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Connectedness in the Context of Patient-Provider Relationships: A Concept Analysis

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Abstract

Aim—This paper is a report of an analysis of the concept of connectedness.

Background—Previous attempts to conceptualize patient–provider relationships were limited in explaining how such relationships are fostered and maintained, and how they influence patient outcomes. Connectedness is a concept that may provide insights into the advantages of patient–provider relationships; however, the usefulness of this concept in health care is limited by its conceptual ambiguity. Although connectedness is widely used to describe other social relationships, little consistency exists among its definitions and measures.

Data Sources—Sources identified through CINAHL, OVID, PubMed, and PsychINFO databases, as well as references lists of selected articles, between 1983 and 2010.

Review Methods—A hybrid concept analysis approach was used, involving a combination of traditional concept analysis strategies that included: describing historical conceptualizations, identifying attributes, critiquing existing definitions, examining boundaries, and identifying antecedents and consequences.

Results—Using five distinct historical perspectives, seven attributes of connectedness were identified: intimacy, sense of belonging, caring, empathy, respect, trust, and reciprocity. A broad definition of connectedness, which can be used in the context of patient–provider relationships, was developed. A preliminary theoretical framework of connectedness was derived from the identified antecedents, attributes, and consequences.

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CRP & JEH were responsible for the study conception and design

CRP & JEH performed the data collection

CRP performed the data analysis.

CRP was responsible for the drafting of the manuscript.

CRP, JEH & WCK made critical revisions to the paper for important intellectual content.

CRP, JEH & WCK provided statistical expertise.

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JEH supervised the study

Conclusion—Research efforts to advance the concept of connectedness in patient–provider relationships have been hampered by a lack of conceptual clarity. This concept analysis offers a clearer understanding of connectedness, provides recommendations for future research, and suggests practice implications.

Keywords

concept analysis; connectedness; patient–provider relationships

INTRODUCTION

Connectedness is a concept that, when more fully understood in the context of patient–provider relationships, has the potential to improve patient health outcomes (Suchman & Matthews 1988, McManus 2002, Thorne *et al.* 2005, Atlas *et al.* 2009). Connectedness is broadly defined as the extent to which a person perceives that he/she has a “significant, shared, and meaningful personal relationship with another person, a spiritual being, nature or an aspect of one’s inner self” (Haase *et al.* 1992, p. 146). Researchers have found that patients’ perceptions of the extent of their connectedness or the quality of the relationship with their healthcare providers is associated with increased participation in medical decision-making (Cooper-Patrick *et al.* 1997, Leidy & Haase 1999, Marelich & Murphy 2003), adherence to treatment (Schneider *et al.* 2004, van Servellen & Lombardi 2005, Beach *et al.* 2006b), and decreased risk-taking behaviors (Ettner 1999, Beach *et al.* 2006b).

Although many researchers have used the term “connectedness” to describe and/or measure a person’s perception of having a significant relationship with other people, there is little consistency across the literature in the definition or measurement of connectedness. Additionally, little research has been done to clarify the concept of connectedness within the context of patient–provider relationships. The purpose of this article is to clarify the concept of connectedness by evaluating how it has been examined in social relationships.

BACKGROUND

Historically, researchers, theorists and clinicians have used a variety of terms to describe the relationships between patients and providers, including patient-centered care (Mead & Bower 2000, Mallinger *et al.* 2005), relationship-centered care (Beach *et al.* 2006a, Suchman 2006); perceived social support from healthcare providers (Brucker & McKenry 2004, Arora *et al.* 2007), and therapeutic alliance (Summers & Barber 2003, Hilsenroth *et al.* 2004). Attempts to clearly conceptualize these relationships, the mechanisms by which they are developed or maintained, and their influence on patient health outcomes have thus far been limited. Of most concern is the fact that the research on these concepts tends to focus on relationships from a healthcare provider’s perspective; the patient’s experience and perceived meaning relative to having a relationship with providers are inadequately described (Epstein *et al.* 2005, Thorne *et al.* 2005).

Method of analysis

To clarify the concept of connectedness, we used a hybrid concept analysis approach similar to that used by Haase *et al.* (2009) to clarify resilience. The clarification process incorporated traditional concept analysis strategies proposed by Rodgers (2000), Walker and Avant (2004), and Hinds (1984), including: (1) describing how connectedness was historically conceptualized, (2) identifying essential attributes, (3) critiquing existing definitions, (4) examining boundaries, and (5) identifying antecedents and consequences.

DATA SOURCES

Literature selected for this analysis was located through database search engines (CINAHL, OVID, PubMed, and PsychINFO), for the period 1983–2010, using the keyword connectedness. Database searches were limited to peer-reviewed articles written in English. Since a very large number of articles (over 2000) were retrieved using the keyword “connectedness,” the search was limited to articles using that term in the title. After deleting duplicates, abstracts of the 204 remaining articles were read. Articles that did not pertain to social relationships (i.e., connectedness to oneself, nature, the Internet, marketing ads, political media, and television characters) were excluded. This criterion also eliminated articles that described connectedness as a method of image segmentation (i.e., fuzzy connectedness), genetic scheme referencing in animal breeding, and perceptual organization (i.e., uniform connectedness).

Based on the selection criteria, a total of 139 articles remained. Since the abstracts provided little information about definitions or assumptions used, the 139 selected articles were read in closer detail, focusing on definitions, assumptions, attributes, antecedents, and consequences of connectedness. Articles with no definitions of or assumptions about connectedness were excluded. Articles that referenced a classic or popular definition of connectedness related to a program of research (e.g., Grotevant & Cooper 1986, Gavazzi & Sabatelli 1990, Resnick *et al.* 1993, Lee & Robbins 1998, Karcher & Lee 2002) were limited to the original and/or most recent publication. Articles that referenced these classics, but did not provide additional rich descriptions of connectedness, were omitted. Reference lists from the selected articles were also examined for other relevant articles or book chapters. A total of 23 research articles, four review articles, and one book chapter were identified. These key literature sources were then reread, and essential information related to connectedness was extracted.

