is no longer a concern for individuals to be weary of being humble. In fact, the research has continuously provided examples of how humility positively impacts an individual's interactions with others (Van Tongeren et al., 2019; Davis et al., 2013).

When examining humility outside of provider humility, the literature suggests that intellectual humility has significant prosocial traits as well. In a study by Krumrei-Mancuso (2017), empathy and gratitude acted as mediators between intellectual humility and prosocial values. Thus, it may be that empathy alongside humility accentuates humility's positive impact. When individuals express both traits, empathy and humility, they tend to be characterized as prosocial and positive (Weidman et al., 2018).

What is Empathy?

Taking a broader look at human relationships and care, humility and empathy are both important characteristics that need to occur in order for individuals to feel cared for. Carl Rogers, the father of Client Centered Therapy, depicted three necessary components for successful

personality change and strong therapeutic alliance: empathy, unconditional positive regard, and congruence. As Rogers described qualities of a good clinician, he argued that it is less about knowledge and more about presence (Overholser, 2007). He even went as far as to say that "empathy is in itself a healing agent. It is one of the most potent aspects of therapy" (Rogers, 1992, p. 829).

In order to properly understand what psychologists mean by empathy, one could rely on Carl Rogers' experiential depiction of the trait. Roger suggested that "accurate empathic understanding means that the therapist is completely at home in the universe of the client. It is a moment-to-moment sensitivity in the here and now, in the immediate present. It is a sensing of the client's inner world of private personal meanings as if it were your own, while never forgetting that it is not yours" (Rogers, 1966, p. 187). Roger's depiction highlights a few different components of empathy. He depicts a cognitive component and an emotional/feeling component. Most research that explores empathy has had difficulty capturing both components of the trait. Specifically, when researching empathy in health professionals, researchers have struggled to find psychometrically sound and sensitive measure to define and capture the essence of the trait (Hojat et al., 2018). Historically, the best definitions highlight three distinct dimensions: (a) cognitive (understanding the inner experience and perspective of another), (b) feeling (observer's emotional response to the other's experience), and (c) acting (being able to communicate this understanding to the other) (Sulzer et al., 2016). Sulzer et al. (2016) successfully captured all three components in their explanation of empathy stating, "[Empathy is] the ability to listen to a patient, understand their perspective, sympathize with their experience, and express understanding, respect, and support" (p. 305). Their definition

emphasizes the thinking, feeling, and acting aspects of empathy and captures the vast majority of this prosocial trait's benefits.

Hojat and colleagues (2002) not only recognized the importance of physician empathy in patient care, but they became passionate about developing a psychometrically sound instrument that captured both "face" and "content" validity of empathy in health care professional. In 2002, the Jefferson Scale of Empathy was developed to measure content-specific and context-relevant empathy within the field. Therefore, for the purpose of this study and in alignment with the Jefferson Scale of Empathy, we will be defining physician empathy as, "a cognitive attribute that involves an ability to understand the patient's pain, suffering, and perspective combined with a capability to communicate this understanding and an intention to help" (Fields et al., 2011). This measure accurately captures health care professionals' empathy embedded within the health care context.

Provider Empathy

The past 40 years of literature surrounding physician empathy has shown that patient satisfaction with health care services and compliance with medical regimes are directly related to physician's empathetic communicative behaviors (DiMatteo & Hays, 1980; DiMatteo et al., 1980; Hojat et al., 2002; Linn & Wilson, 1980; Olson, 1995; Pelz, 1982; Pollak et al., 2011). One MD went as far as to say, "empathy is the foundation of patient care, and it should frame the skills of the profession" (Spiro, 2009, p. 1177). In a recent article endorsed by the Dr. K C Chaudhuri Foundation, all graduate and postgraduate medical and nursing students were urged to attend educational programs focused on communication and prosocial traits to learn how to care for their patients by not just focusing on "what to tell [their patients]" but "how to tell them" (Singh, 2016, p. 34). They also noted that "most complaints of dissatisfaction and

mismanagement originate from the lack of communication or because of abrasive, cold or calloused attitudes of doctors or members of the health care team" (Singh, 2016, p. 33). Medical educational systems have started to implement trainings that highlight empathy to help emerging physicians develop skills for their inevitable need to provide empathetic care.

