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DEVELOPMENT OF ASSESSMENT TOOL TO MEASURE SOFT SKILLS IN THE PERFORMANCE OF HEALTHCARE PROVIDERS

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IN INTERDISCIPLINARY STUDIES

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A DISSERTATION APPROVED FOR THE

INTERDISCIPLINARY STUDIES, GRADUATE COLLEGE

BY THE COMMITTEE CONSISTING OF

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إلى من غمرتني بدعواتها ومنحتني كل أشكال الدعم في كل الأوقات

إلى أمي أغلى من لي في هذه الدنيا

To the one who immersed me with her prayers and gave me all forms of support at all times

To my MOTHER, the most precious person to me in this world

إلى قدوتي ومثلي الأعلى، الحاضر في وجداني دائما، أبي الغالي (رحمه الله)

To my role model, who is always present in my sentiments,

my dear Father (may God have mercy on him)

إلى شقيقاتي وأشقائي الغاليين على ثقتهم ودعمهم الذي لا يتزعزع

To my dear Sisters and Brothers for their unfaltering confidence and support

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Development of Assessment Tool to Measure Soft Skills in

the Performance of Healthcare Providers

ABSTRACT

The objective of the study is to develop an assessment tool to measure healthcare providers' use of soft skills during their encounters with patients in primary care settings. Development of the assessment tool is designed to address a gap in performance measurement systems used in healthcare settings. The current study utilizes the Iceberg Model of Managerial Competencies to define the construct and develop a conceptual model of soft skills.

The research consisted of two phases and implemented a mixed-methods approach. Phase One used qualitative focus groups and semi-structured personal interviews to identify essential soft skills for provider-patient interactions and generate an initial item pool for the assessment tool. A total of 62 participants including users (n=35) and providers (n=27) of healthcare services were recruited using a purposeful and snowball sampling strategies. Six subject matter experts were also recruited in this phase to assess content validity using a purposeful sampling strategy. Content and thematic analysis following the grounded theory method were used in Phase One to interpret the qualitative data. Phase One resulted in the generation of a pool of 198 items and the identification of 10 soft skills as the most essential for provider-patient interactions in a primary care setting. The first refined draft of the Soft Skills Assessment Tool (SSAT) consisted of 49 items rated on 6-point Likert-type scale exhibited excellent content and face validity.

Phase Two used quantitative online surveys to pilot test and establish face validity of the assessment tool, as well as to explore the psychometric properties including the factorial structure of the final measure. Fourteen users of healthcare services were recruited using a

convenience sample to examine face validity. Data from 202 users of healthcare services were used to inform factorial structure and test the internal consistency of the scale. Exploratory factor analysis in Phase Two supported a two-factor model measured with 38 items and two composite latent constructs: behavioral-interaction competence and affective-interaction. The SSAT demonstrated good factor structure and psychometric properties with high levels of internal consistency.

This study suggests that SSAT is a reliable measure. Future research to establish the construct-validity of the SSAT is recommended. The SSAT offers value for future research regarding soft skills in patient-provider interactions as well as a means for healthcare managers to gain a more comprehensive view of provider competence in the delivery of care.

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SECTION ONE: INTRODUCTION

Overview

The healthcare industry is facing challenges including intensive competition and increasing patient flow. These challenges have directed the focus of healthcare organizations toward enhancing the delivery of quality care. The quality improvement literature in healthcare considers two types of competency quality: "*technical quality*," which refers to clinical and medical knowledge and experience, and "*service quality*," which refers to the way the services are delivered (Tabrizi et al., 2009). The prevailing perception among healthcare providers is that the quality of care is mainly dependent on the technical quality of care. Thus, the focus of the extant literature has primarily been on physical health outcomes produced by medical teams (i.e., technical quality) with doctors being considered the central actors within healthcare organizations (Overeem et al., 2007). AbuJbara and Worley (2019), however, identified a gap in the extant literature regarding the assessment of outcomes of services offered by non-medical workers in healthcare organizations. Because the patient experience includes interactions with medical and non-medical team members, additional measures of quality are needed to assess patients' subjective care experiences given patients' interaction with healthcare staff (i.e., service quality). This gap in the literature reflects a shortcoming in current practice in the measurement of the quality of service received in healthcare organizations.

Service quality is intangible; it is likely a function of the interaction between treatment received and perceptions of the service experiences. Therefore, patient experience is one commonly used indicator of the quality of service in healthcare; patient experience is typically assessed through patient satisfaction (Schneider at al., 1997). A commonly used measure of a patient's perception of service quality is Zeithaml, Parasuraman, and Berry's (1990)

SERVQUAL instrument. After its development, the SERVQUAL assessment scale received wide recognition and subsequently has been used in several service industries, including but not limited to healthcare (Kilbourne et al., 2004; Ladhari, 2009; Schneider et al., 1997). The increased attention to the value of the customer's perception and satisfaction in service industries led to greater recognition of the importance of soft skills in the delivery of services (Bailly & Léné, 2012). Thus, soft skills have become an important competency in wide spectrums of professions (Marques, 2013), including healthcare (Farmer, 2015; Joubert et al., 2006; Stoller et al., 2013; Weiszbrod, 2013).

Soft skills are competencies that play a major role in building the connection between providers and patients by influencing the way service is delivered and perceived (Burger et al., 2014). There is a lack of consensus in the literature, however, regarding the definition of soft skills (Joubert et al., 2006). The intangible nature of soft skills makes them difficult to measure and value (Robles, 2012). In addition, there is a significant difference in the perceived importance of soft skills for workers in different industries (Mitchell et al., 2010). For example, problem-solving and working under pressure are essential soft skills for corporate finance professionals (Dixon et al., 2010), while concern for others and honesty are important soft skills for leaders (Marques, 2013). Robles (2012) identified integrity and communication among the top 10 most important soft skills for business executives. In healthcare, empathy and communication were widely reported as interpersonal soft competencies that could impact the physician-patient relationship and, therefore, the patient experience (Jones, 2014; Kelm et al., 2014; Michalec, 2011). In addition, an attitude of respect for patients is considered fundamental for positive provider-patient interactions (Beach et al., 2006). Researchers (e.g., Epner & Baile, 2014; Kim et al., 2004), have therefore recommended that healthcare service providers develop

interpersonal soft skills that can enhance their ability to build trust with their patients, contribute to positive patient experiences, and enhance patient satisfaction.

The integration of soft skills into healthcare providers' daily interactions with patients is vital because healthcare services are fundamentally different from other types of consumer services. Healthcare services are offered to patients who are usually seeking services in atypical circumstances. That is, individuals seeking healthcare services are typically ill or injured. The word *patient* is deep-rooted in the Latin word *patior,* which means suffering while waiting for the provision of cure (Hudak et al., 2003; Neuberger, 1999). Therefore, patients expect healthcare providers to understand and sense their pain and discomfort. These expectations vary based on peoples' differing personalities and tolerance for pain, as well as severity of illness or injury. When in pain, individuals tend to be more sensitive to other people's words and actions. Accordingly, healthcare providers need to exhibit a high level of customer service and possess interpersonal qualities that enable them to handle difficult situations and make emotional connections with patients. In this regard, soft skills are important attitudinal and interpersonal competencies that play a significant role in building the emotional connection between healthcare providers and their patients (Burger et al., 2014). Soft skills fundamentally affect a provider's ability to achieve the primary goal of healthcare services, which is to deliver quality care in order to improve or maintain patients' health (Hudak et al., 2003).

Problem Statement

The extant literature chronicles the many attempts for the advancement of education and human resource practices that facilitate development of soft skills in healthcare providers. For example, Van Staden et al. (2006) tested medical students' adeptness in the application of soft skills, while Harlak and colleagues (2008) recommended the consideration of soft skills in

recruitment and training programs. Several interventions to improve soft skills among physicians have also been tested including training medical professionals and students to exhibit soft skills in addition to clinical examination skills (Joubert et al., 2006; Kelm et al., 2014; Martin, 2011). Findings from these studies emphasize the importance of soft skills for healthcare delivery, although the role of soft skills in the overall performance of healthcare providers is still under-researched (AbuJbara & Worley, 2019). Further, no commonly accepted definition of soft skills in the extant literature exists (Joubert et al., 2006); this reflects ambiguity and disagreement about the nature of soft skills. The lack of a unified definition also contributes to difficulty in the measurement of soft skills (Robles, 2012) and helps explain the lack of soft skills training and assessment tools to measure healthcare providers' soft skills. Therefore, the current study is designed to address the aforementioned gaps in the extant literature by clearly defining soft skills and the qualities they encompass, identifying essential soft skills in patient-provider interactions, and developing a measurement tool to assess providers' efficacy in demonstrating soft skills during the delivery of healthcare services.

Purpose of the Study

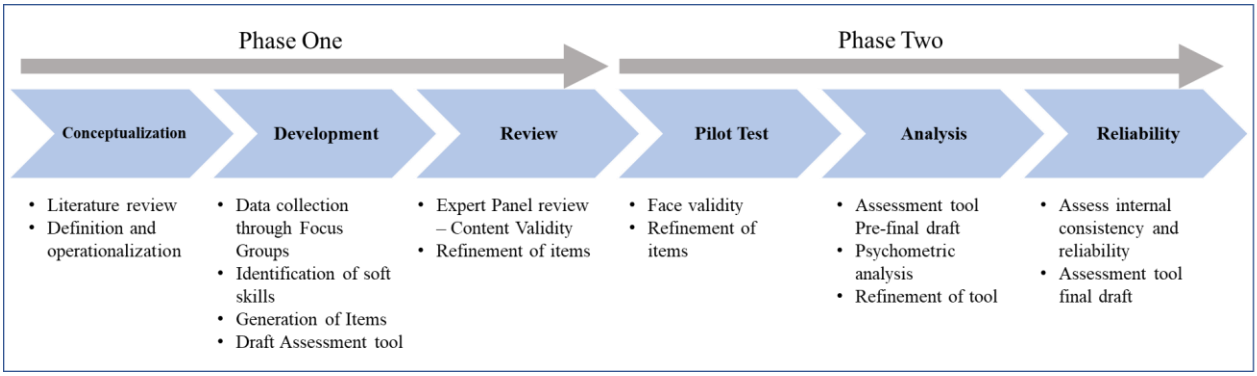
The goal of the current study is to develop an assessment tool for use by healthcare organizations to measure healthcare providers' soft skills during patient encounters. The assessment tool will specifically focus on the soft skills that exert the greatest influence on the way healthcare service is delivered and perceived. Given that essential soft skills may vary by discipline or by line of service, this research will focus on soft skills of healthcare providers in primary care practice. The study context will focus on primary care because this medical specialty is considered the largest platform of formal healthcare in the United States (Phillips & Bazemore, 2010). In primary care, the work environment is described as intense as a result of

workload and time pressures, heightened administrative and regulatory demands, fragmented delivery of care, and unrealistic expectations that are often placed on the primary care work force (Sinsky et al., 2013). Therefore, primary care practice presents an ideal setting to investigate the demonstration of soft skills in provider-patient interactions.

To achieve this goal, the research will be completed in two phases and utilize a mixed-methods approach. Figure 1 illustrates the process that will be followed to develop the assessment tool. The goal of Phase 1 is to identify the most essential soft skills for provider-patient interactions and generate a pool of items to measure each identified skill in the new assessment tool. To meet this goal, a conceptual model will be developed based on a review of relevant research literature, and an operational definition of soft skills used in healthcare will be explicated. A theoretical framework will also be proposed in this phase to guide the development of the new assessment tool. The goal of Phase 2 is to explore the factorial structure of the final draft of the assessment tool. An exploratory factor analysis will be conducted in this phase. The development of the assessment tool follows the procedures and guidelines of Netemeyer, Bearden, and Sharma (2003).

Figure 1

The Research Process for Development of the Assessment Tool



Definitions of Terms

Several terms will be used throughout this study to refer to different stakeholders in the healthcare delivery process. These terms are defined below.

Healthcare providers. The term "healthcare providers" will be used to refer to healthcare employees in Oklahoma primary care practices who are involved with the provision of medical care for patients. Such healthcare providers will include but not be limited to physicians, nurses, patient assistants, physicians' assistants, medical technicians and technologists.

Users of healthcare services. The term "users" of healthcare services refers to patients and individuals who interact with a healthcare provider in order to receive treatment for a health issue. This contrasts with individuals who interact with healthcare providers for other reasons, such as patient family members or other staff.

Primary care practice. This term will be used to refer to healthcare settings that provides the first level of contact individuals have with healthcare providers who are accountable for addressing a large majority of personal healthcare needs and developing a sustained partnership with patients for continuing care of various medical conditions (Phillips & Bazemore, 2010). Primary care is the medical specialty that concentrates on general medical skills and knowledge. Primary care practice in healthcare provides a wide range of medical services, including medical diagnosis and treatment, health education and communication of information about prevention and treatment, care of chronic disease, risk assessment and early disease detection, preventative treatment and behavioral change interventions (Goroll & Mulley, 2009). In this study, primary care services include general medicine, family medicine, and internal medicine services for adult patients only.

Research Questions

The primary objective of this research study is to develop an assessment tool to measure healthcare providers' soft skills during patient encounters in primary care practice. A major step in the development of an assessment tool involves the identification of salient aspects of the construct to be measured and generation of a pool of items believed to measure the construct. Therefore, several general research questions will guide development of this tool. These questions are:

Research question 1 (RQ1): Do healthcare providers and patients conceptualize soft skills? And if so, how?

Research question 2 (RQ2): What individual differences in expectations are important considerations for identification of soft skills in healthcare?

Research question 3 (RQ3): What soft skills do patients consider most important for the provider-patient interaction?

Significance of the Study

The current study presents a first attempt to develop an assessment tool to measure soft skills in a healthcare context. This tool could be applied by primary care healthcare service delivery organizations and integrated into their performance management strategies. Conceptualization and measurement of soft skills can also aid in the development of focused training programs designed to enhance providers' soft skills performance.

SECTION TWO: PHASE 1 - LITERATURE REVIEW

Soft skills are integral across an array of occupations and are applicable to different life domains (e.g., leadership, project management, marketing, training and education, and healthcare services). Thus, people have different perceptions about what constitutes the construct of soft skills (Kechagias et al., 2011). This diversity and the broad reach of soft skills helps explain why scholars have not yet reached a consensus on a definition of soft skills (Joubert et al., 2006). This section will discuss the diversity of definitions of soft skills in published research and the importance of soft skills to various domains, with a specific focus on healthcare. These varied definitions will be evaluated and synthesized in order to present the conceptualization of soft skills that will be used in the proposed study.

Definitions of Soft Skills

Several research streams indicate that soft skills are a combination of interpersonal skills and personal emotional attributes (Joubert et al., 2006; Laker & Powell, 2011; Robles, 2012; Ryan, 2016). For example, Weber and colleagues (2009) defined soft skills as "the interpersonal, human, people or behavioral skills needed to apply technical skills and knowledge in the workplace" (p. 354). Further, Nilsson (2010) described soft skills as "interpersonal skills" and "high employability skills" (p. 548). Matteson and colleagues (2016) described soft skills as "a collection of people management skills, important to many professions and job positions" (p. 71). Furthermore, Kechagias and colleagues (2011) defined soft skills as "intra- and inter-personal (socio-emotional) skills, essential for personal development, social participation and workplace success" (p. 33). Similarly, scholars such as Laker and Powell (2011) as well as Hurrell and colleagues (2013) explained that soft skills involve intrapersonal and interpersonal skills. Hurrell et al. (2013) described soft skills as "non-technical and not reliant on abstract

reasoning, involving interpersonal and intrapersonal abilities to facilitate mastered performance in particular contexts" (p. 162). *Intrapersonal skills* refer to one's ability to manage oneself while *interpersonal skills* are one's ability to handle one's interactions with others (Laker & Powell, 2011). These interpersonal and intrapersonal abilities facilitate mastered performance in various contexts (Hurrell et al., 2013). A person who has a mastery of soft skills can be described as being emotionally intelligent (Wheeler, 2016) or as someone who has "the ability to understand and manage oneself and to understand others and manage relationships" (Stoller et al., 2013, p. 243). Many of these soft skills definitions used the term "interpersonal skills" or "non-cognitive skills" interchangeably with other terms such as interactive skills, people skills, face-to-face skills, personality traits, non-cognitive abilities, character skills, and social competence including soft skills (Hayes, 2002; Kautz et al., 2014). The common theme among most of these definitions is the influence of these competencies or attributes on increasing a person's ability to behave toward a desired outcome. Therefore, Hayes (2002) defined interpersonal skills as "goal-directed behaviors used in face-to-face interactions in order to bring about a desired state of affairs" (p. 3).

In a clinical context, Joubert and colleagues (2006) described soft skills as "doing the right thing at the right time and doing it nicely" (p. 29). Klaus (2007) characterized soft skills as "the nontechnical traits and behaviors needed for successful career navigation" (p. 1). According to Onisk (2011), "The very term 'soft-skills' is often generically applied to anything that is 'non-IT'" (i.e., not information technology) (p. 1). In searching for a definition for non-academic skills, Kamenetz (2015) indicated that employers use the term soft skills to describe "anything from being able to write a letter, to showing up on time and having a firm handshake" (p. 5). Muzio and colleagues (2007) referred to soft skills as micro-social skills that are "universally

recognized as being critical to successful project management" (p. 30). In business education, Perreault (2004) defined soft skills as "personal qualities, attributes, attitudes, and level of commitment that set an individual apart from others who may have similar experiences and skills" (p. 23). Furthermore, James and James (2004) indicated that soft skills are a "set of talents or abilities that an employee brings to the workplace" (p. 40).

Importance of Soft Skills

Despite the lack of agreement among scholars on a definition of soft skills (Matteson et al., 2016), soft skills have been recognized as a vital competency in different professional spectrums, including business management and leadership (Marques, 2013), investment and advising (Leyes, 2007), accounting and corporate finance (Dixon et al., 2010; Rathi, 2015), education (Ryan, 2016), and healthcare (Farmer, 2015; Joubert et al., 2006; Stoller et al., 2013; Weiszbrod, 2013). Soft skills have been credited with creating responsive organizations (Phillips et al., 2015). Soft skills also reflect desired behaviors and competencies that positively influence the work environment (Phillips et al., 2015). Wats and Wats (2008) indicated that 85% of an employee's success is due to soft skills, with hard skills accounting for the other 15%. Furthermore, Tulgan (2015) noted that because soft skills affect the way service is delivered, employees typically get fired due to their lack of soft skills despite the tendency for organizations to hire based on hard skills. Soft skills are recognized as essential for all aspects of project management, from tactics to organizational strategy (Muzio et al., 2007).

In healthcare, several studies have called for the reformation of medical school curricula to include soft skill training to facilitate development of emotional intelligence among medical students, physicians, and nurses (Bourquin et al., 2014; Epner & Baile, 2014; Farmer, 2015; Harlak et al., 2008; Jones, 2014; Kelm et al., 2014; Kumagai & Wear, 2014; Martin, 2011;

Michalec, 2011; Rao et al., 2007; Shield et al., 2011; Stoller et al., 2013; Van Staden et al., 2006; Weiszbrod, 2013). For example, Ray and Overman (2014) recognized the importance of integrating soft skills into the daily practice of nurses; they illustrated how the soft skills of effective communication and delegation positively affected clinical outcomes, the work environment, and employee well-being. Additionally, Kim and colleagues (2004) provided evidence that empathic communication skills between physicians and patients could improve patient satisfaction and compliance.

There is an increasing awareness and acknowledgment that technical skills are necessary but not sufficient for success beyond entry-level positions, and that soft skill competencies are necessary as employees move higher within organizations (Laker & Powell, 2011). This disconnect between technical and soft skill proficiencies explains the common reports of public discontentment and patient dissatisfaction despite significant improvements in health science knowledge and technical abilities in diagnosing and treating diseases (Mohammadi & Hedges, 2007).

Conceptualization of Soft Skills

Although the extant literature has identified numerous competencies and traits as soft skills, thus far, there has been limited investigation regarding the various, unique dimensions within the realm of soft skills which can explain the individual differences in soft skills performance. The term *soft skill* has been plagued by a lack of clarity in definitions of the concept; more generally, scholars debate about conceptualizing the term *skill* (Bolton, 2004). Therefore, building a meaningful conceptualization of soft skills is important for this research to ensure accurate operationalization of the term for development of an effective assessment model.

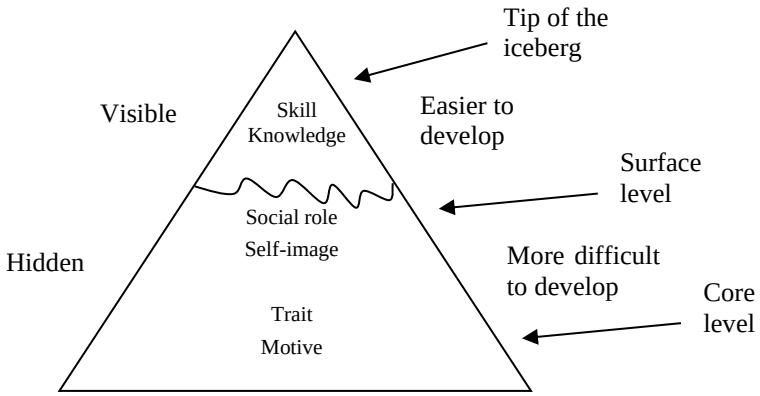
Thus far, various business domains have defined the concept of soft skills differently. Some descriptions have been explicit, while others have been implicit (Kechagias et al., 2011). For example, Conley (2013) and Kamenetz (2015) referred to soft skills as *non-cognitive* skills, while Hurrell et al. (2013) described soft skills as *non-technical* and *not reliant on abstract reasoning.* Robles (2012) considered soft skills *intangible* and *character-traits* or *personality-specific skills,* while Decker (1999) called soft skills *hidden competencies.* In a business environment, James and James (2004) associated the terms *career skills* and *emotional IQ* with soft skills. They used this analogy "*emotional IQ*" to associate superior performance to employees who are using their soft skills parallel to the effect of emotional intelligence on leadership.

By analyzing the differences across the various definitions in the psychology literature, Hurrell et al. (2013) defined *skill* as "what is required of workers for performing a specific task and describes processes leading to relevant performance in particular situations" (p. 165). According to Hurrell et al. (2013), skill develops with practice over time and cognitive knowledge. The Hay Group (2003) defined *skills* as "things that people can do well" (p. 3), while Attewell (1990) noted that most definitions describe skill as "the ability to do something well," and thus implies competence or proficiency (p. 423). The Iceberg Model of Managerial Competencies (see Figure 1) considers skill as an ability that demonstrates a level of competency (Hay Group, 2003). The iceberg model defined *competency* as "an underlying characteristic of a person which enables them to deliver superior performance in a given job, role, or situation" (Hay Group, 2003, p. 2). The iceberg model illustrated six elements that formulate the different levels of a competency. As Figure 2 illustrates, skill and knowledge are positioned at the tip of the iceberg, representing the elements that are above the surface. Social role and self-image are

on the surface, while trait and motive sit below the surface and closer to a person's core. Elements of competencies that fall above the surface, including skill and knowledge, are generally easy to identify, measure, and train; elements that fall below the surface, including traits, are more difficult to train or develop as they are generally believed to be innate.

Figure 2

The Iceberg Model of Managerial Competencies



Source: Adapted from Hay Group – Working paper (2003).

In addition to competencies and skills, the Hay Group (2003) also described soft skills using the term *trait*; traits are "enduring characteristics of people" and "habitual behaviors by which we recognize people" (Hay Group, 2003, p. 3). Traits are also seen as *dispositions* that are "individual qualities that influence behavior and actions performed as part of an individual's skill set" (Matteson et al., 2016, p. 74). Traits differ from skills in several respects; "personality traits refer to dispositions toward manifesting observable behaviors or to non-observable, inferred characteristics" (Johnson, 1999, p. 444). Traits are more difficult to learn and develop than skills. Traits are stable characteristics, skills are not (Kechagias et al., 2011). Displays of traits are subject to the influences of social and environmental factors which is why people respond differently even in the same situation (Hurrell et al. 2013); skills, however, depend on having the

knowledge of how to do a task and both the ability and motivation to perform it (Kechagias et al., 2011).

Additionally, the term *soft*, as clarified by Bailly and Léné (2012), reflects relational skills that include qualities in employees' personalities such as enthusiasm, the ability to interact socially with others, empathy, self-management and control, and other attributes that are essential for workers in most industries. These relational skills show the ability to manage emotions according to a situation (Bolton, 2004); they acknowledge the individual's power in social interaction behavior. Accordingly, Hurrell and colleagues (2013) explained that soft skills are behaviors that turn into skilled work when combined with knowledge and discretion. In the workplace, soft skills are conceptualized as "*individuals' qualities brought to the job and transferred into skills on the job*" (Hurrell et al., 2013, p. 178). The emotional behavior of soft skills is derived from the socio-emotional factor in emotional intelligence theory (Kechagias et al., 2011). On the contrary, Claxton and colleagues (2016) criticized using the term *non-cognitive* to describe soft skills. They argued that researchers use the term *cognitive* for behaviors that depend on knowledge and education; therefore, the term *non-cognitive* reflects actions not derived from rational thinking or knowledge. This description could be undermining the importance of soft skills. Kautz and colleagues (2014) explained that, when applied to skills, the term *non-cognitive* is used by researchers to describe personal attributes not thought to be measured by IQ or achievement tests (p. 8). The particularity of cognitive and non-cognitive attributes in terms of calling them skills that influence a person's behavior lies in their ability to change and be shaped over the life cycle (Kautz et al., 2014). The old literature in psychology used the term *trait* to reflect the permanence and heritable nature of attributes. Given that skills are attributes that can be shaped and reflect capacities to function, researchers refer to cognitive

and non-cognitive attributes by the term *skills* (Kautz et al., 2014). Although heritability and a caring environment play a role in solidifying a person's attributes and personality traits, developing non-cognitive skills early in life increases the person's ability to learn and enhance these skills with age (Kautz et al., 2014; Roberts, 2009). Therefore, soft skills in the context of intellectual abilities such as creative thinking, empathic understanding, and making sound decisions are conceptualized as cognitive skills, as opposed to soft skills related to affective or emotional attributes and genetic effects like affective empathy and gentleness (Hojat et al., 2009; Kantrowitz, 2005).

Accordingly, to distinguish the type of soft skills that are the subject of interest for this study, and based on the theoretical concepts of the diverse variables used to describe soft skills in the literature, soft skills are conceptualized to be competencies formulated by different elements that involve personal traits at the core of individual's behavior. Knowledge and skills are the differentiating elements that present on the surface and distinguish the use of soft skills from one individual to another. As a result, the following operational definition of soft skills for healthcare providers will be used in this study:

> Soft skills for healthcare providers are a set of interpersonal competencies derived from the individual's qualities and traits, refined by the individual's intelligence, and shaped by experience and the skill of knowing how and when to use these competencies in a way that positively influences the provider's performance when interacting with patients.

Conceptualization of Initially Identified Soft Skills

The literature review revealed that soft skills for healthcare providers generally are perceived to include communication, empathy, gentleness, listening, respect, personal initiative,

and self-control (see Table 1). This section will describe these principal soft skills that have been recognized in literature. These soft skills will further be examined through this study to assess their viability and confirm that these soft skills are essential for effective healthcare provider-patient interactions.

Table 1

Soft Skills Identified in Literature for Healthcare Professionals

Soft skills	References
Communication	Epner & Baile, 2014; Farmer, 2015; Harlak, Gemalmaz, Gurel, Dereboy, & Ertekin, 2008; Jones, 2014; Kelm, Womer, Walter, & Feudtner, 2014; Kim, Kaplowitz, & Johnston, 2004; Klaus, 2007; Martin, 2011; Ray & Overman; 2014; Robles, 2012
Empathy	Case & Brauner, 2010; Churchill & Schenck, 2008; Epner & Baile, 2014; Harlak, Gemalmaz, Gurel, Dereboy, & Ertekin, 2008; Jones, 2014; Kelm, Womer, Walter, & Feudtner, 2014; Kim, Kaplowitz, & Johnston, 2004; Klaus, 2007; Michalec, 2011; Robles, 2012
Gentleness	Ray & Overman (2014)
Listening	Churchill & Schenck, 2008; Epner & Baile, 2014; Jones, 2014; Martin, 2011; Ray & Overman, 2014
Respect	Beach, Roter, Wang, Duggan, & Cooper, 2006
Personal Initiative	Boerner & Dütschke, 2008; Işik, Uğurluoğlu, Akbolat, Öner, & Pisapia, 2012
Self-control	Decker (1999)

Communication. The word *communication* has been defined in countless ways and has been ascribed diverse meanings. Communication is a complicated process based on the framing of information to create meaning in a reciprocal relationship. Communication involves understanding and conveying information in multiple ways. Communication is more than sending a message to a receiver; communication involves the sender's intention and thoughts and the receiver's attention, understanding, and acceptance (Miller, 2015; Page, 1984). Although

definitions of communication do not explicitly identify communication as a soft skill, scholars consider communication to be a core competency that influences interpersonal behavior (Schiavo, 2013). Communication has also been identified by business executives as one of the top 10 soft skills needed in the contemporary workplace (Robles, 2012). In healthcare, empathy and communication have been widely reported as interpersonal soft competencies that could impact the physician-patient relationship and, therefore, the patient experience (Jones, 2014; Kelm et al., 2014; Michalec, 2011). In addition, the Joint Commission has identified communication, human factors, and leadership as three of the most common soft skills that can influence the environment of a medical team (Farmer, 2015).

Kurtz and colleagues (2005) highlighted how the quality of provider-patient and provider-provider communication has evolved during the last two decades and how this evolution has impacted the quality of healthcare. Provider-patient communication has been perceived differently in the two medical models of communication. The biomedical model is the old model that assumes poor health is a physical symptom that can only be treated through physical means. This model uses informative and scientific modes of communication while disregarding the influence of psychological factors that can impact patient health. The second model is the biopsychosocial model, which presumes health is not only a function of physical factors but is also influenced by the patient's feelings and beliefs, as well as other factors (e.g., social support) in his or her life. Therefore, this model emphasizes the need for empathetic and sensible communication with patients in order to achieve understanding regarding both the medical and human factors of health (Ong, De Haes, Hoos, & Lammes, 1995; Schiavo, 2013). Many healthcare organizations have found the biopsychosocial model more pertinent to their focus on delivering patient-centered services than the biomedical model and subsequently have

shifted to this approach (Schiavo, 2013). This shift in adoption of medical models has been supported by several professional societies and regulating institutions, including but not limited to the U.S. Department of Health and Human Services, the American Medical Association, American Academy of Family Physicians, the American Association of Family Practitioners, the Association of American Medical Colleges, and various hospitals and academic institutions (Ong et al., 1995; Schiavo, 2013). The biopsychosocial model explains the two dimensions of communication in healthcare: instrumental and affective communication. During provider-patient interactions, providers need to apply multiple modes of communication that incorporate genuine personal engagement and emotional involvement. For example, expressing sympathy requires exhibiting candid feelings and correct use of words (Levinson et al., 2010; Ong et al., 1995). Accordingly, as provider-patient communications encompass several key functions, healthcare providers are required to exhibit a high level of customer service quality and possess interpersonal communication competencies that enable them to connect with patients, communicate information, and handle difficult situations.

In healthcare interactions, communication is more complex than in other settings; it has multiple facets. Providers' interaction styles include both verbal and non-verbal facets that help them better engage with patients. The provider's communicated message must travel from the patient's brain to his or her heart to gain acceptance (Page, 1984). This is not an easy step considering that a patient experiencing an illness does not have his or her normal capacities. Thus, providers need to listen to their patients, ask questions, and care about their patients' emotional concerns (DeVoe et al., 2009; Fallowfield, & Jenkins, 1999; Haig et al., 2006; Ong et al., 1995; Pinto et al., 2012; Schiavo, 2013). Consideration of patients' feelings and needs during provider-patient interactions can encourage patient adherence to treatment protocols, increase

patient satisfaction, and improve health outcomes (Levinson et al., 2010; Maguire & Pitceathly, 2002; Ong et al., 1995; Schiavo, 2013). Numerous studies have examined the relationship between provider-patient communication and health outcomes. For instance, Ong et al. (1995), Maguire and Pitceathly (2002), and Levinson et al. (2010) identified several benefits to both patients and providers when doctors communicate effectively with their patients. For doctors, the benefits include a higher likelihood of accurate diagnosis of a patient's problem, which in turn typically leads to higher patient satisfaction and adherence to the treatment plan. Patients benefit from effective communication with their providers through increased understanding of their illness or injury, which can result in decreased anxiety and increased willingness to adhere to a treatment plan. Thus, effective communication can have a positive impact on both the doctor's and the patient's well-being. Additionally, effective provider-patient communication may also foster trust between providers and patients, as well as increase patient commitment (Pearson & Raeke, 2000; Sharma & Patterson, 1999). Multiple institutions have established guidelines, courses, and interventions to foster a patient-centered approach in provider-patient communication to equip physicians with skills and tools to communicate effectively and enhance health outcomes (Schiavo, 2013). Further, the Patient Protection and Affordable Care Act's emphasis on improved primary care has led to increased interest in the use of patient-centered communication skills shown to influence patient satisfaction and a patient's adherence to treatment (Levinson et al., 2010). Therefore, communication is a fundamental tool for provider-patient interaction, and one of the main soft skills in healthcare services.

