

Developing a Model of Social Capital Relationships in Primary Care

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We have developed a model of social capital to enhance relationships within primary care practices that promote organizational success and improve patient care outcomes. The model extends the meaning and the value of social capital by providing dimensions, attributes, and operational definitions that can be used to measure outcomes and guidelines to develop future interventions. Our model brings new insight and logic to understanding relationships to create resources to improve primary care practices. Furthermore, our model provides a preliminary focus on the value of integrating registered nurses into the work of primary care practices and as facilitators of social capital. **Key words:** *complex adaptive systems, model development, nursing leadership, primary care, relationships, social capital*

SOcial scientists have used the concept of social capital to highlight the pivotal nature of relationships. The idea that relationships are essential for the success of any human system dates to the origins of sociology as a distinct discipline and the work of Durkheim¹ and Marx.² A simple definition of *social capital* is “the resources from relationships.”³ Rather than focusing on re-

lationships, current strategies for improving productivity and quality in healthcare settings often emphasize individual role development and job descriptions.^{4–6} Although specialization is important, high-quality interactions and relationships are needed to ensure that healthcare organizations can fully utilize the specialized skills of all members of healthcare organizations. Previously, the concept *social capital* has not been used to understand interactions between and among members of healthcare organizations such as nurses and physicians.

In contrast, the value of relationships among individuals who work in healthcare settings is captured in the recent literature suggesting that healthcare organizations are complex adaptive systems (CAS). In the CAS, the members have diverse backgrounds and knowledge, a high degree of information asymmetry, and a need to share information to contribute to their system's success. In a CAS, relationships are as important to the system's success as the qualifications and capacities of the individuals themselves.^{7,8} Primary care practices are CAS that address health promotion, disease prevention, and chronic illness care, and they constitute a large segment

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of the primary healthcare system.⁹ Their success is of great importance to society's health and well-being.

In this article, the further development of a model¹⁰ of social capital is based on a concept that was first identified and analyzed by Bourdieu.¹¹ The goal is to provide a guide for enhancing relationships within primary care practices to promote organizational success and improve patient care outcomes. The literature on change and improvement in primary care typically identifies the physician as the locus for practice improvement and often does not address the importance of the participation of nurses and other practice members.¹²⁻¹⁴ Where the primary care literature does address nursing, the focus is on nurse practitioners whose roles are well-defined in primary care practices and include intense individual patient-nurse interactions.¹⁵⁻¹⁷ The role of the registered nurse (RN), however, has been typically ill-defined, and RNs are underutilized. They are often treated as part of the "office staff" rather than as professionals, a designation that disregards their level of education and clinical expertise. Therefore, they are an untapped resource. Since RNs have already been educated in group dynamics and human behavior, a short course of the development of social capital should enable them to become the facilitators of the development of practicewide social capital that can then be used to make changes to improve primary care practices.

The organizational and management theorists Nahapiet and Ghoshal¹⁰ identified 3 dimensions of social capital with attributes associated with each dimension. To facilitate the usefulness of this model to better understand and to improve relationships in practice settings, we used the work of social and political scientists to select those attributes identified by Nahapiet and Ghoshal that are most congruent with the literature on CAS. The result of this work is a refined model that focuses on specific behaviors and processes associated with social capital in a primary care setting. The model is used to analyze qualitative data from a primary care practice to:

(1) create operational definitions for each social capital attribute and (2) demonstrate the usefulness of the model for understanding relationships among nurses, physicians, and other practice members. The exemplar practice was selected to show how high-quality relationships promote the integration of the knowledge and skills of an RN to improve practice performance and, ultimately, patient care outcomes.

BACKGROUND

The term *social capital* initially appeared in community studies, highlighting the central importance for the survival and functioning of city neighborhoods, of networks of strong, crosscutting relationships that develop over time, and facilitate collective action.¹⁸ Bourdieu,¹¹ the French social theorist, is credited by many with the first systematic contemporary analysis of social capital. He defined *social capital* as the sum of the actual and potential resources derived from the network of relationships possessed by a social unit. Networks of mutual recognition and acquaintance are a valuable resource for conducting social affairs. Social capital provides the members of a network with a type of "credit" that they can tap when needed. This credit takes the form of obligations arising from feelings of gratitude, respect, and friendship, or from the institutionally guaranteed rights derived from membership in a family, a class, or a school.^{11(p249)} Social capital thus comprises both the network and the assets that may be mobilized by individuals through that network.

Since the work of Bourdieu, social capital has been applied to many social phenomena¹⁹⁻²² to explore the effect of social capital in various human systems. One of the outcomes has been confusion about its actual meaning. While some social scientists struggle to define the concept theoretically, others have debated how to measure it in different settings and at various levels. For example, it has been used to analyze relationships

at the level of the individual, the group, the formal organization, the community, and the nation. In response to this, Putnam²³ argued that a high research priority was to clarify the different dimensions of social capital to incorporate the complexity of the concept. Following this, the organizational and management theorists Nahapiet and Ghoshal¹⁰ identified the dimensions of social capital and the many attributes associated with each dimension.