Provider Competency

Provider competency and patient satisfaction has been an area of study for many decades. Researchers identified the importance of provider competence in patient satisfaction early on; however, the research also demonstrated that provider competence was more than just medical skills provided to patients. In the early years, researchers often explored patient satisfaction in relation to provider competency and communication styles. In 1980, DiMatteo et al. claimed that both provider competency and a provider's ability to read and communicate with nonverbals were the most important components related to patient satisfaction. Their research found that when patients perceived their providers as competent and had the ability to communicate well, patient anxiety was lowered (p. 377). This led more researchers to realize provider communication style was not just an addition to provider competency, it was a necessity. Therefore, a proper definition of provider competency includes both components, the technical quality or instrumental aspect of care and the provider's ability to communicate or exchange information about the skills they provide (DiMatteo et. al., 1980; Azizam & Shamsuddin, 2015).

Since patients know very little about medical procedures and protocols, they rely solely on their quick perception of the provider to determine whether or not they are competent (Fiske et al., 1999). Patient's perceptions include three distinct aspects. First, they evaluate the provider's intentions. Next, patients assess various provider qualities associated with competence, and then the patient evaluates the provider's ability to effectively communicate

(Azizam & Shamsuddin, 2015). Fiske et al. (2006), proposed the idea that patients first get a sense of a provider's "intentions" and then rate their provider's competence by answering the question, "does this person have the ability to enact those positive or negative intentions?" (p. 79). This is done alongside evaluating qualities like intelligence, power, assertiveness, ambition, efficacy, and skill (vs. inefficiency, indecisiveness, passivity, and laziness) (Howe et al., 2019). Both evaluations of perceived provider competence occur within the first few seconds/minutes of the patient-provider interaction. This significantly affects the patient's perception of their entire medical treatment experience. As the patient establishes their idea of whether the provider is competent or not, they also begin to evaluate the effectiveness of their provider's communication. Azizam and Shamsuddin (2015), discovered that a provider's skill to exchange information helps patients better understand and manage their illness, maintain their health, and follow their provider's instructions such as complying with their medications. Their research showed that a provider's ability to exchange information is one of the most specific ways that patients determine their provider competence which directly impacts patient's satisfaction.

Finally, Howe et al. (2019) examined the critical role of competence and warmth in patient-provider interactions. They discovered if the patient perceives the provider as competent and the provider explicitly states a treatment will improve their condition, then it is more likely the treatment will do so. Therefore, perceived provider competence may be directly related to patient overall healing outcomes and thus patient satisfaction.

Purpose of This Study & Hypothesis

As a result, the current study aims to examine the relationship between provider humility, empathy, and perceived competence on patient satisfaction. Based on the literature review, we hypothesized that the three distinct characteristics of provider's (a) humility, (b) empathy, and

(c) perceived competence will be positively related to patient satisfaction. Therefore, it was hypothesized that providers with the highest levels of all three characteristics (humility, empathy, and perceived competence) would have the highest patient satisfactions scores as well as the highest perceived competence ratings.

Chapter 2

Methods

Participants

The participants in this study were made up of two separate groups: Primary Care Providers (PCP) and Patients. They were recruited directly through two primary care clinics with the opportunity for the clinics to receive meaningful information after the completion of the study. Primary Care Providers from Geary Street: Samaritan Health Services (Albany, OR) and West Hills Health Care Clinic (McMinnville, OR), were asked to participate in this study by completing the survey during a providers' meeting. Additionally, patients from both primary care clinics were asked to participate in the study through completing a patient satisfaction survey before or after their medical visit. Clinic support staff helped distribute the patient surveys over a 2-week period at both clinics while checking patients in or out from their visit. Participants represented a wide variety of presenting problems, demographic diversity, and engagement with treatment. After the 2-week collection period, roughly 300 patient surveys were collected and a total of 17 primary care providers participated in the study.