In healthcare, currently implemented methods for measuring the effectiveness of a provider's communication skills are either in the form of self-report questionnaires or patient satisfaction or experience surveys (Levinson et al., 2010). Many studies have assessed a

healthcare provider's communication through the development of new tools or the use of existing tools to measure a provider's performance in patient-centered care (Johnson, Roter, Powe, & Cooper, 2004; Levinson et al., 2010; McCormack et al., 2011). For example, the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey is a validated assessment tool developed by O'Malley and colleagues (2005) to measure several dimensions of patient-centered care. The CAHPS survey is widely used by researchers and healthcare organizations to measure providers' communication skills as part of the assessment of patients' experiences (Duffy et al., 2004; Levinson et al., 2010; Makoul et al., 2007). The Roter Interaction Analysis System (RIAS) is another instrument that is widely used in healthcare to assess physician-patient communication (Cavaco & Roter, 2010; Duffy et al., 2004; Hall et al., 1994; Ong et al., 1998; Roter et al., 1987; Roter & Larson, 2002; Roter et al., 1991). The RIAS system is based on first recording the physician-patient communication, followed by coding each statement of the audiotaped content (utterance) into one of 29 task-focused and 14 socioemotional communication categories (Cavaco & Roter, 2010; Hall et al., 1994; Ong et al., 1998; Roter et al., 1991; Sandvik et al., 2002). The RIAS has mostly been applied in primary care settings (Cavaco & Roter, 2010; Ong et al., 1998). The RIAS was also evaluated in provider-patient communication settings other than primary care, including oncology (Ong et al., 1998) and pharmaceutical care (Cavaco & Roter, 2010), as well as in medical-related behavioral or social comparative analysis studies that examined differences in provider-patient communication on the basis of ethnic background (Johnson et al., 2004) and gender differences (Hall et al., 1994; Roter et al., 1991). Most studies reported the RIAS to be highly reliable; however, using the RIAS in daily provider-patient interaction seems impractical. The system is based on coding audio and/or video recorded consultations, which seems possible in research but

not feasible in everyday medical encounters due to confidentiality regulations. Duffy and colleagues (2004) reported that the RIAS provides a powerful tool for research and educational programs. Disadvantages of the RIAS, however, include the coding process, which is time-consuming and requires well trained coders and high attention (Ong et al., 1998); coding of the RIAS is also undermined by a lack of strict definition for some coding categories (Sandvik et al., 2002). Another validated assessment tool to measure provider-patient communication is the Communication Assessment Tool (CAT) developed by Makoul and colleagues (2007) to capture patient perception of provider communication and interpersonal skills soon after an inpatient or outpatient medical encounter. The CAT was validated and assumed to be reliable for use in everyday practice through a field test on a large sample of physicians and patients from different specialties, including family medicine, dermatology, neurosurgery, ophthalmology, orthopedics, and physical medicine (Makoul et al., 2007). The CAT, however, is comprised of 15 items, 14 of which evaluate physicians solely leaving only one item that evaluates other supporting medical providers.

As noted earlier, provider-patient communications are complex and multidimensional. The provider-patient communication involves more than performing mechanical skills; it involves multiple communication tasks, including personal engagement and emotional connection (Levinson et al., 2010). Therefore, instruments to measure healthcare providers' communication should distinguish between verbal and non-verbal communication, as well as between affective and instrumental communication. Furthermore, there is a lack of evidence that patients can distinguish between the different types of communication when they report their perceptions. Depending on the level of a patient's illness and the degree to which the patient's emotions are involved, some patients focus on the provider's technical quality, while others

instead evaluate the provider's performance based on interpersonal qualities (Ong et al., 1995). Researchers confirm that both dimensions of communication are important; however, the level of importance of the dimensions varies based on the situation (Ong et al., 1995). Accordingly, the availability of several measurement tools to assess provider-patient communication could facilitate crafting and adapting the factors of communication most relevant to provider-patient interaction in a primary care setting.

Empathy. There is much commonality between the characteristics of empathy and soft skills. As with soft skills, the literature lacks a unified concept or definition for the term *empathy* because empathy is multi-dimensional and relevant to many disciplines (Gerdes et al., 2010; Oxley, 2011; Preston & De Waal, 2002; Reniers et al., 2011). Accordingly, the literature shows that researchers have identified empathy with various terms and definitions. For example, Eisenberg and Strayer (1990) identified empathy as having an affective component and defined it as "sharing the perceived emotion of another – 'feeling with' another" (p. 5). Davis (1990) stated that empathy is a skill and behavior, and Spiro and Yale University (1993) regard empathy as a "process or event by which one perceives and understands the subjective experience of another person" (p. 79). D'Arms (1998) believes that empathy is a capacity and a way of acquiring an emotion. Benbassat and Baumal (2004) referred to empathy as a humanistic attitude, where Lucas (2011) defined empathy as "the affective and/or cognitive awareness of another's internal states and perspectives" (p. 4). Patnaik (2009) asserted empathy occurs when a person can "step outside of" him or herself and "walk in someone else's shoes" (p. 85). Alford (2016) defined empathy as "a vicarious emotion, a feeling of what the other individual is feeling" (p. 4), whereas Waytz (2016) considered empathy a cognitive task. Hoffman (2008) defined empathy "as an emotional state triggered by another's emotional state or situation, in which one feels

what the other feels or would normally be expected to feel in his situation" (p. 440). In patient-care settings, Hojat and colleagues (2002) defined empathy as "a cognitive attribute that involves an ability to understand the patient's inner experiences and perspective and a capability to communicate this understanding" (p. 1564).

The term *empathy* comes from the Greek word *empatheia*, meaning "affection or passion" (Eisenberg & Strayer, 1990, p. 38). The word empathy was first used by psychologist Edward B. Titchener (1909), in his work entitled *Elementary Psychology of the Thought Processes*; in this piece, Titchener translated the German word *Einfühlung* as empathy, by way of the Greek *empatheia* (Alford, 2016; Depew, 2005; Spiro & Yale University, 1993; Wispé, 1986). In the literature, much confusion surrounds use of the term empathy with other related concepts, including sympathy and pity (Alford, 2016; Davis, 1990; Eisenberg & Strayer, 1990; Hojat et al., 2009; Spiro & Yale University, 1993; Wispé, 1986). Scholars have sought to differentiated empathy from sympathy. Empathy is a process of vicarious experience that happens when a person understands a specific emotional state of another person and shares that feeling with the other person by taking the perspective of the other person (Alford, 2016; D'Arms, 1998; Oxley, 2011; Preston & De Waal, 2002). The process of empathy involves transfer of emotions and relates to various emotional states beyond painful ones only (Alford, 2016; Oxley, 2011). On the other hand, the word *sympathy* is rooted in the Greek *sympatheia*, or the Latin *sympathia*, means literally "with" (syn) "suffering" (pathos) (Wispé, 1986). Sympathy is an emotion that refers to feeling care or concern for someone else's hardship (Alford, 2016; D'Arms, 1998; Oxley, 2011; Wispé, 1986). *Pity* is described as another name or form of sympathy, a kind of sympathetic sorrow (Davis, 1990; D'Arms, 1998). Empathy encompasses reaching out to the other person to understand the perspective of the other person and to share his

or her feelings, while sympathy is the experience of being moved and feeling distressed by the other person's suffering and showing concern for the other person's well-being. Empathy does not require having direct concern for the other person but still involve sharing the other person's emotions through understanding their pain – "perspective-taking" (Alford, 2016; Eisenberg & Strayer, 1990; Oxley, 2011; Wispé, 1986). Empathy is commonly described as "feeling with" another, while sympathy is commonly described as "feeling sorry for" the other (Eisenberg & Strayer, 1990, p. 642).

The multidimensional process of empathy includes three main components: cognitive or mental events, affective response, and behavioral outputs (Decety & Jackson, 2004; Larson & Yao, 2005; Oxley, 2011). The cognitive dimension, according to Davis (1990), happens when an individual understands and finds him or herself aware of the state of another person; Spiro and Yale University (1993) referred to the cognitive dimension by "empathic understanding" that formulates a basic characteristic of the provider and a fundamental requirement for the development of clinical knowledge. The affective dimension takes place when an individual makes the emotional shift from thinking to feeling connected to the other person; this dimension is called by many scholars the "perspective taking" dimension (D'Arms, 1998; Decety & Jackson, 2004; Oxley, 2011; Preston & De Waal, 2002; Stephan & Finlay, 1999). Finally, the behavioral act is when an individual shares his or her experience with another person (Davis, 1990). The empathic person undergoes various psychological activities during the empathic process; cognitive and affective dimensions of empathy are assumed to formulate the higher order of empathy, namely "true empathy" (Preston & De Waal, 2002).

Another model introduced by Decety and Moriguchi (2007) proposed that four components interact dynamically to produce empathy: affective sharing, self-awareness, mental

flexibility, and regulatory processes (Decety & Moriguchi, 2007). Cognitive empathy is assumed to be derived from self-awareness and mental flexibility (Davis, 1990; Decety & Moriguchi, 2007; Gallup & Platek, 2002; Keenan & Wheeler, 2002). Many scholars consider empathy to be a means of communication (Davis, 1990; Kim et al., 2004; Larson & Yao, 2005); empathy is included in the definition of rapport as one of its components ("Rapport", 2012). In addition, the literature has widely reported empathy and communication to be interpersonal soft competencies; the impact of empathy on the provider-patient interaction and subsequently patient satisfaction has been demonstrated in numerous studies (Davis, 1990; Halpern, 2003; Hojat et al., 2009; Jones, 2014; Kelm et al., 2014; Larson & Yao, 2005; Michalec, 2011; Starcevic & Piontek, 1997; Suchman et al., 1997). Regardless of whether empathy is tied to self-awareness, communication and rapport, or other competencies, the literature confirms that the characteristics, experiences and cognitive evaluations of the empathic person affect empathy's representation and expressions (Larson & Yao, 2005; Preston & De Waal, 2002).

Empathy in healthcare represents the professional qualities that should shape the humanistic skills of providers (Spiro & Yale University, 1993). Research on the role of empathy in the domain of provider-patient interaction considers empathy as one of the fundamental caring competencies that health providers should demonstrate in their interactions with patients (Larson & Yao, 2005; Suchman et al., 1997). The two dimensions of empathy that many scholars found most appropriate for the provider-patient relationship are cognitive and behavioral empathy (Halpern, 2003; Hojat et al., 2009; Suchman et al., 1997). Cognitive empathy in a medical context is illustrated through understanding the state of a patient's emotions and concerns. Behavioral empathy is illustrated by the provider's skill and ability to convey this understanding back to the patient in a way that would improve the patient's emotional state (Halpern, 2003;

Hojat et al., 2009; Kim et al., 2004; Suchman et al., 1997). The emotional dimension, however, is required as a first step to engage the provider to connect with the patient emotionally to understand the patient's distinct experience (Spiro & Yale University, 1993).

The healthcare literature presented evidence for the positive benefits of this clinical type of empathy to the provider-patient interaction. The empathic communication that lies in cognitive and behavioral empathy restores a patient's feeling of being understood, which increases patient trust in providers and enhances patient satisfaction (Halpern, 2003; Hojat et al., 2009; Kim et al., 2004; Larson & Yao, 2005; Rousseau, 2008; Starcevic & Piontek, 1997; Suchman et al., 1997). The benefits of clinical empathy also extend to healthcare providers. Understanding a patient's concerns and emotional state helps providers make a better evaluation of the patient's state and accordingly results in deeper engagement and interaction (Larson & Yao, 2005; Starcevic & Piontek, 1997). Further, *cognitive and behavioral empathy* are found to reassure patients and reduce their anxiety, which in turn helps reduce provider burnout and leads to optimal clinical outcomes (Hojat et al., 2009; Larson & Yao, 2005).

In contrast, *affective empathy* is seen as a threat to healthcare providers because it is more important for the physician to recognize and understand patients' feelings than to experience and share these feelings (Halpern, 2003). Providers need to maintain an emotional balance by keeping a reasonable distance while empathizing with patients to avoid the interference of emotions with the provider's objectivity in diagnosis and treatment (Hojat et al., 2002). This distinction is equivalent to the difference between empathy and sympathy, where an empathic provider will be focused on *understanding* a patient's feelings, while a sympathetic provider will focus on *feeling* the level of pain that the patient is experiencing (Hojat et al., 2009). Even so, experiencing the pain of each patient is not feasible, as it will lead health providers to career

burnout. Therefore, a provider's expression of emotions could thwart the provider's neutrality and objective reasoning in clinical decision making and consequently affect the provider's actual ability to provide care for the patient (Halpern, 2003; Hojat et al., 2009). Accordingly, the cognitive and behavioral facets of clinical empathy, as opposed to affective or emotional empathy, offer great benefits for patients and providers. Empathy improves the provider-patient interaction, contributes to the delivery of a better quality of care, enhances patient and provider satisfaction, and provides meaning for the practice of medicine (Rousseau, 2008; Suchman et al., 1997).

There are several factors that hinder health providers from experiencing effective empathy. First, the structure of education in medical schools concentrates on scientific research; the individual patient is seen as a "case." Even medical reports are written in the passive voice hence, the focus is directed toward the disease rather than the patient as a holistic being. These training elements shape the health provider's style of thinking to be more objective and impersonal, with less attention given for humanity (Spiro & Yale University, 1993). Second, in medical practice, the most common barrier to empathy in provider-patient interaction is time pressure. Time constraints prevent the provider from allocating enough time to listen carefully to the patient. Listening is critical to observe and understand a patient's perspective and feelings (Halpern, 2003; Starcevic & Piontek, 1997). Third, the demanding work environment that requires providers to be mentally present and aware all the time is another barrier to empathy (Halpern, 2003; Larson & Yao, 2005). Healthcare providers are constantly exposed to several emotional reactions that contribute to burnout; these emotional reactions drain the energy they need to control emotional distress and maintain objective communication (Hojat et al., 2009; Larson & Yao, 2005). Fourth, interpersonal characteristics and the social style of the provider

and the patient are other factors that affect the likelihood that the provider will provide empathy in provider-patient interactions (Halpern, 2003; Larson & Yao, 2005).

Many researchers indicated that the lack of consensus on a definition of empathy and its conceptualization present the main challenge to the measurement of empathy (Gerdes et al., 2010; Neumann et al., 2015; Reniers et al., 2011; Wispé, 1986). Further, there are several incongruent perspectives regarding empathy due to its complex and multidimensional nature (Hojat et al., 2002; Neumann et al., 2015). For instance, Davis (1990) and Spiro and Yale University (1993) explained that measuring empathy is difficult because empathy is a natural (non-determined) behavior that cannot be taught but can be restored or fostered through the development of other skills and attitudes, such as self-awareness, effective listening and communication skills. Gerdes and colleagues (2010) confirmed that the automatic nature of empathy produced affective reactions and cognitive abilities. Wispé (1986) stated that many assessment tools that were developed to measure empathy are instead measuring sympathy.

Though several measuring tools for empathy exist in the literature for use in the general population, none of these tools was designed specifically to measure empathy in the context of provider-patient interaction (Hojat et al., 2002; Hojat et al., 2009; Lawrence et al., 2004). Two of these empathy instruments, however, are recognized to measure empathy of healthcare providers: The Jefferson Scale of Physician Empathy and The Consultation and Relational Empathy (CARE) measures. The Jefferson Scale of Physician Empathy was developed and validated by Hojat and colleagues (2001) to measure the attitudes of medical students toward physician empathy in patient care situations using a sample of internal medicine residents and medical students. To make the scale more relevant to the measurement of providers' empathetic behavior rather than empathetic perceptions, a modified version was developed by Hojat and

colleagues (2002) using a sample of physicians. The modifications resulted in a scale that was applicable to a range of healthcare providers including not only physicians, but other providers such as nurses and therapists. Research on the psychometric characteristics of the modified version of the Jefferson Scale of Physician Empathy (JSPE) for health professionals "HP" indicated there were significant differences in empathy scores between genders and among physicians in different specialty groups (Hojat et al., 2002). The scale yielded three components for a physician's empathy: perspective taking that applies to the general population, in addition to compassionate care and standing in the patient's shoes, which are specific to the provider-patient relationship (Hojat et al., 2002). Several researchers thereafter adapted the JSPE scale to the Jefferson Scale of Empathy-Health Profession Students version (JSE-HPS) to measure empathy in diverse student groups including those in healthcare profession (Fields et al., 2011; Kliszcz et al., 2006) and pharmacy (Fjortoft et al., 2011).

The Consultation and Relational Empathy (CARE) measure was developed and validated by Mercer and colleagues (2004) to measure patients' perception of relational empathy of healthcare providers in the context of the clinical consultation in general practice. The CARE measure is a patient-assessed measure initially developed based on a broad definition of empathy as "the ability to understand the patient's situation, perspective and feelings; to communicate that understanding and check its accuracy; and to act on that understanding with the patient in a helpful way" (Mercer et al., 2004, p. 700). The measure was validated through correlational analysis against other validated measures in a series of three pilot studies using patients and providers from the general practice field. The final version of the CARE measure consists of 10 items rated on a 5-point rating scale from 'poor' to 'excellent' in addition to a 'does not apply' response option (Mercer et al., 2004). The performance of CARE measure was assessed by a

large sample of patients attending 26 different general practitioners in Scotland and found of direct relevance to everyday encounter in high and low socio-economic deprivation settings (Mercer et al., 2005). Results of these studies suggest that the Jefferson Scale of Physician Empathy (JSPE) and the CARE measure are strong tools and that some of their items could be considered and adapted to the purpose of this research to measure healthcare providers' empathy in provider-patient interactions.

Gentleness. The term "gentleness" thus far has not been discussed or operationalized as an independent construct in the extant healthcare literature; is it denoted as a component of patient care (Ray & Overman, 2014). Gentleness is described as a quality associated with kindness, thoughtfulness, consideration, concern, empathy, respect, and love (Carron & Cumbie, 2011; Faust, 2009; Flynn, 2016). The term gentleness is used to describe the *act* of being kind rather than the *way* an individual feels while showing care (Faust, 2009). In the healthcare literature, gentleness has previously only been assessed indirectly through surveys of patient-centered care services (Ballatt & Campling, 2011). Some routine healthcare tasks are more appreciated when patients feel the task is performed with intimacy and a personal touch. For example, helping a patient to sit up, bathing an elderly person with a smile, or placing a reassuring hand on a shoulder can convey behaviors of gentleness and kindness (Ballatt & Campling, 2011). Therefore, to measure gentleness as a soft skill, it is important to carefully identify healthcare providers' behaviors that clearly demonstrate acts of gentleness during encounters with patients.

Listening. Individuals learn to develop the natural competency of listening and to use it consciously as they mature (Purdy, 1997). Listening involves hearing, interpreting, and understanding meaning. Listening is associated with verbal and non-verbal communication and

understanding abilities (Hayes, 2002; Riggio, 1986). Some scholars (e.g. Purdy, 1997) assert it is the most important communication skill for building relationships (Purdy, 1997). The primary purpose of listening is to learn about other people and situations in order to be able to make sound ethical decisions and take actions to accomplish a specific goal (Purdy, 1997, p. 15). According to Purdy (1997), conscious listening instills meaning in communication and increases the listener's sensitivity to the needs of others. Through effective listening, the listener conveys respect and understanding for the speaker in a way that reflects caring (Purdy, 1997). Thus, the main outcomes of listening include not only learning and understanding, but also the cultivation of relationships (Purdy, 1997).

In the process of communication, listening is different from hearing; it is more conscious than merely hearing. Hearing is the physical capacity to receive sound messages, which can be measured clinically using audiometry machines that gauge the person's sense of hearing (Gosselin & Gagné, 2010). Listening, on the other hand, is the mental act that transforms received messages into meaning (Lundsteen, 1979). Hearing is a sense that presents a passive function while listening is a skill that demonstrates cognition through attention to the information that is heard as well as the intention to process that information to produce meaning (Gosselin & Gagné, 2010). Listening has been defined by Lundsteen (1979) as "the process by which spoken language is converted to meaning in the mind" (p. 1). Purdy (1997) defined listening as "the active and dynamic process of attending, perceiving, interpreting, remembering, and responding to the expressed (verbal and non-verbal) needs, concerns, and information offered by other human beings" (p. 8). Hayes (2002) defined listening as "the active search for a full and accurate understanding of the meaning of another's message" (p. 69). These definitions highlighted the components that are critical for listening to be an affective process, specifically: the desire to

listen, attendance with focus and attention, the awareness to perceive, a readiness to understand and interpret the message, the ability to remember the message, a response to the message whether verbal or non-verbal, and the expression of concern for the needs and information offered by another person (Lundsteen, 1979; Purdy, 1997). These components illustrate that effective listening is a highly conscious, intellectual activity (Lundsteen, 1979).

The literature identified four main types of listening. *Discriminative* listening involves the ability to recognize verbal and non-verbal aspects of a message concerning the features of the message rather than its content. *Comprehensive* listening involves understanding the content of the message for the purpose of learning and comprehending the information conveyed. *Critical-evaluative* listening assumes the nature of the message has been recognized (discriminative) and understood (comprehensive) adequately to be able to analyze intentions and evaluate information. *Therapeutic* listening, also called empathic listening, reflects concern about other people's interests and needs through listening to share feelings or offer comfort to others with meaningful responses (Lundsteen, 1979; Purdy, 1997).

Purdy (1997) asserts the essential elements of interpersonal listening include awareness, empathy, trust, self-disclosure, and a supportive environment (p. 40). Listening skills involve attributes of role-taking and empathy toward others through understanding the other person's needs and perceptions and using this information while communicating with the other person effectively and empathically (Lundsteen, 1979). Listening and some of its facets including awareness and empathy, are generally considered to be soft skills and important aspects of effective communication and interpersonal interactions.

The medical practice presents two listening models in clinical settings: active listening and passive listening. *Active listening* occurs when the provider listens to patients attentively and

responds with verbal and non-verbal expressions that confirm effective listening and understanding. *Passive listening* occurs when the provider pretends to listen, with unconcerned reactions or preoccupation with note taking, without engaging with the patient and making only superficial responses. Active listening reflects the effective listening skills that are emphasized in medical settings and fulfill the purpose and objective of listening (Jagosh et al., 2011; Johnston et al., 2007). In a provider-patient interaction, effective listening makes the patient feel comfortable and cared about, which is likely to enhance the patient-provider relationship. Thus, listening to patients' complaints reduces patients' stress, makes patients feel comfortable, and demonstrates understanding which encourages patients' openness and cultivates rapport with patients. These listening outcomes increase patients' satisfaction with their providers' communication skills (Dyche, 2007; Hobgood et al., 2002; Jagosh et al., 2011). In addition, effective listening contributes to clinical outcomes, such as accurate diagnosis and reporting of patients' complaints, that improve the providers' ability to make appropriate medical decisions (Jagosh et al., 2011). Therefore, active listening is considered vital for clinical communication and relationship building between provider and patient (Jagosh et al., 2011; Johnston et al., 2007). In primary care, active listening by general practitioners plays a therapeutic role in improving psychological outcomes of patients with minor illnesses who visit their primary care providers for comfort or as prevention against the development of more serious conditions (Fassaert et al., 2007; Johnston et al., 2007). Medical practice, however, presents some barriers to effective listening in clinical settings, most notably time and workload pressures. These barriers can result in failure to encourage patients to open-up in the short amount of time often allowed for consultation (Johnston et al., 2007). Lack of listening is likely to be perceived by patients as lack of attention or acknowledgement on the part of the doctor (Johnston et al., 2007).

Thus, active listening by general practitioners can prevent unnecessary repeat visits by patients and consequently lower the general practitioners' workload (Fassaert et al., 2007).

How to most effectively measure listening skill is still an under-researched and under-evaluated phenomenon despite listening skills being recognized as an instrumental and central competency in provider-patient interactions (Fassaert et al., 2007; Jagosh et al., 2011). Many existing assessment tools designed to measure listening skill have conceptualized or measured listening in contexts other than healthcare. Nevertheless, the context in which the listening function occurred influences how listening is conceptualized and how listening behavior is demonstrated (Davis et al., 2008; Imhof & Janusik, 2006). Much healthcare research focuses on the role of listening in improving provider-patient interaction, yet there is a paucity of research assessing patients' conceptualization of their providers' listening behavior (Davis et al., 2008). In recognition of researchers' different conceptualizations of listening, Imhof and Janusik (2006) developed the Imhof Janusik Listening Concept Inventory (IJLCI) to assess how an individual conceptualizes or thinks about listening. The IJLCI includes four factors: 1) Listening as organizing information; 2) Listening as relationship building; 3) Listening as learning and integrating information; and 4) Critical listening (Imhof & Janusik, 2006). The instrument was validated using undergraduate university students and presented as plausible for individuals with different conceptualizations of listening; however, there was no indication if the instrument is context dependent. To examine listening concepts in the healthcare context, Davis and colleagues (2008) used the IJLCI to explore how conceptualizations of listening differ between physicians, nurses, and hospital administrators. Although the study revealed variation in how listening was conceptualized across different types of healthcare providers, the IJLCI could not confirm if respondents considered the healthcare context specifically or other listening contexts

in general (Davis et al., 2008). Therefore, measuring listening in provider-patient interaction remains a challenge. Careful consideration should be given to the context should any of the existing tools be used or adapted for the purposes of this research.

Respect. There is a lack of research on the concept of respect. People have different understandings and interpretations of the attitudes and behaviors that encompass respect (Beach et al., 2006). Respect is mostly used in the healthcare cultural competence literature to describe providers' professional attitude toward patients (Beach et al., 2006). Accordingly, respect in cultural competency is translated as offering equal treatment to patients of different ethnic and cultural backgrounds and in consideration of patients' worldviews (Jongen et al., 2018). Conversely, Thiel de Bocanegra and Gany (2004) also noted that respect is used to denote a provider's consideration of patients' views and acceptance of patients' decisions. In medical ethics, respect is demonstrated by protecting a patient's confidentiality and autonomy; in the psychoanalytic literature, respect is exhibited by recognizing and valuing patients as persons (Beach et al., 2006). Respect is a positive behavior and that has been found to be associated with physicians' communication behaviors in primary care settings (Beach et al., 2006). A study by Beach and colleagues (2006) explored the domain of physician-reported respect for individual patients; results indicated that physicians offered significantly more information and rapport building statements to patients they moderately or highly respected. In healthcare, respect is measured as an element of patient care through surveys of patient satisfaction and patient-centered care services (Morris, 1997).

Personal initiative. Personal initiative is often described as a "behavior syndrome that results in an individual taking an active and self-starting approach to work and going beyond what is formally required in a given job" (Frese et al., 1997, p. 140; Frese et al., 1996, p. 38).

The definition emphasizes the following elements of personal initiative: a) consistency, b) long-term focus, c) goal-oriented and action-oriented, d) persistence in overcoming barriers, and e) self-starting and pro-active (Speier & Frese, 1997). Scholars who study personal initiative have demonstrated its positive relationships with other concepts including entrepreneurship (Hisrich, 1990), self-management (Cohen et al., 1998), proactivity (Baer & Frese, 2003; Frese et al., 1996), effective performance (Baer & Frese, 2003; Frese et al., 1997; Hisrich, 1990), creativity (Binnewies et al., 2007), responsibility (Bledow & Frese, 2009), and self-efficacy (Speier & Frese, 1997). Conversely, strain has been shown to be negatively associated with initiative behavior (Işik et al., 2012).

Personal initiative is an active approach wherein the person self-starts the action based on his/her situational judgment to overcome a difficulty that arises in the pursuit of a goal (Fay & Frese, 2001). Persons with a passive approach lack personal initiative; they do what they are told to do without reacting to situational demands (Fay & Frese, 2001). Personal initiative, however, is sometimes viewed negatively by supervisors who find it interrupts routines and threatens the flow of operations (Baer & Frese, 2003; Frese et al., 1997). Therefore, management support for an environment that encourages initiative is critical for people to demonstrate personal initiative (Baer & Frese, 2003). When organizations provide a supportive climate and employees demonstrate high levels of initiative, employees are likely to generate creative ideas and innovations that result in smoother processes and ultimately improve performance by the organization (Baer & Frese, 2003; Binnewies et al., 2007; Frese et al., 1997).

In healthcare settings, providers must usually follow directions and guidelines carefully (Boerner & Dütschke, 2008). Nevertheless, healthcare is a stressful environment; employees' time and energy are often directed toward coping behaviors (Işik et al., 2012). The escalating

complexity of challenges facing the healthcare sector, however, necessitates process changes and requires spontaneous reaction. This in turn, increases the demand for flexibility among all workers in healthcare to allow them to actively participate in the transformation process (Boerner & Dütschke, 2008; Işik et al., 2012). Therefore, healthcare providers are expected to demonstrate personal initiative behaviors more often than reactive attitudes (Boerner & Dütschke, 2008; Işik et al., 2012). For healthcare providers to perform actively in such a dynamic environment, delegation of responsibility downward should allow employees to be proactive and take initiatives beyond task constraints with little supervision (Işik et al., 2012).

Personal initiative has been measured in literature using different constructs and multiple instruments. The most recognized measure of personal initiative is a scale developed by Frese and colleagues (1997) in response to differences noted between residents of East and West Germany. The measure was developed through validation of the construct of personal initiative with a set of interviews and questionnaires conducted using a randomly selected sample of citizens from two cities, one in East Germany and another in West Germany. Frese and colleagues (1997) demonstrated validity of the personal initiative scale for research purposes. They stated that the personal initiative construct and its measuring instrument are valuable to indirectly determine organizational effectiveness (Fay & Frese, 2001; Frese & Fay, 2001; Frese et al., 1997). The personal initiative scale (Frese et al., 1997) was used in 2002 on a sample of citizens of Dresden, East Germany, to examine the relationship between stressors at work and personal initiative as a proactive concept of extra-role performance (Fay & Sonnentag, 2002). In another study, items from the personal initiative scale (Frese et al., 1997) were adapted to measure personal initiative of a group of dentists in a study that investigated cross-lagged relationships between job resources and work engagement, between work engagement and

personal initiative, and between personal initiative and work-unit innovativeness (Hakanen et al., 2008). The Frese et al. (1997) scale for personal initiative was used again to examine the links between well-being and entrepreneurial personal initiative on a group of German business owners (Hahn et al., 2012). Hahn and colleagues (2012) divided the personal initiative construct into task-oriented personal initiative that was measured by the Frese et al. (1997) scale and relationship-oriented personal initiative that was measured by items developed for the purpose of the study adapted from a measure used by Zhao and colleagues (2010). Also, Glaub and colleagues (2014) measured personal initiative behavior in an intervention targeting small business owners in Kampala, Uganda, to increase their personal initiative behavior and entrepreneurial success using the personal initiative scale developed by Frese and colleagues (1997) as adapted by Fay and Frese (2001) to the entrepreneurial task.

In a healthcare context, the personal initiative behavior of doctors and nurses from six public and private German hospitals was measured using a modified version from the Staufenbiel and Hartz (2000) scale of organizational citizenship behavior. The study aimed to investigate the impact of charismatic leadership on followers' initiative-oriented behavior (Boerner & Dütschke, 2008). Evidently, none of the existing measures for personal initiative was developed or validated to assess personal initiative of healthcare providers in the context of provider-patient interactions. Although Frese and colleagues (1997) introduced a sound validated concept for personal initiative (PI), there is a literature gap in the measurement of the construct of personal initiative in the context of healthcare, particularly in provider-patient interactions, where this research could make a contribution.

Self-control. Steptoe and Poole (2016) defined self-control as a "person's ability to suppress impulses that could be thoughts, emotions, or behaviors, and delay gratification" (p.

73). Rosenbaum (1993) referred to self-control as "the process by which individuals consciously decide to take charge of their own behavior" (p. 33). Self-control is associated with other concepts, including self-regulation and willpower, which safeguard the person against stressors (Rosenbaum, 1993; Steptoe & Poole, 2016). Self-control is a specific type of self-regulation with a high level of conscious effort aimed at overcoming desires and responding to situations (Vandellen et al., 2012). The trait of self-control is an enduring skill that is correlated with capacity for focused attention (Strayhorn Jr, 2002). In healthcare, the concept of self-control is used to describe patients' willpower to overcome the difficulties of certain illnesses; there is a lack of research on the role of self-control in provider-patient interactions. The Self-Control Schedule (SCS) is a self-report instrument developed by Rosenbaum (1980) to assess an individual's self-control. The SCS instrument involves describing a person's application of problem-solving strategies and perceived self-efficacy (Rosenbaum, 1980). The psychometric properties of the SCS instrument were assessed and validated in several studies and reported as reliable in research on self-control (Redden et al., 1983; Richards, 1985; Rosenbaum, 1980). Nevertheless, there is no indication as to whether the SCS is a reliable measure to assess self-control in healthcare providers during their interactions with patients.