RESULTS

Connectedness was examined by researchers from a variety of academic disciplines including child and adolescent development, education, medicine, nursing, psychology, and public health. Connectedness was studied across the lifespan from early childhood (Clark & Ladd 2000) to older adults (Leidy & Haase 1999, Ong & Allaire 2005). The most common population in which connectedness was studied was adolescents.

Historical perspectives on connectedness

Five different perspectives on connectedness were found. Within and across these perspectives, researchers conceptualized connectedness as a(n): (1) component of the individuation process; (2) condition of the social environment; (3) culturally influenced conception of self; (4) personality trait; and (5) affective quality of positive social interactions with significant others.

Component of the individuation process—The earliest conceptualization of connectedness in the literature set seems to have emerged from research in which authors presented connectedness as having a positive or negative impact on individuation. For example, Grotevant and Cooper (1986) conceptualized connectedness as communicative processes (i.e., openness and respect for the views of others) among family members that promoted the psychosocial development of adolescents. Clark and Ladd (2000) held a similar view and characterized connectedness as the mutuality of parent–child expression. Among these authors, individuation was seen as positively influenced by a high level of connectedness in parent–child/adolescent relationships and characterized by mutuality between parents and children.

In contrast, Gavazzi and Sabatelli (1990) believed that connectedness was part of the individuation process and characterized it as the extent to which an adolescent is emotionally, financially, and functionally dependent on his/her parents. Well-individuated adolescents were considered to be less dependent on their parents (Gavazzi et al. 1999). In this conceptualization, lower levels of connectedness were perceived as socially desirable, and connectedness that was predicated on mutuality was considered less desirable because authors believed it could hinder individuation and independence from parents. Within perspectives on individuation, it is apparent that there is a disagreement as to what degree of connectedness is healthy versus dependent.

Condition of the social environment—In subsequent research, connectedness was expanded beyond the context of individuation from family and was viewed broadly as a condition influenced by the environment. Barber and Schluterman (2008), for example, described connectedness as the “essence of the social condition” (p. 213). Other scholars perceived connectedness as a consequence of being actively involved with others (Karcher & Lee 2002, Karcher 2005, Ong & Allaire 2005, Townsend & McWhirter 2005, Person et al. 2007) or a therapeutic relationship between patients and their nurse (Heifner 1993, Schubert & Lionberger 1995, Miner-Williams 2007). In each environmental context, connectedness was described as being fostered through supportive interactions and engagement with significant others, and it was believed to be reciprocated among all people involved in the relationship.

Culturally influenced conception of self—Connectedness was also characterized as a culturally influenced construct. For example, some researchers viewed connectedness as an aspect of the collectivism prominent in Eastern cultures (Beyers et al. 2003, Liu et al. 2005, Huiberts et al. 2006). People who were socialized within collectivistic societies or families were said to have a greater tendency to develop a connectedness social orientation. In this perspective, connectedness was described as emotional closeness and interdependence among family members (Liu et al. 2005, Huiberts et al. 2006), as well as “having strong and persuasive emotional ties with parents” (Beyers et al. 2003, p. 352). In Eastern cultures, this type of connectedness was considered a healthy societal norm. In contrast, in Western cultures, individualistic perspectives that promote independence and autonomy are fostered and perceived to be a healthier dynamic within family relationships. These contrasting perspectives indicate that connectedness is influenced by culture.

Personality trait—Another perspective of connectedness emerged from the counseling psychology literature. Within this perspective, connectedness was presented as a personality trait that was developed or underdeveloped over time and integrated into a person’s personality and internal sense of self. For example, Lee and Robbins (1998) characterized social connectedness as “an internal sense of belonging ... the subjective awareness of being in close relationship with the social world” (p. 338). These authors viewed social connectedness as a relatively stable psychological sense of how people view themselves in relation to others (Lee & Robbins 1998, Lee et al. 2001). Similarly, Rude and Burnham (1995) perceived connectedness as a part of one’s personality. They described connectedness as a healthy expression of personal inter-dependency (versus neediness, which is problematic) and defined connectedness as “a valuing of relationships and sensitivity to the effects of one’s actions on others” (p. 337). Within this perspective, connectedness was presented as a personality trait that was either strongly developed or remained underdeveloped and that influenced a person’s ability to form healthy or unhealthy relationships. Researchers thought that counseling interventions could promote a person’s underdeveloped trait of connectedness.

Affective qualities of positive social interactions with significant others—The most recent and commonly found perspective of connectedness focused on the affective qualities of positive social interactions with significant others (i.e., parents, teachers, and peers). In this perspective, connectedness was defined as a person's perception of the relationship versus the actual condition or quality of the social relationship. Authors defined connectedness as a person's perception or belief that he/she is cared for, respected, valued, and understood (Resnick *et al.* 1993, Resnick *et al.* 1997, Rew 2002, Edwards *et al.* 2006, Grossman & Bulle 2006, Shochet *et al.* 2006, Whitlock 2006, Waters *et al.* 2009). This perspective predominantly was explored in adolescents. When adolescents indicated that they felt cared for, respected, valued, and understood as a result of connectedness, researchers associated these affective qualities with psychosocial outcomes such as enhanced well-being and fewer risk-taking behaviors (Resnick *et al.* 1993, Resnick *et al.* 1997, Shochet *et al.* 2006).

In summary, the analysis of connectedness revealed five different perspectives. The perspectives were incongruent in how connectedness was defined or conceptualized. However, there were some commonalities across the perspectives in that connectedness was viewed as an interpersonal phenomenon; related to the ability to form healthy versus maladaptive relationships with others; influenced by culture; and had both environmental and affective components. Although each of these views sheds light on the nature and development of connectedness and some commonalities are present, the literature set exists in disciplinary and/or philosophical "silos," rendering it less useful for building new knowledge on connectedness. A more cohesive perspective of connectedness may emerge with identification of the essential attributes, antecedents, and outcomes of connectedness found across the literature set.

Attributes

Seven attributes of connectedness were identified: intimacy, sense of belonging, caring, empathy, respect, trust, and reciprocity (see Table 1). These attributes were identified by analyzing the definitions, descriptions of the characteristics of connectedness, and measurement indicators used by the investigators in the reviewed literature. The expression (i.e., the strength or form) of the identified attributes varied across the perspectives; however, all seven attributes were either identified or could be inferred in all instances where connectedness occurred. Although these attributes are discussed separately, it should be noted that they are not mutually exclusive categories; there was a great deal of overlap among the attributes identified.