Materials

Four separate instruments were in the study. They were compiled into two separate surveys: the Provider Survey and the Patient Survey. The Provider Survey included demographic questions, the 24-item brief HEXACO instrument, the Jefferson Empathy Scale (20 items), and a

single question about personal perception of competence in providing medical care. The Patient Survey included demographic questions including identifying their PCP, an adapted version of the Client Satisfaction Questionnaire (CSQ-18) (five items), and a single question about perceived provider competence.

Demographics

Both surveys included items regarding age, gender, and race/ethnicity. Additionally, the Patient Survey asked for the participant to identify their Primary Care Provider (PCP).

The Brief HEXACO Personality Inventory – (BHI)

The Brief HEXACO Inventory is a 24-item instrument that assess the six major dimensions of personality: Honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience. This scale represents a brief version of the full HEXACO by selecting facets with 1 item per facet (i.e., four items per domain) and takes approximately 2–3 minutes to complete (Ashton & Lee, 2008). deVries et al., (2013) found this brief version to have average alpha reliability, test-retest stability, and self-other agreement, as well as original construct validity as it correlates with the original HEXACO Inventory full version.

The Jefferson Scale of Empathy – (JSE)

The Jefferson Scale of Empathy is a 20-item instrument developed by R. Nathan Spreng, Margaret C. McKinnon, Raymond A. Mar, and Brian Levine to measure empathy in the context of health profession education and patient care and is designed for administration to health professions students and practitioners (Hojat et al., 2018). The researchers found that many empathy measures were ambiguous and lacked psychometrically sound empirical evidence. In

addition, no empathy self-report measure accurately accounted for measuring empathy within the context of patient care. Therefore, the JSE was developed to be psychometrically sound instrument and context specific. Within the JSE, items are answered on a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*), with half the items directly scored and half reversed scored. Various versions of the scale are available depending on the characteristics of the participants. This study used the HP-Version, which was designed to administer to practicing health professionals including physicians, nurses, dentists, pharmacologists, clinical psychologists, and other clinicians involved with patient care. In examining many national and international studies in which the JSE was used, the Cronbach's alpha coefficient were mostly in the 0.70–0.80 range with an average of 0.78 (Hojat 2018, pp. 124, 275–331). It has been shown to have good internal consistency and high test-retest reliability. Within provider empathy research, it has been found to be one of the most context sensitive and reliable measures (Hojat et al., 2018).

Competency Scale

For the purpose of this study, we drew upon Howe et al.'s (2019) research that suggests patients' perception of competence drives satisfaction. Therefore, to examine provider competency, we developed a single item to capture both patients' and providers' perceptions of PCP competence. This item had different form for each survey:

1. The provider's survey asked them to rate their own their competence.
2. The patient's survey asked participants to rate their perception of their provider's competence. This item was asked in a Likert-scale format, which provided responses on a scale from 1 (*low*) to 10 (*high*).

Patient Satisfaction

We selected and adapted five items from the Client Satisfaction Questionnaire (CSQ-8) and the Satisfaction Questionnaire for Patient Satisfaction (Comstock et al., 1982). These items examine satisfaction with services. Both satisfaction scales have high internal consistency (CSQ coefficient α =.91) and strong reliability. We adapted each item to reflect the context of a medical visit with a PCP, as well as provided appropriate rating answers following the format of 1 (*dissatisfied*) to 4 (*satisfied*).

Procedure

Following IRB approval and informed consent, participants were asked to complete either survey one (Provider Survey) or survey two (Patient Survey). The participants were given as much time as needed to complete the surveys. Patient surveys were completed on an individual basis following each patient's medical appointment, whereas providers' surveys were completed during a designated providers' meeting at each respective clinic. All data was collected within a 2-month period. Each clinic had a separate 2-week data collection timeframe for patients to complete their surveys.