Soft Skills and Emotional Intelligence

Emotional intelligence was first introduced and conceptualized by Salovey and Mayer (1990), who defined the term "emotional intelligence" as "a subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions*"* (Salovey & Mayer, 1990, p. 189). The conceptualized model of emotional intelligence, as described by Salovey and Mayer (1990), has three main components: 1) appraisal and expression of emotions for self and

others; 2) regulation of emotions in self and in others; and 3) utilization of emotions in guiding decision making through flexible planning, creative thinking, redirected attention, and motivation (Salovey & Mayer, 1990). The model illustrates that individuals with emotional intelligence skills can assess and adapt their own emotions and those of others in a skillful way that drives positive and flexible behaviors and makes impact among others. As individuals with emotional intelligence may use different skills and demonstrate different behaviors based on the situation, Salovey and Mayer (1990) considered emotional intelligence a subset of social intelligence. Emotional intelligence, as defined by Goleman (2000) is "the ability to manage ourselves and our relationships effectively" (p.6). According to Goleman's framework, emotional intelligence consists of four fundamental capabilities: 1) self-awareness, 2) self-management, 3) social awareness, and 4) social skills (Goleman, 2000, 2001). Emotional intelligence as defined by Slaski and Cartwright (2002) is "the ability to perceive, understand and reflectively manage one's own emotions and those of others" (p.63). Accordingly, individuals with high emotional intelligence are regarded as having "people skills" (Slaski & Cartwright, 2002). The literature includes several other definitions and models for emotional intelligence as well as studies which have explored the association between emotional intelligence and other constructs, such as an individual's performance and leadership (Stein et al., 2009). For example, Slaski and Cartwright (2002) found a significant link between emotional intelligence and health and performance, in which emotional intelligence played a role in moderating the stress process and increased individual resilience (Slaski & Cartwright, 2002). Furthermore, through focusing on emotional intelligence as a theory of performance, Goleman (2001) introduced the term "emotional competence" which is "a learned capability based on emotional intelligence that results in outstanding performance at work" (p.1). The relationship

between emotional intelligence competencies, leadership styles, and organizational effectiveness has been discussed over several studies and a new refined framework of emotional competencies was introduced (Goleman, 1998, 2000, 2001). Those studies provided evidence of positive association between emotional intelligence and leadership competence, organizational climate, and organizational performance (Goleman, 2001). In realizing the connection between emotions, cognitive abilities, and personality, researchers offered propositions to consider emotional intelligence competencies in organizational recruitment criteria alongside other technical skills required for a job (Abraham, 2006; Goleman, 1998, 2001). Emotional intelligence is now considered one of the fundamental competencies for management and leadership in the workplace (Freshman & Rubino, 2002). Furthermore, scholars have emphasized the need to support educational systems that develop students' emotional intelligence competencies as essential life skills (Abraham, 2006; Goleman, 1998, 2001).

The extensive research on emotional intelligence and the increased interest in the concept since its introduction have resulted in the development of several perspectives and theoretical frameworks. The various models present a comprehensive exploration of emotional intelligence's role in different business domains (Freshman & Rubino, 2002; Schutte et al., 1998). Also, several assessment tools have been developed to measure emotional intelligence in different contexts (Dulewicz & Higgs, 1999; Schutte et al., 1998). The Emotional Quotient Inventory (Bar-On EQ-I, 1997) is considered the oldest and the first commercial instrument introduced to measure emotional intelligence (Cherniss, 2000; Fernández-Berrocal & Extremera, 2006). The Bar-On EQ-I (1997) is a self-report inventory consisting of 133 items that are distributed over five factors and 15 subscales and rated on a 5-point Likert-type scale. The five factors are: intrapersonal, interpersonal, adaptability, stress management, and mood (Fernández-

Berrocal & Extremera, 2006; Schutte et al., 1998; Slaski & Cartwright, 2002). The 15 subscales are: emotional self-awareness, assertiveness, self-regard, self-actualization, independence, empathy, interpersonal relationships, social responsibility, problem solving, reality testing, flexibility, stress tolerance, impulse control, happiness and optimism (Schutte et al., 1998). The factors and subscales of the Bar-On EQ-I (1997) demonstrate a skills-based model that encompasses personal, emotional, and social abilities and skills (Stein et al., 2009).

The Trait Meta-Mood Scale (TMMS) self-report measure was developed by Salovey and colleagues (1995) based on Salovey and Mayer's (1990) model. The TMMS measures Perceived Emotional Intelligence (PEI) which is the degree of an individual's knowledge about his or her own emotions (Extremera & Fernández-Berrocal, 2005; Lopez-Zafra, 2010). This measure is widely used in psychological research and education (Lopez-Zafra, 2010). The adapted Spanish version of this measure includes 24 items that measure three facets of emotional intelligence using a 5-point Likert-type scale; the three facets are emotional clarity, emotional regulation, and emotional attention (Extremera & Fernández-Berrocal, 2005; Lopez-Zafra, 2010).

Based on the theoretical model of Salovey and Mayer (1990), another self-report emotional intelligence scale was developed by Schutte and colleagues (1998). Their emotional intelligence scale consisted of one factor and 33 items rated on a 5-point Likert-type scale. The items covered appraisal and expression of emotion in the self and others, regulation of emotion in the self and others, and utilization of emotions in solving problems (Schutte et al., 1998). In addition, another tailored self-report questionnaire to measure emotional intelligence was developed by Dulewicz and Higgs (1999). Their emotional intelligence questionnaire consisted of 69 items divided into seven subscales: self-awareness, emotional resilience, motivation,

interpersonal sensitivity, influence, decisiveness, conscientiousness and integrity (Dulewicz & Higgs, 1999).

Most researchers discuss emotional intelligence as a skills-based model and mental ability that encompasses a broader set of competencies (Fernández-Berrocal & Extremera, 2006; Stein et al., 2009). Freshman and Rubino (2002) noted that recent research views emotional intelligence competencies as "skills to be developed rather than personality traits that are considered less malleable" (p. 2). The main competencies of emotional intelligence as highlighted by many researchers are self-awareness, self-regulation, motivation, empathy, and social awareness (Freshman & Rubino, 2002; Goleman, 1998; Stein et al., 2009; Wheeler, 2016). According to the modified model of emotional intelligence presented by Mayer and Salovey (1997), emotional intelligence involves the following mental abilities: the ability to perceive accurately; the ability to appraise, and express emotion; the ability to generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Fernández-Berrocal & Extremera, 2006, p.8; Mayer & Salovey, 1997, p. 10). In addition, the theoretical models of Bar-On (1997) and Goleman (2001) focus on emotional intelligence being a mental ability (Fernández-Berrocal & Extremera, 2006; Mayer & Salovey, 1997). Few studies, however, have examined the emotional intelligence construct as a trait-based model (Conte, 2005). Some researchers considered that emotional intelligence competencies are soft skills and described them as "people skills" (Slaski & Cartwright, 2002; Stein & Book, 2006; Wheeler, 2016). Soft skills and emotional intelligence skills both are obviously important for relationship building between individuals, especially in the business world. Goleman (2001) reported that organizations need to consider emotional intelligence in their recruitment criteria along with

other technical skills and business expertise required for the job. In practice, however, Tulgan (2015) stated that organizations typically hire their employees based on hard skills, but fire them due to their lack of soft skills. Several terms including “people skills”, “social skills”, and “interpersonal skills” have been used interchangeably in literature to describe emotional intelligence and soft skills (Abraham, 2006; Freshman & Rubino, 2002; Hayes, 2002; Stein & Book, 2006), thus it becomes important to explore the distinction between these the constructs of emotional intelligence and soft skills.

The operational definition of soft skills in this study considers soft skills as a set of interpersonal competencies derived from the individual’s qualities and traits, refined by the individual’s intelligence, and shaped by experience. The core feature of soft skills using this definition is rooted in traits instead of mental abilities, as in the case of emotional intelligence. Intelligence, however, is a major facet of both soft skills and emotional intelligence. Stein and Book (2006) discussed how emotional intelligence is confused with intelligence quotient (IQ), which refers to cognitive and rational abilities and measures an individual’s intellectual, analytical, logical, and rational abilities (p. 13). Intelligence in emotional intelligence refers to the abilities of processing emotional information (Fernández-Berrocal & Extremera, 2006, p. 8). These differences explain why an individual with a high IQ score may not necessarily be good at building successful relationships with others (Stein & Book, 2006). At the same time, emotional intelligence is not a personality trait that is fixed and forms a person’s long-term characteristic; instead, emotional intelligence is a dynamic skill that reflects on the individual’s behavior depending on the situation (Stein & Book, 2006) where different individual’s roles may require different types of emotional intelligence (Abraham, 2006).

Empathy is another important factor of emotional intelligence and soft skills. Empathy is one of the five main components of emotional intelligence competencies, along with self-awareness, self-regulation, motivation, and social skills (Boyatzis et al., 2000; Goleman, 1998). In applying the emotional intelligence concept to leadership styles in the workplace, Goleman (2000) identified four fundamental capabilities for emotional intelligence, where empathy is one of the competencies of the social awareness capability; other capabilities are self-awareness, self-management, and social skills (Goleman, 2000). Furthermore, every measure of emotional intelligence includes empathy as one of its main competencies. At the same time, empathy has been highlighted as an essential soft skill for healthcare providers (see Table 1). Faguy (2012) also highlighted the importance of empathy as one of the main components of emotional intelligence competencies for healthcare providers. Empathy, however, is highly associated with self-awareness and self-control which ensures the balancing of emotions (Faguy, 2012). Active listening is also considered one of the most important tools for healthcare providers to achieve empathy (Goleman, 1998). The competencies of active listening, self-awareness, and self-control were also discussed in research as soft skills. In terms of the benefits of empathy as an emotional intelligence competency in provider-patient interactions, Goleman (1998) reported that "physicians who are better at recognizing emotions in their patients are more successful in treating them than their less sensitive colleagues" (p. 139). Goleman further added, "Good communicators – among primary care physicians - take time to tell patients what to expect from a treatment, to laugh and joke, to ask the patients' opinion and check their understanding, and to encourage patients to talk" (p. 139). Goleman's remarks about empathy, communication, and listening competencies are in line with other scholars' remarks and findings about soft skills and their role in provider-patient interactions. In further comment on this interrelation between the

emotional intelligence competencies and soft skills, Wheeler (2016) suggested that “a person who has a mastery of soft skills can be defined as being emotionally intelligent” (Wheeler, 2016, p. 29).

In conclusion, there are some notable differences in the operational definitions of each construct. There are, however, more similarities among the type of competencies that are regarded as soft skills and those which reflect emotional intelligence. On the other hand, scholarly research that has examined the association between soft skills and emotional intelligence is scant. Therefore, this subject warrant more in-depth exploration to establish whether soft skills competencies fall within an emotional intelligence framework, or vice versa. Accordingly, further research is recommended to evaluate the convergence between emotional intelligence and the Soft Skills Assessment Tool (SSAT) to be developed in this study.

SECTION THREE: THEORETICAL MODEL AND HYPOTHESES

Phase 1: Qualitative Inquiry

Data collection during Phase 1 involved qualitative inquiry. Multiple methodological approaches were used to acquire patients' and providers' perspectives about soft skills. The focus group questions were formulated based on three main theoretical perspectives: positivist and realist approaches, constructivism, and grounded theory. It was anticipated that these three theoretical approaches would allow exploration of the different points of view of participants and lead to identification of essential soft skills for healthcare providers.

Theoretical Framework

The positivism and reality-testing approaches were expected to reveal healthcare providers' perspectives regarding soft skills. Healthcare providers' perspectives were captured through their answers to direct questions regarding the soft skills that they observed and/or practiced during real-world provider-patient encounters (Patton, 2002; Ponterotto, 2005). The constructivism perspective adopts the hermeneutical approach. This approach was reflected through direct interaction with participants who were users of healthcare services during focus group sessions (Patton, 2002; Ponterotto, 2005). Based on this theoretical approach, focus group questions were designed to extract participants' unique experiences and the meaning they attached to those experiences. These recalled experiences provided a deeper understanding of different perspectives about healthcare providers' soft skills. The positivism and reality-testing paradigm was presented as an alternative to the constructivism paradigm; extant literature emphasizes the differences between the paradigms (Ponterotto, 2005; Salazar et al., 2015). Capturing and analyzing data using strategies of both paradigms enriched the study and offered in-depth understanding regarding how patients' and providers' perspectives of soft skills overlap and diverge (Ponterotto, 2005; Salazar et al., 2015).

The third theoretical paradigm used in this study was grounded theory which enabled identification of patterns and themes that reflected these different perceptions. Incorporating the grounded theory approach allowed for comparison and analysis of data captured based on the other two paradigms. Grounded theory also allowed for identifying behaviors associated with each identified soft skill (Patton, 2002; Salazar et al., 2015). The results from implementing the process of grounded theory formed the foundation for achieving the main objective of this study which was to develop an assessment tool to measure soft skills. The three qualitative theoretical approaches that were adopted in this research – positivism and reality-testing, constructivism, and grounded theory - are compatible. The deductive approach of the positivism paradigm together with the inductive approaches of the constructivism and grounded theory paradigms collectively contributed to the identification and building of a common understanding of the soft skills essential for provider-patient interactions that addressed the qualitative research questions of this study.

Hypothesis Development

The research questions were addressed using qualitative content and thematic analysis. It was expected, however, that the qualitative data will provide information that can enrich this research beyond the limitations of the research questions. Therefore, additional hypotheses were proposed to address potential qualitative information. For instance, it was believed that the confusion between empathy and sympathy discussed in literature (Alford, 2016; Davis, 1990; Eisenberg & Strayer, 1990; Hojat et al., 2009; Rousseau, 2008; Spiro & Yale University, 1993; Wispé, 1986) still occurs in practice. The qualitative data was expected to show many providers and patients who use the terms “empathy” and “sympathy” interchangeably are actually referring to “sharing emotions” which implies sympathy. Accordingly, the value of cognitive empathy as

an essential soft skill for provider-patient interactions was underestimated. It was, therefore, hypothesized that:

> ***Hypothesis 1 (H1)****:* Providers and users of healthcare services have a semantical misunderstanding of the role of "empathy" in healthcare.

Phase 2: Scale Development

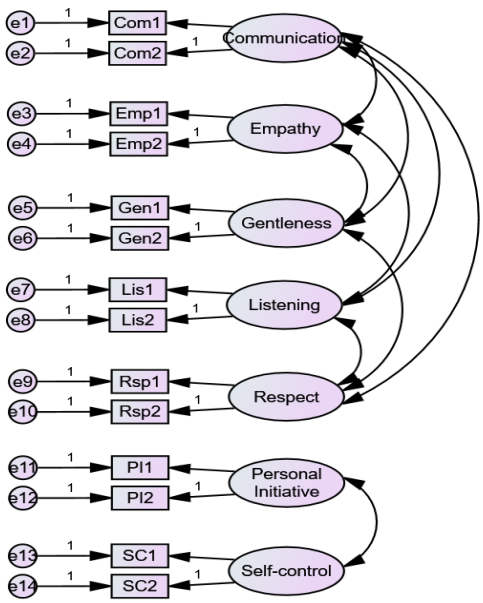
The literature review revealed seven potential soft skills that may influence patient's perception of the provider's effectiveness and, subsequently, their satisfaction with provider-patient interactions. The seven potential soft skills showed strong relationships with several other competencies, namely: self-awareness, self-efficacy, and self-regulation. These three competencies are closely related. The first two competencies: *self-awareness* and *self-efficacy* were conceptualized as traits and abilities shaped by experience and knowledge (Bandura, 1977; Bandura, 1994; Morin, 2011). Conversely, *self-regulation* is a higher-level cognitive process that mediates cognitive and affective functioning (Kanfer, 1990). According to motivation theory (Kanfer, 1990; Pintrich, 2000), these competencies represent intrinsic abilities that motivate a person to behave in a certain way to achieve a specific goal. Therefore, it is believed that self-awareness, self-efficacy, and self-regulation act as motivators of soft skill behaviors. Given that the focus of this study is exclusively on soft skills that influence a provider's behavior during provider-patient interactions, the three competencies - self-awareness, self-efficacy, and self-regulation – were not included in the proposed theoretical model. Knowing about the motivating effects of self-awareness, self-efficacy, and self-regulation, however, can benefit future research on the development of soft skills.

Proposed Theoretical Model

The hypothesized relationships between the seven potential soft skills perceived to influence a provider's effectiveness during provider-patient interactions are illustrated in Figure 3. This hypothetical model is manifested by a common latent construct model with reflective indicators (MacKenzie at al., 2005). The seven latent variables in the hypothetical model were expected to load on a first-order factor demonstrating the correlational relationships between each of the constructs according to the evidence presented in the literature review.

Figure 3

Hypothesized Model of Relationships Between Potential Soft Skills Variables

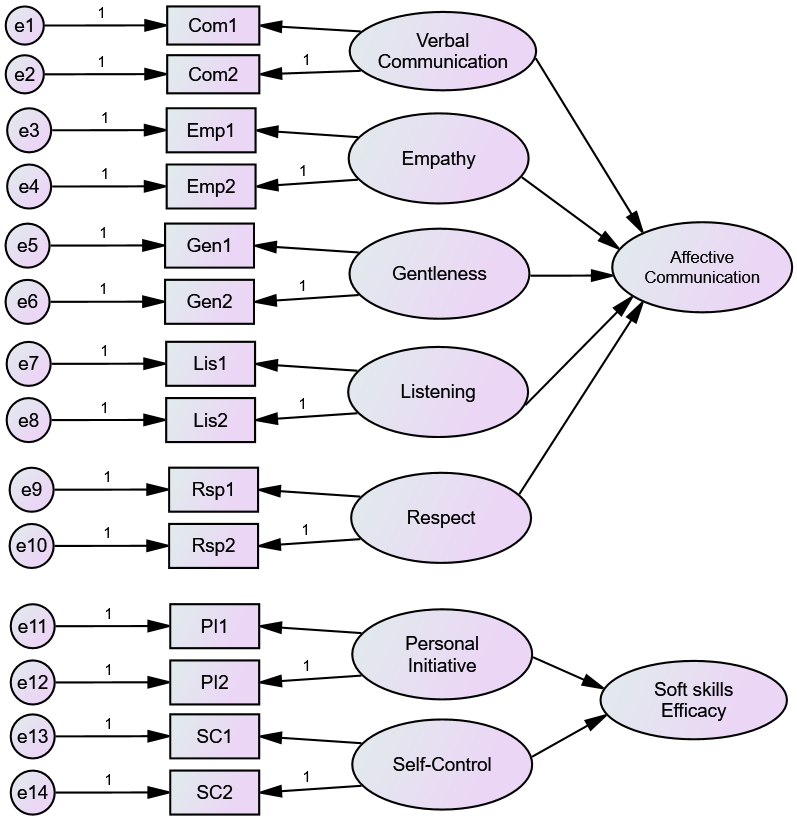


Given the anticipated high correlations between the latent construct of communication and the constructs of gentleness, listening, and respect, as well as the high correlations between the construct of empathy and the constructs of communication, gentleness, and listening, a second order factor model was proposed as an alternative theoretical model (see Figure 4). The

alternative hypothesized model is a formative-indicator measurement model with composite latent constructs (MacKenzie et al., 2005).

Figure 4

Alternative Hypothesized Model with Two Second Order Factors



The alternative model was based on the premise that listening and other non-verbal expressions, such as gentleness and respect, are elements of affective communication (Levinson et al., 2010; Maguire & Pitceathly, 2002; Ong et al., 1995). Accordingly, the three constructs of gentleness, listening, and respect, which are highly correlated with communication, were expected to load as indicators on the factor of communication. As empathy is also considered to be a means of communication (Davis, 1990; Kim et al., 2004; Larson & Yao, 2005), the construct of empathy was also hypothesized to load as an indicator on the communication factor.

Each of these constructs: empathy, gentleness, listening, and respect, in addition to other verbal communication, were expected to capture specific aspects of affective communication. Collectively, these constructs were expected to provide information about the overall level of a healthcare provider's communication soft skills through a composite score which represents affective communication. The other proposed second-order composite latent construct was labeled soft skills efficacy, which derived from two constructs: personal initiative and self-control. Personal initiative is correlated with self-control (Cohen et al., 1998); self-control is regarded as a type of self-regulation (Vandellen et al., 2012) associated with problem-solving and self-efficacy (Rosenbaum, 1980). Therefore, the alternative hypothesized model posited personal initiative and self-control will load on one factor as indicators for a healthcare provider's soft skills efficacy.

Hypotheses

Empathy and its relationship with communication. According to the literature, communication and empathy are strongly associated constructs that are also considered core competencies that impact provider-patient interactions and subsequently patient satisfaction (Davis, 1990; Halpern, 2003; Hojat et al., 2009; Jones, 2014; Kelm et al., 2014; Larson & Yao, 2005; Michalec, 2011; Schiavo, 2013; Starcevic & Piontek, 1997; Suchman et al., 1997). Empathy is comprised of three main dimensions: cognition, affect, and behavior (Decety & Jackson, 2004; Irving & Dickson, 2004; Larson & Yao, 2005; Oxley, 2011). Scholars tend to focus on cognitive and behavioral empathy regarding provider-patient interactions (Halpern, 2003; Hojat et al., 2009; Suchman et al., 1997). Empathy is a construct that researchers have widely investigated as an independent concept in healthcare (Davis, 1990; Faust, 2009; Hoffman, 2008; Hojat et al., 2009; Malinauskas & Malinauskiene, 2015). Some scholars (see Levinson et

al., 2010; Ong et al., 1995), however, have recommended including empathy as an element of communication in the biopsychosocial model of communication in healthcare. Additionally, there is an increasing tendency in general practice to conceptualize empathy as a soft aspect or non-verbal means of communication (Derksen, Bensing, Kuiper, et al., 2014). Primary care providers usually do not deal with life-threatening or serious medical cases. Therefore, a primary care provider's empathy is mostly reflected through the exchange of medical information; it is through such provider-patient communications that providers can build relationships with their patients (Derksen, Bensing, & Lagro-Janssen, 2013). Therefore, based on the nature of the relationships between empathy and several components of communication, it was hypothesized that:

Hypothesis 2 (H2)*:* Exploratory factor analysis will show that empathy loads on the same factor as communication.

Soft skills variables and dimensions. The alternative proposed model shown in Figure 4 included seven potential variables that comprise a healthcare provider's soft skills in primary care; these seven variables were expected to load on two factors. The two hypothesized second-order constructs are: affective communication and soft skills efficacy. Variables predicted to load on the efficacy dimension (self-control and personal initiative) have been found to be associated with other competencies. For example, self-control is correlated with interpersonal relationships, adaptive and coping behaviors (Gresham & Elliott, 1987; Tangney et al., 2004) as well as problem-solving and self-efficacy (Rosenbaum, 1980). Similarly, personal initiative showed a strong positive association with self-efficacy (Speier & Frese, 1997). Accordingly, it was assumed that additional soft skills variables like flexibility and problem-solving will be revealed and load on the soft skills efficacy factor. Thus, it was hypothesized that:

Hypothesis 3 (H3)*:* Additional soft skills variables will be explored and load on the soft skills efficacy factor.

Hypothesis 4 (H4)*:* Exploratory factor analysis of the soft skills assessment tool as proposed in the theoretical model will yield a multi-dimensional construct for soft skills.

Challenges in Assessing Soft Skills

The literature lacks a clear quantitative measurement tool for assessing or measuring soft skills (Muzio et al., 2007). Scholars have faced challenges in defining and measuring soft skills, yet research suggests practitioners are aware of the criticality of soft skills and are also perplexed regarding how to define or measure them (James & James, 2004; Nilsson, 2010; Onisk, 2011; Robles, 2012). To date, soft skills are mostly measured through subjective and nonsystematic methods (Muzio et al., 2007). According to Klaus (2007), the problem of evaluating soft skills could be semantic. Using typical business evaluation methods designed to assess hard skills for something described as soft does not make sense. It is difficult to estimate how soft skills impact the bottom line of a business (Klaus, 2007), which is likely why such measures have received less attention than those of hard skills. Measuring the value of quantitative technical abilities is easier than measuring the value of human social abilities (Muzio et al., 2007).

The literature review of the initially identified soft skills illustrated more challenges that this research will have to address and overcome. First, many soft skills are multi-dimensional and multi-factorial. The literature presented multiple definitions for each soft skill as an independent construct. Each construct has been measured in several ways based on how it was conceptualized in a particular context. There is little evidence that one tool is better than another. The lack of standardized concepts and measurement instruments has impeded attempts to benchmark assessment tools and concepts. Benchmarking could facilitate the process of

developing a new assessment tool through identification of strengths and limitations generated from the implementation of other instruments in a similar context.

Second, accurate measurement of a provider's behavior during a provider-patient encounter in the context of primary care is critical for development of a valid assessment tool. Because soft skills and a healthcare provider's style of interaction are assumed to influence the patient experience through provider-patient interaction (Flocke et al., 2002; Kim et al., 2004; Ray & Overman; 2014), it is expected that patients will be the best raters of providers' behavior during an encounter. Patient perceptions, however, are influenced by several factors that impact their ratings (Duffy et al., 2004; Epstein et al., 2005). For example, research has shown that the health status of patients affects their satisfaction with their healthcare provider. Patients in poor health are likely to rate their providers lower than are patients in better health (Duffy et al., 2004; Hall et al., 1998). Further, patients are not always able to distinguish between the provider's interpersonal and technical qualities (Chang et al., 2006) and may lack rationality in evaluating the provider's service quality (Shemwell et al., 1998). The alternative rating method is self-assessment or self-reporting (Duffy et al., 2004). The self-assessment method, however, is threatened by social desirability response bias (Donaldson & Grant-Vallone, 2002; Duffy et al., 2004; Hakanen et al., 2008). The risk of bias in behavioral self-report assessment questionnaires lies in participants' tendencies to over-rate behaviors that are regarded as socially appropriate, and under-rate behaviors that are deemed to be socially inappropriate (Donaldson & Grant-Vallone, 2002), and thus, may not reflect actual behavior. The third response option in clinical settings is to use observer ratings (Duffy et al., 2004; Epstein, 2007). Although an observer will be able to rate engagement in certain behaviors, it is difficult for an observer to infer the occurrence of a patient's feelings of being cared for during a provider-patient encounter (Duffy

et al., 2004) or to recognize a provider's proactive behavior (Parker & Collins, 2010). In addition, observation may not be possible in some clinical examinations (Epstein, 2007). Therefore, it is unclear whether one method of response is more reliable than another in all contexts. Selecting the response method that provides the greatest accuracy in assessing the desired behaviors remains a challenge; thus, this research seeks to resolve this issue using multiple methods.

Third, as measurement of soft skills is largely a new topic with little research to investigate soft skills constructs, there is a heightened risk of making mistakes. Errors in identifying relations between the different constructs and performance model misspecifications could result in severe measurement error (MacKenzie et al., 2005).

Fourth, accurate measurement of soft skills is important for learning and training efforts. Learning soft skills is challenging, as is developing training techniques and programs that can cultivate them. Teachers and trainers find soft skills more difficult than hard skills to teach and students find soft skills more difficult to learn (James & James, 2004; Klaus, 2007). Offering soft skills training is challenging because assessing the outcomes of soft skills training is not straight forward (Onisk, 2011). For that reason, the focus of most training programs is on improving hard skills rather than on improving soft skills (Laker & Powell, 2011). Because of the subjective nature of soft skills, training developers face difficulties in offering unified or mixed training approaches (Kechagias et al., 2011). Further, prior research has shown that soft skills training is more expensive in terms of both time and money because transfer of skills from training to the job is less likely with soft skills training than with hard skills training (Laker & Powell, 2011). The personal element inherent in soft skills, including individual traits and prior experience, involves some tacit knowledge rather than more explicit knowledge. This may account for some

of the hinderance in the transfer of training for soft skills as well as of the difficulty in identifying training needs (Laker & Powell, 2011). Although soft skills training in healthcare is still an emerging field, the literature presents few successful experiences or guiding principles in this domain that can inform future research and training initiatives (AbuJbara & Worley, 2018). Nevertheless, there is an increasing demand to develop an accurate measure of soft skills to overcome training challenges.

SECTION FOUR: DEVELOPMENT OF THE ASSESSMENT TOOL

The purpose of this research was to develop an assessment tool to measure healthcare providers' soft skills during encounters with patients. This section of Phase 1 included development of the assessment tool using qualitative methodology. All procedures of Phase 1 were approved by the Institutional Review Board of the University of Oklahoma – Norman (Appendix A) and the St. John Health System Institutional Review Board (Appendix B).

Development of the assessment tool involved several steps. First, data were collected from focus group sessions and semi-structured personal interviews with healthcare providers and users of healthcare services. Next, responses were evaluated using the grounded theory inductive approach. Then, the deductive approach of the positivism and reality-testing paradigm together with the inductive approach of the constructivism paradigm were adopted to synthesize participants' responses and build a common understanding of their perspectives about soft skills. The results of this process were used to create an initial draft of the measurement tool to assess providers' soft skills deemed to be useful during the patient encounter. After this initial draft was developed, content validity of the measurement tool was assessed by a panel of subject matter experts. The process of developing the assessment tool followed the procedures and guidelines of Netemeyer and colleagues (2003).

Focus Groups and Personal Interviews

Methods

Focus group sessions and personal interviews were conducted to obtain information from users and providers of healthcare services regarding soft skills in healthcare. The use of focus group sessions was the primary method of data collection in this phase of the study although semi-structured personal interviews were used to obtain data from providers of healthcare

services whose time constraints made their participation in focus groups unfeasible. These methods allowed the participants to describe their experiences in depth which allowed for the identification of soft skills deemed necessary for effective provider-patient interactions. Data collected from these participants were used to develop an initial item pool.

Focus group sessions and semi-structured personal interviews took place between the second week of April until the first week of August 2019. Each focus group was made up of either healthcare providers or users of healthcare services. Groups were not mixed so that participants could separately identify the essential soft skills for provider-patient interactions from each group's perspective.

Participants. In this phase of the study, participants included both users and providers of healthcare services. Participants were recruited using purposeful and snowball sampling strategies. Participants in the group of healthcare providers in primary care services were recruited through coordination with the director of clinical operations at OU Physicians - the OU School of Community Medicine, and the director of clinical operations at St. John Clinics in Tulsa. Individual primary care providers in other healthcare organizations in Tulsa were recruited directly through referrals and connections using snowball strategy. Participants in the group of users of healthcare services were students, faculty, and employees of the University of Oklahoma - Tulsa and their friends and family members.

The initial sample of users and providers was recruited through an announcement sent via the university’s electronic newsletter and the St. John’s internal news email. Further recruitment efforts included flyers that were distributed on campus in conspicuous locations to maximize participation from a representative sample of healthcare users and providers. See a sample flyer in Appendix C.

In order to be eligible to participate as a user of healthcare services, each potential participant had to: be an adult 18 years of age or older, have had an interaction with a healthcare provider in a primary care healthcare facility in the State of Oklahoma for a personal health issue within the past 6 months, not be a healthcare provider or an employee in a healthcare facility, and be willing to provide consent indicating interest to participate in the study. In order to be eligible to participate in the study as a healthcare provider, potential participants had to be: 18 years of age or older, a healthcare provider involved with the provision of medical care for patients in primary care service, and willing to provide consent indicating interest to participate in the study.

A total of 94 individuals responded to recruitment efforts utilized for this study. Of those, 57 (60.64%) were users of healthcare services and 37 (39.36%) were providers of healthcare services. Of the 57 users of healthcare services, 15 did not attend the scheduled focus group, and 7 respondents did not meet the eligibility criteria for participation yielding a resultant sample of 35 users of healthcare services. Of the 37 healthcare providers who responded to the study recruitment materials, 8 did not attend the scheduled interview, and 2 respondents were non-eligible. Thus, the resultant sample included 27 healthcare providers. The total effective sample of 62 respondents was comprised of 35 (56.45%) users of healthcare services and 27 (43.55%) providers of healthcare services. All 62 participants completed a demographic questionnaire (see Appendix D). Both the users and providers of healthcare services groups included individuals from diverse community and professional settings. Professions of the 35 users of healthcare services are shown in Table 2. The professional medical capacity of the 27 providers of healthcare services are shown in Table 3. Providers were recruited from the primary care and family medicine clinics of four major healthcare organizations in Oklahoma including: OU

Physicians and the University of Oklahoma School of Community Medicine in Tulsa (n=9) and Oklahoma City (n=1); St. John's primary care and family medicine clinics in Tulsa (n=3), Broken Arrow (n=1), Sapulpa (n=5), and Owasso (n=2); St. Francis main (n=5), and the Medical Center of Oklahoma State University in Tulsa (n=1). Specialties represented include primary care (n=13), family medicine (n=6), and internal medicine (n=8).

Table 2

Professions of Users of Healthcare Services

Professional Sector	Users (n=35)
Financial services	2 (5.8%)
Information technology	3 (8.7%)
Hospitality	5 (14.5%)
Education	5 (14.5%)
Management / business ownership	3 (8.7%)
Engineering	2 (5.8%)
Non-profit services	3 (8.7%)
Graduate student	1 (2.9%)
Retired	3 (8.7%)
Housewife / mother / unemployed	8 (23.2%)

Table 3

Medical Capacity of Providers of Healthcare Services

Medical Capacity	Providers (n=27)
Physicians	5 (18.5%)
Physician Assistant	5 (18.5%)
Practical and Registered Nurse	9 (33.3%)
Medical Assistant	5 (18.5%)
Radiology Technician	2 (7.4%)
Laboratory Technician	1 (3.7%)

Procedures. All interested participants were contacted by email to confirm their eligibility for participation and to schedule appointments for interviews. Consent forms were distributed via email the day prior to the interviews and focus group sessions to allow time for review. All data collection was completed in person. During the focus group and interview sessions, participants were first asked to complete the demographic questionnaire (see Appendix D). An interview guide and question pathway were used in data collection and followed in all sessions (see Appendix E); focus groups and interviews were moderated by the primary researcher following focus group methodology and guidelines delineated by Kreuger and Casey (2015). After all questions and follow up probes were asked, participants were provided with an activity sheet to rank soft skills based on perceived importance (see Appendix F). The ranking sheet included 7 pre-identified soft skills and a space for participants to write and rank any additional soft skills that they deemed important.