Intimacy—Intimacy was the most common attribute identified within the literature set. This attribute was described as a feeling of closeness or having a unique bond with another person or group of others. This attribute was also described as an observable bond between people that is exhibited by communicative and behavioral expressions of closeness. For example, intimacy in the parent-child/adolescent relationship was defined as the degree to which each other's feelings and viewpoints were discussed and shared (Clark & Ladd 2000, Grotevant & Cooper 1986, Grotevant & Cooper 1998).

Sense of belonging—A sense of belonging was described as feeling that one fits in with and is part of a group of others. This attribute was identified in studies that examined people's sense of social connectedness, particularly in adolescents. For example, Shochet *et al.* (2006) measured adolescents' sense of connectedness to school by asking questions related to their feeling like a real part of the school and being included in school-related activities.

Empathy—Empathy was another common attribute across the literature set, and was described as an expression of openness and sensitivity to the viewpoints of others or the ability to understand and feel compassionate towards others. For example, children/adolescents and their parents expressed empathy in a connected relationship by being receptive and considerate of one another's beliefs and values (Clark & Ladd 2000, Grotevant & Cooper 1986, Grotevant & Cooper 1998).

Caring—Caring was an attribute described as being affectionate towards others, experiencing warmth from others, and displaying concern for the well-being of others. For example, a person's sense of connectedness was commonly measured by how much he or she perceived that significant others (i.e., parents, teachers, peers, etc.) cared about them (Resnick *et al.* 1993, Resnick *et al.* 1997, Rew 2002, Grossman & Bulle 2006).

Respect—Respect was described as a sense of being valued and/or displaying value for others. Respect was a particularly common attribute among the studies that explored connectedness between family members, adolescents' connectedness to school, and nurse-patient connectedness. For example, Miner-Williams (2007) claimed that one of the key elements of connectedness in the nurse-patient relationship was the nurse's ability to acknowledge the patient as a unique person, which in turn made the patient feel valued by the nurse.

Trust—Trust was a common attribute of connectedness. Trust was described as being able to be open and honest when sharing personal thoughts and feelings with others; having a sense of comfort or safety when interacting with others; or being able to believe in and depend on others. For example, among the authors who perceived connectedness as a culturally influenced construct or a personality trait, trust was exhibited by a person's confidence in the availability of support from others (Lee & Robbins 1998, Lee *et al.* 2001, Beyers *et al.* 2003, Huiberts *et al.* 2006).

Reciprocity—Reciprocity was an attribute of connectedness exhibited by the mutual exchange of affection and interest that people have in one another. Reciprocity was commonly described in articles that explored connectedness between people (e.g., children and parents; nurses and patients). Reciprocity was also identified in studies that examined persons' perceptions of connectedness. For instance, Whitlock (2006) found that an adolescent's sense of connectedness to school is something that is not only received, but also reciprocated (i.e., when an adolescent feels cared for by his/her peers and teachers, the adolescent also cares about those people).

Adequacy of the definitions of connectedness

To further clarify the concept of connectedness, the definitions of connectedness were evaluated for adequacy based on criteria proposed by Cohen and Nagel (1934) and Hamblin (1960) and first described for nursing by Hinds (1984). According to the criteria, definitions: (1) must provide the essential, not accidental attributes; (2) must not directly or indirectly contain the term being defined; (3) should be stated in positive terms; (4) should be expressed in clear or non-figurative language; (5) should reflect a continuum indicating that various amounts of the construct may occur (e.g., uses the words "the degree to which" or "the extent to which"); and (6) indicates the context of the construct (Hinds 1984). A total of 27 definitions were evaluated (see Table 2).

None of the reviewed definitions met all criteria for adequacy. The most commonly missed criterion was providing the essential attributes of connectedness. The greatest number of attributes identified in the definitions was four and only four (out of 27) definitions included

this many attributes (Beyers *et al.* 2003, Grossman & Bulle 2006, Whitlock 2006, Barber & Schluterman 2008) — indicating that the majority of the definitions failed to describe the essence of connectedness.

Two definitions directly used the term “connectedness” (Resnick *et al.* 1997, Liu *et al.* 2005). All definitions were stated in positive terms. Although the majority of definitions used clear language, three used obscure or figurative language that made the definition difficult to understand. For example, Clark and Ladd’s (2000) definition included the phrase “dyadic property”. Similarly, other authors used vague phrases such as “quality ties” (Ong & Allaire 2005) or “social world” (Lee & Robbins 1998).

Only five of the 27 definitions reflected that connectedness may be measured on a continuum. All but six definitions indicated the context in which connectedness occurred. The most common context in which connectedness was examined in the literature set was among children/adolescents and their parents. Other contexts were at school (between adolescents and their teachers and peers), within healthcare settings (between nurses and their patients), and in other natural groups (between adults and their friends, family members, romantic partners, teammates, or colleagues).

An adequate definition of connectedness—Based on the identified attributes of connectedness and the evaluation of definitions, a *broad* definition of connectedness was derived that meets the criteria for definitions outlined above: “In social relationships, connectedness is the degree to which a person perceives that he/she has a close, intimate, meaningful, and significant relationship with another person or group of people. This perception is characterized by positive expressions (i.e., empathy, belonging, caring, respect, and trust) that are both received and reciprocated, either by the person or between people, through affective and consistent social interactions”.

Boundaries

Boundaries of connectedness were determined by asking questions similar to those Haase *et al.* (2009) used to determine the boundaries of resilience. Questions were related to contextual influences (What are the conditions under which connectedness occurs, varies, or disappears?), dimensions (Does connectedness have subjective and/or objective dimensions? Does it have psychological and/or physiological dimensions?), and underlying assumptions (Does connectedness exhibit growth or stability and is it considered a state or trait?).