Chapter 3

Results

As described in Chapter 2, participants originally included 17 medical providers and over 300 patient participants. After examining the final collected data, only 14 medical providers (N = 14) were used in the final analysis study due to limited corresponding patient satisfaction data collected from three providers. Between the 14 providers, there were nine females and five males, aging between 25–64 years of age (one provider: 25–34 years of age, six providers 35–44 years of age, four providers 44–54 years of age, and three providers 55–64 years of age), and

representing a variety of ethnic backgrounds including Caucasian (75%), Middle Eastern (7%), and those identifying as Multiethnic (14%) (see Table 1).

Regarding the patient participants, there were over 300 patient satisfaction surveys collected between both clinics. However, only 222 patient satisfaction surveys (N = 222) were used in final analysis. Patient surveys were not included if their forms were improperly completed (e.g., incorrect or no PCP identification, incomplete surveys, and/or printing errors). The remaining patient participants included 137 females (61%), 84 males (37%), and one non-binary (0.4%) participant. Their ages ranged from 18–65+ years of age including 8% between 18–24 years of age, 9% between 25–34 years of age, 9% between 34–44 years of age, 13% between 45–54 years of age, 17% between 55–64 years of age, and 41% 65 years of age or older. Patient participant's ethnic backgrounds included Asian (1.8%), Hispanic or Latino (4.5%), Native Hawaiian or other Pacific Islander (0.4%), Caucasian (87%), and those identifying as Multiethnic (4.5%; see Table 1).

Table 1

Participant Demographics

Characteristic		PCP		Patients	
		n	%	*n*	%
Age (years)					
	18-24	0	0	18	8
	25-34	1	7	22	9
	35-44	6	43	21	9
	45-54	4	29	29	13
	55-64	3	21	39	17
	65+	0	0	93	41
Gender					
	Male	5	36	84	37
	Female	9	64	137	62
	Other	0	0	1	.5
Ethnicity/race					
	Asian	0	0	4	2

Characteristic		PCP		Patients	
		n	%	*n*	%
	Hispanic or Latino	0	0	10	5
	Multiracial/Multiethnic	2	14	10	5
	Middle Eastern	1	7	0	0
	Native American	0	0	1	.5
	Pacific Islander	0	0	1	.5
	White	11	79	195	88

Note. PCP $N = 14$; Patient $N = 222$

Provider data was scored resulting in a total humility score, a total empathy score, and a perceived competence score based off patient and provider data.

Patient satisfaction scores were computed, and Pearson correlational analyses were conducted to examine the relationship between providers' humility, empathy, and competency on patient satisfaction.

Data analysis failed to find a significant correlation between patient satisfaction and humility ($r(13) = -.134$, $p = .648$), empathy ($r(13) = .174$, $p = .522$), or competence ($r(13) = .244$, $p = .40$) (See Table 2).

Table 2

Results for Provider Humility, Empathy, and Competency Scores

Subscales	*M*	*SD*	*Range*	*r*	*p*
Humility total	8.07	1.07	4	-.134	.648
Empathy total	117.25	6.84	24.0	.174	.522
Competency	8.14	.77	3.0	.244	.40

Note. The sample size ($N = 14$); PCP Correlation with Patient Satisfaction.

Additionally, no relationships were found between any provider traits such as between humility and empathy ($r(13) = .207$, $p = .477$), humility and competence ($r(13) = .080$, $p = .786$), or empathy and competence ($r(13) = -.285$, $p = .324$) (see Table 3).

Table 3

Trait Correlations between Provider Humility, Empathy, and Competency Scores

Subscales	*r*	*p*
Humility & empathy	.207	.477
Humility & competence	.080	.786
Empathy & competence	-.285	.324

Note. The sample size (N = 14)

Chapter 4

Discussion

Contribution to Current Research

The primary goal of the current study was to examine the relationship between provider humility, empathy, and competence and patient satisfaction. Specifically, we wanted to see if there was a combined impact of all three characteristics that impacted patient satisfaction, or if one characteristic may have a stronger relationship than another. Our hope was to examine these relationships to further validate the importance of these characteristics in providing high quality patient care, as has been seen in previous research (Lavelock et al., 2017; Spiro, 2009; DiMatteo et al., 1980). To accomplish this, data was collected from surveys and statistical analyses were used to search for meaningful relationships.