A total of 7 focus group sessions were conducted with users of healthcare services; focus group size ranged from 3 to 7 participants per meeting. A total of 4 focus groups were conducted with providers of healthcare services; focus groups ranged from 1 to 5 participants per meeting. In addition, 16 semi-structured individual interviews were conducted with providers of healthcare services who could not participate in focus group sessions. Focus groups lasted an average of 62 minutes (ranged from 38 to 83 minutes). Personal interviews lasted an average of 36 minutes (ranged from 20 to 54 minutes). Participants received a $20 gift card in compensation for their time. All participants' identities were coded, and their responses were transcribed.

The concept of *saturation* in qualitative data collection refers to the condition in which the researcher has gathered diverse ideas but is no longer obtaining unique information from participants (Krueger & Casey, 2015). Saturation occurred in the current study approximately

halfway through the stated data collection period. Although interviewees' responses become redundant without yielding additional new ideas, data collection continued and was only terminated when no other individuals indicated interest in participation.

Data Analysis

The qualitative data analysis was conducted based on guidelines described by Patton (2002). All focus groups and semi-structured interviews were transcribed verbatim in English and analyzed by the primary researcher. Content and thematic analysis of data was completed following the grounded theory method with an inductive approach of coding. Coding was conducted based on a line-by-line analysis to organize data into distinct categories and themes. Data were coded and clustered into categories based on the relationship among the extracted data using Microsoft Excel for Office 365. Categories of data were labeled based on the soft skill that was expressed or named by participants. Subsequently, patterns and themes of participants' perspectives about soft skills emerged during this coding process. Quotations from transcripts were used to support each theme using a cut-and-paste technique. A graduate student was trained and assigned to review the coding of transcripts. The graduate student was asked to code the data independently from the researcher's transcriptions. The code books of the graduate student and the researcher were then compared, differences were noted and resolved through discussion.

A deductive content analysis was also performed at this stage. Data were reviewed for participants' perspectives about pre-stated research questions and the qualitative hypothesis. Data extracted from deductive analysis were categorized based on participants' responses that corresponded to or addressed research questions and hypothesis. Quotations from transcripts were extracted to reflect participants' perspectives and support discussion of research questions.

At the end of the coding process, content within each category was further analyzed used to generate statements of the first collective pool of items for the assessment tool.

The triangulation methods were used to report and compare parts of the qualitative data using numbers and percentages. The involvement of integrating data collected through a qualitative method with a quantitative approach of reporting aimed at comparing between perspectives of users and providers to address the main research questions and the qualitative hypothesis (Patton, 2002). The quantitative data from the demographic questionnaire (Appendix D) and participants' responses to the ranking activity question (Appendix F) were analyzed using IBM SPSS Statistics 26.0. Descriptive statistics were used to report the demographic characteristics of the sample and frequency distribution was used to report the outcome of soft skills ranking.

Results

Table 4 outlines the demographic characteristics of focus group and personal interview participants. Results are presented separately for participants in the user and provider groups. The in-depth analysis of the unabridged transcriptions of the focus groups and personal interviews aimed at identifying the essential soft skills and their associated behaviors from the perspectives and actual experiences of the participants. The line-by-line analysis allowed for extracting statements for the pool of items of the assessment tool and exploring patterns in perspectives of users and providers. This content analysis identified four themes, three patterns, and 16 soft skills. Themes extracted from the interviews illustrated in Table 5 show 1) users' and providers' limited knowledge of soft skills, 2) patients emphasize emotional skills, providers emphasize non-verbal skills, 3) the value of empathy despite a narrow definition, and 4) soft skills are interrelated. Emerged patterns shown in Table 6 derived from the consensus in

providers' perspectives about 1) limited training on soft skills in medical education, 2) participants' valuing of soft skills and their impact on patients' experience, and 3) variation in perceptions about important soft skills.

Table 4

Demographic Characteristics of All Focus Group and Personal Interviews Participants

Characteristic Variable	Users (n=35)	Providers (n=27)
Age	*M* = 47.23 (*SD* = 14.8)	*M* = 37.59 (*SD* = 9.98)
Range	22 - 75	25 - 55
Gender		
Female	23 (65.7%)	18 (66.7%)
Male	12 (34.3%)	9 (33.3%)
Ethnicity		
Asian	6 (17.1%)	1 (3.7%)
African American	3 (8.6%)	1 (3.7%)
Hispanic	2 (5.7%)	1 (3.7%)
White / Caucasian	23 (65.7%)	21 (77.8%)
Multiple ethnicity	1 (2.9%)	3 (11.1%)
Educational Level		
High school degree or equivalent	2 (5.7%)	-
Some college or associate degree	6 (17.1%)	7 (25.9%)
Bachelor's degree	16 (45.7%)	5 (18.5%)
Graduate degree	11 (31.4%)	5 (18.5%)
Professional degree	-	5 (18.5%)
Professional certification or trade school	-	4 (14.8%)
Other	-	1 (3.7%)
Last Visit to Primary Healthcare Provider		
Within the last week	5 (14.3%)	
Within the last month	7 (20.0%)	
Between 1 and 3 months ago	15 (42.9%)	
Between 3 and 6 months ago	8 (22.9%)	

The following discussion of themes and patterns, together with Tables 6 and 7, will demonstrate representative statements from participants' responses quoted in italics.

Theme 1: Knowledge of soft skills. The level of participants' "*knowledge of soft skills*" was demonstrated from the beginning of the discussion. Most participants – both users and providers - did not recognize what soft skills are until they heard the term "*bedside manner*." When participants were asked "what are soft skills?" the majority did not answer and remained silent. Very few participants asked, "what is the meaning of soft skills?"

Soft skills reported by users were limited to their common knowledge of bedside manner, such as "*a lot of bedside manners has to do with personality, I mean the way you deal with people*"; and "*How they make me feel when I am sitting there with them.*" Providers' responses were also limited to general statements and a few generic bedside manners. For example, one provider said, "*I think just the way you carry yourself, just being friendly and like letting them know that you are there for them*"; another provider said, "*These behaviors are usually when the patient is talking about how they feel, more than what symptoms they are having.*" Some participants, however, were more knowledgeable than others and had a more specific conceptualization of soft skills. For example, one user responded, "*I just think about it like interpersonal skills,*" and another user said, "*Like the traits*"; and a provider responded, "*I imagine that beyond providing good care, you know lots of doctors provide good medical care, but bedside manners are an extra aspect of care that not everyone is able to provide well.*" Informed responses, although very few, touched on some elements of the operational definition of soft skills in this research. Overall, knowledge of soft skills was limited, with many participants reporting similar or repeated information. This finding about participants'

knowledge of soft skills was expected due to the deficiency in literature exploring soft skills in the healthcare environment and the absence of a clear definition for the term "soft skills."

Theme 2: Patients emphasize emotional skills; providers emphasize non-verbal skills.

While there was an agreement between users and providers on the important role of body-language in influencing patients' feelings of comfort and satisfaction, users typically linked the implication of body language to feelings and emotions. Conversely, providers linked body language with affective and non-verbal communication. Tendencies toward these directions in valuation of soft skills emerged when participants were asked to name soft skills that they perceive to influence patient satisfaction. Responses of most users emphasized the emotional and human skills, while providers stressed the role of non-verbal skills and body language. For example, some users' responses were, "*My provider was very compassionate. I could feel that she was compassionate, and she felt bad for what I had to go through,*" and "*It is more about that they realized how I feel and tried to comfort me,*" also "*How they make me feel when I am sitting there with them,*" and "*Just that feeling that they do care, that is huge for me.*" Most users also reported behavior of humanity as an expression of an influential soft skill: "*I don't want you to see me as a number, treat me like a human.*"

Most providers, on the other hand, reported primary soft skills being "*Always listening, answering and smiling. These are the key ones,*" also "*Patients want … specially in Oklahoma, people expect eye contact, and when you never look at anybody, then they think you don't care and are just being rude,*" and "*I think part of bedside manner that influences the patient satisfaction is keeping the eye contact, it is giving them the impression that I am listening to what they are saying and that I am giving them the time, not rushing them.*" Similarly, several other providers emphasized "*sit and listen to them,*" "*keep your eye contact,*" and "*eye contact is*

everything." Discussion with providers revealed that emphasis on eye contact is in response to patients' complaints about providers focusing on their computer during encounters. Ultimately, while technology use can make care delivery more efficient through increasing access to patients' charts and improving the reporting and documenting of patients information, the way technology is used does not enhance perceptions of service quality when providers spend more time on the computer than in a human interaction with their patients. According to the Iceberg Model of Competencies (Hay Group, 2003), it appeared that providers are guided toward using visible skills, such as making eye contact and smiling, to ensure patients observe their bedside manner. Users, however, rely on their feelings more and apparently can judge if those visible skills were driven by genuine care or automated motions. The following quote by one of the users supported this finding: "*I used to go to a doctor who has no feelings in his face or in his words. You feel that he is a machine talking to you.*"

Theme 3: Value of empathy despite narrow definition. Empathy as a soft skill was recognized by participants in both groups after users and providers were asked to define empathy. Thereafter, empathy was mentioned by 72% of the users and 67% of the providers in different parts of the discussions. Users of healthcare services used several expressions to imply the value of empathy, which included, "*When a doctor or nurse is empathetic, that is like a golden standard,*" and "*In my experience it was always empathy is what determines for me either that provider is good with their soft skills or not,*" also, "*If a provider feels what I feel that would be like too good to be true, that would be the best care,*" and "*Empathy means he actually cares, genuinely cares.*" In due course, some providers demonstrated the value of empathy through statements such as, "*I think the empathy part has the greatest influence on patient's satisfaction*,"

and "*Empathy means to me that my heart goes out to my patients*," also, "*I feel like patients have more connection with you when you are empathetic, I would say definitely*."

Valuation of empathy presents a continuation for healthcare users' inclination toward emotional soft skills. In the extant literature, empathy is considered one of the five main components of the emotional intelligence model of Goleman (1998), who described empathy as "being able to read another's emotions, at a higher level" and "sensing and responding to a person's unspoken concerns of feelings" (p. 135). Also, the term "empathy" means "affection or passion" (Eisenberg & Strayer, 1990). As users build their perspective about their providers based on how they feel, and as providers realize users' tendency to judge by emotions, participants' perspective of empathy illustrated their limited knowledge of empathy's broad and multidimensional scope. A little more than one third of participants (37%) focused only on the emotional factor of empathy: the affective dimension or perspective-taking dimension. Their definition of empathy was limited to the following statements: "*put yourself in their shoes*" or "*feel what they feel.*" This narrow definition could be aligned with other published definitions such as "sharing the perceived emotion of another – 'feeling with' another" (Eisenberg & Strayer, 1990, p. 5), and "to step outside of yourself and walk in someone else's shoes" (Patnaik, 2009, p. 85). This reflected the narrow perspective about the other dimensions of empathy.

Theme 4: Soft skills are interrelated. Soft skills are multidimensional in nature and are influenced by factors such as personality traits, education, and experience. The literature review suggested a strong association between the latent constructs of the initially identified soft skills. The factorial structural analysis conducted in Phase 2 of this research supported these interrelations. Participants, however, confirmed this high interrelation among soft skills when they responded to a question asking them to describe the behaviors associated with soft skills

that they identified. In their responses, users and providers used adjectives that are also considered soft skills. For example, in describing the behavior of caring, a participant said, "*Touching my hand meant the doctor is caring for me*," using a non-verbal communication behavior or body language to describe caring. In another example, the tight relation between different soft skills were described by a participant as one soft skill led to another soft skill and so on, such as

> *Care is also listening. Definitely the listening is part of caring behavior, for sure, it's the most important thing that I think that I need to do so that patients trust me, and trust is one of the most important things that I need to do my job.*

Several other examples followed this pattern in description, for instance, "*listening and showing them that you heard them and understand them is a big part of caring*," "*caring and listening comes as part of communication*," "*I show them that I care by listening.*" Additional uses of interrelated soft skills terms were offered. This interrelation between soft skills was directly stated through responses such as

> *You can't really have affective communication if you are not really showing respect to your patients, they are not gonna believe that you have empathy if you don't show them respect, that also part of the affective communication, it's all interrelated and hard to break out to individual little traits.*

Table 5

Focus Group and Personal Interviews Themes

Themes	Selected Quotations*	
	Users	**Providers**
Knowledge of soft skills	• *The quality of friendliness.* • *How do you interact with people, how do you treat people, compassion.*	• *Soft skills is friendliness.* • *It's a customer service thing no matter how you look at it.*

	• *Those are God given skills.*	• *I would say kindness, just being kind, smiling.* • *It's about how you present yourself and how the patient relates to you or you gain the patient's trust.*
Patients emphasize emotional skills and providers emphasize non-verbal skills	• *It is like personal attention or feeling, specially how did they make me feel in that moment.* • *I feel like sometimes those small emotions don't play a role in medical anymore.*	• *To me communication is a key when it comes to healthcare, and if you do it with a smile then high five all around.* • *Keep your eye contact and focus on the patient.* • *Eye contact is everything.* • *Sit down at patient level.*
Value of empathy despite narrow definition	• *I think empathy is super important.* • *Empathy is part of their job.* • *With empathy you could feel the sincerity of the doctor as a human being.* • *It's when you get a doctor that have been in your shoes, the way you are treating me you feel that pain.*	• *It is important, it is like trying to express that you feel for them.* • *Empathy is a must.* • *When somebody is sad you kind of mirror their emotions.*
Soft skills are interrelated	• *I think a soft skill is compassion, speaking to me not above me, … keeping me informed, just that kindness, I think this is the overarching term.* • *Compassion as someone listening, caring, and kind of gentleness.* • *Friendliness is kind words and greeting somebody with a smile.* • *If my provider is friendly, they gonna be understanding, and they gonna be compassionate with me.*	• *Patients' perception of care, and patients' perception of empathy, all has to do with the communication skills.* • *Being approachable fosters trust, which going to foster openness, which opens communication, all of these are part of communication, most definitely, they are like several pieces to a puzzle.* • *It's kind of difficult because they are all collectively the same.* • *The list of soft skills is really good, and also overlap, like affective communication and then listening, then empathy and listening, really none of these skills exist in a vacuum, you can never really have empathy*

	without having respect or listening, in my opinion. • *When you talk about some of these words or topics such as listening, communication, eye contact, there is so much overlap for me, it's hard for me to say that this is communication and this is listening, because I think listening is part of communication.*

*Quoted passages appear in italics.

Pattern 1: Limited training on soft skills in medical education. Focus groups and semi-structured personal interviews with providers of healthcare services always started by asking the participants to give examples of soft skills that they use in their daily practice. The responses revealed a pattern of agreement on the approach that providers follow when they start their interactions with patients. Almost 85% of providers reflected generic behaviors such as "*I would be friendly with the patient, I am always smiling, I think they can tell by body language," "Keep a smile on your face, keep polite, keep eye contact, let them talk, things like that," "I would say kindness, just being kind, smiling, greeting patients and making them feel welcome," and "I would say the first part will be the non-verbal cues, body language, sitting down, eye contact, some like active listening, other one establishing the relationship with the patient, like shaking hand and calling them by their name."*

Although this finding confirms themes such as "participants' limited knowledge of soft skills," and "providers' emphasis on body language and non-verbal communication," the replication in providers' responses compelled asking them a new question about the source of their soft skills: "*Where did you learn these skills?*" Only 18% of providers indicated they have received some sort of training on one of these skills during their medical education or practice. About 44% of providers learned the skills from life or work experience, 37% stated the skills

were part of their personality traits, and less than 1% learned from seeing a colleague or mentor performing one of the soft skills behaviors. Table 6 illustrates some supporting statements to this pattern from providers' responses. This pattern reiterates the importance of developing and integrating soft skills training in medical school curricula for medical students and providers to improve their knowledge of soft skills and their work efficiency which eventually will enhance patient satisfaction.

Pattern 2: Value of soft skills. Although participants in general and providers, in particular, demonstrated a limited knowledge of soft skills, a majority of providers (67%) stressed the importance and value of soft skills for provider-patient interactions. This confusing outcome was explained by analyzing providers' individual responses as to why they perceive soft skills to be important. Most providers realized that soft skills play an important role in building relationships with patients and consequently lead to establishing trust in the provider. Providers also recognized the difference between soft skills and technical skills exemplified by medical knowledge in healthcare, and how personality traits and experience are related to different displays of soft skills from one person to another. Examples of providers' responses included "*Lots of doctors provide good medical care, but bedside manners are an extra aspect of care that not everyone is able to provide well*," "*A lot of times you have doctors that provide excellent care, but they are perceived that they are doing bad care, and you have doctors that provide mediocre care and they are perceived that they are providing excellent care*," and "*I think you know what works with one person doesn't always work with the next one*." Providers also recognized that soft skills may impact patients' perceived experience and satisfaction (see Table 6). This pattern emerged to clarify that providers realize the value of soft skills, even with their limited knowledge of different soft skills. This finding, however, demands more

investigation to explore whether providers' limited knowledge could be a result of lack of training or experience using soft skills, and whether users of healthcare services have a similar conceptualization.

Table 6

Focus Group and Personal Interviews Patterns

Patterns	Providers Selected Quotations*
Limited training on soft skills in medical education	• *The work environment teaches us how to interact with patients. It teaches us the skills. I did not learn it in school.* • *I just be me; they don't really teach us that in medical school, most of it I think is just my personality.* • *Life, these are life skills.* • *I think the real personal experiences taught us all these bedside manners before we become nurses.* • *I think that it's a little bit of personal traits, medical training and experience. I think that to be genuine that is not something that you like learn to do.* • *Some of that like definitely personality, and just how you are.* • *I don't recall that we've learned any soft skills in medical school, I think a lot of that came just from interacting with people in my everyday life.* • *Part of it is experience and probably another part of it is personality.* • *It came naturally with practical experience and some training, usually in medical school they might give you some general guidelines, but they don't really teach you a course on those skills.* • *Med school does not teach you any of the bedside manners or business side of the medicine, it's just what you were born and raised to do.*
Value of soft skills	• *I think it's important to have that first contact with them and develop that relationship, the friendliness.* • *I think it's really important because if your patients know or feels as that you care about them as a person, by using your soft skills and making that connection with them, they gonna trust your medical judgment more.* • *Absolutely soft skills are important. I think that you can be very knowledgeable and maybe be a really great healthcare provider in the hard science without utilizing those things, but I think that your*

	patients will not perceive that, then it doesn't matter how good you are in all technical things. • *I think they are important on a couple different levels, with one being the connection with human and trying to understand each other, but also, I think it does improve outcomes or compliance if a person trust you and believes what you are saying.* • *I think it really helps foster that relationship so that you do have that positive impact on their lives.* • *I do think they are important and specially in a primary care setting where we are really trying to build up trust and like a continuity relationship.* • *I think it is very important and helps in showing that you care and build trust with the patients.*

*Quoted passages appear in italics.

Pattern 3: Variation in perceptions about important soft skills. This pattern emerged after comparing participants' verbal responses to interview questions and their written responses on the ranking activity question. The ranking activity was administered at the end of each interview after participants responded to all verbal questions. The content analysis revealed that participants were able to name 16 soft skills during the discussion (Table 7). Some soft skills were named directly, such as communication, listening, respect, caring, compassion, and friendliness. Other soft skills were described by the behaviors associated with them, such as body language (non-verbal communication), gentleness, humility, kindness, and self-control. Empathy was rarely mentioned until participants were asked specifically how they define empathy. As the ranking activity was conducted at the end of each interview with seven soft skills pre-listed in the ranking sheet (see Appendix F), the results revealed some inconsistencies between participants' ranking and their earlier verbal evaluation and discussion of individual soft skills. Results show that most participants assumed the pre-listed soft skills are essential, although they might have expressed a different verbal perspective in the interview.

To demonstrate this variance between verbal and written responses, a manual counting was conducted for the number of participants who verbally named each of the identified soft skills during the interviews. The manual calculations accounted for the percentage of participants who named the soft skill as most important for patient satisfaction, and the percentage of participants who named the soft skill as having the greatest influence on patient satisfaction. The outcomes of this manual calculation are illustrated in Table 7, together with the written ranking frequencies. Percentages do not add up to 100% for each group because some participants only ranked the pre-listed soft skills while others identified and ranked additional soft skills. Furthermore, some participants equally ranked more than one soft skill as the most important (e.g. more than one soft skill ranked as number 1). Thus, frequencies illustrated in Table 7 present the inconsistency between participants' verbal and written perspectives. For example, although none of the users mentioned *personal initiative* during the interviews, 22.9% of users ranked personal initiative as most important in the ranking list. Also, during the interviews, *friendliness* was verbally identified as most important soft skill by 48.6% and as most influential by 14.3% of users, while on the ranking list only 2.9% of users identified and ranked friendliness as the most important soft skill. Similarly, during the interviews about 60% of users and 96.3% of providers verbally identified *caring* as most important soft skill, while only 20% of users and 7.4% of providers identified and ranked caring on the ranking list.

Variation in participants' evaluations is difficult to explain. Such discrepancy, however, could possibly be linked to participants' limited knowledge of soft skills, in that their perceptions were influenced by the pre-listed soft skills when they reached this part of the session. For example, empathy - which was among the pre-listed soft skills in the ranking sheet – was ranked by 34.3% of users as most important soft skill, while only 14.3% of users identified empathy

verbally despite the question pathway (see Appendix E) including a question specifically about empathy. Table 7 present similar inconsistencies with other soft skills such as compassion, kindness, body language, and trust. Therefore, further investigation is recommended that conducts the ranking activity under different conditions.

Identified Soft Skills. Sixteen soft skills were identified through content analysis, including those identified from the literature review and others extracted from focus groups and personal interview discussions (see Table 7). The 16 identified soft skills are: 1) affective communication, 2) empathy, 3) gentleness, 4) listening, 5) respect, 6) personal initiative, 7) self-control, 8) kindness, 9) caring, 10) compassion, 11) friendliness, 12) humility, 13) body language, 14) approachability, 15) trust, and 16) sympathy.

As illustrated in Table 7 and discussed in "*Pattern 3: Variation in perceptions about important soft skills,"* it was difficult to determine a list of the top 5 or 10 essential soft skills for provider-patient interactions based only on participants' ranking outcome or their verbal discussion. Therefore, a Mann-Whitney U Test was used to explore whether there was any significant difference between users' and providers' ranking of each soft skill. The Mann-Whitney ranking table and test outcome are illustrated in Table 8 and Table 9.

Frequency of soft skills which were nominated and added by some participants in the ranking sheet (see Table 8), other than the pre-listed soft skills, was impacted by the small number of participants who ranked those soft skills. Also, because of the small sample size, the Mann-Whitney U test statistics (see Table 9) calculated the exact *p*-values for those soft skills.

Table 7

Frequencies of Identified Soft Skills

	Pre-listed soft skills															
	Affective Communication	Empathy	Gentleness	Listening	Respect	Personal Initiative	Self-Control	Kindness	Caring	Compassion	Friendliness	Humility	Body Language	Approachability	Trust	Sympathy
Ranking List[a]																
Users (n=35)	34.3%	34.3%	14.3%	45.7%	51.4%	22.9%	14.3%	0.0%	20.0%	8.6%	2.9%	8.6%	0.0%	0.0%	2.9%	0.0%
Providers (n=27)	33.3%	14.8%	0.0%	40.7%	37.0%	0.0%	7.4%	0.0%	7.4%	3.7%	3.7%	0.0%	7.4%	0.0%	3.7%	0.0%
Interviews - most important[b]																
Users (n=35)	25.7%	14.3%	5.7%	51.4%	25.7%	0.0%	0.0%	14.3%	60.0%	31.4%	48.6%	8.6%	14.3%	2.9%	14.3%	0.0%
Providers (n=27)	74.1%	44.4%	11.1%	96.3%	55.6%	3.7%	11.1%	11.1%	96.3%	14.8%	14.8%	0.0%	55.6%	22.2%	48.1%	7.4%
Interviews - most influential[c]																
Users (n=35)	28.6%	8.6%	2.9%	17.1%	20.0%	0.0%	0.0%	5.7%	22.9%	11.4%	14.3%	8.6%	14.3%	0.0%	11.4%	0.0%
Providers (n=27)	44.4%	11.1%	0.0%	37.0%	11.1%	0.0%	3.7%	7.4%	25.9%	7.4%	11.1%	3.7%	37.0%	3.7%	14.8%	3.7%

a. Percentage of participants ranking the soft skill as the most important - from written ranking activity that include pre-identified soft skills.

b. Percentage of participants who named the soft skill as most important for patient satisfaction through focus group and personal interviews verbal discussions.

c. Percentage of participants who named the soft skill as the most influential on patient satisfaction through focus group and personal interviews verbal discussions.

Table 8

Mann-Whitney U Rankings

Rank of Soft Skills (from 0 to 1)	Groups	N	Mean Rank	Sum of Ranks
*Affective Communication	Users	35	32.17	1126.00
	Providers	27	30.63	827.00
	Total	62		
*Empathy	Users	35	28.93	1012.50
	Providers	27	34.83	940.50
	Total	62		
*Gentleness	Users	34	26.97	917.00
	Providers	27	36.07	974.00
	Total	61		
*Listening	Users	35	31.70	1109.50
	Providers	27	31.24	843.50
	Total	62		
*Respect	Users	35	29.41	1029.50
	Providers	27	34.20	923.50
	Total	62		
*Personal Initiative	Users	33	28.64	945.00
	Providers	27	32.78	885.00
	Total	60		
*Self-control	Users	32	29.41	941.00
	Providers	27	30.70	829.00
	Total	59		
Caring	Users	14	9.82	137.50
	Providers	6	12.08	72.50
	Total	20		
Compassion	Users	9	6.56	59.00
	Providers	3	6.33	19.00
	Total	12		
Friendliness	Users	3	4.00	12.00
	Providers	3	3.00	9.00
	Total	6		
Humility	Users	7	4.21	29.50
	Providers	1	6.50	6.50
	Total	8		
Body Language	Users	9	14.00	126.00
	Providers	13	9.77	127.00
	Total	22		
Approachable	Users	1	1.00	1.00
	Providers	2	2.50	5.00
	Total	3		
Trust	Users	3	3.17	9.50

	Providers	2	2.75	5.50
	Total	5		
Sympathy	Users	0[a]	0.00	0.00
	Providers	3	2.00	6.00
	Total	3		

* Pre-listed soft skills

a. Mann-Whitney Test cannot be performed on empty groups.

Table 9

Mann-Whitney U Test Statistics

	Pre-listed Soft Skills						
	Affective Communication	Empathy	Gentleness	Listening	Respect	Personal Initiative	Self-control
Mann-Whitney U	449.000	382.500	322.000	465.500	399.500	384.000	413.000
Wilcoxon W	827.000	1012.500	917.000	843.500	1029.500	945.000	941.000
Z	-0.343	-1.298	-2.012	-0.105	-1.094	-0.921	-0.291
Asymp. Sig. (2-tailed)	0.732	0.194	0.044	0.917	0.274	0.357	0.771
Exact Sig. [2*(1-tailed Sig.)]							

	Caring	Compassion	Friendliness	Humility	Body Language	Approachable	Trust
Mann-Whitney U	32.500	13.000	3.000	1.500	36.000	0.000	2.500
Wilcoxon W	137.500	19.000	9.000	29.500	127.000	1.000	5.500
Z	-0.824	-0.094	-0.674	-0.900	-1.532	-1.225	-0.333
Asymp. Sig. (2-tailed)	0.410	0.925	0.500	0.368	0.125	0.221	0.739
Exact Sig. [2*(1-tailed Sig.)]	.444[b]	1.000[b]	.700[b]	.500[b]	.144[b]	.667[b]	.800[b]

a. Grouping Variable: Users group = 1 and providers group = 2

b. Not corrected for ties.

The results, however, did not provide sufficient evidence to support a significant difference between the ranking of the two groups (users and providers) for caring, compassion, friendliness, humility, body-language, and trust. Therefore, those six soft skills were considered essential based on the percentage of participants who verbally identified those soft skills as most important for patient satisfaction during the interviews (see Table 7) and the soft skills' *p*-value (see Table 9). Consequently, the following 10 soft skills were determined as the most essential soft skills for provider-patient interactions in a primary care setting: 1) affective communication, 2) empathy, 3) listening, 4) respect, 5) caring, 6) compassion, 7) friendliness, 8) humility, 9) body language, and 10) trust. Summary of statistics used to determine those identified 10 soft skills are illustrated in Table 10.

Table 10

Identified Soft Skills Summary Statistics

Soft Skill	Ranking Frequency (from Table 7)		Mann-Whitney U Statistics (from Tables 8 & 9)			
	Users	Providers	U-Statistics	Mean Rank (Users)	Mean Rank (Providers)	*p*-value
Affective communication	34.3%	33.3%	449.000	32.17	30.63	0.732
Empathy	34.3%	14.8%	382.500	28.93	34.83	0.194
Listening	45.7%	40.7%	465.500	31.70	31.24	0.917
Respect	51.4%	37.0%	399.500	29.41	34.20	0.274
Caring	60%	96.3%	32.500	9.82	12.08	0.444
Compassion	31.4%	14.8%	13.000	6.56	6.33	1.000
Friendliness	48.6%	14.8%	3.000	4.00	3.00	0.700
Humility	8.6%	0.0%	1.500	4.21	6.5	0.500
Body-language	14.3%	55.6%	36.000	14.00	9.77	0.144
Trust	14.3%	48.1%	2.500	3.17	2.75	0.800

Of the 16 initially identified soft skills, the six following soft skills were excluded: gentleness, personal initiative, self-control, kindness, approachability, and sympathy. Gentleness

was excluded because the Mann-Whitney U statistics showed a significant difference between the ranking of the two groups (users and providers) for this soft skill (U=322.000, p=0.044). Personal initiative and self-control were excluded because they were described by participants as internal competencies that can hardly be observed externally: "*It's all internal skill not external like the body language*," and "*I think if you have less of these but more empathy, listening, respect and affective communication, they gonna perceive that provider as a better provider than somebody who has more personal initiative and self-control."* Kindness, approachability, and sympathy were excluded because they appeared to be the least important from both users' and providers' perspectives according to the evaluation conducted.

Research Questions. In addition to identified soft skills, the qualitative data have also provided answers to main research questions and the qualitative hypothesis (H1). The first research question **RQ1:** ***Do healthcare providers and patients conceptualize soft skills? If so, how?*** Discussion of the second pattern "*value of soft skills"* has obviously demonstrated that providers realized the value of soft skills and conceptualized soft skills relative to their important role in building relationships with patients. Although users and providers had limited knowledge of soft skills, providers were able to identify the important role of soft skills for provider-patient interaction in building relationships and generating trust that consequently impact patient satisfaction. Further, providers' responses quoted in Table 6 showed their realization of the nature of soft skills as a set of competencies that partially refers to an individual's traits and is gradually shaped by experience and knowledge. Users of healthcare services did not demonstrate equal understanding and conceptualization of soft skills. Users' responses were more focused on participants' feelings about their interactions with providers and did not provide evidence for

their understanding of the nature and source of soft skills. This finding requires more investigation to explore users' perspectives in more depth.

The second research question **(RQ2):** ***What individual differences in expectations are important considerations for identification of soft skills in healthcare?*** Disparity between users' and providers' conceptualization of soft skills was not the only element to answer this question. Multiple themes and patterns have collectively highlighted several differences between users' and providers' perspectives and expectations. Users have emphasized the aspect of feelings and emotions in most of their responses to identify important soft skills, while providers focused more on the verbal and non-verbal communication to make their behaviors of soft skills visible to users. The second theme has discussed this difference and illustrated examples from users' and providers' statements (Table 5). This theme become more significant with the emergence of the third pattern "*variation in perceptions about important soft skills."* Table 7 illustrated the inconsistency in participants' perspectives about different soft skills. Highlighting these differences was imperative for determining the 10 soft skills that were considered most essential for provider-patient interaction and reinforced the existence of a lack of consensus on essential soft skills as indicated by Joubert and colleagues (2006).

The third research question **(RQ3):** ***What soft skills do patients consider most important for the provider-patient interaction?*** As shown in Table 7, patients considered all the identified soft skills important for provider-patient interaction, at least at one point in their interviews. The 10 soft skills determined most important for provider-patient interactions in primary care settings are: 1) affective communication, 2) empathy, 3) listening, 4) respect, 5) caring, 6) compassion, 7) friendliness, 8) humility, 9) body language, and 10) trust. Summary of evaluation statistics to determine these 10 soft skills essential were illustrates in Table 10.

The content analysis also allowed the qualitative hypothesis **H1: *Providers and users of healthcare services have a semantical misunderstanding for the role of "empathy" in healthcare*** to be addressed**.** The literature revealed confusion between the concepts of empathy and sympathy. This misconception was tackled through asking all participants to explain how they perceive or define empathy, and how is empathy different from sympathy. Earlier discussion of study themes showed that participants acknowledged the affective dimension or perspective taking dimension of empathy, which was reflected in their limited definition to empathy as "*put yourself in their shoes*," or as "*feel what they are feeling*." The meaning of empathy, however, was confused with sympathy by about 31.4% of users and 40% of providers. Conversely, about 26% of users and 52% of providers were able to make an accurate distinction between empathy and sympathy. In addition, 11.4% of users and .04% of providers were also confused between empathy and compassion. Thus, the data indicated at least one third of users and providers have a semantical misunderstanding of the meaning and the role of empathy in healthcare. Table 11 shows some examples of participants' responses that led to fail to decline this hypothesis. This hypothesis, however, requires further investigation in future research with a larger sample.