Contextual influences—Based on the articles reviewed, connectedness most commonly occurs in the context of social relationships. Connectedness does not occur when a person feels uncomfortable. For example, Leidy and Haase (1999) reported that patients with chronic obstructive pulmonary disease felt uncomfortable or embarrassed in public places because of their treatments and symptoms. These feelings led to an increased sense of social disconnectedness because of their reluctance to venture out. Connectedness also was absent when persons experienced mistrust (Lee & Robbins 1998) or were violated by others (Rew 2002). When Rew compared her findings to other studies in the literature, she concluded that homeless youths with histories of sexual abuse perceived themselves to be less socially connected, lonelier, and less healthy than the non-homeless youths described in other studies. Decisions about how connectedness, once established, may disappear could not be made because the literature set did not address such conditions.

Subjective/objective dimensions—There appear to be both subjective and objective dimensions of connectedness. Over two thirds of the articles examined connectedness through self-reported measures asking people about their relationship with family members,

peers, or members within a community. Most of these instruments contained questions about feeling cared for, valued, respected, and understood by others (e.g., Resnick *et al.* 1993) or about the ability to establish and maintain close relationships with others (e.g., Lee & Robbins 1998). Other studies also included questions about particular activities with others rather than only focusing on the affective response of feeling connected (Karcher & Lee 2002, Rew 2002). For example, Karcher and Lee developed an instrument that assesses both the degree of involvement and affection experienced in close relationships.

A few studies examined objective dimensions of connectedness. For example, Clark and Ladd (2000) proposed that connectedness in young children is manifested directly in the personal narrative conversations they have with their mother. In this investigation, connectedness between mothers and their five-year-old child was assessed by having observers view each narrative conversation and rate the dyad on six constructs of mutual: positive engagement; warmth; reciprocity; happy tone; intimacy; and intensity. Similarly, Grotevant and Cooper (1998) developed a Q-sort that was used by observers to assess individuality and connectedness qualities in dyadic relationships. Thus, connectedness appears to have attributes that can be objectively observed.

Psychological/physiological dimensions—Psychological concepts that have been associated with connectedness include self-esteem, anxiety, depression, coping, and well-being (e.g., Lee & Robbins 1998, Shochet *et al.* 2006; Person *et al.* 2007). These psychological concepts were most often described as consequences of connectedness.

Two studies examined physiological dimensions of connectedness. Ong and Allaire (2005) found that people who were perceived to be more socially connected had diminished diastolic and systolic blood pressure reactivity when encountering daily negative emotional states. Edwards *et al.* (2006) found a positive association between salivary testosterone levels and connectedness among male and female college soccer players. What is unclear is the causal relationship between these variables. Further work is needed to replicate these findings and to determine how the variables are associated.

Growth vs. stability assumptions—Based on the reviewed literature, it is unclear if connectedness is a phenomenon that exhibits growth (change) or stability. Though some investigators defined and/or measured connectedness on a continuum (e.g., Shochet *et al.* 2006), other researchers implied that connectedness was a constant and stable characteristic (e.g., Lee & Robbins 1998, Lee *et al.* 2001, Rude & Burnham 1995). Many other investigators failed to indicate either assumption. One might think that connectedness could change over time; however, this assumption was not studied in the selected literature set. Understanding how connectedness either changes or remains stable over time is important to measurement; the stability or tendency to change over time has implications for how and when a concept should be measured or whether or not interventions can influence connectedness.

State vs. trait assumptions—There seemed to be conflicting assumptions regarding whether or not connectedness was state-like or trait-like. The majority of the investigators implied that connectedness was situational or state-like. For example, connectedness was commonly described as occurring in social relationships, especially when a person felt cared for, respected, and understood by other people in the relationship. In contrast, other investigators referred to connectedness as a stable personality characteristic, which indicates that connectedness is trait-like. These two conflicting assumptions require further investigation.

Antecedents

The antecedents of connectedness were rarely described and difficult to clearly identify; however, at least three antecedents were implied in the literature (see Table 3). The first and most commonly implied antecedent that fostered connectedness was having consistent interactions with people who exhibited behaviors that were supportive and affectionate. For example, a person connects with another person when he/she experiences repetitive interactions that involve nurturing and caring behaviors.

The second antecedent implied in the literature was a person's need or desire to connect. Some authors described the need or desire to connect as an innate human characteristic that is fulfilled when people experience consistent interactions that are nurturing and supportive (Lee & Robbins 1998, Karcher 2005, Townsend & McWhirter 2005). Other authors described the need or desire to connect as a person's response to another person who needs help such as a nurse's response to help a patient with a health problem (Heifner 1993, Schubert & Lionberger 1995, Miner-Williams 2007).

The third probable antecedent identified was sharing similar experiences, characteristics, interests, or beliefs with other people. For example, Edwards *et al.* (2006) believed that a person's sense of connectedness to their teammates was the result of the shared experiences of team membership. Similarly, Grossman and Bulle (2006) reviewed adult-youth programs and reported that the most common determinant for an adolescent feeling connected to non-parental adults was shared interests or personality characteristics. The notion of shared experiences, characteristics, interests, or beliefs with others was also implied as an antecedent in the context of parent-child relationships (Liu *et al.* 2005, Huiberts *et al.* 2006) and nurse-patient relationships (Heifner 1993).

Consequences

Researchers have reported that connectedness is associated with a variety of positive psychosocial outcomes (see Table 4) such as higher self-esteem, enhanced psychosocial/emotional adjustment (e.g., less anxiety, stress, and depression), adaptive interpersonal skills, and improved health status and well-being. Other consequences noted, particularly for adolescents, were higher academic achievement and diminished risk-taking behaviors. Although several researchers proposed that connectedness may be predictive of these positive outcomes, most of the evidence was based on correlations. Thus, further empirical work is needed to determine how or if connectedness influences the reported outcomes.

Preliminary theoretical framework

Based on the results of this analysis, a preliminary theoretical framework of connectedness was developed. Figure 1 identifies antecedents, attributes, and consequences of connectedness in the framework.

DISCUSSION

Study limitations

For this analysis, literature sources were limited to studies that examined connectedness within social relationships and may not be generalizable to other contexts (e.g., spiritual connectedness or connectedness to nature). Since the literature search was limited to articles using the word "connectedness" in the title, a number of relevant sources may have been excluded. A strategy used to mitigate this limitation included reviewing the reference lists of the selected literature for other relevant sources. Because the analysis involved an inductive approach, using only literature sources, there was a potential for bias. Strategies taken to

minimize bias included using an audit trial when appropriate (see Tables) and validating interpretations of findings with co-authors.