Our hypothesis was not supported. An interesting finding that impacted our ability to proceed with any meaningful follow up analyses was a limited range in the actual patient satisfaction scores. Overall, the patients reported very high rates of satisfaction with their medical care. Every one of the 14 providers received a score of 17 (out of 20) or higher. Therefore, due to the limited range in patient satisfaction scores, we were unable to find

meaningful correlations. To examine which provider characteristics may be related to patient satisfaction, we needed a wider range of scores to compare against, which was not found. A variety of reasons could have contributed our findings and are briefly explored below.

In the early 2000's, patient satisfaction research surged in the medical community (Siegrist, 2013). Since that time, most primary care clinics routinely collect patient satisfaction data. Clinics work to retain providers with high patient satisfaction scores, as well as help identify and correct any contributing factors for providers with low patient satisfaction. Therefore, it could be that patient dissatisfaction is becoming less frequent and thus is more difficult to identify with the traditional patient satisfaction measures.

Additionally, when surveying the research within physician empathy and physician humility and how they influence patient satisfaction, most researchers rely on patient perception of these traits in place of true measures. For example, Kim et al., (2004) who established convincing research supporting the direct influence of physician empathy on patient satisfaction, mainly relied on patient perception of physician empathy opposed to self-reported scores of physician empathy. Similarly, Hyunh and Dicke-Bohmann's (2020) research with physician humility also found that the strongest correlations between physician humility and patient satisfaction occurred when gathering patients' perception of physician humility. Therefore, it could be patients' perceptions of both physicians' empathy and humility are the most salient contributors in patient satisfaction. Within our research, we only gathered patient perception of providers' competence, and relied on providers' scores on empathy (using the JSE) and humility (the HEXACO) measures to depict these characteristics. We still would have needed a wider range of patient satisfaction scores to find meaningful correlations, but further examination of these traits may be warranted.

Finally, one remaining contributor to our findings could be an indirect impact of the growing integration of Behavioral Health services into primary care facilities. The two primary care clinics used in this research have robust Behavioral Health Consultant (BHC) Teams and work closely together on multidisciplinary teams. It could be that these providers represent an outstanding set of PCPs who already actively engage in conversations on how to better meet the wholistic needs of their patients, resulting in better patient satisfaction.

Implications

As previously mentioned, patient satisfaction data has gained wide popularity over the past 20 years and has arguably improved overall patient care (Ben-Sira, 1976; Hulka et al., 1970; DiMatteo & Hays, 1980). Our research stands as an example of how patient satisfaction data can work to help inform clinics how satisfied patients are with their medical care. Additionally, in the midst of ongoing patient care, providers are constantly being asked to see more patients in a shorter amount of time (Collins, 2010; Apaydin et al., 2021; Tuzovic & Kuppelwieser, 2016). This step in "efficiency" may consequently decrease providers' ability to humbly and empathetically connect with their patients. Without comprehensively understanding what combination of provider characteristics directly impact patient satisfaction, patient satisfaction may begin to decrease with the loss of time with their PCP. So, although our study was not conclusive and did not directly support our hypothesis, provider humility, empathy, and perceived competence research is still an area of importance. With further evidence supporting these provider characteristics and their impact on patient satisfaction, clinics and physicians may continue to invest in on-going training and prioritization of patient connection.

One other meaningful takeaway of our study is to recognize the success of this group of providers who work diligently to provide satisfactory patient care. Many factors may be

contributing to their high patient satisfaction scores, and it remains encouraging to know that patients are satisfied with their medical care. This continues to validate the importance of patient satisfaction data collection as a way to celebrate primary care provider's success.