Table 11

Perceptions of Empathy and Sympathy

Themes	Selected Quotations*	
	Users	**Providers**
Accurate understanding of sympathy	• *They will just say: I am sorry you are going through this.* • *Sympathetic, they feel sorry for you.* • *Sympathy means to me like they are looking down upon you.*	• *Sympathizing is more like: I am sorry that happened, I am sorry for you.* • *If people feel that you are sympathizing with them, they might feel like you are giving them a petty.*
Wrong understanding of sympathy	• *Sympathy is like when they don't have a solution for you to figure out for your recovery.* • *Sympathize is like showing that you are trying to help.*	• *Sympathizing will lift them up while empathizing is just they gonna get better.* • *Sympathy I think that you let them know what their choices are, even if they make the decision that you think is not the best for them you sympathize with them.*
Confused with compassion	• *In my experience I see a lot of compassionate, but I don't know whether to call that empathetic or someone with empathy.* • *I think empathy complied within compassion.*	• *Compassion would be feeling what they are feeling, you know what they are going through, and empathize is kind of the same thing.*

*Quoted passages appear in italics.

Scale Development

Initial Item Pool

A pool of 198 items were extracted from focus groups and personal interviews data to represent characteristics of the 10 identified soft skills. The extracted items reflected the identified soft skills, including affective communication (18 items), empathy (41 items), listening (20 items), respect (18 items), caring (25 items), compassion (8 items), friendliness (10 items), humility (5 items), body-language (34 items), and trust (19 items). A 5-point Likert-type

response format was utilized with response options ranging from *strongly disagree* (1) to *strongly agree* (5).

All items were reviewed. Unclear items were revised, and redundant items were eliminated. This process winnowed down the initial pool to a final pool of 74 items including affective communication (8 items), empathy (10 items), listening (7 items), respect (6 items), caring (11 items), compassion (4 items), friendliness (5 items), humility (2 items), body-language (15 items), and trust (6 items). The 74 items were organized and listed under appropriate headings; affective communication and body language items were combined under the heading *verbal and non-verbal communication (23 items)*. This process resulted in the initial design of the assessment tool, which appeared ready to be tested for content validity (see Appendix G).

Content validity

Content validity is one of the most important steps in scale construction projects. Content validity aims to assess whether items measure what they are intended to measure (Shultz et al., 2013). Subject matter experts (SMEs) were recruited to evaluate the 74 items (Appendix G). Nine subject matter experts (SMEs) including faculty members and industry professionals, were invited to participate in evaluating the initial draft of the assessment tool. Six of the nine invited members agreed to take part in the panel of experts to rate the items and response scale. The subject matter experts (SMEs) included four faculty members and two industry professionals. The faculty were from the University of Oklahoma Department of Internal Medicine, Department of Education Leadership and Policy, College of Nursing; and School of Community Medicine - Physician Assistant Program. The industry experts were from the Tulsa City Health Department, and the Oklahoma Healthcare Authority. All procedures for recruiting subject

matter experts and obtaining content validity were approved by the Institutional Review Board of the University of Oklahoma – Norman (see Appendix A).

First Evaluation. Personal interviews were conducted with SMEs to collect their verbal and written evaluations. Meetings with SMEs were audio-recorded to include all their verbal comments and feedback. SMEs were briefed about the study objective and the operational definitions of constructs. Also, SMEs were provided written instructions and a question pathway about the evaluation process to guide them through the assessment meeting (see Appendix H). The SME assessment meetings were all conducted during November 2019.

Methods. The evaluation process included collecting SMEs' qualitative and quantitative opinions regarding the clarity and relevancy of each item, comprehensiveness of the items measuring each construct, and appropriateness of the response rating scale. SMEs were asked to revise or add items based on their clinical and theoretical expertise, and to indicate whether an item was necessary for the construct. The assessment process used the Content Validity Index (CVI) developed by Waltz and Bausell (1981). The SMEs were asked to rate each item using a 4-point scale with options ranging from *item is not relevant* (1) to *item is very relevant* (4). An Expert Reviewer Scoring Sheet was developed to collect the quantitative evaluations (see Appendix I). As shown in Table 12, evaluation of content validity included calculating the item-level content validity index (I-CVI), content validity ratio (CVR), probability of chance agreement (Pc), and degree of interrater agreement (Kappa). It is important to note that the item-level content validity index and content validity ratio measures were used together to ensure accuracy of the final decision about items to be retained or eliminated.

The item-level content validity index (I-CVI) was computed to assess relevancy and clarity of each item. The I-CVI value range is from 0 to +1. Items with an I-CVI value higher

than .79 were marked appropriate, items with an I-CVI value between .70 and .79 needed revision, and items with an I-CVI value less than .70 were eliminated (Zamanzadeh et al., 2015). The content validity ratio (CVR) was computed to help determine which items to reject or retain based on SMEs' ratings. The CVR value ranged from +1 to -1 for each item. Higher scores indicate greater agreement among the SMEs regarding the relevance of an item, thus greater content validity (Lawshe, 1975; Shultz et al., 2013). Because the CVR value depends on the number of SMEs involved in the evaluation, Lawshe (1975) developed a table of minimum values based on number of raters; for seven or fewer SMEs, a CVR of at least .99 is deemed necessary (Lawshe, 1975; Shultz et al., 2013). Given six SMEs provided ratings, any item with a CVR of .99 or higher was marked as essential.

The measure interrater reliability, the Kappa statistic was computed given it is designed to assess the extent of agreement in raters' evaluations beyond chance (Brennan & Hays, 1992; Zamanzadeh et al., 2015). Kappa statistic is a valuable supplement to CVI because it adjusts for chance agreement, unlike the CVI (Polit & Beck, 2006; Zamanzadeh et al., 2015). The Kappa statistic requires first to calculate the probability of chance agreement (Pc) (Zamanzadeh et al., 2015). Kappa scores range from 0 to 1 (Davis, 1992). Evaluation of items based on Kappa value relied on the following criteria: items with a Kappa value above 0.74 were considered excellent, items with a Kappa value between 0.60 and 0.74 were considered good, and items with a Kappa value between 0.40 and 0.59 were considered fair (Cicchetti & Sparrow, 1981; Zamanzadeh et al., 2015).

The scale level content validity index (S-CVI) was also computed to determine the proportion of all items deemed to be relevant (Polit & Beck, 2006). Therefore, the higher the number of SMEs involved in item evaluation, the harder it becomes to achieve total agreement in

rating (Polit & Beck, 2006). The acceptable standard value for S-CVI is .80 or higher (Davis, 1992; Polit & Beck, 2006). Both calculation methods of S-CVI were used: the universal agreement calculation method (S-CVI/UA), and the average calculation method (S-CVI/Ave) (Polit & Beck, 2006; Zamanzadeh et al., 2015). It is recommended to use both methods of calculation because the S-CVI/UA method is strict and more likely to decrease in value with the increase in number of evaluators; while the S-CVI/Ave is more tolerant (Polit & Beck, 2006). Table 12 illustrates the formulas used to calculate content validity measures, the computation results, and the relevance decision for each item. The comprehensiveness of items was measured at the end of the evaluation meeting by asking each SME to provide verbal feedback. SMEs considered the extent to which items represented the construct, additional items needed to be added to a specific dimension of the construct, and additional construct dimensions needed to be added to the assessment tool. Scale comprehensiveness was then evaluated by SMEs qualitative feedback and judgment.

Table 12

Content Validity Computation (First Evaluation) – 74 items

Construct	Item #	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Number of Experts	Not relevant (rating 1 or 2)	Relevant (rating 3 or 4)	I-CVI[a]	Evaluation	CVR[b]	Evaluation	Pc[c]	Kappa[d]	Evaluation
Verbal and non-verbal communication	1	4	3	4	4	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	2	4	4	3	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	3	2	3	2	1	4	4	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	4	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	5	2	2	2	2	3	4	6	4	2	0.33	Eliminate	-0.33		0.188	0.18	
	6	3	4	4	4	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	7	3	4	1	4	2	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	8	3	4	3	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	9	3	4	2	4	4	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	10	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	11	4	4	4	3	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	12	2	2	1	1	4	1	6	5	1	0.17	Eliminate	-0.67		0.469	-0.57	
	13	3	3	1	4	3	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	14	3	2	1	4	2	4	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	15	3	2	3	1	1	4	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	16	4	4	3	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	17	4	3	1	3	4	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	18	3	3	3	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	19	2	3	1	3	3	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	20	4	4	3	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	21	2	1	2	3	1	3	6	4	2	0.33	Eliminate	-0.33		0.188	0.18	
	22	3	2	3	3	2	1	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	23	4	4	4	4	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Empathy	1	2	2	1	3	1	1	6	5	1	0.17	Eliminate	-0.67		0.469	-0.57	
	2	1	2	1	1	1	1	6	6	0	0.00	Eliminate	-1.00		#DIV/0!	#DIV/0!	
	3	4	2	3	3	3	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	4	4	3	3	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	5	3	4	3	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	6	2	2	3	1	3	1	6	4	2	0.33	Eliminate	-0.33		0.188	0.18	
	7	1	2	1	3	1	1	6	5	1	0.17	Eliminate	-0.67		0.469	-0.57	
	8	4	4	3	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	9	4	4	4	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	10	3	3	3	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Compassion	1	4	4	3	1	4	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	2	4	4	4	3	1	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	3	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	4	3	3	3	1	1	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	
Caring	1	3	4	1	1	3	3	6	2	4	0.67	Appropriate	0.33		0.047	0.65	Excellent
	2	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	3	3	3	1	1	1	1	6	4	2	0.33	Eliminate	-0.33		0.188	0.18	
	4	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	5	4	4	4	4	4	1	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	6	3	3	3	1	3	1	6	2	4	0.67	Eliminate	0.33		0.047	0.65	
	7	3	3	1	4	3	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	8	1	3	1	1	1	1	6	5	1	0.17	Eliminate	-0.67		0.469	-0.57	
	9	4	4	3	4	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	10	4	4	1	4	1	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	11	4	4	1	3	3	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
Listening	1	3	3	2	4	1	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	2	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	3	4	2	1	4	4	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	4	4	3	4	1	4	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	5	3	3	2	3	2	3	6	2	4	0.67	Appropriate	0.33		0.047	0.65	Excellent
	6	4	3	3	4	1	1	6	2	4	0.67	Eliminate	0.33		0.047	0.65	
	7	3	3	4	3	3	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Respect	1	3	4	4	4	4	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	2	4	4	3	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	3	4	4	3	1	3	1	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	4	4	4	3	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	5	3	3	1	1	1	2	6	4	2	0.33	Eliminate	-0.33		0.188	0.18	
	6	4	3	1	3	3	4	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
Friendliness	1	4	4	3	4	4	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	2	3	3	1	4	3	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	3	3	3	1	4	1	1	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	4	2	2	3	1	3	3	6	3	3	0.50	Eliminate	0.00		0.094	0.45	
	5	4	4	3	3	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Trust	1	4	4	1	4	1	4	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	2	4	4	1	1	4	4	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	3	4	4	1	1	4	4	6	2	4	0.67	Eliminate	0.33		0.047	0.65	Good
	4	4	4	1	4	4	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
	5	4	4	4	4	4	4	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	6	4	3	2	3	3	3	6	1	5	0.83	Appropriate	0.67		0.019	0.83	Excellent
Humility	1	3	1	3	2	3	3	6	2	4	0.67	Eliminate	0.33		0.047	0.65	
	2	3	3	4	4	3	3	6	0	6	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent

[a][I-CVI = $k_{relevant}$/ n_t], [b][CVR=(n_e-(N/2))/(N/2)], [c][Pc=[N!/A!(N-A)!]*.5^N], [d][k=(I-CVI - Pc)/(1 - Pc)]

0.72	S-CVI/Ave	(Sum of I-CVIs / total number of items)
0.39	S-CVI/UA	(number of items with I-CVI = 1 / total number of items)

Results. Based on calculations of item-level content validity index I-CVI, of the 74 items, 43 items were retained because their I-CVI was above .79 and considered appropriate. The 43 retained items were also rated excellent based on Kappa statistic computation indicating these items were evaluated relevant beyond chance. Of the items that were eliminated, 29 items had an I-CVI of .67 or below, and 2 items were redundant. The S-CVI/Ave with the retained 43 items was .76, and the S-CVI/UA was .39. SMEs suggested additional changes included adding 8 new items to the 43 retained items, which increased the list to 51 items; increasing the response rating scale to 6-points by adding another response option of "Not applicable"; and merging the only item left under the construct of *humility* "*my provider was down to earth*" into items representing trust. This item was judged being reflective of openness, a facet of trust.

Regarding comprehensiveness of the items, all SMEs confirmed that the set of items appeared to be extremely thorough and reflective of their constructs and dimensions. One SME who has extensive knowledge in literature about trust and scale construction, confirmed the five facets of trust were represented by some of the new added items. By implementing the suggested changes, the first round of content validity evaluation resulted in a reduction of the original 74 items to a list of 51 items (Appendix J). The S-CVI, however, was below the acceptable standard value of .80. Therefore, according to the recommended standards, a second round of SME evaluations became necessary (Polit & Beck, 2006).

Second Evaluation. The list of 51 items (Appendix J) was returned to the SMEs for a second rating. Two out of the six SMEs completed the second evaluation.

Methods. The SMEs were asked to evaluate each item by selecting one of two rating options: clear and relevant, or irrelevant. The evaluation sheet (see Appendix K) also included a section for SMEs to make remarks such as suggesting minor rewording of an item, if any, and

for explanations about a selected rating if needed. The SMEs were also asked to add items they might see as appropriate for the measurement of any dimension. To obtain content validity of the instrument, all the CVI measures calculated in the first evaluation were also computed in the second evaluation (see Table 13).

Results. Based on second round calculations of item-level content validity index I-CVI, four items from the 51 were eliminated due to having an I-CVI rating of .5 and a Kappa statistic of zero. The remaining 47 items were retained based on having an I-CVI of 1, meeting the recommended evaluation rating of appropriate, and yielding a Kappa statistic of 1. SMEs suggested adding 2 new items to the 47 retained items, which increased the list to 49 items. As shown in Table 13, The S-CVI/Ave increased to .96, and the S-CVI/UA become .92. The second round of content validity evaluation ended with 49 items and a S-CVI scored above the acceptable standard value of .80 that can be judged as having an excellent content validity. The 49 items measure the following 8 constructs: verbal and non-verbal communication (15 items), empathy (5 items), compassion (4 items), caring (6 items), listening (5 items), respect (4 items), friendliness (4 items), and trust (6 items). The 49 items shown in Table 14 represent the first complete draft of the assessment tool.

Table 13

Content Validity Computation (Second Evaluation) – 51 items

Construct	Item #	Expert 2	Expert 6	Number of Experts	Irrelevant (1)	Clear and Relevant (2)	I-CVI	Evaluation	CVR	Evaluation	Pc	Kappa	Evaluation
Verbal and non-verbal communication	1	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	2	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	3	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	4	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	5	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	6	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	7	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	8	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	9	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	10	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	11	1	2	2	1	1	0.50	Eliminate	0.00		0.500	0.00	
	12	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	13	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	14	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	15	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	16	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Empaty	17	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	18	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	19	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	20	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	21	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Compassion	22	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	23	1	2	2	1	1	0.50	Eliminate	0.00		0.500	0.00	
	24	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	25	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	26	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Caring	27	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	28	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	29	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	30	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	31	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	32	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Listening	33	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	34	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	35	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	36	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	37	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Respect	38	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	39	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	40	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	41	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Friendliness	42	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	43	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	44	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	45	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
Trust	46	1	2	2	1	1	0.50	Eliminate	0.00		0.500	0.00	
	47	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	48	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	49	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
	50	1	2	2	1	1	0.50	Eliminate	0.00		0.500	0.00	
	51	2	2	2	0	2	1.00	Appropriate	1.00	Essential	0.000	1.00	Excellent
							0.96	S-CVI/Ave					
							0.92	S-CVI/UA					

Table 14

Complete Draft of the Soft Skills Assessment Tool (SSAT) - 49 items

Behavior	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Not Applic-able
Provider's verbal and non-verbal communication						
1. My provider asked appropriate questions.						
2. My provider asked questions to get to know who I am as an individual.						
3. My provider called me by my preferred name.						
4. My provider tried to understand what I am experiencing.						
5. My provider explained what was happening throughout the visit.						
6. My provider remembered me as an individual.						
7. My provider introduced himself / herself appropriately.						
8. My provider greeted me appropriately.						
9. My provider maintained good eye contact with me.						
10. My provider showed interest and listened carefully.						
11. My provider addressed my questions and concerns.						
12. My provider was approachable.						
13. I felt comfortable asking questions to my provider.						
14. My provider explained things in plain language.						
15. My provider used terms I could understand.						
Provider's empathy						
16. My provider tried to comfort me.						
17. My provider wanted to understand what I was going through.						
18. My provider helped me to feel supported.						
19. My provider tried to find a solution for my situation.						
20. My provider helped me to anticipate what to expect.						
Provider's compassion						
21. My provider paid attention to me.						
22. My provider was understanding.						
23. My provider took the time to address my concerns.						
24. My provider was caring.						
Provider's care						
25. My provider remembered details about me.						
26. My provider valued my opinion.						
27. My provider showed me that he / she cares.						
28. My provider expressed his/her concern about my condition.						
29. My provider gave personal attention to make me feel comfortable.						
30. My provider was attentive to my medical needs.						
Provider's listening						
31. My provider let me talk without interruptions.						
32. My provider listened attentively.						
33. My provider heard what I said.						
34. My provider was engaged during our interaction.						
35. My provider paid attention to details.						

Provider's respect

36. My provider valued my time.
37. My provider respected me as a person.
38. When family members were present, my provider addressed them appropriately.
39. My provider was respectful.

Provider's friendliness

40. My provider was welcoming.
41. My provider was courteous with me.
42. My provider was approachable.
43. My provider was friendly.

Provider's trust

44. My provider was honest with me.
45. My provider was competent.
46. My provider talked to me openly.
47. My provider was 'down to earth'.
48. My provider was transparent about what they could and could not do.
49. I trust my provider will help me with my health-related needs.

Limitations

The most significant limitation of this phase of the study was the small number of participants which prevented generalization of findings from themes and patterns. This limitation, however, was expected as recruitment for focus groups and personal interviews does not generally attract many participants. Nevertheless, the study outcomes provided an indication of the perspectives of patients and providers about soft skills in a way that has not been explored in earlier literature. Another limitation was revealed in the design of the ranking activity. The inclusion of a pre-identified set of soft skills in the list appeared to influence participants' opinions, causing some contradiction between what they verbally reflected and their ranking on the paper. Accordingly, the results of the ranking activity were confusing and did not agree with results from the verbal-response portion; such agreement was anticipated and desired but not realized. As this qualitative study was just a step toward the main objective to construct an assessment tool to measure soft skills, repeating the study with a larger sample is certainly recommended.

Conclusion

The outcomes of this phase of the study reflect an effective implementation of the qualitative design that provided insight into users' and providers' perceptions of soft skills. Data collected from focus groups and personal interviews have contributed to the identification of essential soft skills for provider-patient interactions that influence patient experience and satisfaction. The qualitative data permitted generating an initial behavioral item pool for the assessment tool. In addition, the data were especially useful to identify areas that require further investigation and exploration in future research. The content evaluation process produced the first draft of the assessment tool, which consists of 49 items measuring 8 soft skills rated on a 6-point Likert-type scale and reported to have a high level of content validity (see Table 13).

SECTION FIVE: PHASE 2 – FACTORIAL STRUCTURE OF THE ASSESSMENT TOOL

The purpose of Phase 2 of this study is to inform the final design and assess the reliability of the developed assessment tool. This quantitative study included two administrations to test the tool. The survey was initially administered to a convenience sample of 14 individuals representing users of healthcare services. The survey consisted of the 49 items that resulted from Phase 1 of the study; items were rated on a 6-point Likert-type scale. This initial survey administration was conducted to pilot test the assessment tool and to assess face validity. The soft skills assessment tool was administered a second time to a convenience sample of 202 participants representing users of healthcare services. This administration was used to assess psychometric properties of the scale including internal consistency reliability.

Participants were recruited through the community of the University of Oklahoma and asked to also recruit qualifying members of their family and friends. An exploratory factor analysis was conducted in this phase to analyze the scale's dimensionality and item loadings. All procedures for conducting this study were approved by the Institutional Review Board of the University of Oklahoma – Norman (see Appendix L).

Pilot Testing and Face Validity

A pilot test was conducted for the 49-item version of the assessment tool to evaluate face validity of the measure. The main objective of the pilot test was to identify difficult, poorly written, and ambiguous items, as well as likely misinterpretations of the meaning of items among users of healthcare services. For this purpose, an electronic version of the questionnaire was created using Qualtrics.

Methods

A convenience sampling strategy was implemented through direct contact and email invitations to 18 individuals representing a sample of patients and target end users of the survey. The email invitation included information about the study, the objective of the pilot survey, a brief description about the process, the value of completing this process, and the link to take the online survey. As the pilot testing sample was small and the purpose of this step was to explore how test takers were interpreting the items, the following two validity-related questions were added at the end of each section of items: "*Is the meaning of each statement clear and straightforward?"* and "*Did you have to read an item more than once to understand what it was asking?"* The answer options for both questions were "Yes" and "No." If the answer for the first question was "*No*," a follow-up question appeared asking the respondent to indicate which items were not clear. Similarly, if the answer for the second question was "*Yes*," a follow-up question appeared asking the respondent to indicate which items they had to read more than once. After responding to the 49 items and the validity related questions, participants were asked to provide any additional comments about the survey through email or via a face-to-face meeting. This protocol was derived from the concept of *think-aloud method* in pilot testing (Fonteyn et al., 1993; Shultz et al., 2013). None of the invited participants were members of previous samples used this study. Fourteen participants consented online and completed the online survey within the last two weeks of December 2019.

Results

Fourteen individuals (n=14) completed the Qualtrics pilot survey. Detailed descriptive demographic characteristics are illustrated in Table 15. The 49-item pilot survey was anticipated to require less than 20 minutes for completion. The Qualtrics Expert Review Report estimated

time to complete the survey was 14.2 minutes. The pilot data showed that 71.4% of respondents completed the survey in less than 20 minutes, with an average of 12.15 minutes. Verbal comments from 21.4% of respondents indicated the survey length was reasonable. Responses on the 49 items varied and did not show clustering or tendency toward one particular response trend.

Table 15

Demographic Characteristics of Participants in Pilot-Survey

Characteristic Variable	Users (n=14)
Age	*M* = 49.50 (*SD* = 11.38)
Range	25 - 60
Gender	
Female	10 (71.4%)
Male	4 (28.6%)
Ethnicity	
Asian	2 (14.29%)
White / Caucasian	8 (57.14%)
Other	4 (28.57%)
Education Level	
Bachelor's degree	10 (71.43%)
Graduate degree	4 (28.57%)

Responses to the validity-related questions were primarily positive except for two (14.29%) negative responses about the nature of one empathy item which was "*My provider helped me to anticipate what to expect.*" Both respondents indicated having to read this item more than once to understand what it was asking, but neither provided a suggestion for modification of the item. Another respondent wrote the following general note at the end of the survey:

> *In healthcare, healthcare providers when they try to deliver messages, they try to communicate them in the most concise way by ignoring details that are very important. To fully solve your health problems, you need to do extra efforts to do extra research and*

readings. They do not explain all details, nor do they help you be proactive to prevent a problem.

Table 16 includes additional positive and negative feedback provided by 28.5% of respondents. Based on this feedback, some items were modified and refined for the final survey. For instance, the item, "*My provider helped me to anticipate what to expect*," was modified to read, *"My provider explained in detail what I should expect."* Grammar was corrected where relevant and the design of the tool was modified to provide the respondent with the option to indicate the name of the provider whose soft skills were being evaluated.

Table 16

Participants' Feedback on Pilot-Survey

Criteria	Positive comments	Negative comments	Suggestions
Understanding		• Had to read this item more than once: *"My provider helped me to anticipate what to expect."*	
Comprehensiveness	• *All questions are clear and easily understood.* • *The survey included quality questions that are not covered in other patient experience survey.*		
Appearance		• *Some questions seemed very similar to each other, probably because the categories of the questions are closely related although they are technically different.*	• Grammar corrections. • Provide space for patients to select which provider they will evaluate at a specific visit.

*Quoted passages appear in italics.

Overall, results of the pilot test indicated most participants felt the assessment tool demonstrated face validity. Although minor revisions were made to the wording of a few items, 49 items were retained for the psychometric evaluation of the SSAT.

Psychometric Evaluation and Factor Structure

Methods

The assessment tool that resulted from the scale development steps described above was named the Soft Skills Assessment Tool (SSAT). The SSAT was administered to a sample of healthcare users in order to allow for assessment of various psychometric properties of the tool. A quantitative online survey was implemented via Qualtrics. Data were collected through the online survey from January 29 to February 26, 2020.

Participants. Data were collected using a convenience sample of participants representing users of healthcare services. Recruitment occurred through the community of the University of Oklahoma as well as family members and friends of OU constituents. A total of 282 participants responded to the online survey, of which 202 (71.63%) provided usable responses. Of the 80 eliminated responses, 62 responses had a substantial missing data, 4 responses were tracked as spam based on the source of the IP address, 2 respondents refused to consent, and 12 respondents did not meet the eligibility criteria. Detailed descriptive demographic characteristics of this sample are illustrated in Table 17. Respondents had the option of participating in a random drawing to receive 1 of 10 gift cards of $10 each as an incentive for participation.

Table 17

Demographic Characteristics of Participants in SSAT Survey

Characteristic Variable	Users (n=202)
Age	*M* = 34.92 (*SD* = 15.44)
Range	18 - 85
Gender	
Female	154 (76.2%)
Male	41 (20.3%)
Non-binary / Other	4 (2%)
Do not wish to disclose	3 (1.5%)
Race / Ethnic Group	
American Indian / Alaska Native	5 (2.5%)
Asian	8 (4%)
Black / African American	7 (3.5%)
Hispanic / Latino / Latina	8 (4%)
White / Caucasian	145 (71.8%)
Other	8 (4%)
Multiple race / ethnic group	21 (10.4%)

Measures. The Qualtrics quantitative online survey consisted of the 49 items rated on a 6-point Likert-type scale constructed in Phase 1. Participants were also asked to identify the job role of the healthcare provider whom they rated in their responses. A majority of the sample (68.3%) selected to rate their primary care doctor; no respondent chose to rate a Lab Technician. Table 18 show frequencies of rated healthcare providers based on their job role.

Table 18

Job Roles of Rated Healthcare Providers

Job Role	Frequency (n=202)
Primary Care Doctor	138 (68.3%)
Family Doctor	25 (12.4%)
Internal Medicine Doctor	11 (5.4%)
Physician Assistant (PA)	18 (8.9%)
Practical Nurse	2 (1%)
Registered Nurse	5 (2.5%)
Nurse	2 (1%)
Radiology Technician	1 (0.5%)

Data Analysis and Results

To examine the factor structure of the SSAT an attempt was made to run an exploratory Principal Axis factor analysis using IBM's SPSS 26.0. Results of the initial factor analysis were undefined, which indicated a problem either in the sample size of 202 cases being insufficient for this procedure with the number of included variables (49 variables); or a linear dependency relationship among some variables. According to Hair and colleagues (2009), and Shultz and colleagues (2013), to run common factor analysis, 100 cases or more are needed; preferably there is at least a 5:1 ratio between the sample size relative to number of items (variables). Instead, the Principal Axis factor solution may have been undefined as a result of having one or more of the following conditions: correlations greater than 1.0, linear dependency among the observed variables, multicollinearity among the observed variables, a variable that is a linear combination of other variables, or correlation values outside the permissible range of +/−1.0. Based on recommendations by Wothke (1993), an inspection of the correlation matrix showed perfect correlation (r=1.0) between four variables. One item on the Care scale (My provider expressed

their concern about my condition) was perfectly correlated with an item on the Compassion scale (My provider paid attention to me). Additionally, another Care scale item (My provider showed me that they care) was perfectly correlated with another Compassion item (My provider was caring). Therefore, one Care item (My provider expressed their concern about my condition) and one Compassion item (My provider was caring) were eliminated to reduce redundancy. The factor analysis was re-run with the remaining 47 items.

To determine the adequacy of the data after excluding the two items, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was computed. The KMO measure is particularly recommended in studies when case-to-variable ratio is less than 1:5 (William et al., 2009). The range of KMO measure of sampling adequacy is between zero and 1, with 0.50 considered suitable (Dziuban, & Shirkey, 1974; William et al., 2009). The Bartlett's Test of Sphericity should also be significant with $p<.05$ for factor analysis to be suitable (William et al., 2009). The overall measure of sampling adequacy for the correlation matrix of the SSAT was 0.950, and Bartlett's Test of Sphericity was significant ($p <0.001$). These results supported the suitability of the data to perform exploratory factor analysis.

Factor Extraction. To determine the number of factors to be extracted, many researchers recommended the use of multiple criteria and decision rules (Hair et al., 2009; Thompson, 2004; Williams et al., 2010). Three factor extraction techniques were considered in the SSAT: Latent root criterion, scree test, and parallel analysis. The latent root criterion is the most commonly used method in research and is also known as the Kaiser-Guttman eigenvalue criterion or "K1 rule" (Almutairi, & Dahinten, 2017; Hair et al., 2009; Hayton et al., 2004; Henson, & Roberts, 2006; Netemeyer et al., 2003). The eigenvalue as a mathematical term refers to the strength or magnitude of a factor that represents the total amount of variance explained by an individual

factor (Henson, & Roberts, 2006; Shultz et al., 2013). The rule of latent root criterion is based on retaining the factors with eigenvalues greater than or equal to 1. Factors with eigenvalues less than 1 are considered insignificant and are disregarded. Factors associated with large eigenvalues explain more variance. The pre-rotated PAF generated 6 factors with eigenvalues greater than 1. Table 19 presents the total variance explained by each factor, where the first factor explains the most variance and the last factor explains the least variance (Hair et al., 2009; Shultz et al., 2013).

Table 19

Total Variance Explained (47 items; n=202)

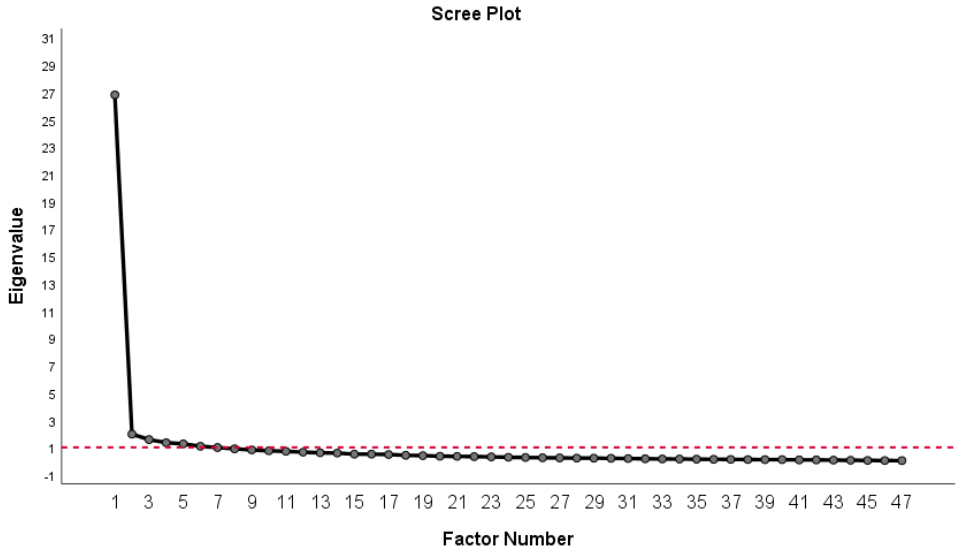
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	26.805	57.031	57.031	26.518	56.422	56.422
2	1.968	4.188	61.219	1.666	3.545	59.966
3	1.570	3.339	64.559	1.183	2.517	62.484
4	1.345	2.862	67.420	1.097	2.334	64.817
5	1.260	2.681	70.102	.877	1.865	66.683
6	1.079	2.295	72.397	.829	1.764	68.446

Table 19 shows that the first factor explained 57.031% of the common variance of the 47 items, while all six factors with eigenvalues greater than 1 explained a total of 72.397% of the variance. In social science research, the common criterion for the number of factors to extract is that they should account for 50% to 60% of the total variance explained by all factors (Hair et al., 2009; Netemeyer et al., 2003). Table 19 shows that this guideline can be met by extracting from one to three factors that explained a total variance of 64.559%, which can be deemed sufficient. Although this seems to be a simple and straightforward solution, using the eigenvalue to confirm the retained number of factors has been associated with several problems. When the number of

variables used in the factor analysis is large, the latent root method appeared to yield many factors with eigenvalues equal to or larger than 1 (Shultz et al., 2013). Also, this technique is most reliable when the sample size is relatively large, with a case-to-item ratio of 10:1 (Ford et al., 1986; Shultz et al., 2013). It is critical for a newly developed assessment tool like SSAT to extract the correct number of factors because it will affect the final design of the tool.