Theoretical implications

Although the importance of patient–provider relationships/connectedness has been long recognized and explored by nursing theorists (Peplau 1952, Travelbee 1971, King 1981, Watson, 1988), few theories explain how this phenomenon is fostered and the mechanisms through which connectedness contributes to positive patient health outcomes. Likewise, theoretical frameworks of health-related quality of life (e.g., Ferrell *et al.* 2003, Ferrans *et al.* 2005) suggest that social relationships (i.e., relationships with family, friends, and healthcare providers) lead to positive health outcomes; however, these frameworks provide little insight into how such relationships enhance a person’s quality of life. One explanatory theoretical framework that may help guide future research on connectedness is the Resilience in Illness Model (RIM), previously referred to as the Adolescent Resilience Model (Haase 2004). The RIM specifies the protective and risk factors that either enhance or hinder resilience in chronically ill people. One of the key protective factors – Social Integration – reflects the hypothesis that people’s perceptions of their relationships with healthcare providers influence their resilience and quality of life by influencing the degree to which they use positive coping strategies and hope-derived meaning. Although the RIM suggests that patient–provider relationships are important, little is known about how people become connected to their healthcare providers. Therefore, once the antecedents and critical attributes of patient–provider connectedness outlined in the preliminary theoretical framework have been validated, the RIM may be a useful framework to evaluate the hypothesized relationships between patient–provider connectedness and the proximal and distal outcomes of resilience and quality of life.

CONCLUSION

In health care, connectedness is inadequately defined and has not been adequately examined. Specific reasons that the applicability of connectedness in health care is in its infancy include a limited understanding of the (1) attributes/characteristics that define patient–provider connectedness; (2) antecedents or conditions that encourage the development of patient–provider connectedness; and (3) how this phenomenon influences patient health outcomes. Other reasons relate to the major conceptual issues identified in this analysis. First, the diverse and segregated historical perspectives in which connectedness has been conceptualized or defined have hampered efforts to build upon previous research. Second, the definitions of connectedness are inadequate because little consideration has been devoted to examining the essential attributes of connectedness. Although seven attributes were identified in this analysis, further research is needed to determine if these attributes can be validated. Third, the boundaries of connectedness seemed to be blurred by the various conceptualizations and need further exploration — specifically, contextual influences, dimensions, and assumptions need to be closely examined. Fourth, there has been a lack of research on identifying the antecedents of connectedness. The antecedents extracted through this analysis provide direction for future research. Lastly, although connectedness has been associated with a variety of positive psychosocial outcomes, further work is needed to determine the strength and direction of these hypothesized relationships.

Three research recommendations are offered for refining connectedness in patient–provider relationships. These recommendations are based on Haase *et al.* (1999) decision-making process for theory and instrument development. First, additional research is needed to examine connectedness from the perspectives of patients and healthcare providers in order to provide a clearer description of the attributes, antecedents, and consequences of connectedness, as well as the conditions under which patient-provider connectedness is

manifested. Qualitative methods are believed to be well suited for further clarification of unclear concepts (Morse *et al.* 1996). Second, the preliminary theoretical framework derived from this analysis requires further examination and refinement using quantitative techniques. Third, psychometrically sound instruments that measure the attributes of patient–provider connectedness and help examine the relationships among connectedness, its antecedents, and its consequences need to be identified or developed. The development of such instruments will help answer questions about the preliminary theoretical framework and allow refinements to the framework based on statistical analyses such as factor analysis. Factor analysis will help provide valuable information regarding the dimensionality and structure of connectedness in relation to instrumentation. Clarifying connectedness will provide a better understanding of how this concept can be applied in healthcare settings, guide the development of interventions to promote patient-provider connectedness, and identify the extent to which it influences patient health outcomes. Practice implications include (1) raising an awareness of the importance of patient-provider connectedness and its relationship to positive patient outcomes; and (2) developing staff education programs to help healthcare providers understand the behaviors and attitudes that foster connectedness.

Summary Statements

What is already known about this topic

- Patient–provider connectedness is believed to have a positive influence on patient health outcomes.
- Research to demonstrate the significance of patient–provider connectedness is lacking due to a limited understanding of its defining characteristics and mechanisms that foster and/or maintain the connection.
- Although connectedness is a commonly used term to define meaningful social relationships, there is a great deal of inconsistency in how this concept is conceptualized and measured.

What this paper adds

- Identification of attributes of connectedness: intimacy, sense of belonging, caring, empathy, respect, trust, and reciprocity.
- Development of an adequate, broad definition of connectedness that can be validated through future research.
- A preliminary theoretical framework of connectedness that, with further research, may be used to conceptually refine patient–provider connectedness and lead to the development of an explanatory theoretical framework.

Implications for practice and/or policy

- Healthcare providers' knowledge of the antecedents of connectedness (i.e., consistent supportive/affective interactions, desire to connect, shared experiences) may contribute to their behaviors/attitudes that foster connectedness with patients.
- To foster awareness of the potential benefit of connectedness for patient health outcomes, staff education programs may include content on factors influencing patient–provider connectedness.
- After the preliminary theoretical framework is validated from patients' and providers' experiences and refined through quantitative techniques, it can be used to predict patient health outcomes and guide interventions.