Limitations

Two prominent limitations in our study were sample size and limited ranged responses from both patients and providers. With a more robust sample size, more varied responses may have been found. In addition, we obtained limited patient data for certain providers, such as 12 patient responses for one provider and 27 patient responses from another. Increasing the length of data collection and targeting a higher number of responses for each corresponding provider may produce more significant findings. This may also provide a larger patient representation for each provider, yielding a more accurate overall patient satisfaction score. Additionally, expanding the number of primary care clinics may help to mitigate any clinic specific trends and produce a wider variability in patient responses.

Another significant limitation included relying solely on self-report screeners of provider humility and empathy, as opposed to gathering additional data on patient perception of providers' characteristics. This additional data could have led to further understanding of the perception of provider characteristics when compared to their own self-report.

Suggestions for Future Research

Historically, the primary care model has highly prioritized competence, efficiency, and medical expertise above patient connection. Yet research suggests that patients may ultimately benefit more fully from providers who demonstrate high levels of humility and empathy alongside competence and expertise. Although the current study did not illuminate which characteristics most prominently correspond with high patient satisfaction, it highlighted the

current success of 14 PCPs who are working hard to meet patients' needs and are ultimately providing satisfactory care. Moving forward, it may be beneficial to continue examining which characteristics most closely relate to patient satisfaction. This research could help inform both clinics and PCPs on what to prioritize in patient interactions, as well as dedicate time to on-going training and development. Additionally, gathering meaningful self-report data of humility, empathy, and competence, alongside patient perception of all three traits might ultimately shed light on if it is the patient perception of these characteristics or self-report scores of these traits that correspond with higher patient satisfaction. Finally, if given further time, surveying both provider and patients self-report characteristics of humility and empathy may produce interesting findings. Such as, those patients with higher levels of humility and empathy may prefer providers who also have high perception of these traits, or the opposite.

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Appendix A

Informed Consent for Research Participants – Patient

Background Information:

The purpose of this research is to examine the relationships between Provider and Patient interactions and Patient satisfaction. If you choose to participate, you will be asked to fill out a short questionnaire packet. We also need your permission to pair your answers with your associated Provider. This will require you indicating which provider you see but no other identifying information will be needed. Signing this informed consent form will be considered assent to all of the above. Please fill out the questionnaire, sign the informed consent, and return the completed questionnaire packet to the front desk. This total procedure is estimated to take 10 minutes.

Great care will be taken to provide as much confidentiality as possible. Each returned packet will be filed with the appropriate provider's folder. The providers will never have access to their patient's survey packet, nor will they receive individual results from this project. General information according to findings gathered from all Providers and Patients will be made available to the counseling site. No identifying information will be used in the results. Providers will not have access to the names of participants on the packets or on the provider ratings. Patient data, identified only by number code, will be seen and entered as data only by the researcher, Stephanie Burkhard and the direct supervisor of the study, Dr. Bill Buhrow. Raw data from the questionnaire will be kept in a locked file and access limited to the GDCP administrative Assistant. The educational and questionnaire data will be merged for the final analysis.

Results will be made available to anyone who is interested, in the form of a journal manuscript. If you have any questions or concerns about your participation in this research, you may contact this researcher (Stephanie Burkhard) via, or Dr. Bill Buhrow via bbuhrow@georgefox.edu or at 503.554-2340.

Consent:

I have read the description of this research regarding patient and provider satisfactory care and have voluntarily chosen to participate. I understand that the questionnaire information is to be received and maintained in confidence and used for research purposes only. I also understand that if I wish to discontinue participation at any time prior to the completion of the packet, I may do so without penalty. I also may receive a signed copy of this consent form if desired.