Figure 5

Scree Plot Conducted to Determine the Maximum Number of Factors to be Extracted



As a scree test is another widely used factor extraction criterion and is strongly preferred over the eigenvalue criterion (DeVellis, 1991; Shultz et al., 2013), a scree test was performed to investigate the number of factors yielded by latent root solution. The scree test is a visual examination of the line that connects the plots of eigenvalues against the number of factors in their order of extraction. The goal is to identify the factors that explain the largest amount of variance. To decide which factors to retain, the scree test depends on finding a significantly large drop in the slope of eigenvalues or sudden flattening in the pattern of plots that remark an "elbow" shape (Almutairi & Dahinten, 2017; Ford et al., 1986; Hair et al., 2009; Netemeyer et al., 2003; Shultz et al., 2013). Factors below this marking point have small explained variance

and can be deleted (DeVellis, 1991; Netemeyer et al., 2003). Inspection of scree plot (see Figure 5) based on the 47 items showed an elbow point at the second factor, with a flattening line after the fourth factor. Thus, the eigenvalues plots demonstrated one obvious factor, with some ambiguity about the qualification of the second factor. Williams et al. (2010) advised retaining the number of factors marked above the cutoff point "elbow" without including the breaking point itself. According to this guideline, the scree test in Figure 5 shows only one factor to be retained.

In practice, determining the number of factors to retain using the scree test approach is subjective (DeVellis, 1991; Hayton et al., 2004; Netemeyer et al., 2003). For that reason, parallel analysis method was considered to assess the optimal number of factors to be extracted. Parallel analysis requires generation of random data containing the same number of items and cases as the real data. Random data will be used to conduct a factor analysis like the one performed on the real data, then outcomes from both data sets are compared. The concept of parallel analysis method is that the variance of the components generated from non-random data is due in part to true correlation and in part to correlation resulting from sampling error and least-squares bias (Horn 1965; Williams et al., 2010). Thus, it is assumed that some eigenvalues from real data with a valid factor structure will be larger than eigenvalues from random data (Ford et al., 1986). Based on the parallel analysis generated random eigenvalues, the rule for the number of factors to retain will be the number of eigenvalues generated from real data that are larger than the corresponding random eigenvalues (Hayton et al., 2004; Horn 1965; Williams et al., 2010). The web-based parallel analysis engine of Patil and colleagues (2017) was used to calculate eigenvalues from randomly generated correlation matrices. As Table 20 illustrates, the use of parallel analysis in this study suggested one factor to be qualified for retention.

Table 20

Parallel Analysis Solution

Component	Real Data Eigenvalue from PAF	Random Eigenvalue from Parallel Analysis	Decision
1	26.805	2.221	Accept
2	1.968	2.072	Reject
3	1.570	1.933	Reject
4	1.345	1.866	Reject
5	1.260	1.784	Reject
6	1.079	1.716	Reject

Parallel analysis has been considered a more accurate measure for factor extraction than the scree test and the K1 rule (Glorfeld, 1995; William, et al., 2009). The major weakness of using parallel analysis is the tendency of this procedure to extract more factors or poorly defined factors (Glorfeld, 1995). In a recent study, Lim and Jahng (2019) examined the performance of principal analysis method in 13 different models and found that accuracy of the principal analysis method was not satisfactory when factors are highly correlated, or factor loadings are not strong enough. There is, however, agreement in literature that no single analysis can provide evidence of the viability of a factor structure (Goldberg & Velicer, 2006). With the lack of a clear decision about the number of factors to extract, Lim and Jahng (2019) suggested considering (k + 1) or (k -1) of factor structure. Many scholars discussed the importance of the amount of variance explained by extracted factors to account for at least 50% to 60% of the total variance explained by all factors (Hair et al., 2009; Netemeyer et al., 2003; William, et al., 2009). As selecting the optimal number of factors is one of the major decisions in factor analysis, and with the literature evidence of the multidimensionality of many soft skills, the results of the three

different factor extraction methods suggest rotating the PAF results using a forced number of factors to estimate the most appropriate factor solution for this study.

The main objective of factor rotation is to make the factor structure more interpretable because rotation allow items to load highly on few factors or has a substantial loading on one factor. Rotation also assist in determining which items to retain or delete (Netemeyer et al., 2003; Shultz et al., 2013). There are two types of rotation: orthogonal and oblique. Orthogonal rotation prevents factors correlation, while oblique rotation allows factors to correlate (Netemeyer et al., 2003). From the several methods of rotation, Varimax and Quartimax are common forms of orthogonal rotation, Promax and Direct Oblimin are forms of oblique rotation (Netemeyer et al., 2003; Shultz et al., 2013). As soft skills are highly intercorrelated, the oblique Promax factor rotation was selected in this study to allow factors to correlate in hopes of extracting more realistic loading of variables. Using Promax rotation is expected to reflect the nature of soft skills constructs in the real world and reveal more meaningful theoretical factors of soft skills (Hair et al., 2009; Netemeyer et al., 2003; Williams et al., 2010). In addition, Shultz and colleagues (2013) indicated that using Promax rotation will still allow identification of uncorrelated factors.

Factor Solution and Results. A series of principal axis factoring (PAF) analyses was performed using the oblique Promax rotation to determine the number of dimensions and to assess the psychometric properties of the SSAT. The PAF rotation was conducted using the 47 items, with a forced number of factors to reach the most interpretable factor structure of the SSAT and refine the scale. The forced number of factors was between 1 and 3. The optimal result was obtained with a two-factor solution that accounted for 59.967% of variance of all the 47 items, with the first factor accounting for 56.422% and the second factor accounting for 3.545% of the variance.

The pattern matrix in each rotated factor was evaluated to examine items loadings and refine the SSAT. The commonly used rule for item loading was implemented. Items with loading in the range of 0.30 to 0.40 were accounted low, items with loading in the range of 0.50 were accounted practically significant, and items with loading exceeding 0.70 were accounted indicative (Ford et al., 1986; Hair et al., 2009; Shultz et al., 2013). According to Hair et al. (2009), for a sample size of 200, a factor loading of 0.40 is considered the minimal accepted level of significance. Items with cross-loading on the two factors were reviewed first. The pattern matrix showed a cross-loading in 14 items, and 3 other items with low loadings (<0.40) on a single factor. The Respect item (When family members were present, my provider addressed them appropriately), and the Trust item (My provider was transparent about what they could and could not do) were deleted for their very low loading on the second factor (<0.35). Items with weak cross-loading were investigated next. When an item's loading on both factors was low (< 0.40) and/or the item had no primary loading such that the difference in loading between both factors was small, the item was deleted. Items were eliminated one at a time, with re-running the PAF after every item removal. Four items were deleted for cross-loading, three items from the Communication scale and one item from the Care scale. The Communication items were deleted in the following order: "My provider called me by my preferred name," "My provider introduced himself/herself appropriately," and "My provider was approachable"; then the following Care item was deleted: "My provider was attentive to my medical needs."

A re-run of the PAF was conducted with the retained 41 items to confirm that each item has a substantial moderate to strong loading on one of the two factors. The pattern matrix of the final PAF illustrated in Table 21 showed the first factor is measured by 24 variables, explaining

56.422% of variance, and the second factor is measured by 17 variables, explaining 3.545% of variance. Both factors explain 59.967% of variance.

Table 21

Final Principal Axis Factoring Analysis Result – Pattern Matrix

Item	Factor 1	Factor 2
1. Friend_Q2: My provider was courteous with me	.958	
2. Listen_Q3: My provider heard what I said	.893	
3. Respec_Q4: My provider was respectful	.822	
4. Listen_Q5: My provider paid attention to details	.821	
5. Trust_Q6: I trust my provider will help me with my health-related needs	.812	
6. Trust_Q2: My provider was competent	.810	
7. Listen_Q2: My provider listened attentively	.809	
8. Listen_Q4: My provider was engaged during our interaction	.795	
9. Listen_Q1: My provider let me talk without interruptions	.775	
10. Trust_Q3: My provider talked to me openly	.761	
11. Friend_Q1: My provider was welcoming	.699	
12. Friend_Q3: My provider was approachable	.689	
13. Respec_Q2: My provider respected me as a person	.679	
14. Trust_Q1: My provider was honest with me	.666	
15. Friend_Q4: My provider was friendly	.629	
16. Trust_Q4: My provider was ‘down to earth’	.612	
17. Comm_Q14: My provider explained things in plain language	.571	
18. Respec_Q1: My provider valued my time	.556	
19. Comm_Q11: My provider addressed my questions and concerns	.492	
20. Empathy_Q4: My provider tried to find a solution for my situation	.464	
21. Comm_Q1: My provider asked appropriate questions	.461	
22. Comm_Q15: My provider used terms I could understand	.458	
23. Comm_Q8: My provider greeted me appropriately	.441	
24. Comp_Q3: My provider took the time to address my concerns	.427	
25. Comm_Q2: My provider asked questions to get to know who I am as an individual		.910
26. Comm_Q6: My provider remembered me as an individual		.881
27. Empathy_Q2: My provider wanted to understand what I was going through		.852
28. Care_Q3: My provider showed me that they care		.841
29. Comp_Q1: My provider paid attention to me		.807
30. Care_Q1: My provider remembered details about me		.787

31. Empathy_Q1: My provider tried to comfort me	.759
32. Empathy_Q3: My provider helped me feel supported	.752
33. Comp_Q2: My provider was understanding	.678
34. Care_Q5: My provider gave personal attention to make me feel comfortable	.671
35. Care_Q2: My provider valued my opinion	.658
36. Comm_Q4: My provider tried to understand what I am experiencing	.607
37. Comm_Q10: My provider showed interest and listened carefully	.555
38. Empathy_Q5: My provider explained in detail what to expect	.545
39. Comm_Q5: My provider explained what was happening throughout the visit	.507
40. Comm_Q13: I felt comfortable asking questions to my provider	.482
41. Comm_Q9: My provider maintained good eye contact with me	.438

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.[a]

a. Rotation converged in 3 iterations.

Factor Labeling. Items were evaluated to identify a theoretical meaning for the set of items that loaded on each factor. The set of items that loaded on the first factor pertained to the provider's behavior initiated from personality traits (i.e. friendliness) and values (i.e. respect), then integrated with individual abilities (i.e. listening), skills (i.e. communication) and knowledge (i.e. gain trust); therefore, this factor was labeled as "Behavioral-Interaction Competence" based on the conceptualization and characteristics of "competence" (Guerrero & De los Ríos, 2012). The set of items that loaded on the second factor reflected care, compassion, empathy, and communication that are all in the core of the concept and definition of "compassion" according to Raab (2014) and Schantz (2007); thus, this factor was labeled as "Affective-Interaction."

Internal Consistency and Item Analysis. Internal consistency assesses the inter-relatedness among the set of items for each factor. Cronbach's coefficient alpha is a measure of reliability and the most widely used measure for internal consistency. Values of Cronbach's

alpha range from 0 to 1. The widely accepted level of reliability is 0.70 or greater (DeVellis, 1991; Hair et al., 2009; Netemeyer et al., 2003; Shultz et al., 2013). In new scale development, coefficient alpha should be above 0.80 (Netemeyer et al., 2003). In assessing the internal consistency of items for each factor, it is important to consider the number of items in the scale and items' redundancy that could falsely increase the value of coefficient alpha (Hair et al., 2009; Netemeyer et al., 2003; Shultz et al., 2013).

To assess the reliability of the SSAT, the internal consistency analysis was calculated for items loaded on each factor separately using Cronbach's alpha. The internal consistency analysis indicated excellent reliability indices of 0.972 for the "Behavioral-Interaction" factor and 0.964 for the "Affective-Interaction" factor. To reduce the number of items and reduce the impact of removing items on the scale's internal consistency reliability, item statistics were inspected. In deleting items, it was important to consider the conceptual and theoretical sense of the scale, while maintaining a minimum effect on the reliability score. The item tool statistics for the first factor showed that deleting any item would reduce the Cronbach's alpha coefficient. In looking for possible redundancy, one Communication item (My provider explained things in plain language) was deleted because it was redundant with another Communication item (My provider used terms I could understand). The recalculated Cronbach's alpha for Behavioral-Interaction become 0.971 for 23 items.

The Cronbach's coefficient alpha was again calculated for the Affective-Interaction scale with its 17 items. The item tool statistics showed that deletion of one Communication item (My provider maintained good eye contact with me) would not change the reliability of the scale or affect the theoretical representation of the factor, so it was deleted. Evaluating other items showed that the Communication item "My provider asked questions to get to know who I am as

an individual" was a candidate for deletion given it was lengthy and weakly worded thus, it was deleted. The recalculated Cronbach's alpha for Affective-Interaction was 0.963 for 15 items. Other items were retained for additional research and a future item reduction procedure to finalize the assessment tool with a different sample.

The Flesch-Kincaid measure of readability was used to assess the reading ability of the scale items using the online test tool (webfx.com, 2020). The Flesch-Kincaid reading grade is based on a 0 to 100 score. A high score means the text is easier to read. The text of the 38-items scored 59.3 indicating an average reading grade level of about 8th grade. Scale items should be easily understood by individuals who are 13 to 14-years-old or older.

Calculating Composite Scores. A composite score is the average score of the variables loading on one factor (Hair et al., 2009). A composite score may be calculated when a scale consists of multiple factors and several variables, and where the variables clustering on one factor demonstrate a meaningful facet of the theoretical concept of the measured construct (Song et al., 2013). Calculating a composite score will simplify interpretation of the results and reduce measurement error (Hair et al., 2009). As the high reliability Cronbach's alpha score indicated strong interrelation between the individual indicators (variables) in each subscale, it becomes useful to create a composite score for each subscale to reflect and compare a provider's performance on each dimension. An average composite score for each subscale (factor) was calculated using SPSS. As Table 22 illustrate, the Pearson correlation between both subscales was significant (r=.859, p<.001). This high correlation suggests that both set of indicators are assessing the soft skills dimensions very well.

Table 22

Composite Scores Descriptive Statistics and Correlations

Subscale / Factor	Mean	SD	N
Composite Score: Behavioral-Interaction Competence	5.2968	.68267	202
Composite Score: Affective-Interaction	4.9228	.89015	202

Subscale / Factor		Composite Behavioral Competence	Composite Affective-Interaction
Composite Score: Behavioral-Interaction Competence	Pearson Correlation	1	.859**
	Sig. (2-tailed)		.000
	N	202	202
Composite Score: Affective-Interaction	Pearson Correlation	.859**	1
	Sig. (2-tailed)	.000	
	N	202	202

*** Correlation is significant at the 0.01 level (2-tailed).*

Conclusion

The rotated PAF solution resulted in a multi-dimensional assessment tool. The final SSAT, illustrated in Table 23, consisted of 23 items representing Behavioral-Interaction Competence and 15 items representing Affective-Interaction. The two dimensions are highly correlated (r=.859) with an internal consistency Cronbach's Alpha of 0.971 within the items of behavioral-interaction competence and 0.963 within the items of affective-interaction.

Table 23

Dimensions of SSAT and their Corresponding Items

Factor / Dimension	Corresponding Items
Behavioral-Interaction Competence	*Provider's friendliness*
	1. My provider was welcoming (Friend_Q1)
	2. My provider was courteous with me (Friend_Q2)
	3. My provider was approachable (Friend_Q3)
	4. My provider was friendly (Friend_Q4)
	Provider's respect
	5. My provider valued my time (Respec_Q1)
	6. My provider respected me as a person (Respec_Q2)
	7. My provider was respectful (Respec_Q4)

	Provider's listening	
		8. My provider let me talk without interruptions (Listen_Q1)
		9. My provider listened attentively (Listen_Q2)
		10. My provider paid attention to details (Listen_Q5)
		11. My provider heard what I said (Listen_Q3)
		12. My provider was engaged during our interaction (Listen_Q4)
	Provider's effective communication	
		13. My provider greeted me appropriately (Comm_Q8)
		14. My provider asked appropriate questions (Comm_Q1)
		15. My provider addressed my questions and concerns (Comm_Q11)
		16. My provider used terms I could understand (Comm_Q15)
	Provider's trustworthy	
		17. My provider talked to me openly (Trust_Q3)
		18. My provider was honest with me (Trust_Q1)
		19. My provider was competent (Trust_Q2)
		20. My provider was 'down to earth' (Trust_Q4)
		21. I trust my provider will help me with my health-related needs (Trust_Q6)
		22. My provider tried to find a solution for my situation (Empathy_Q4)
		23. My provider took the time to address my concerns (Comp_Q3)
Affective-Interaction	*Provider's empathy*	
		24. My provider wanted to understand what I was going through (Empathy_Q2)
		25. My provider tried to comfort me (Empathy_Q1)
		26. My provider helped me feel supported (Empathy_Q3)
		27. My provider explained in detail what to expect (Empathy_Q5)
	Provider's care	
		28. My provider showed me that they care (Care_Q3)
		29. My provider remembered details about me (Care_Q1)
		30. My provider gave personal attention to make me feel comfortable (Care_Q5)
		31. My provider valued my opinion (Care_Q2)
	Provider's compassion	
		32. My provider paid attention to me (Comp_Q1)
		33. My provider was understanding (Comp_Q2)
	Provider's empathetic communication	
		34. My provider remembered me as an individual (Comm_Q6)

35. My provider tried to understand what I am experiencing (Comm_Q4)
36. My provider explained what was happening throughout the visit (Comm_Q5)
37. My provider showed interest and listened carefully (Comm_Q10)
38. I felt comfortable asking questions to my provider (Comm_Q13)

SECTION SIX: DISCUSSION

The purpose of the research was to develop an assessment tool to measure soft skills in the performance of healthcare providers during encounters with patients in primary care settings. In general, the main objective of the study was attained. The SSAT was structured with two dimensions and 38 items rated on a 6-point Likert-type scale. The two factorial dimensions had meaningful clusters of items indicative of behavioral-interaction competence and affective-interaction. The SSAT displayed good psychometric characteristics in terms of internal consistency reliability. Cronbach's alpha for both subscales far exceeded the lower acceptable level of .80 suggested by Netemeyer and colleagues (2003).

The use of focus groups and personal interviews in Phase 1 of the study served as an invaluable tool to identify important soft skills from the perspectives of users and providers, and to generate a pool of items for the development of the assessment tool. Content analysis of participants' perspectives addressed the qualitative research questions. Perspectives of users and providers about the value of soft skills have also demonstrated the influence of providers' soft skills on patients' clinical outcomes and compliance to treatment plan. Most providers confirmed that soft skills are critical in building relationships with patients and establishing trust in the provider (see Table 6). Patient's trust in their providers increase patient's confidence in their provider's medical judgement and consequently increase patient's compliance. Users expressed this important role of their provider's soft skills in responses such as "the way he received you will make positive or negative results of their medicine" and "their job is human, before any medicine or anything like that, you know these attitudes affects the patient more than medicine." This important outcome confirms the results reported by Chruchill and Schenck (2008) who

identified eight providers' skills including empathy, listening, and trust that build provider-patient relationship and have healing effects.

It was also possible to recognize some individual differences in expectations and evaluations of soft skills between users and providers of healthcare services. For example, users of healthcare services were more inclined to identify soft skills that include emotional context, such as care and compassion, whereas providers were more likely to use non-verbal communication and body language. These differences and other extracted themes and patterns provided empirical evidence for the need to develop training programs on soft skills as part of medical education.

Data collected from focus groups and personal interviews were utilized primarily to create a list of 198 items corresponding to behaviors representing the 10 identified soft skills. The high intercorrelations between different soft skills increased the likelihood of item redundancy. Therefore, the initial process of filtering the pool of items reduced the number of items to 74. A later review by SMEs further reduced the number of items to 49. Exploratory factor analysis helped to further reduce the length of the survey to 38 items.

Based on a thorough literature review, the high correlation between the latent soft skills constructs was anticipated in the early proposed theoretical model. Therefore, it was appropriate to use PAF with a promax rotation to explore dimensionality of the items given that oblique rotations allow factors to be correlated. Cross-loaded items also demonstrated the interrelationships between soft skills behaviors. For example, because communication is a critical element in many other soft skills, such as listening, empathy, compassion, and care items including communication behaviors as well as those of other dimensions often loaded on

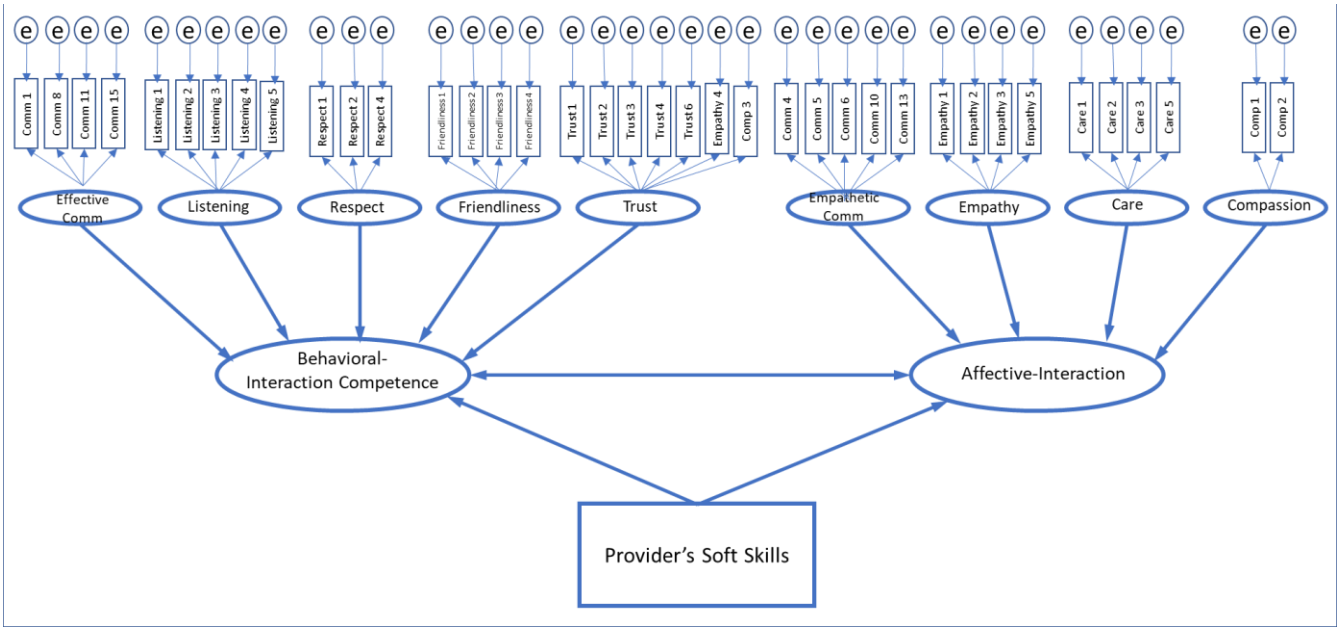
multiple factors. Therefore, it was more meaningful to calculate a composite score for these constructs as collective indicators of a scale dimension.

In this direction, a speculative framework for the SSAT theoretical model is presented in Figure 6, which is a second-order formative-indicator measurement model with composite latent constructs. This model based on the factor solution that determined SSAT is a multi-factor model formulated of multiple indicators for two composite latent constructs: behavioral-interaction competence and affective-interaction. This structure demonstrates rational in the clustering of variables. For example, empathy was hypothesized to load with communication on the same factor. Results, however, showed that empathy loaded on the second factor, affective-interaction, together with newly identified constructs of care and compassion. Theoretically, the constructs of compassion, empathy, and care are very related, and in healthcare, behaviors that reflect them align closely. Compassion and empathy involve understanding and acknowledging a patient's pain and taking measures to relieve the patient (Raab, 2014; Roberts et al., 2019). Compassion is also assumed to make the offering of care more meaningful (Roberts et al., 2019; Van der Cingel, 2011). This also clearly demonstrates the underlying theoretical rational of labeling this factor "affective-interaction." Additionally, because items of communication split into both factors, each set of communication items was labeled based on the meaning of the items clustering together in relation to the theoretical dimension. Thus, communication items loaded on behavioral-interaction competence were labeled "effective communication," and communication items loaded on affective-interaction were labeled "empathetic communication" (see Table 23). Based on these results, the modified theoretical model illustrated in Figure 6 include effective communication, listening, respect, friendliness, and trust on one dimension as formative indicators for behavioral-interaction competence. The other dimension consists of empathetic

communication, empathy, care, and compassion as formative indicators for affective-interaction. This speculative model should be thoroughly investigated and affirmed in future research using confirmatory factor analysis.

Figure 6

The Modified Theoretical Model



Hypotheses

Of the three factor structure hypotheses, the results partially supported hypothesis 2, failed to support hypothesis 3, and fully supported hypothesis 4.

Hypothesis 2: ***Exploratory factor analysis will show that empathy will load on the same factor as communication.*** This hypothesis was primarily derived from the biopsychosocial model of communication in healthcare that recommended empathy as an element of communication (Levinson et al., 2010; Ong et al., 1995). Also, in the emotional intelligence model, Goleman (1998) discussed the strong relationship between empathy, communication, and listening as important competencies for healthcare providers. Results of the exploratory factor analysis failed to support this hypothesis according to the proposed theoretical model (Figure 3).

The results, however, confirmed an association between empathy and communication. The difference was that communication items split over both factors, where empathy loaded on the same factor with items of communication that were labeled "empathetic communication." Accordingly, the exploratory factor analysis had partially confirmed this hypothesis.

Hypothesis 3: ***Additional soft skills variables will be explored and load on the soft skills efficacy factor.*** Although additional soft skills variables were identified - such as friendliness, trust, compassion, and care - this hypothesis was not supported primarily because softs skills hypothesized to load on the efficacy factor were not seen as essential for provider-patient interaction by participants. The efficacy factor was comprised of personal initiative and self-control. These two soft skills were excluded by participants, who described them as internal competencies that are hard to observe externally. As a result, the final exploratory factor structure did not have an efficacy factor. Instead, the factor labeled affective-interaction presented with the newly identified soft skills variables of compassion, care, empathetic communication, and empathy. Therefore, this hypothesis was not supported.

Hypothesis 4: ***Exploratory factor analysis of the soft skills assessment tool as proposed in the theoretical model will yield a multi-dimensional construct for soft skills.*** The exploratory factor analysis resulted in two dimensions as hypothesized. The first dimension consisted of 23 items and represented behavioral-interaction competency. The second dimension consisted of 15 items and represented affective-interaction. A modified theoretical model was developed to reflect the structure of the final factor solution (Figure 6). Thus, the results of this study supported this hypothesis. These results, however, should be validated through a confirmatory factor analysis to examine the best structure fit of the tool. Future research to validate the SSAT and explore its relationship with other existing measures is vital to assess its effectiveness as a

quality measure to improve provider-patient interaction and patient satisfaction. The design of SSAT as a patient-reported measure for use in primary care encounters is expected to offer direct benefits to healthcare organizations and providers, as well as to patients. Patient's direct feedback will highlight strengths and weaknesses of providers' interactional abilities from patient's human perspective. Evaluating the quality of provider-patient interaction will serve organizational process of performance measurement of healthcare providers. Mapping gaps in providers' abilities to build and maintain strong relationships with patients will inform assessment of training needs. These utilities of using the SSAT can extend to behavioral training in medical education and in future research.

Conclusions

The SSAT was developed using both qualitative and quantitative means in order that the resulting scale would demonstrate sound psychometric characteristics including content validity and internal consistency reliability. Two composite latent constructs were calculated as collective indicators of identified soft skills: behavioral-interaction competence and affective-interaction. A modified theoretical model was presented for future validation through a confirmatory factor analysis study.

Several strengths presented in this study including increased awareness of soft skills among study participants. The use of focus groups and personal interviews at the early stage of assessment tool development demonstrated richness in the quality of the collected data. The involvement of the researcher in moderating the interviews stimulated the discussions and encouraged participants to share more information. Including patients and providers in generation of items provided specific behavioral descriptions of providers' soft skills, in contrast to many patient satisfaction surveys based on general statements.

SECTION SEVEN: LIMITATIONS AND FUTURE IMPLICATIONS

Limitations

A number of limitations identified while working on this study warrant attention for future research. The following are main specific limitations that have to be acknowledged.

Sample limitations. The most significant limitation of this study was the small sample size in both phases of the process. In phase 1, the limited number of participants in focus groups and personal interviews could be linked to the time required to complete each interview. Dedicating one hour for the interview created a participation barrier, especially for healthcare providers. In phase 2, the low number of participants completing the online survey could have resulted from the limited circulation of the survey link. The limited number of respondents prevented the possibility of using split sample analysis to perform confirmatory factor analysis. Another limitation in both samples was the lack of adequate diversity. The demographic characteristics of interview participants and survey respondents demonstrated a homogenous sample, with a majority of white and female individuals. These limitations prevented generalization of the study findings. A heterogeneous sample could improve the possibilities of generalizing the qualitative results.

Design Limitations. The primary design limitation was in the format of the written ranking activity. Pre-listing several pre-identified soft skills in the ranking sheet confused participants and limited their ability to think of and identify new soft skills. It is believed that participants assumed the pre-identified soft skills were important by default. As a result, there was a clear inconsistency between participants' verbal and written responses. To overcome this problem, and because the sample size was small, it was possible to manually calculate frequencies of participants' verbal responses related to identifying soft skills and compare them

to the written responses. Therefore, it is strongly recommended to repeat this activity without any pre-listed soft skills.

Data / Measurement Limitations. Data collected from the online survey presented perfect bivariate correlations which affected four items. This data collinearity could result from the multi-dimensional nature of soft skills constructs and the high intercorrelation between those variables. Also, bad item wording and redundancy could be a reason for perfect correlation, the matter that could not be anticipated by the SMEs content validation review. Data collinearity hindered conducting exploratory factor analysis with principal axis factorial method using all the variables. Therefore, two of the four variables were excluded to overcome this obstacle.

Implications and Directions for Future Research

Given the literature gap in measuring soft skills and scholars' indications of the difficulty of the process, this research is expected to make a significant contribution to the literature of the measurement of soft skills in a primary care context within the healthcare industry. The study presents a first attempt to develop and validate an assessment tool that could be applied by primary care healthcare service delivery organizations to assess soft skills in the performance of healthcare providers, which is expected to improve the delivery of quality care and, consequently, patient satisfaction.

The SSAT still requires criterion-related validation and item reduction before it can be recommended for practical use. Netemeyer and colleagues (2003) suggested retention of many items at an early stage of scale development, including items that do not meet statistical criteria but still obtained content and/or face validity. Additional studies should consider measuring the modified theoretical model through a confirmatory factor analysis, followed by calculating construct validity. Although every item on the current SSAT appears essential, final length of the

scale can be determined by additional validity testing. Furthermore, using a different sample for validity testing of the SSAT could establish a higher reliability for the measure. When validity is sufficiently demonstrated, the SSAT could be used in future research and many practical applications.

Directions for future research include conducting convergent validity between the SSAT and the Emotional Intelligence scale developed by Schutte et al. (1998). The aim is to explore the level of intercorrelation between constructs of both scales. This area in literature is still under-researched, and findings could make significant contribution to future conceptualization and applications of emotional intelligence and soft skills assessments. It is also recommended to explore the relationship of SSAT with other validated measures such as Consultation and Relational Empathy (CARE) measure developed by Mercer et al. (2004). It is important, however, to keep in mind that SSAT is not a self-report measure when conducting convergent or discriminant validity testing between SSAT and other measures. Future research could also investigate if there are gender differences in soft skills performance. Knowing about such differences and findings from future studies will inform initiatives to develop and improve training programs on performance using soft skills in medical education and other contexts. The SSAT can also be integrated into other human resource functions in healthcare organizations, such as employees' performance management and measurement strategies, as well as recruitment assessment measures within healthcare organizations.

Concluding Thoughts

The qualitative data provided evidence that patients and providers recognized the importance of soft skills in influencing perception of behaviors. Although participants lack enough knowledge about soft skills, and providers confirmed lack of training on soft skills in

medical education, the findings of this study confirm the possibility of identifying and measuring soft skills.

As finalizing this study coincided with a major unplanned enforced change in peoples' daily behavior due to the global pandemic of COVID-19, the near future is expected to include an increased demand for the development of training programs on softs skills essential for self-control, self-management of crises, and associated social distress. Therefore, it is strongly recommended to expand soft skills future research and training to social domains beyond healthcare.

References

Abraham, A. (2006). The need for the integration of emotional intelligence skills in business education. *The Business Renaissance Quarterly, 1*(3), 65-80.

AbuJbara, N. K., & Worley, J. A. (2018). Leading toward new horizons with soft skills. *On the Horizon*, *26*(3), 247-259.

AbuJbara, N. K., & Worley, J. A. (2019). Performance measurement indicators in the healthcare industry: A systematic review. *Global Business and Economics Review, 21*, 43-68.

Alford, C. F. (2016). Mirror neurons, psychoanalysis, and the age of empathy. *International Journal of Applied Psychoanalytic Studies, 13*(1), 7-23.

Almutairi, A. F., & Dahinten, V. S. (2017). Factor structure of Almutairi's critical cultural competence scale. *Administrative Sciences, 7*(2), 1-14.

Attewell, P. (1990). What is skill? *Work and Occupations, 17*(4), 422-448.