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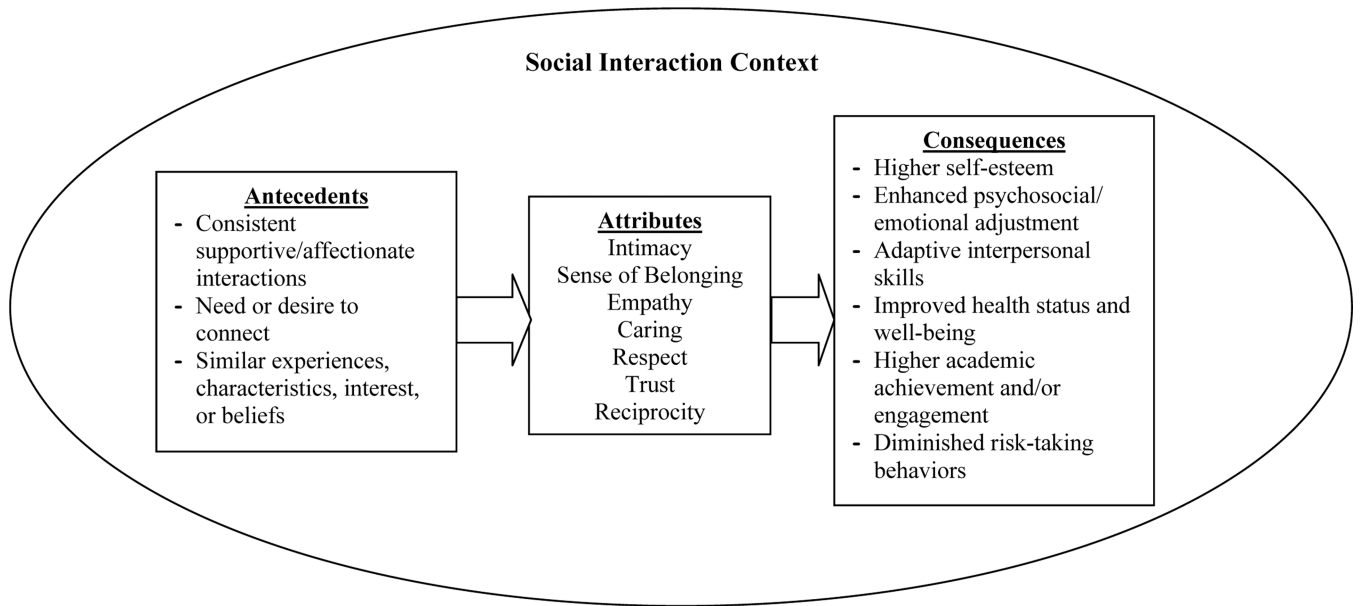


Figure 1.
Preliminary **Theoretical Framework** of Connectedness

Table 1

Attributes of Connectedness

Attributes	Sources
<i>Intimacy</i>	
- a feeling of closeness or having a unique bond to another person or group of others	Barber & Schluterman (2008), Beyers <i>et al.</i> (2003), Grossman & Bulle (2006), Heifner (1993), Huiberts <i>et al.</i> (2006), Karcher & Lee (2002), Karcher (2005), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Leidy & Haase (1999), Miner-Williams (2007), Ong & Allaire (2005), Resnick <i>et al.</i> (1993), Resnick <i>et al.</i> (1997), Rew (2002), Rude & Burnham (1995), Schubert & Lionberger (1995), Townsend & McWhirter (2005), Waters (2009), Whitlock (2006)
- an observable bond between people exhibited by communicative and behavioral expressions of closeness	Clark & Ladd (2000), Grotevant & Copper (1986), Grotevant & Cooper (1998); Liu <i>et al.</i> (2005)
<i>Sense of belonging</i>	
- a feeling of fitting in with or part of a group of others	Barber & Schluterman (2008), Edwards <i>et al.</i> (2006), Grossman & Bulle (2006), Karcher & Lee (2002), Karcher (2005), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Ong & Allaire (2005), Person <i>et al.</i> (2007), Resnick <i>et al.</i> (1993), Resnick <i>et al.</i> (1997), Shochet <i>et al.</i> (2006), Townsend & McWhirter (2005); Waters (2009)
<i>Empathy</i>	
- an expression of openness and sensitivity to the view points of others	Clark & Ladd (2000), Grotevant & Copper (1986), Grotevant & Cooper (1998), Karcher & Lee (2002), Karcher (2005), Leidy & Haase (1999), Liu <i>et al.</i> (2005); Miner-Williams (2007), Rude & Burnham (1995), Townsend & McWhirter (2005)
- the ability to understand and feel compassionate for others	Beyers <i>et al.</i> (2003), Edwards <i>et al.</i> (2006), Grossman & Bulle (2006), Heifner (1993), Miner-Williams (2007), Person <i>et al.</i> (2007), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Ong & Allaire (2005), Rush & Burnham (1995), Schubert & Lionberger (1995)
<i>Caring</i>	
- being affectionate towards others	Clark & Ladd (2000), Grotevant & Cooper (1986), Grotevant & Cooper (1998), Huiberts <i>et al.</i> (2006), Karcher (2005), Karcher & Lee (2002), Liu <i>et al.</i> (2005), Rude & Burnham (1995)
- experiencing warmth from others	Barber & Schluterman (2008), Grossman & Bulle (2006), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Leidy & Haase (1999), Person <i>et al.</i> (2007), Resnick <i>et al.</i> (1993), Resnick <i>et al.</i> (1997), Rew (2002), Schubert & Lionberger (1995), Shochet <i>et al.</i> (2006), Townsend & McWhirter (2005), Waters (2009), Whitlock (2006)
- displaying concern for the well-being of others	Beyers <i>et al.</i> (2003), Heifner (1993), Miner-Williams (2007), Ong & Allaire (2005)
<i>Respect</i>	
- feeling valued and/or displaying value for others	Barber & Schluterman (2008), Edwards <i>et al.</i> (2006), Grossman & Bulle (2006), Grotevant & Copper (1986), Grotevant & Cooper (1998), Heifner (1993), Huiberts <i>et al.</i> (2006), Karcher (2005), Karcher & Lee (2002), Leidy & Haase (1999), Liu <i>et al.</i> (2005), Miner-Williams (2007), Person <i>et al.</i> (2007), Resnick <i>et al.</i> (1993), Resnick <i>et al.</i> (1997), Schubert & Lionberger (1995), Shochet <i>et al.</i> (2006), Waters (2009), Whitlock (2006)
<i>Trust</i>	
- being able to believe in or depend on others	Barber & Schluterman (2008), Gavazzi & Sabatelli (1990), Gavazzi <i>et al.</i> (1999), Huiberts <i>et al.</i> (2006), Ong & Allaire (2005), Person <i>et al.</i> (2007), Whitlock (2006)
- a sense of comfort or safety when interacting with others	Leidy & Haase (1999), Karcher (2005), Karcher & Lee (2002), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Townsend & McWhirter (2005), Rew (2002), Waters (2009)
- being able to be open and honest when sharing personal thoughts and feelings with others	Beyers <i>et al.</i> (2003), Grossman & Bulle (2006), Grotevant & Cooper (1986), Grotevant & Cooper (1998), Clark & Ladd (2000), Liu <i>et al.</i> (2005), Heifner (1993), Miner-Williams (2007), Schubert & Lionberger (1995)
<i>Reciprocity</i>	
- mutual affection and interest that people have in one another	Barber & Schluterman (2008), Clark & Ladd (2000), Grotevant & Cooper (1986), Grotevant & Cooper (1998), Liu <i>et al.</i> (2005), Miner-Williams (2007), Schubert & Lionberger (1995), Waters (2009)
- characteristics of connectedness are both received and reciprocated by the person	Beyers <i>et al.</i> (2003), Edwards <i>et al.</i> (2006), Lee & Robbins (1998), Lee <i>et al.</i> (2001), Karcher (2005), Karcher & Lee (2002), Heifner (1993), Ong & Allaire (2005), Resnick <i>et al.</i> (1993), Resnick <i>et al.</i> (1997), Townsend & McWhirter (2005), Whitlock (2006)