_____ _____

Signature of Participant Date

Informed Consent for Research Participants - Provider

Background Information:

The purpose of this research is to examine the relationships between Provider and Patient interactions and Patient satisfaction. If you choose to participate, you will be asked to fill out a short questionnaire packet. We also need your permission to pair your answers with your associated Patients. This will require you agreeing to allow your name to be indicated on a single form with a corresponding number so that your patients may identify their association with you. You too will use a number to indicate which provider you are, but the number sheet will be discarded as soon as possible to preserve confidentiality. No other identifying information will be needed. Signing this informed consent form will be considered assent to all of the above. Please fill out the questionnaire, sign the informed consent, and return the completed questionnaire packet to the front desk. This total procedure is estimated to take 30 minutes.

Great care will be taken to provide as much confidentiality as possible. Each returned packet will be filed with the appropriate provider's folder only using the number code to protect confidentiality. The patients and staff will never have access to their patient's survey packet, nor will they receive individual results from this project. General information according to findings gathered from all Providers and Patients will be made available to the counseling site. No identifying information will be used in the results. Providers will not have access to the names of participants on the packets or on the provider ratings. Patient and provider data, identified only by number code, will be seen and entered as data only by the researcher, Stephanie Burkhard and may be overviewed by the direct supervisor of the study, Dr. Bill Buhrow. Raw data from the questionnaire will be kept in a locked file and access limited to the administrative Assistant. The educational and questionnaire data will be merged for the final analysis.

Results will be made available to anyone who is interested, in the form of a journal manuscript. If you have any questions or concerns about your participation in this research, you may contact this researcher (Stephanie Burkhard) via, or Dr. William Buhrow via bbuhrow@georgefox.edu or at 503.554-2340.

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_____ _____

Signature of Participant Date

Appendix B

The Brief HEXACO Inventory (24 Item)

Instructions: Please indicate to what extent you agree with the following statements, using the following answering categories: 1=strongly disagree, 2=disagree, 3=neutral (neither agree, nor disagree), 4=agree, and 5=strongly agree.

#	*Dutch version*	*English version*
1.	Ik kan lang naar een schilderij kijken.	I can look at a painting for a long time.
2.	Ik zorg dat dingen altijd op de juiste plek liggen.	I make sure that things are in the right spot.
3.	Ik blijf onaardig tegen iemand die gemeen was.	I remain unfriendly to someone who was mean to me.
4.	Niemand wil graag met mij praten.	Nobody likes talking with me.
5.	Ik ben bang om pijn te lijden.	I am afraid of feeling pain.
6.	Ik vind het moeilijk om te liegen.	I find it difficult to lie.
7.	Ik vind wetenschap saai.	I think science is boring.
8.	Ik stel ingewikkelde taken zo lang mogelijk uit.	I postpone complicated tasks as long as possible.
9.	Ik geef vaak kritiek.	I often express criticism.
10.	Ik leg gemakkelijk contact met vreemden.	I easily approach strangers.
11.	Ik maak me minder zorgen dan anderen.	I worry less than others.
12.	Ik ben benieuwd hoe je op een oneerlijke manier veel geld kan verdienen.	I would like to know how to make lots of money in a dishonest manner.
13.	Ik heb veel fantasie.	I have a lot of imagination.
14.	Ik werk erg nauwkeurig.	I work very precisely.
15.	Ik ben het snel met anderen eens.	I tend to quickly agree with others.

16.	Ik praat graag met anderen.	I like to talk with others.
17.	Ik kan prima in m'n eentje moeilijkheden overwinnen.	I can easily overcome difficulties on my own.
18.	Ik wil graag beroemd zijn.	I want to be famous.
19.	Ik houd van mensen met rare ideeën.	I like people with strange ideas.
20.	Ik doe vaak dingen zonder echt na te denken.	I often do things without really thinking.
21.	Zelfs als ik slecht behandeld word, blijf ik kalm.	Even when I'm treated badly, I remain calm.
22.	Ik ben zelden opgewekt.	I am seldom cheerful.
23.	Ik moet huilen bij trieste of romantische films.	I have to cry during sad or romantic movies.
24.	Ik heb recht op een speciale behandeling.	I am entitled to special treatment.