Baer, M., & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *24*(1), 45-68.

Bailly, F., & Léné, A. (2012). The personification of the service labour process and the rise of soft skills: A French case study. *Employee Relations, 35*(1), 79-97.

Ballatt, J., & Campling, P. (2011). *Intelligent kindness: Reforming the culture of healthcare.* London, UK: RCPsych Publications.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran's (Ed.). *Encyclopedia of Human Behavior, 4*(4), 71-81.

Bar-On, R. (1997). BarOn emotional quotient inventory. Multi-Health Systems. Resource Report for Chris Devan. Retrieved November 22, 2019, from http://www.eitrainingcompany.com/wp-content/uploads/2009/04/eqi-133-resource.pdf

Beach, M. C., Roter, D. L., Wang, N. Y., Duggan, P. S., & Cooper, L. A. (2006). Are physicians' attitudes of respect accurately perceived by patients and associated with more positive communication behaviors?. *Patient Education and Counseling, 62*(3), 347-354.

Benbassat, J., & Baumal, R. (2004). What is empathy, and how can it be promoted during clinical clerkships?. *Academic Medicine, 79*(9), 832-839.

Binnewies, C., Ohly, S., & Sonnentag, S. (2007). Taking personal initiative and communicating about ideas: What is important for the creative process and for idea creativity?. *European Journal of Work and Organizational Psychology, 16*(4), 432-455.

Bledow, R., & Frese, M. (2009). A situational judgment test of personal initiative and its relationship to performance. *Personnel Psychology, 62*(2), 229-258.

Boerner, S., & Dütschke, E. (2008). The impact of charismatic leadership on followers' initiative-oriented behavior: A study in German hospitals. *Health Care Management Review, 33*(4), 332-340.

Bolton, S. C. (2004). Conceptual confusions: Emotion work as skilled work. In C. Warhurst, Grugulis, I., & Keep, E. (Eds.), *The skills that matter* (pp. 19-37). New York, NY: Palgrave/Macmillan.

Bourquin, C., Stiefel, F., Bernhard, J., Micheli, G. B., Dietrich, L., Hürny, C., Wössmer, B., & Kiss, A. (2014). Mandatory communication skills training for oncologists: Enforcement does not substantially impact satisfaction. *Supportive Care in Cancer, 22*(10), 2611-2614.

Boyatzis, R. E., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory (ECI). *Handbook of Emotional Intelligence, 99*(6), 343-362.

Brennan, P., & Hays, B. (1992). The kappa statistic for establishing interrater reliability in the secondary analysis of qualitative clinical data. *Research in Nursing & Health, 15*(2), 153-158.

Burger, J., Hoogerhuis, M., & Standish, M., (2014). *How hospitals can maximize the patient experience*. Washington, D.C.: Gallup, Inc.

Case, G. A., & Brauner, D. J. (2010). Perspective: the doctor as performer: A proposal for change based on a performance studies paradigm. *Academic Medicine, 85*(1), 159-163.

Carron, R., & Cumbie, S. A. (2011). Development of a conceptual nursing model for the implementation of spiritual care in adult primary healthcare settings by nurse practitioners. *Journal of the American Academy of Nurse Practitioners, 23*(10), 552-560.

Cavaco, A., & Roter, D. (2010). Pharmaceutical consultations in community pharmacies: Utility of the Roter Interaction Analysis System to study pharmacist–patient communication. *International Journal of Pharmacy Practice, 18*(3), 141-148.

Chang, J. T., Hays, R. D., Shekelle, P. G., MacLean, C. H., Solomon, D. H., Reuben, D. B., Roth, C. P., Kamberg, C. J., Adams, J., Young, R. T., & Wenger, N. S. (2006). Patients' global ratings of their health care are not associated with the technical quality of their care. *Annals of Internal Medicine, 144*(9), 665-672.

Cherniss, C. (2000, April). Emotional intelligence: What it is and why it matters. *In annual meeting of the Society for Industrial and Organizational Psychology*, New Orleans, LA. Retrieved Nov 22, 2019, from https://www.researchgate.net/profile/Cary_Cherniss/publication/228359323_Emotional_intelligence_What_it_is_and_why_it_matters/links/0a85e533f10b04fe4a000000/Emotional-intelligence-What-it-is-and-why-it-matters.pdf

Churchill, L. R., & Schenck, D. (2008). Healing skills for medical practice. *Annals of Internal Medicine, 149*(10), 720-724.

Cicchetti, D. V., & Sparrow, S. A. (1981). Developing criteria for establishing interrater reliability of specific items: Applications to assessment of adaptive behavior. *American Journal of Mental Deficiency, 86*(2), 127-137.

Claxton, G., Costa, A., & Kallick, B. (2016). Hard thinking about soft skills. *Educational Leadership, 73*(6), 60-64.

Cohen, R., Allaby, C., Cumbaa, C., Fitzgerald, M., Ho, K., Hui, B., Latulipe, C., Lu, F., Moussa, N., Pooley, D., Qian, A., & Siddiqi, S. (1998). What is initiative? *User Modeling and User-Adapted Interaction, 8*(3-4), 171-214.

Conley, D. T. (2013). Rethinking the notion of non-cognitive. *Education Week, 32*(18), 20-21.

Conte, J. M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior, 26*(4), 433-440.

D'Arms, J. (1998). Empathy and evaluative inquiry. *Chicago-Kent Law Review, 74*(4), 1467-1500.

Davis, C. M. (1990). What is empathy, and can empathy be taught?. *Physical Therapy, 70*(11), 707-711.

Davis, L. L. (1992). Instrument review: Getting the most from a panel of experts. *Applied Nursing Research, 5*(4), 194-197.

Davis, J., Thompson, C. R., Foley, A., Bond, C. D., & DeWitt, J. (2008). An examination of listening concepts in the healthcare context: Differences among nurses, physicians, and administrators. *The International Journal of Listening, 22*(2), 152-167.

Decety, J., & Jackson, P. L. (2004). The functional architecture of human empathy. *Behavioral and Cognitive Neuroscience Reviews, 3*(2), 71-100.

Decety, J., & Moriguchi, Y. (2007). The empathic brain and its dysfunction in psychiatric populations: Implications for intervention across different clinical conditions. *BioPsychoSocial Medicine, 1*(1), 1-22.

Decker, P. J. (1999). The hidden competencies of healthcare: Why self-esteem, accountability, and professionalism may affect hospital customer satisfaction scores. *Hospital Topics, 77*(1), 14-26.

Depew, D. (2005). Empathy, psychology, and aesthetics: Reflections on a repair concept. *Poroi, 4*(1), 99-107. Retrieved December 9, 2018, from https://doi.org/10.13008/2151-2957.1033

Derksen, F., Bensing, J., Kuiper, S., van Meerendonk, M., & Lagro-Janssen, A. (2014). Empathy: What does it mean for GPs? A qualitative study. *Family Practice, 32(1),* 94-100.

Derksen, F., Bensing, J., & Lagro-Janssen, A. (2013). Effectiveness of empathy in general practice: A systematic review. *British Journal of General Practice, 63*(606), e76-e84.

DeVellis, R. F. (1991). *Scale development: Theory and applications*. Newbury Park, CA: Sage.

DeVoe, J. E., Wallace, L. S., & Fryer Jr, G. E. (2009). Measuring patients' perceptions of communication with healthcare providers: Do differences in demographic and socioeconomic characteristics matter? *Health Expectations, 12*(1), 70-80.

Dixon, J., Belnap, C., Albrecht, C., & Lee, K. (2010). The importance of soft skills. *Corporate Finance Review, 14*(6), 35-38.

Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology, 17*(2), 245-260.

Duffy, F. D., Gordon, G. H., Whelan, G., Cole-Kelly, K., & Frankel, R. (2004). Assessing competence in communication and interpersonal skills: The Kalamazoo II report. *Academic Medicine, 79*(6), 495-507.

Dulewicz, V., & Higgs, M. (1999). Can emotional intelligence be measured and developed?. *Leadership & Organization Development Journal, 20*(5), 242-253.

Dyche, L. (2007). Interpersonal skill in medicine: The essential partner of verbal communication. *Journal of General Internal Medicine, 22*(7), 1035-1039.

Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin, 81*(6), 358-361.

Eisenberg, N., & Strayer, J. (Eds.). (1990). *Empathy and its development*. New York, NY: Cambridge University Press Archive.

Epner, D. E., & Baile, W. F. (2014). Difficult conversations: Teaching medical oncology trainees communication skills one hour at a time. *Academic Medicine, 89*(4), 578-584.

Epstein, R. M. (2007). Assessment in medical education. *New England Journal of Medicine, 356*(4), 387-396.

Epstein, R. M., Franks, P., Fiscella, K., Shields, C. G., Meldrum, S. C., Kravitz, R. L., & Duberstein, P. R. (2005). Measuring patient-centered communication in patient–physician consultations: Theoretical and practical issues. *Social Science & Medicine, 61*(7), 1516-1528.

Extremera, N., & Fernández-Berrocal, P. (2005). Perceived emotional intelligence and life satisfaction: Predictive and incremental validity using the Trait Meta-Mood Scale. *Personality and Individual Differences, 39*(5), 937-948.

Faguy, K. (2012). Emotional intelligence in health care. *Radiologic Technology, 83*(3), 237-253.

Fallowfield, L., & Jenkins, V. (1999). Effective communication skills are the key to good cancer care. *European Journal of Cancer, 35*(11), 1592-1597.

Farmer, D. L. (2015). Soft skills matter. *JAMA surgery, 150*(3), 207-207.

Fassaert, T., van Dulmen, S., Schellevis, F., & Bensing, J. (2007). Active listening in medical consultations: Development of the Active Listening Observation Scale (ALOS-global). *Patient Education and Counseling, 68*(3), 258-264.

Faust, H. S. (2009). Kindness, not compassion, in healthcare. *Cambridge Quarterly of Healthcare Ethics, 18*(3), 287-299.

Fay, D., & Frese, M. (2001). The concept of personal initiative: An overview of validity studies. *Human Performance, 14*(1), 97-124.

Fay, D., & Sonnentag, S. (2002). Rethinking the effects of stressors: A longitudinal study on personal initiative. *Journal of Occupational Health Psychology, 7*(3), 221.

Fernández-Berrocal, P., & Extremera, N. (2006). Emotional intelligence: A theoretical and empirical review of its first 15 years of history. *Psicothema,* (18), 7-12.

Fields, S. K., Mahan, P., Tillman, P., Harris, J., Maxwell, K., & Hojat, M. (2011). Measuring empathy in healthcare profession students using the Jefferson Scale of Physician Empathy: Health provider–student version. *Journal of Interprofessional Care, 25*(4), 287-293.

Fjortoft, N., Van Winkle, L. J., & Hojat, M. (2011). Measuring empathy in pharmacy students. *American Journal of Pharmaceutical Education, 75*(6)*/109*, 1-6.

Flocke, S. A., Miller, W. L., & Crabtree, B. (2002). Relationships between physician practice style, patient satisfaction, and attributes of primary care. *Journal of Family Practice, 51*(10), 835-841.

Flynn, S. (2016). Who cares? A critical discussion of the value of caring from a patient and healthcare professional perspective. *International Journal of Orthopaedic and Trauma Nursing, 20*, 28-39.

Fonteyn, M., Kuipers, B., & Grobe, S. (1993). A description of think aloud method and protocol analysis. *Qualitative Health Research, 3*(4), 430-441.

Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology, 39*(2), 291-314.

Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational and Organizational Psychology, 70*(2), 139-161.

Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. *Research in Organizational Behavior, 23*, 133-187.

Frese, M., Kring, W., Soose, A., & Zempel, J. (1996). Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal, 39*(1), 37-63.

Freshman, B., & Rubino, L. (2002). Emotional intelligence: A core competency for health care administrators. *The Health Care Manager, 20*(4), 1-9.

Gallup, G. G., & Platek, S. M. (2002). Cognitive empathy presupposes self-awareness: Evidence from phylogeny, ontogeny, neuropsychology, and mental illness. *Behavioral and Brain Sciences, 25*(1), 36-37.

Gerdes, K. E., Segal, E. A., & Lietz, C. A. (2010). Conceptualising and measuring empathy. *British Journal of Social Work, 40*(7), 2326-2343.

Glaub, M., Frese, M., Fischer, S., & Hoppe, M. (2014). Increasing personal initiative in small business managers or owners leads to entrepreneurial success: A theory-based controlled randomized field intervention for evidence-based management. *Academy of Management Learning & Education, 13*(3), 354-379.

Glorfeld, L. W. (1995). An improvement on Horn's parallel analysis methodology for selecting the correct number of factors to retain. *Educational and Psychological Measurement, 55*(3), 377-393.

Goldberg, L. R., & Velicer, W. F. (2006). Principles of exploratory factor analysis. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed., pp. 209-237). New York, NY: Springer.

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.

Goleman, D. (2000). Leadership that gets results. *Harvard Business Review, 78*(2), 4-17.

Goleman, D. (2001). An EI-based theory of performance. *Consortium for Research on Emotional Intelligence in Organizations,* (1), 27-44. Retrieved November 22, 2019, from http://www.eiconsortium.org/pdf/an_ei_based_theory_of_performance.pdf

Goroll, A., & Mulley, A. G. (2009). *Primary care medicine: Office evaluation and management of the adult patient* (6th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Gosselin, P. A., & Gagné, J. P. (2010). Use of a dual-task paradigm to measure listening effort. *Canadian Journal of Speech-Language Pathology and Audiology, 34*(1), 43-51.

Gresham, F. M., & Elliott, S. N. (1987). The relationship between adaptive behavior and social skills: Issues in definition and assessment. *The Journal of Special Education, 21*(1), 167-181.

Guerrero, D., & De los Ríos, I. (2012). Professional competences: A classification of international models. *Procedia-Social and Behavioral Sciences, 46*, 1290-1296.

Hahn, V. C., Frese, M., Binnewies, C., & Schmitt, A. (2012). Happy and proactive? The role of hedonic and eudaimonic well-being in business owners' personal initiative. *Entrepreneurship Theory and Practice, 36*(1), 97-114.

Haig, K. M., Sutton, S., & Whittington, J. (2006). SBAR: A shared mental model for improving communication between clinicians. *The Joint Commission Journal on Quality and Patient Safety, 32*(3), 167-175.

Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Harlow, England: Pearson Education Limited.

Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of Vocational Behavior, 73*(1), 78-91.

Hall, J. A., Irish, J. T., Roter, D. L., Ehrlich, C. M., & Miller, L. H. (1994). Gender in medical encounters: An analysis of physician and patient communication in a primary care setting. *Health Psychology, 13*(5), 384-392.

Hall, J. A., Milburn, M. A., Roter, D. L., & Daltroy, L. H. (1998). Why are sicker patients less satisfied with their medical care? Tests of two explanatory models. *Health Psychology, 17*(1), 70-75.

Halpern, J. (2003). What is clinical empathy? *Journal of General Internal Medicine, 18*(8), 670-674.

Harlak, H., Gemalmaz, A., Gurel, F. S., Dereboy, C., & Ertekin, K. (2008). Communication skills training: Effects on attitudes toward communication skills and empathic tendency. *Education for Health*, *21*(2), 62-67.

Hay Group. (2003). *Using competencies to identify high performers: An overview of the basics* (Working Paper). Retrieved May 8, 2020, from Baidu Library website: https://wenku.baidu.com/view/47f03f6648d7c1c708a14591

Hayes, J. (2002). *Interpersonal skills at work*. New York: Routledge.

Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods, 7*(2), 191-205.

Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational and Psychological Measurement, 66*(3), 393-416.

Hisrich, R. D. (1990). Entrepreneurship/intrapreneurship. *American Psychologist, 45*(2), 209-222.

Hobgood, C. D., Riviello, R. J., Jouriles, N., & Hamilton, G. (2002). Assessment of communication and interpersonal skills competencies. *Academic Emergency Medicine, 9*(11), 1257-1269.

Hoffman, M. L. (2008). Empathy and prosocial behavior. *Handbook of emotions, 3*, 440-455.

Hojat, M., Gonnella, J. S., Nasca, T. J., Mangione, S., Vergare, M., & Magee, M. (2002). Physician empathy: Definition, components, measurement, and relationship to gender and specialty. *American Journal of Psychiatry, 159*(9), 1563-1569.

Hojat, M., Mangione, S., Nasca, T., Cohen, M., Gonnella, J., Erdmann, J., Veloski, J., & Magee, M. (2001). The Jefferson scale of physician empathy: Development and preliminary psychometric data. *Educational and Psychological Measurement, 61*(2), 349-365.

Hojat, M., Vergare, M. J., Maxwell, K., Brainard, G., Herrine, S. K., Isenberg, G. A., Veloski, J., & Gonnella, J. S. (2009). The devil is in the third year: A longitudinal study of erosion of empathy in medical school. *Academic Medicine, 84*(9), 1182-1191.

Horn, J. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika, 30*(2), 179-185.

Hudak, P. L., McKeever, P., & Wright, J. G. (2003). The metaphor of patients as customers: Implications for measuring satisfaction. *Journal of Clinical Epidemiology, 56*(2), 103-108.

Hurrell, S. A., Scholarios, D., & Thompson, P. (2013). More than a 'humpty dumpty' term: Strengthening the conceptualization of soft skills. *Economic and Industrial Democracy, 34*(1), 161-182.

Imhof, M., & Janusik, L. A. (2006). Development and validation of the Imhof-Janusik Listening Concepts Inventory to measure listening conceptualization differences between cultures. *Journal of Intercultural Communication Research, 35*(2), 79-98.

Irving, P., & Dickson, D. (2004). Empathy: Towards a conceptual framework for health professionals. *International Journal of Health Care Quality Assurance, 17*(4), 212-220.

Işik, O., Uğurluoğlu, Ö., Akbolat, M., Öner, Z. H., & Pisapia, J. (2012). Charismatic leadership: Impulse factor for initiative-oriented health care personnel in the Turkish public hospitals. *HealthMED, 6*(5), 1523-1535.

Jagosh, J., Boudreau, J. D., Steinert, Y., MacDonald, M. E., & Ingram, L. (2011). The importance of physician listening from the patients' perspective: Enhancing diagnosis, healing, and the doctor–patient relationship. *Patient Education and Counseling, 85*(3), 369-374.

James, R. F., & James, M. L. (2004). Teaching career and technical skills in a "mini" business world. *In Business Education Forum, 59,* 39-41.

Johnson, J. A. (1999). Persons in situations: Distinguishing new wine from old wine in new bottles. *European Journal of Personality, 13*(5), 443-453.

Johnson, R. L., Roter, D., Powe, N. R., & Cooper, L. A. (2004). Patient race/ethnicity and quality of patient–physician communication during medical visits. *American Journal of Public Health, 94*(12), 2084-2090.

Johnston, O., Kumar, S., Kendall, K., Peveler, R., Gabbay, J., & Kendrick, T. (2007). Qualitative study of depression management in primary care: GP and patient goals, and the value of listening. *British Journal of General Practice, 57*(544), e1-e14.

Jones, D. S. (2014). A complete medical education includes the arts and humanities. *Virtual Mentor, 16*(8), 636-641.

Jongen, C., McCalman, J., Bainbridge. R., & Clifford, A. (2018). *Cultural competence in health: A review of the evidence*. Singapore: Springer.

Joubert, P. M., Krüger, C., Bergh, A. M., Pickworth, G. E., Van Staden, C. W., Roos, J. L., Schurink, W. J., Du Preez, R. R., Grey, S. V., & Lindeque, B. G. (2006). Medical students on the value of role models for developing 'soft skills' - "That's the way you do it". *African Journal of Psychiatry, 9*(1), 28-32.

Kamenetz, A. (2015). Non-academic skills are key to success. But what should we call them. *National Public Radio*. Retrieved December 9, 2018, from http://www.cbsd.org/cms/lib010/PA01916442/Centricity/Domain/2711/Nonacademic%20Skills%20Are%20Key%20To%20Success.pdf

Kanfer, R. (1990). Motivation theory and industrial and organizational psychology. *Handbook of Industrial and Organizational Psychology, 1*(2), 75-130.

Kantrowitz, T. M. (2005). *Development and construct validation of a measure of soft skills performance* (Doctoral dissertation, Georgia Institute of Technology). Retrieved January 21, 2019, from https://smartech.gatech.edu/bitstream/handle/1853/6861/kantrowitz_tracy_m_200505_phd.pdf

Kautz, T., Heckman, J. J., Diris, R., Ter Weel, B., & Borghans, L. (2014). *Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success* (No. w20749). National Bureau of Economic Research. Retrieved Dec 20, 2018, from https://www.econstor.eu/bitstream/10419/107477/1/dp8696.pdf

Kechagias, K., Welsh, M., Stewart, M., Mearns, A., Papadopoulou, D., Agapidou, E., Kalivas, I., Ananiadis, P., Waglund, P., Jonsson, E. M., Norling, L., Rask, T., Luca, S. Dragan, V., Iuga, C., Plompen, S., Snippert, D., Terpstra, P., Hupkes, P., & Botke, J. (2011). *Teaching and assessing soft skills*. Neapolis, Thessaloniki: 1st Second Chance School of Thessaloniki (Neapolis). Retrieved online May 2020 at: https://www.yumpu.com/en/document/view/10974306/teaching-and-assessing-soft-skills-mass-measuring-and-

Keenan, J. P., & Wheeler, M. A. (2002). Elucidation of the brain correlates of cognitive empathy and self-awareness. *Behavioral and Brain Sciences, 25*(1), 40-41.

Kelm, Z., Womer, J., Walter, J. K., & Feudtner, C. (2014). Interventions to cultivate physician empathy: A systematic review. *BMC Medical Education*, *14*(1), 219-229.

Kilbourne, W. E., Duffy, J. A., Duffy, M., & Giarchi, G. (2004). The applicability of SERVQUAL in cross-national measurements of healthcare quality. *Journal of Services Marketing, 18*(7), 524-533.

Kim, S., Kaplowitz, S., & Johnston, M. (2004). The effects of physician empathy on patient satisfaction and compliance. *Evaluation & the Health Professions*, *27*(3), 237-251.

Klaus, P. (2007). *The hard truth about soft skills*. New York: Klaus & Associates, Harper-Collins.

Kliszcz, J., Nowicka-Sauer, K., Trzeciak, B., Nowak, P., & Sadowska, A. (2006). Empathy in health care providers–validation study of the Polish version of the Jefferson Scale of Empathy. *Advances in Medical Sciences, 51*, 219-225.

Krueger, R. A. & Casey, M. A. (2015). *Focus Groups: A practical guide for applied research* (5th ed.). Thousand Oaks, CA: SAGE Publications

Kumagai, A. K., & Wear, D. (2014). “Making strange”: A role for the humanities in medical education. *Academic Medicine, 89*(7), 973-977.

Kurtz, S., Draper, J., & Silverman, J. (2005). *Teaching and learning communication skills in medicine*. London: CRC Press.

Ladhari, R. (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences, 1*(2), 172–198.

Laker, D. R., & Powell, J. L. (2011). The differences between hard and soft skills and their relative impact on training transfer. *Human Resource Development Quarterly, 22*(1), 111-122.

Larson, E. B., & Yao, X. (2005). Clinical empathy as emotional labor in the patient-physician relationship. *Journal of American Medical Association - JAMA, 293*(9), 1100-1106.

Lawrence, E. J., Shaw, P., Baker, D., Baron-Cohen, S., & David, A. S. (2004). Measuring empathy: Reliability and validity of the empathy quotient. *Psychological Medicine, 34*(5), 911-920.

Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel Psychology, 28*(4), 563-575.

Levinson, W., Lesser, C. S., & Epstein, R. M. (2010). Developing physician communication skills for patient-centered care. *Health Affairs, 29*(7), 1310-1318.

Leyes, M. (2007). Soft skills are key: Whether an investment client stays with you or not may have more to do with your people skills than your investment savvy. *Advisor Today, 102*(3), 29-30.

Lim, S., & Jahng, S. (2019). Determining the number of factors using parallel analysis and its recent variants. *Psychological Methods, 24*(4), 452-467.

Lopez-Zafra, E. (2010). Emotional intelligence and personality traits as predictors of psychological well-being in Spanish undergraduates. *Social Behavior and Personality: An International Journal, 38*(6), 783-793.

Lucas, J. M. (2011). *Not just a feeling anymore: Empathy and the teaching of writing*. Theses and Dissertations (All). 272. Retrieved December 13, 2018 from https://knowledge.library.iup.edu/cgi/viewcontent.cgi?article=1298&context=etd

Lundsteen, S. W. (1979). Listening: Its impact at all levels on reading and the other language arts. ERIC Clearinghouse on Reading and Communication Skills. Illinois: National Council of Teachers of English.

MacKenzie, S. B., Podsakoff, P. M., & Jarvis, C. B. (2005). The problem of measurement model misspecification in behavioral and organizational research and some recommended solutions. *Journal of Applied Psychology, 90*(4), 710-730.

Maguire, P., & Pitceathly, C. (2002). Key communication skills and how to acquire them. *BMJ, 325*(7366), 697-700.

Makoul, G., Krupat, E., & Chang, C. H. (2007). Measuring patient views of physician communication skills: Development and testing of the Communication Assessment Tool. *Patient Education and Counseling, 67*(3), 333-342.

Malinauskas, R. K., & Malinauskiene, V. A. (2015). Indicators of empathy display among future physiotherapists. *European Journal of Medicine, 7*(1), 22-28.

Martin, C. (2011). Perspective: To what end communication? Developing a conceptual framework for communication in medical education. *Academic Medicine, 86*(12), 1566-1570.

Marques, J. (2013). Understanding the strength of gentleness: Soft-skilled leadership on the rise. *Journal of Business Ethics, 116*(1), 163-171.

Matteson, M. L., Anderson, L., & Boyden, C. (2016). "Soft skills": A phrase in search of meaning. *Portal: Libraries and the Academy, 16*(1), 71-88.

Mayer, J. D., & Salovey, P. (1997). *What is emotional intelligence?* In P. Salovey & D. Sluyter (Eds.), Emotional development and emotional intelligence: Implications for educators (3-31). New York: Basic Books.

McCormack, L. A., Treiman, K., Rupert, D., Williams-Piehota, P., Nadler, E., Arora, N. K., Lawrence, W., & Street Jr., R. L. (2011). Measuring patient-centered communication in cancer care: A literature review and the development of a systematic approach. *Social* Science & Medicine, 72(7), 1085-1095.

Mercer, S. W., Maxwell, M., Heaney, D., & Watt, G. (2004). The consultation and relational empathy (CARE) measure: development and preliminary validation and reliability of an empathy-based consultation process measure. *Family Practice, 21*(6), 699-705.

Mercer, S. W., McConnachie, A., Maxwell, M., Heaney, D., & Watt, G. C. (2005). Relevance and practical use of the consultation and relational empathy (CARE) measure in general practice. *Family Practice, 22*(3), 328-334.

Michalec, B. (2011). Learning to cure, but learning to care? *Advances in Health Sciences Education, 16*(1), 109-130.

Miller, K. (2015). *Organizational communication: Approaches and processes* (7th ed.). Stamford, CT: Cengage Learning.

Mitchell, G. W., Skinner, L. B., & White, B. J. (2010). Essential soft skills for success in the twenty-first century workforce as perceived by business educators. *The Journal of Research in Business Education, 52*(1), 43-53.

Mohammadi, S., & Hedges, M. (2007). Conceptualizing a quality plan for healthcare. *Health Care Analysis, 15*(4), 337-361.

Morin, A. (2011). Self-awareness part 1: Definition, measures, effects, functions, and antecedents. *Social and Personality Psychology Compass, 5*(10), 807-823.

Morris, N. M. (1997). Respect: its meaning and measurement as an element of patient care. *Journal of Public Health Policy, 18*(2), 133-154.

Muzio, E., Fisher, D. J., Thomas, E. R., & Peters, V. (2007). Soft skills quantification (SSQ) for project manager competencies. *Project Management Journal, 38*(2), 30-38.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Thousand Oaks, CA.: Sage Publications.

Neuberger, J. (1999). Let's do away with "Patients". *BMJ: British Medical Journal, 318*(7200), 1756-1757.

Neumann, D. L., Chan, R. C.K., Boyle, G. J., Wang, Y., & Westbury, H. R. (2015). Chapter 10 - Measures of empathy: Self-report, behavioral, and neuroscientific approaches. *In Measures of Personality and Social Psychological Constructs* (257-289). London, UK: Elsevier Inc.

Nilsson, S. (2010). Enhancing individual employability: The perspective of engineering graduates. *Education + Training, 52*(6/7), 540-551.

O'Malley, A. J., Zaslavsky, A. M., Elliott, M. N., Zaborski, L., & Cleary, P. D. (2005). Case-mix adjustment of the CAHPS® Hospital Survey. *Health Services Research, 40*(6p2), 2162-2181.

Ong, L. M., De Haes, J. C., Hoos, A. M., & Lammes, F. B. (1995). Doctor-patient communication: A review of the literature. *Social Science & Medicine, 40*(7), 903-918.

Ong, L. M., Visser, M. R., Kruyver, I. P., Bensing, J. M., Van Den Brink-Muinen, A., Stouthard, J. M., Lammes, F. B., & De Haes, J. C. (1998). The Roter Interaction Analysis System (RIAS) in oncological consultations: psychometric properties. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer, 7*(5), 387-401.

Onisk, M. (2011). Is measuring soft-skills training really possible. Sidney: Appcorn. Retrieved December 9, 2018, from https://appcon.com.au/Portals/0/Research_Case_Studies/Is%20Measuring%20Softskills%20Really%20Possible.pdf

Overeem, K., Faber, M. J., Arah, O. A., Elwyn,G., Lombarts, K. M., Wollersheim, H. C., & Grol, R. P., (2007). Doctor performance assessment in daily practice: Does it help doctors or not? A systematic review. *Medical Education*, *41*(11), 1039-1049.

Oxley, J. (2011). *The moral dimensions of empathy: Limits and applications in ethical theory and practice*. London, UK: Palgrave Macmillan.

Page, D. (1984). What is communication? *Education Training, 26*(2), 50-51.

Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management, 36*(3), 633-662.

Patil, V. H., Singh, S. N., Mishra, S., & Donavan, D. T. (2017). Parallel analysis engine to aid in determining number of factors to retain using R [Computer software]. Available from https://analytics.gonzaga.edu/parallelengine/.

Patnaik, D. (2009). *Wired to care: How companies prosper when they create widespread empathy*. Upper Saddle River, NJ: FT Press.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA.: Sage Publications.

Pearson, S. D., & Raeke, L. H. (2000). Patients' trust in physicians: Many theories, few measures, and little data. *Journal of General Internal Medicine, 15*(7), 509-513.

Perreault, H. (2004). Business educators can take a leadership role in character education. *Business Education Forum, 59*, 23-24.

Phillips Jr, R. L., & Bazemore, A. W. (2010). Primary care and why it matters for US health system reform. *Health Affairs, 29*(5), 806-810.

Phillips, J. J., Phillips, P. P., & Ray, R. (2015). Derive hard numbers from soft skills: It is possible to measure the impact and ROI of soft skill programs. *TD Magazine, 69*(9), 54-56.

Pinto, R. Z., Ferreira, M. L., Oliveira, V. C., Franco, M. R., Adams, R., Maher, C. G., & Ferreira, P. H. (2012). Patient-centred communication is associated with positive therapeutic alliance: A systematic review. *Journal of Physiotherapy, 58*(2), 77-87.

Pintrich, P. R. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology, 25*(1), 92-104.

Polit, D. F., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29*(5), 489-497.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology, 52*(2), 126-136.

Preston, S., & De Waal, F. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences, 25*(1), 1-72.

Purdy, M. (1997). What is listening? In M. Purdy & D. Borisoff (Eds.), *Listening in everyday life: A personal and professional approach* (2nd ed.; pp. 1-20). Lanham, Maryland: University Press of America.

Raab, K. (2014). Mindfulness, self-compassion, and empathy among health care professionals: A review of the literature. *Journal of Health Care Chaplaincy, 20*(3), 95-108.

Rao, J. K., Anderson, L. A., Inui, T. S., & Frankel, R. M. (2007). Communication interventions make a difference in conversations between physicians and patients: A systematic review of the evidence. *Medical Care, 45*(4), 340-349.

Rapport. (2012). In *Farlex Partner Medical Dictionary*. Retrieved January 21, 2019, from https://medical-dictionary.thefreedictionary.com/rapport

Rathi, P. (2015). Why soft skills matter. *The Financial Express*. Retrieved December 9, 2018, from http://www.financialexpress.com/jobs/why-soft-skills-matter/88220/

Ray, J. D., & Overman, A. S. (2014). Hard facts about soft skills. *The American Journal of Nursing, 114*(2), 64-68.

Redden, E. M., Tucker, R. K., & Young, L. (1983). Psychometric properties of the Rosenbaum schedule for assessing self-control. *The Psychological Record, 33*(1), 77-86.

Reniers, R., Corcoran, R., Drake, R., Shryane, N., & Völlm, B. (2011). The QCAE: A questionnaire of cognitive and affective empathy. *Journal of Personality Assessment, 93*(1), 84-95.

Richards, P. S. (1985). Construct validation of the self-control schedule. *Journal of Research in Personality, 19*(2), 208-218.

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology, 51*(3), 649-660

Roberts, B. W. (2009). Back to the future: Personality and assessment and personality development. *Journal of Research in Personality, 43*(2), 137-145.