Table 2

Definitions of Connectedness

Primary Source (Related Source)	Definition	Essential attributes are provided	Term being defined is not re-used	Stated in positive terms	Stated in clear, non-figurative language	Reflects a continuum	Indicates the context
<i>Component of the Individuation Process</i>							
Clark & Ladd 2000	"Connectedness is a feature of the emotional bond formed between the parent and child. ...we defined connectedness as a dyadic property of the parent-child relationship – as reflected in the mutuality of parent-child emotional expressions" (p. 485).	1 out 7	+	+	-	-	+
Gavazzi et al. 1999 (Gavazzi & Sabatelli 1990)	Multigenerational interconnectedness refers to the financial, functional, & psychological connections between adolescents/young adults & their families. Definitions are as follows: "Financial interconnections refer to the specific monetary ties between family members that reflect the extent to which a person is financially <i>dependent</i> on other family members" (Gavazzi et al. 1999, p. 1361). "Functional interconnections refer to those activities in which family members share time with each other and reflect the extent to which a person is <i>reliant</i> on the family for daily care, companionship, and recreation" (Gavazzi et al. 1999, p. 1361). "Psychological (emotional) interconnections refer to the approval, loyalty, obligation, and guilt that family members experience with one another and reflect the extent to which a person is emotionally <i>dependent</i> on other family members" (Gavazzi et al. 1999, p. 1361).	1 out 7	+	+	+	+	+
Grotevant & Copper 1998 (Grotevant & Copper, 1986)	"Connectedness involves processes that link the self to others and has two dimensions: (1) <i>Permeability</i> - expressing responsiveness to the views of others & (2) <i>Mutuality</i> - expressing sensitivity and respect for others" (Grotevant & Copper 1998, p. 4).	4 out 7	+	+	+	-	-
<i>Condition of the Social Environment</i>							
Barber & Schluterman 2008	Define connection as a "tie between the child and significant other persons (groups or institutions) that provide a sense of belonging, an absence of aloneness, and a perceived bond. Depending on the intimacy of the context, this connection is produced by different levels, degrees or combinations of consistent, positive, predictable, loving, supportive, devoted, and/or affectionate interaction" (p. 213).	4 out 7	+	+	+	-	-
Karcher 2005 (Karcher & Lee 2002)	"Connectedness reflects youth's activity with and affection for the people, places and activities within their life" (Karcher 2005, p. 66).	2 out 7	+	+	+	-	+
Heifner 1993	"A positive connectedness in the psychiatric nurse-pt relationship is a therapeutic state of interaction that enhances the effectiveness of the relationship and benefits the nurse and the patient" (p. 14).	0 out 7	+	+	+	-	+
Miner-Williams 2007	Connectedness is "the special type of nurse-patient relationship in which the nurse and patient feel a particular closeness [and] is a process of meeting the needs of the spirit" (p. 1230)	2 out 7	+	+	-	-	+

Primary Source (Related Source)	Definition	Essential attributes are provided	Term being defined is not re-used	Stated in positive terms	Stated in clear, non-figurative language	Reflects a continuum	Indicates the context
Ong & Allaire 2005 Person <i>et al.</i> 2007	Social connectedness defined as “having quality ties with others” (p. 476). “Social connectedness refers to the relationship that people have with others that results in a sense of belonging, a social identity, support and comfort, a buffer for stressors, and positive influences on coping with psychological and physical problems” (p. 280).	1 out 7 3 out 4	+	+	-	-	-
Schubert & Lionberger 1995	“Mutual connectedness is the joining of the nurse and client in a relationship committed to the health and healing of the client. The nurse remains constant in caring, listening to, and focusing on the client. Client’s trust may fluctuate until a feeling joining or bonding occurs in the relationship” (p. 109).	2 out 7	+	+	+	-	+
Townsend & McWhirter 2005	Borrowed – Connectedness occurs “when a person is actively involved with another person, object, group, or environment, and that involvement promotes a sense of comfort, well-being, and anxiety-reduction” (Borrowed from Hagerly, Lynch-Sauer, Patusky, and Bouwsema, 1993, p. 293 as cited by Townsend & McWhirter 2005, p. 193).	3 out 7	+	+	+	-	+
<i>Culturally Influenced Conception of Self</i>							
Beyers <i>et al.</i> 2003	Borrowed – Connectedness “refers to high levels of concern about parents’ well-being, high levels of empathy, strong and pervasive emotional ties with parents, openness and reciprocity in the communication with parents, and low levels of separateness from parents” (Borrowed from Frank <i>et al.</i> 1988, as cited by Beyer <i>et al.</i> 2003, p. 352).	4 out 7	+	+	+	-	-
Huiberts <i>et al.</i> 2006	Provides a positive and negative definition. “In a positive way, connectedness is defined as emotional closeness: the presence of positive affection and confidence in the availability of parents as a source of help. In a negative way, connectedness is defined as the absence of emotional distance and conflicts” (p. 316).	3 out 7	+	+	+	-	-
Liu <i>et al.</i> 2005	“Connectedness was defined as child’s effort to affiliate/connect with his/her mother. Mother encouragement of connectedness included maternal behaviors that promoted the child’s connectedness and affiliation” (p. 491).	1 out 7	-	+	+	-	+
<i>Personality Trait</i>							
Lee & Robbins 1998 (Lee <i>et al.</i> 2001)	“Social connectedness is defined as the subjective awareness of being in close relationship with the social world. The experience of interpersonal closeness in the social world includes proximal & distal relationships with family, peers, acquaintances, strangers, community, and society. It is the aggregate of all these social experiences that is gradually internalized by the individual & serves as a foundation for a sense of connectedness” (Lee & Robbins 1998, p. 338).	2 out 7	+	+	-	-	+
Rush & Burnham, 1995	“Connectedness is a personality characteristic that is a relatively more adaptive form of dependency and represents a valuing of relationships and sensitivity to the effects of one’s actions on others” (p. 337).	2 out 7	+	+	+	-	+
<i>Affective Qualities of Positive Social Interactions with Significant Others</i>							
Edwards <i>et al.</i> 2006	“A sense of connectedness with one’s teammates is a common consequence of the shared experiences of the team membership” (p. 136).	1 out 7	+	+	+	-	+