Scoring table BHI (recode scores of items followed with an 'R' as follows: 5→1, 4→2, 3→3, 2→4, 1→5): *Honesty-Humility*: 6 (Sincerity), 12R (Fairness), 18R (Greed Avoidance), 24R (Modesty); *Emotionality*: 5 (Fearfulness), 11R (Anxiety), 17R (Dependence), 23 (Sentimentality); *eXtraversion*: 4R (Social Self-esteem), 10 (Social Boldness), 16 (Sociability), 22R (Liveliness); *Agreeableness*: 3R (Forgiveness), 9R (Gentleness), 15 (Flexibility), 21 (Patience); *Conscientiousness*: 2 (Organization), 8R (Diligence), 14 (Perfectionism), 20R (Prudence); *Openness to Experience*: 1 (Aesthetic Appreciation), 7R (Inquisitiveness), 13 (Creativity), 19 (Unconventionality).

† All reported data are based on the Dutch version. For the other-rated version of the BHI, please contact the author.

1 = strongly disagree 2 = disagree 3 = neutral 4 = agree 5 = strongly agree

Appendix C

The Jefferson Scale of Empathy – (JSE) **(20 Item)**

Items
1. An important component of the relationship with my patients is my understanding of their emotional status as well as that of their families
2. I try to understand what is going on in my patients' minds by paying attention to their nonverbal cues and body language
3. I believe that empathy is an important therapeutic factor in medical and surgical treatment
4. Empathy is a therapeutic skill without which my success in treatment would be limited
5. My patients value my understanding of their feelings which is therapeutic in its own right
6. My patients feel better when I understand their feelings
7. I consider understanding my patients' body language as important as verbal communication in caregiver–patient relationships
8. I try to imagine myself in my patients' shoes when providing care to them
9. I have a good sense of humor that I think contributes to a better clinical outcome
10. I try to think like my patients in order to render better care
11. Patients' illnesses can be cured only by medical treatment; therefore, affectional ties to my patients cannot have a significant influence on medical or surgical outcomes
12. Attentiveness to my patients' personal experiences does not influence treatment outcomes
13. I try not to pay attention to my patients' emotions in history taking or asking about their physical health
14. I believe that emotion has no place in the treatment of medical illness
15. I do not allow myself to be touched by intense emotional relationships between my patients and their family members
16. My understanding of how my patients and their families feel does not influence medical or surgical treatment
17. I do not enjoy reading nonmedical literature or the arts
18. Asking patients about what is happening in their lives in not helpful in understanding their physical complaints
19. It is difficult for me to view things from my patients' perspectives
20. Because people are different, it is difficult for me to see things from my patients' perspectives

Responses were based on a 7-point Likert-type scale. Responses were reverse scored on items 11–20 (strongly agree = 1, strongly disagree = 7); otherwise, items were directly scored (strongly agree = 7, strongly disagree = 1)

Appendix D

Provider Competence Perception Questions

Patient Question:

Q: How competent do you perceive your Primary Care Provider to be on a scale from 1 to 10?

Provider Question:

Q: How competent do you perceive yourself to be as a Primary Care Provider on a scale from 1 to 10?

Appendix E

[Questions adapted from the Client Satisfaction Questionnaire (CSQ-18)] (5 Item)

4. How would you rate the quality of the services you have received?

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent

5. Did you get the kind of services you wanted?

- ☐ Not really
- ☐ Somewhat
- ☐ Mostly
- ☐ Absolutely

6. To what extent has your provider met your needs?

- ☐ Did not meet my needs
- ☐ Met some of my needs
- ☐ Met most of my needs
- ☐ Met all my needs

7. If a friend were in need of similar help, how strongly would you recommend your provider to him or her?

- ☐ Not at all
- ☐ Moderately
- ☐ Strongly
- ☐ Very strongly

8. How satisfied are you with the amount of help you have received?

- ☐ Extremely dissatisfied
- ☐ Dissatisfied
- ☐ Satisfied
- ☐ Extremely satisfied