Roberts, B. W., Roberts, M. B., Yao, J., Bosire, J., Mazzarelli, A., & Trzeciak, S. (2019). Development and validation of a tool to measure patient assessment of clinical compassion. *JAMA Network Open, 2*(5), e193976-e193976.

Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly, 75*(4), 453-465.

Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. *Behavior Therapy, 11*(1), 109-121.

Rosenbaum, M. (1993). The three functions of self-control behavior: Redressive, reformative and experiential. *Work & Stress, 7*(1), 33-46.

Roter, D., Hall, J., & Katz, N. (1987). Relations between physicians' behaviors and analogue patients' satisfaction, recall, and impressions. *Medical Care, 25*(5), 437-451.

Roter, D., & Larson, S. (2002). The Roter interaction analysis system (RIAS): Utility and flexibility for analysis of medical interactions. *Patient Education and Counseling, 46*(4), 243-251.

Roter, D., Lipkin, M., & Korsgaard, A. (1991). Sex differences in patients' and physicians' communication during primary care medical visits. *Medical Care, 29*(11), 1083-1093.

Rousseau, P. (2008). Empathy. *American Journal of Hospice and Palliative Medicine, 25*(4), 261–262.

Ryan, B. (2016). Hard truths about soft skills: Don't underestimate how much they matter in your career success. *New Hampshire Business Review*. Retrieved January 21, 2019, from https://www.nhbr.com/January-22-2016/Hard-truths-about-soft-skills/

Salazar, L. F., Crosby, R. A., & DiClemente, R. J., (2015). *Research methods in health promotion* (2nd ed.). San Francisco, CA.: Jossey-Bass.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*(3), 185-211. Retrieved Nov 22, 2019, from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.385.4383&rep=rep1&type=pdf

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, & health* (pp. 125-154). Washington: American Psychological Association.

Sandvik, M., Eide, H., Lind, M., Graugaard, P. K., Torper, J., & Finset, A. (2002). Analyzing medical dialogues: Strength and weakness of Roter's interaction analysis system (RIAS). *Patient Education and Counseling, 46*(4), 235-241.

Schantz, M. (2007). Compassion: A concept analysis. *Nursing Forum, 42*(2), 48-55.

Schiavo, R. (2013). *Health communication: From theory to practice*. San Francisco, CA.: John Wiley & Sons.

Schneider, B., Holcombe, K. M., & White, S. S. (1997). Lessons learned about service quality: What it is, how to manage it, and how to become a service quality organization. *Consulting Psychology Journal: Practice and Research, 49*(1), 35-50.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*(2), 167-177.

Sharma, N., & Patterson, P. G. (1999). The impact of communication effectiveness and service quality on relationship commitment in consumer, professional services. *Journal of Services Marketing, 13*(2), 151-170.

Shemwell, D. J., Yavas, U., & Bilgin, Z. (1998). Customer-service provider relationships: An empirical test of a model of service quality, satisfaction and relationship-oriented outcomes. *International Journal of Service Industry Management, 9*(2), 155-168.

Shield, R. R., Tong, I., Tomas, M., & Besdine, R. W. (2011). Teaching communication and compassionate care skills: An innovative curriculum for pre-clerkship medical students. *Medical Teacher, 33*(8), 408-416.

Shultz, K. S., Whitney, D. J., & Zickar, M. J. (2013). *Measurement theory in action: Case studies and exercises* (2nd ed). New York, NY: Routledge.

Sinsky, C. A., Willard-Grace, R., Schutzbank, A. M., Sinsky, T. A., Margolius, D., & Bodenheimer, T. (2013). In search of joy in practice: A report of 23 high-functioning primary care practices. *The Annals of Family Medicine, 11*(3), 272-278.

Slaski, M., & Cartwright, S. (2002). Health, performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*(2), 63-68.

Song, M. K., Lin, F. C., Ward, S. E., & Fine, J. P. (2013). Composite variables: When and how. *Nursing Research, 62*(1), 45-49.

Speier, C., & Frese, M. (1997). Generalized self-efficacy as a mediator and moderator between control and complexity at work and personal initiative: A longitudinal field study in East Germany. *Human Performance, 10*(2), 171-192.

Spiro, H., & Yale University. School of Medicine. (1993). *Empathy and the practice of medicine: Beyond pills and the scalpel*. New Haven, CT: Yale University Press.

Starcevic, V., & Piontek, C. M. (1997). Empathic understanding revisited: Conceptualization, controversies, and limitations. *American Journal of Psychotherapy, 51*(3), 317-328.

Staufenbiel, T., & Hartz, C. (2000). Organizational citizenship behavior: Entwicklung und erste validierung eines meßinstruments [Organizational citizenship behavior: Development and validation of a measurement instrument]. *Diagnostica, 46*(2), 73-83.

Stein, S. J., & Book, H. E. (2006). *The EQ edge: Emotional intelligence and your success*. Canada: John Wiley & Sons.

Stein, S. J., Papadogiannis, P., Yip, J. A., & Sitarenios, G. (2009). Emotional intelligence of leaders: A profile of top executives. *Leadership & Organization Development Journal, 30*(1), 87-101.

Stephan, W. G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues, 55*(4), 729-743.

Steptoe, A., & Poole, L. (2016). Control and stress. In G. Fink (Ed.), *Stress: Concepts, cognition, emotion, and behavior: Handbook of Stress Series: Vol 1. (*pp. 73-80). London, UK: Elsevier.

Stoller, J. K., Taylor, C. A., & Farver, C. F. (2013). Emotional intelligence competencies provide a developmental curriculum for medical training. *Medical Teacher, 35*(3), 243-247.

Strayhorn Jr, J. M. (2002). Self-control: Theory and research. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(1), 7-16.

Suchman, A. L., Markakis, K., Beckman, H. B., & Frankel, R. (1997). A model of empathic communication in the medical interview. *Journal of American Medical Association - JAMA, 277*(8), 678-682.

Tabrizi, J. S., Wilson, A. J., & O'Rourke, P. K. (2009). Customer quality in health care. *Patient Education and Counseling, 74*(1*)*, 130-131.

Tangney, J. P., Boone, A. L., & Baumeister, R. F. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*(2), 271-324.

Thiel de Bocanegra, H., & Gany, F. (2004). Good provider, good patient: Changing behaviors to eliminate disparities in healthcare. *The American Journal of Managed Care, 10,* SP20-8.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications* (1st ed.). Washington, DC: American Psychological Association.

Tulgan, B. (2015). *Bridging the soft skills gap: How to teach the missing basics to today's young talent*. New Jersey: John Wiley & Sons.

Vandellen, M. R., Hoyle, R. H., & Miller, R. (2012). The regulatory easy street: Self-regulation below the self-control threshold does not consume regulatory resources. *Personality and Individual Differences, 52*(8), 898-902.

Van der Cingel, M. (2011). Compassion in care: A qualitative study of older people with a chronic disease and nurses. *Nursing Ethics, 18*(5), 672-685.

Van Staden, C. W., Joubert, P. M., Pickworth, G. E., Roos, J. L., Bergh, A. M., Krüger, C., Schurink, W. J., Du Preez, R. R., Grey, S. V., & Lindeque, B. G. (2006). The

conceptualisation of" soft skills" among medical students before and after curriculum reform. *African Journal of Psychiatry, 9*(1), 33-37.

Waltz, C. F., & Bausell, B. R. (1981). *Nursing research: design statistics and computer analysis*. Philadelphia: F. A. Davis Company.

Wats, M., & Wats, R. K. (2008). Developing soft skills in students. *International Journal of Learning, 15*(12), 1-10.

Waytz, A. (2016). The limits of empathy. *Harvard Business Review, 94*(1), 68-73.

Weber, M. R., Finley, D. A., Crawford, A., & Rivera, D. (2009). An exploratory study identifying soft skill competencies in entry-level managers. *Tourism and Hospitality Research, 9*(4), 353-361.

webfx.com (2020). The Flesch-Kincaid Online Test Tool [Computer software]. Retrieved March 30, 2020 from: https://www.webfx.com/tools/read-able/check.php

Weiszbrod, T. (2013). *Quantitatively studying the relationship between emotional intelligence and leadership competencies in health care* (Publication No. 3537109) [Doctoral dissertation, Northcentral University]. ProQuest Dissertations & Theses Global.

Wheeler, R. E. (2016). Soft skills: The importance of cultivating emotional intelligence. *AALL Spectrum, 20*(3), 28-31.

Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care (JEPHC), 8*(3), *1-13.*

Wispé, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology, 50*(2), 314 - 321.

Wothke, W. (1993). Nonpositive definite matrices in structural modeling. In K. A. Bollen & J. S. Long (Eds.), *Testing Structural Equation Models*. Newbury Park NJ: Sage.

Zamanzadeh, V., Ghahramanian, A., Rassouli, M., Abbaszadeh, A., Alavi-Majd, H., & Nikanfar, A. R. (2015). Design and implementation content validity study: Development of an instrument for measuring Patient-Centered Communication. *Journal of Caring Sciences, 4*(2), 165–178. doi:10.15171/jcs.2015.017

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: Simon and Schuster.

Zhao, X. Y., Frese, M., & Giardini, A. (2010). Business owners' network size and business growth in China: The role of comprehensive social competency. *Entrepreneurship and Regional Development, 22*(7-8), 675-705.

Appendix A

Approvals from the Institutional Review Board of the University of Oklahoma – Norman

Phase 1

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Initial Submission – Exempt from IRB Review – AP01

Date: March 22, 2019 **IRB#:** 10536

Principal Investigator: Nidaa K Abu Jbara, MHR **Approval Date:** 03/21/2019

Exempt Category: 2

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 1 Focus Group.

On behalf of the Institutional Review Board (IRB), I have reviewed the above-referenced research study and determined that it meets the criteria for exemption from IRB review. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Request approval from the IRB prior to implementing any/all modifications as changes could affect the exempt status determination.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor.
- Notify the IRB at the completion of the project.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: May 09, 2019 **IRB#:** 10536

Principal Investigator: Nidaa K Abu Jbara, MHR **Reference No:** 691836

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 1 Focus Group.

Approval Date: 05/09/2019

Modification Description:
Revision to Section 7.2, 12.1 and 12.2:
The purpose of this revision is to modify the recruitment process and overcome barriers to participation in focus groups. This revision considers time constraints of healthcare providers and enhances the number of participants in this part of the study.

Section 7.2 - To add "Individual Interview" to the tasks that participants from healthcare providers group may complete. Each participant from healthcare providers will complete either a focus group or individual interview. The individual interview is anticipated to take about 45 minutes and will be conducted in-person.

Section 12.1 - To add the following statement for recruitment of healthcare providers: A recruitment flyer will be printed and posted on sign boards in break areas frequented by medical teams and distributed in the doctors and residents' mailboxes. In addition, the flyer will be posted in the elevators of OU-Physicians and OU School of Community Medicine areas in Tulsa.

Section 12.1 - To add the following statement for recruitment of users of healthcare services: A recruitment flyer will be printed and posted on sign boards in OU-Tulsa Administration building, elevators, and student lounges and break areas.

In addition, a web posting will be placed on the following Facebook pages:
- OU-Tulsa;
- Schusterman Library at OU-Tulsa;
- University of Oklahoma - Department of Human Relations; - OU-Tulsa ODYN.

Section 12.2 - to add Recruitment Flyer and Web Posting.

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or

irb@ou.edu. The HRPP Administrator assigned for this submission: Nicole A Cunningham.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: July 16, 2019 **IRB#:** 10536

Principal Investigator: Nidaa K Abu Jbara, MHR **Reference No:** 693864

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 1 Focus Group.

Approval Date: 07/16/2019

Modification Description:
The purpose of this revision is to modify the recruitment procedure and sampling strategy of healthcare providers to include individual providers working in any adult primary healthcare service organization in Oklahoma. This revision will enhance number of participants from the group of healthcare providers and enable the recruitment of providers in job roles that were not presented among participants from OU-Physician and St. John clinics.

Section 7.1 - To add the following statement to the " Procedure and Sampling" paragraph after the sentence ending by " OU Physicians - the OU School of Community Medicine, and St. John Clinics in Tulsa" :
In addition, individual primary care providers in other healthcare organizations in Oklahoma will be invited and recruited directly using a network sampling strategy.

Section 12.1 - To adjust the title " Recruitment of healthcare providers for focus group interviews" to be: Recruitment of healthcare providers for focus group and personal interviews.
In addition, to add the following statement at the end of the paragraph:
Individual primary care providers in other healthcare organizations in Oklahoma will be invited and recruited directly through referrals and connections using a network sampling strategy.

Section 12.2 – To add " Direct contact / Verbal Script"

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. The HRPP Administrator assigned for this submission: Nicole A Cunningham.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: October 24, 2019 **IRB#:** 10536

Principal Investigator: Nidaa K Abu Jbara, MHR **Reference No:** 697388

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 1 Focus Group.

Approval Date: 10/24/2019

Modification Description:
Adding study personnel member Shannon Terry) who will be assigned to review coding of focus group transcripts. Also, adding a new group of participants that are "subject matter experts" to review and evaluate pool of items for the scale development.

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. The HRPP Administrator assigned for this submission: Karen L Braswell.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board

Appendix B

Approval from the St. John Health System Institutional Review Board - Tulsa

Phase 1

St. John Health System

Medical Excellence · Compassionate Care
1725 East 19th Street
Suite 701
Tulsa, OK 74104
WWW.STJOHNHEALTHSYSTEM.COM

DATE:	May 7, 2019
TO:	Nida'a Abu Jbara
FROM:	St. John Health System Institutional Review Board (SJHS IRB)
PROJECT TITLE:	[1435061-1] Development of Assessment Tool to Measure Soft Skills in the Performance of Healthcare Providers - Part 1 Focus Group.
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	May 7, 2019
REVIEW TYPE:	Exempt Review
REVIEW CATEGORY:	#2 - Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Thank you for your submission of the following materials for this study:

- Application Form - Initial Human Subject Research Application.doc (UPDATED: 05/1/2019)
- Conflict of Interest - Declaration - IRB COI-A.Paul.pdf (UPDATED: 05/1/2019)
- Conflict of Interest - Other - IRB COI Signed - Nidaa Abu Jbara.pdf (UPDATED: 05/1/2019)
- Consent Form - Approved Consent for healthcare providers.docx (UPDATED: 04/30/2019)
- Cover Sheet - IRB Cover Ltr.docx (UPDATED: 05/1/2019)
- CV/Resume - Nidaa Abu Jbara CV - April 2019.pdf (UPDATED: 04/30/2019)

Generated on IRBNet

- HIPAA Waiver - SJMC IRB Waiver of Authorization Request Form 2Aug2017.docx (UPDATED: 04/30/2019)
- Letter - OU IRB Approval Letter - Part 1 focus groups.pdf (UPDATED: 04/30/2019)
- Other - Bill of Rights.doc (UPDATED: 04/30/2019)
- Other - IRB Fee Waiver Form.doc (UPDATED: 04/30/2019)
- Other - Recruitment Invitation for healthcare providers - Formatted.docx (UPDATED: 04/30/2019)
- Other - Nida'a Abu Jbara - Project Timeline.pdf (UPDATED: 04/30/2019)
- Proposal - Nidaa Abu Jbara - Developed proposal Feb 13 2019.pdf (UPDATED: 04/30/2019)
- Questionnaire/Survey - Focus group Questions Pathways for healthcare providers.docx (UPDATED: 04/30/2019)
- Questionnaire/Survey - Demographic survey for healthcare providers.docx (UPDATED: 04/30/2019)
- Training/Certification - HSP Training records.pdf (UPDATED: 04/30/2019)

The SJHS IRB has reviewed the above materials and determined that your study meets the criteria for exemption classification. Research classified as exempt is not subject to the continuing review requirement of 45 CFR 46 (however when the project is complete, it needs to be officially closed with the IRB office).

Please note that to qualify for this exemption determination, any data collected during this study must be de-identified at the point of collection into the research dataset. PHI should not be recorded in the research dataset itself. The IRB must be notified of any proposed changes to the study.

All NON-COMPLIANCE issues or COMPLAINTS regarding this study must be reported promptly to the SJHS IRB.

Please note that all research records must be retained for a minimum of three years after the completion of the study and per the Primary Investigator's protocol within the provisions of the CFR.

If you have any questions or comments about this correspondence, please contact the St. John Health System IRB Administration at (918) 744-3058 or St.JohnIRB@sjmc.org. Please include your study title and reference number in all correspondence.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within the St. John Health System IRB's records.

Appendix C

Recruitment Flyer for Healthcare Providers



Recruitment Flyer for Users of Healthcare Services



Appendix D

Demographic Survey for Focus Groups

with Users of Healthcare Services

Name (First or nickname only) …….…….. **Age** ……...

Gender ☐ Male ☐ Female ☐ Non-binary/Other ☐ Prefer not to disclose

Profession ……...

What is your race / ethnic group? *(select all that apply)*

☐ American Indian / Alaska Native

☐ Asian

☐ Black / African American

☐ Hispanic / Latino / Latina

☐ Native Hawaiian / Pacific Islander

☐ White / Caucasian

☐ Other _____

What is the highest level of education you have completed?

☐ Less than high school degree

☐ High school degree or equivalent (e.g. GED)

☐ Some college or associate degree

☐ Bachelor's degree

☐ Graduate degree

☐ Professional degree (e.g., MD, JD)

☐ Professional certification or trade school

☐ Other _____

When was your last visit to a primary healthcare provider *(approximate date)***?**

☐ Within the last week ☐ Within the last month ☐ Between 1 and 3 months ago ☐ Between 3 and 6 months ago

Demographic Survey for Focus Groups and Personal Interviews

with Providers of Healthcare Services

Name (First or nickname only) …….…….. **Age** ……...

Gender ☐ Male ☐ Female ☐ Non-binary/Other ☐ Prefer not to disclose

Profession ……...

What is your race / ethnic group? *(select all that apply)*

☐ American Indian / Alaska Native

☐ Asian

☐ Black / African American

☐ Hispanic / Latino / Latina

☐ Native Hawaiian / Pacific Islander

☐ White / Caucasian

☐ Other _____

What is the highest level of education you have completed?

☐ Less than high school degree

☐ High school degree or equivalent (e.g. GED)

☐ Some college or associate degree

☐ Bachelor's degree

☐ Graduate degree

☐ Professional degree (e.g., MD, JD)

☐ Professional certification or trade school

☐ Other _____

Appendix E

Question Pathway for Focus Groups Interviews

With Users of Healthcare Services

** Kindly introduce yourself. Say your first or nickname clearly and loudly.

1. To start, I want you to take couple of minutes to think about your last visit to your primary healthcare provider. What was the job role of healthcare providers that you interacted with during your last visit?

   Remember, when I refer to a healthcare provider, I am referring to <u>any</u> medical employee who provided a medical service to you during your last visit.

2. The following questions will discuss your experience with the provider:
   a. How would you describe your overall experience with that healthcare provider?
   b. Which behaviors of your provider(s) influenced this opinion positively or negatively?

3. Next, soft skills identification questions:
   a. In your opinion, what are soft skills?
   b. Can you give me an example of a soft skill?
   c. What behaviors can reflect this (these) soft skill(s)?
   d. What soft skills do you believe your healthcare provider(s) have used during your encounter?
   e. What behaviors did the healthcare provider(s) make to demonstrate these soft skills to you?

4. Provider use of soft skills questions:
   a. In your opinion, which particular soft skill behavior had the greatest influence on your experience during that encounter?
   b. Do you believe that your healthcare provider should have used other softs skills during your encounter?
   c. Which soft skills?
   d. Why do you believe these soft skills are important to you?

5. The following is a question about empathy:
    a. How do you perceive a provider's empathy?
    b. Explain what it means to you.
6. Now, we will do a ranking activity that will help me to identify the most essential soft skills for healthcare providers from your perspectives. I will now distribute a sheet for our next activity.

** *(to hold up the activity form and explain about it – see attachment)*:

- As you can see the activity sheet has 2 columns. The left column list 7 soft skills that were pre-identified in literature followed by 10 empty cells. You will use the empty cells to write any soft skill that you perceive essential for primary care providers, other than those pre-listed.
- The empty column on the right will be used to rank the soft skills. From all the skills that are listed, including ones you have added, you will rank the top 10 soft skills that you perceive a healthcare provider in primary care must have and use during an interaction with patients *(for the patient to feel good about the interaction).*
- The most essential soft skill should be numbered "1" and the least important soft skill should be numbered "10".
- When you are done with ranking, please raise the paper so I can collect it.

7. Before ending the discussion, are there other thoughts that you would like to share about soft skills of your healthcare provider?

Question Pathway for Focus Groups and Personal Interviews

With Healthcare Providers

** Kindly introduce yourself. Say your first or nickname clearly and loudly.

1. Can you tell me about soft skills healthcare providers use in primary care?
    a. Can you give an example of a soft skill?
    b. What behavior actions can reflect this (these) soft skill(s)?
2. Do you consider soft skills are important for provider-patient interactions?
    a. Why or why not?
    b. Can you elaborate?
3. The following is a question about empathy:
    a. How do you define a provider's empathy?
    b. Can you give an example of how do you express empathy to patients?
4. Are there soft skills that should be demonstrated specifically by the primary care provider during an encounter?
    a. If yes, please give an example of these soft skills?
    b. If no, can you elaborate on your response?
5. From your experience with patients, what soft skills do you usually use to influence patient experience during your interaction with them?
6. What behavioral actions do you make to demonstrate these skills?
    a. Can you give examples of how do you show (this) these soft skills?
7. From your experience, which particular soft skill has had a greatest influence on the satisfaction of your patient during an encounter?
    a. How did you notice patients' satisfaction with your use of this particular soft skill?
    b. Do all/most patients respond positively to it? What have been patients' response to your use of this soft skill?

8. Now, we will do a ranking activity that will help me to identify the most essential soft skills for primary care providers from your experience and perspectives. I will now distribute a sheet for our next activity.

   ** *(to hold up the activity form and explain about it – see attachment)*:

   - As you can see the activity sheet has 2 columns. The left column list 7 soft skills that were pre-identified in literature followed by 10 empty cells. You will use the empty cells to write any soft skill that you perceive essential for primary care providers, other than those pre-listed.
   - The empty column on the right will be used to rank the soft skills. From all the skills that are listed, including ones you have added, you will rank the top 10 soft skills that you perceive a healthcare provider in primary care must have and use during an interaction with patients (for the patient to feel good about the interaction).
   - The most essential soft skill should be numbered "1" and the least important soft skill should be numbered "10".
   - When you are done with ranking, please raise the paper so I can collect it.

9. Before ending the discussion, are there other thoughts that you would like to share about soft skills that a primary healthcare provider should have and use with patients during an encounter?

Appendix F

Ranking Activity

Instructions:

1. Use the empty cells in the left column to add soft skills that you perceive essential for primary care provider-patient interactions, other than those pre-listed.

2. Use the right column to rank the top 10 soft skills that you perceive a primary healthcare provider must have and use during provider-patient interactions. Number 1 is most important and number 10 is least important.

Soft Skills	Rank
Affective Communication *"Healthcare providers' communication style that involve using personal and social expressions to generate positive and reduce negative feelings in patients"* *(e.g. making jokes and personal remarks, giving compliments and show friendliness)*	
Empathy *"The ability of healthcare provider to understand and feel what patient is experiencing"*	
Gentleness *"The way healthcare providers' show kindness and care for patients"*	
Listening *"Healthcare providers give attention and show understanding to the information that patient says"*	
Respect *"Healthcare providers show consideration of patients' views, feelings, traditions and acceptance of patients' decisions"*	
Personal Initiative *"The ability of healthcare provider to make decisions and take action, beyond job role, without waiting for instructions from someone else"*	
Self-control *"The ability of healthcare provider to regulate one's emotions, thoughts, and behavior in the face of temptations and impulses"*	

Appendix G

Assessment Tool - Item Pool

(First Evaluation - 74 Items)

A. Verbal Communication

1. My provider asked appropriate questions.
2. My provider asked personal questions to show interest in me as a human (or as an individual).
3. My provider asked personal questions to develop our relationship.
4. My provider called me by my preferred name.
5. My provider spoke with me on a personal level.
6. My provider tried to understand what I am feeling or experiencing.
7. My provider cared to know if I am satisfied with his/her services
8. My provider told me what I need to know throughout the process

B. Non-Verbal Communication

9. My provider remembered me as an individual.
10. My provider introduced himself / herself appropriately.
11. My provider greeted me warmly.
12. My provider shakes hand with me.
13. My provider talked to me directly.
14. My provider talked to me on the same level.
15. My provider looked at me in the eye and showed attention to me.
16. My provider showed interest and listened carefully.
17. My provider was not rushing.
18. My provider cared to answer my questions and concerns.
19. My provider was friendly and pleased to deal with me.
20. My provider was approachable.
21. My provider was feeling with me and touched my hand / shoulder to comfort me.
22. Sometimes my provider was humor.
23. My provider explained things in plain language and used terms I could understand.

C. Empathy

24. My provider shared my feelings.
25. My provider knew how I was feeling.
26. My provider cared for me and tried to comfort me.
27. My provider listened to me actively.
28. My provider was interested to understand what I was going through.
29. My provider understood what I was going through.
30. My provider could relate to the same thing I was experiencing.
31. My provider was supportive and comforted me.
32. My provider tried to find a solution for my situation.

33. My provider explained consequences for me (or what to expect).

D. Compassion

34. My provider paid attention to me.
35. My provider was understanding.
36. My provider addressed all my concerns.
37. My provider cared to comfort me.

E. Caring

38. My provider was concerned to listen to me.
39. My provider remembered details about me.
40. My provider was feeling with me.
41. My provider valued my opinion.
42. My provider showed me that he / she cares.
43. My provider's touch was caring.
44. My provider expressed his/her concern and care for me.
45. My provider was smiling to me all the time.
46. My provider gave me personal attention and made me feel comfortable.
47. My provider followed up to check on me.
48. My provider gave attention to my medical needs.

F. Listening

49. My provider was facing me and looking into my eyes.
50. My provider let me talk without interruptions.
51. My provider was not rushing
52. My provider was listening actively.
53. My provider repeated my words to confirm listening.
54. My provider confirmed understanding to what I said.
55. My provider was engaged and paying attention to details.

G. Respect

56. My provider considered my time.
57. My provider respected me as a person.
58. My provider demonstrated understanding to my values and beliefs.
59. My provider addressed me and my family properly.
60. My provider was at my level.
61. My provider was welcoming and respectful.

H. Friendliness

62. My provider greeted me with a smile.
63. My provider talked nicely with me.
64. I felt like I am a member of my provider's family.
65. My provider was caring for me.

66. My provider was approachable.

I. Trust

67. My provider was welcoming.
68. My provider listened actively.
69. My provider was respectful.
70. My provider had well maintained records.
71. My provider was honest with me.
72. My provider was confident.

J. Humility

73. My provider admitted the mistake and made an apology.
74. My provider was humble.

Appendix H

Subject Matter Experts Meeting Questions and Guidelines

- Thank you for accepting my invitation to participate in this study.
- We are meeting today to review the pool of items that were generated for the development of an assessment tool to measure soft skills used by healthcare providers during their interaction with patients.
- The goal of this meeting is to obtain face and content validity to the proposed assessment tool. For this reason, your expertise and knowledge are key aspects to achieve this objective.
- To evaluate your scoring for each item, we will use Content Validity Index (CVI) that was developed by (Waltz & Bausell, 1981):
    - Item is not relevant = 1
    - Item need some revision = 2
    - Item relevant but need minor revision = 3
    - Item very relevant = 4
- The questions that we will need to address in this meeting are:

1. Which of these items are representative of the construct (soft skill) it is proposed to assess?
2. Which of these items is an essential element of the soft skill it is representing?
3. Which of these items requires rewording (clarity of expression)?
4. What alternative wording is suggested?
5. Which of these items are redundant?
6. Which items should be eliminated?
7. What other items / questions are suggested to be added?
8. Is the proposed 5-point Likert response rating scale appropriate?
9. What alternative response rating scale could be more precise?
10. Any other points need to be addressed for content validity of this tool?

Appendix I

Sample of Expert Reviewer Scoring Sheet (First Round)

Relevance Scale:
1 = the item is not relevant of the construct (soft skill)
2 = the item needs some revision to be representative of the construct (soft skill)
3 = the item is relevant but need minor revision to be representative of the construct (soft skill)
4 = the item is very relevant of the construct (soft skill)

Items	Relevance Scale				Comments
	1	2	3	4	
1 - Personal Communication [verbal and non-verbal]	"Healthcare providers' communication style that involve using personal and social expressions to generate positive and reduce negative feelings in patients".				
1. My provider asked appropriate questions.					
2. My provider called me by my preferred name.					
3. My provider greeted me warmly.					
4.					

Items	Relevance Scale				Comments
	1	2	3	4	
2 - Empathy	"The ability of healthcare provider to understand and feel what a patient is experiencing".				
1. My provider shared my feelings.					
2. My provider knew how I was feeling.					
3. My provider cared for me and tried to comfort me.					
4.					

Items	Relevance Scale				Comments
	1	2	3	4	
6 - Respect	"Healthcare providers show consideration of patients' views, feelings, traditions and acceptance of patients' decisions".				
1. My provider considered my time.					
2. My provider respected me as a person.					
3. My provider demonstrated understanding to my values and beliefs.					

Appendix J

Assessment Tool - Item Pool

(Second Evaluation - 51 Items)

A. Personal Communication

1. My provider asked appropriate questions.
2. My provider asked questions to get to know who I am as an individual.
3. My provider called me by my preferred name.
4. My provider tried to understand what I am experiencing.
5. My provider explained what was happening throughout the visit.
6. My provider remembered me as an individual.
7. My provider introduced himself / herself appropriately.
8. My provider greeted me appropriately.
9. My provider maintained good eye contact with me.
10. My provider showed interest and listened carefully.
11. My provider did not rush me.
12. My provider addressed my questions and concerns.
13. My provider was approachable.
14. I felt comfortable asking questions to my provider.
15. My provider explained things in plain language.
16. My provider used terms I could understand.

B. Empathy

17. My provider tried to comfort me.
18. My provider wanted to understand what I was going through.
19. My provider helped me to feel supported.
20. My provider tried to find a solution for my situation.
21. My provider helped me to anticipate what to expect.

C. Compassion

22. My provider paid attention to me.
23. My provider tried to get to the real cause of my problem.
24. My provider was understanding.
25. My provider took the time to address my concerns.
26. My provider was caring.

D. Care

27. My provider remembered details about me.
28. My provider valued my opinion.
29. My provider showed me that he / she cares.
30. My provider expressed his/her concern about my condition.

31. My provider gave personal attention to make me feel comfortable.
32. My provider was attentive to my medical needs.

E. Listening

33. My provider let me talk without interruptions.
34. My provider listened attentively.
35. My provider confirmed hearing what I said.
36. My provider was engaged during our interaction.
37. My provider paid attention to details.

F. Respect

38. My provider valued my time.
39. My provider respected me as a person.
40. When family members were present, my provider addressed them appropriately.
41. My provider was respectful.

G. Friendliness

42. My provider was welcoming.
43. My provider was courteous with me.
44. My provider was approachable.
45. My provider was friendly with me.

H. Trust

46. My provider kept track of all my medical history.
47. My provider was honest with me.
48. My provider was competent.
49. My provider talked to me openly.
50. My provider worked for the best options for me.
51. My provider was ‘down to earth’.

Appendix K

Sample of Expert Reviewer Evaluation Sheet (Second Round)

Provider's Verbal and Non-verbal Personal Communication

Adjusted Items	Clear & Relevant	Irrelevant	Remarks
1. My provider asked appropriate questions.			
2. My provider asked personal questions to know who I am as an individual.			
3. My provider called me by my preferred name.			
4. My provider tried to understand what I am experiencing.			
5.			

Provider's Compassion

Adjusted Items	Clear & Relevant	Irrelevant	Remarks
1. My provider showed attention to me.			
2. My provider tried to get to the real cause of my problem.			
3. My provider was understanding.			
4.			

Provider's Listening

Adjusted Items	Clear & Relevant	Irrelevant	Remarks
1. My provider let me talk without interruptions.			
2. My provider listened to me attentively.			
3. My provider confirmed hearing what I said.			
4.			

Appendix L

Approval from the Institutional Review Board of the University of Oklahoma – Norman

Phase 2

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: December 18, 2019 **IRB#:** 10536

Principal Investigator: Nidaa K Abu Jbara, MHR **Reference No:** 699188

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 1 Focus Group.

Approval Date: 12/18/2019

Modification Description:
To add a new group of participants to complete the pilot survey for face validity.

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. The HRPP Administrator assigned for this submission: Karen L Braswell.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Initial Submission – Exempt from IRB Review – AP01

Date: January 29, 2020 **IRB#:** 11652

Principal Investigator: Nidaa K Abu Jbara, MHR **Approval Date:** 01/29/2020

Exempt Category: 2

Study Title: Development of assessment tool to measure soft skills in the performance of healthcare providers-Part 2 Validation.

On behalf of the Institutional Review Board (IRB), I have reviewed the above-referenced research study and determined that it meets the criteria for exemption from IRB review. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Request approval from the IRB prior to implementing any/all modifications as changes could affect the exempt status determination.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor.
- Notify the IRB at the completion of the project.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,



Fred Beard, Ph.D.
Vice Chair, Institutional Review Board