Primary Source (Related Source)	Definition	Essential attributes are provided	Term being defined is not re-used	Stated in positive terms	Stated in clear, non-figurative language	Reflects a continuum	Indicates the context
Grossman & Bulle 2006	Adolescent–non-parental adult connectedness is defined as “the degree to which youth feel they have a caring and supportive relationship with a non-parental adult” (p. 788).	1 out 7	+	+	+	+	+
Leidy & Haase 1999	Borrowed - “Connectedness is a sense of a significant, shared, and meaningful relationship with other people, a spiritual being, nature, or aspects of one’s inner self” (Haase et al. 1992 as cited by Leidy & Haase 1999, p. 72).	1 out 7	+	+	+	-	-
Resnick et al. 1993 (Resnick et al. 1997)	Family connectedness referred to as “adolescents who indicated that they enjoyed, felt close to and cared for by family members” (Resnick et al. 1993, p. S5). Also “referred to a sense of belonging and closeness to family, in whatever way family was comprised or defined by the adolescents” (Resnick et al. 1993, p. S6).	3 out 7	+	+	+	-	+
Rew 2002	School connectedness referred to as “students who enjoyed school, experiencing a sense of belonging and connectedness to it” (Resnick et al. 1993, p. S5).	1 out 7	-	+	+	-	+
Shochet et al. 2006	Borrowed - “Connectedness refers to the individual’s perception that important others such as parents, teachers, church leaders, and peers care about the individual” (Blum et al. 1989 as cited by Rew 2002, p. 55).	1 out 7	+	+	+	-	-
Waters et al 2009	Borrowed - “School connectedness is defined as “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” (Goodenow 1993 as cited by Shochet et al. 2006, p. 170).	3 out 7	+	+	+	+	+
Whitlock 2006	Borrowed - School connectedness is “the belief by students that adults in that school care about their learning as well as about them as individuals.” (Wingspread Conference, 2004 ¶ 1 as cited by Waters et al 2009, p. 517).	2 out 7	+	+	+	-	+
	School connectedness was defined as “a psychological state of belonging in which individual youth perceive that they and other youth are cared for, trusted, and respected by collections of adults that they believe hold the power to make institutional and policy decisions” (p. 15).	4 out 7	+	+	+	-	+

Table 3

Antecedents of Connectedness

Antecedents	Sources
Consistent interactions with people who exhibit behaviors that are supportive and affectionate	Barber & Schulterman (2008) Grossman & Bulle (2006) Heifner (1993) Huiberts <i>et al.</i> (2006) Karcher (2005) Karcher & Lee (2002) Lee & Robbins (1998) Lee <i>et al.</i> (2001) Liu <i>et al.</i> (2005) Miner-Williams (2007) Resnick <i>et al.</i> (1993) Resnick <i>et al.</i> (1997) Rew (2002) Schubert & Lionberger (1995) Shochet <i>et al.</i> (2006) Waters (2009)
Desire or need to connect	Heifner (1993) Karcher (2005) Karcher & Lee (2002) Lee & Robbins (1998) Lee <i>et al.</i> (2001) Miner-Williams (2007) Resnick <i>et al.</i> (1993) Resnick <i>et al.</i> (1997) Schubert & Lionberger (1995) Townsend & McWhirter (2005)
Recognition of sharing similar experiences, characteristics, interests, or beliefs	Edwards <i>et al.</i> (2006) Grossman & Bulle (2006) Huiberts <i>et al.</i> (2006) Leidy & Haase (1999) Liu <i>et al.</i> (2005)

Table 4

Consequences of Connectedness

Consequences	Sources
Higher self-esteem	Grotevant & Copper (1986) Grotevant & Copper (1998) Karcher (2005) Lee & Robbins (1998) Lee <i>et al.</i> (2001) Waters (2009)
Enhanced psychosocial/emotional adjustment	Gavazzi & Sabatelli (1990) Lee & Robbins (1998) Lee <i>et al.</i> (2001) Miner-Williams (2007) Ong & Allaire (2005) Person <i>et al.</i> (2007) Resnick <i>et al.</i> (1993) Resnick <i>et al.</i> (1997) Rew (2002) Shochet <i>et al.</i> (2006) Waters (2009)
Adaptive interpersonal skills	Clark & Ladd (2000) Grotevant & Copper (1986) Grotevant & Copper (1998) Gavazzi & Sabatelli (1990) Grossman & Bulle (2006) Lee & Robbins (1998) Lee <i>et al.</i> (2001)
Improved health status and well-being	Leidy & Haase (1999) Ong & Allaire (2005) Rew (2002) Waters (2009)
Higher academic achievement and/or engagement	Grossman & Bulle (2006) Karcher (2005) Waters (2009)
Diminished risk-taking behaviors	Barber & Schluterman (2008) Grossman & Bulle (2006) Resnick <i>et al.</i> (1993) Resnick <i>et al.</i> (1997) Waters (2009)