A review of the organization and management literature suggests that theorists have embraced social capital because theoretically organizations with high social capital should function more efficiently and, therefore, have an economic advantage, over organizations with low social capital.²⁴⁻²⁷ Therefore, the theorists Nahapiet and Ghoshal¹⁰ developed a framework to explain the development of social capital and its contribution to the success of numerous businesses. Their contribution to the literature was to identify 2 dimensions of social capital that occur between and among individuals or subgroups within an organization which can develop into a third dimension of social capital at the organizational level. This model explains the connection between the quality of relationships existing among individuals or subgroups and the success of an organization.

Nahapiet and Ghoshal¹⁰ hypothesized that there are *structural*, *relational*, and *cognitive* dimensions of social capital. *Structural* social capital is defined as the different types of linkages among organizational members. More specifically, some members are close and connected, while others may be separated by physical barriers such as distance and/or conceptual barriers such as levels of hierarchy. *Relational* social capital describes the substance of interactions, such as cooperating and reciprocating. Structural social capital evolves with relational social capital, resulting in *cognitive* social capital or a shared knowledge and understanding among organization members. Cognitive social capital influences institutional behavior and enhances organizational capacity.

We refined this model by using the literature on social capital and CAS to select the attributes of practice interactions that most closely reflect the meaning of each dimension of social capital. We then used this refined model to describe interactions among individuals in primary care practice organizations (such as nurses, physicians, and other primary care practice members). The result is a model that offers a better understanding of the value of relationships in healthcare organizations, such as primary care practices, to ultimately improve patient care outcomes.

MODEL DEVELOPMENT OF SOCIAL CAPITAL

The model of social capital that we constructed (Figure 1) was designed using levels of abstraction and terminology consistent with the literature on social capital. The model moves from the conceptual level to the theoretical and finally to the empirical. The most abstract and general ideas are at the conceptual level, identified here as a model of social capital. For the purposes of our work, we used the term *dimensions* as the level that comes directly under the conceptual level. This term was identified by Nahapiet and Ghoshal and includes structural, relational, and cognitive dimensions. The next level of abstraction is at the theoretical level and includes attributes hypothesized to cluster around each dimension. The attributes were selected from Nahapiet and Ghoshal's work as well as from the sociological, political science, and CAS literatures. At the empirical level, operational definitions for each of the attributes were derived from the integration of these literatures and from elements found in the exemplar case. According to Walker and Avant,²⁸ an exemplar provides empirical evidence of aspects of the model.

DIMENSIONS AND RELATED ATTRIBUTES OF SOCIAL CAPITAL

The following discussion presents the 3 dimensions of social capital and their associated

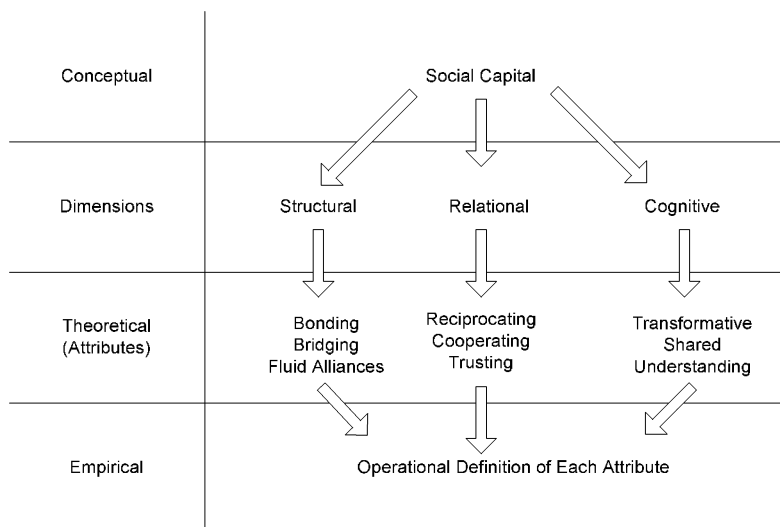


Figure 1. Model of social capital

attributes. These dimensions are highly related, and the distinctions among them are for analytical and research purposes.

Structural social capital

Structural social capital is a dimension that concerns the properties of a network of relations as a whole.^{29,30} According to Nahapiet and Ghoshal, 2 of the most important features of networks or linkages are captured by the terms *connectivity* and *hierarchy*. In contrast, *bonding* and *bridging* are compatible with the ideas of connectivity and hierarchy, and, we believe, are better descriptors for operationalizing structural social capital. Sociologists Gittel and Vidal³¹ originally coined these terms while describing the emergence of social capital in community organizations. Therefore, bonding and bridging are used to describe 2 different types of structural social capital in a primary care practice setting.

Bonding

The idea of *bonding* captures the essence of the connectivity between individuals in an organization. Bonding linkages reinforce exclusive and homogenous groups and are ex-

emplified within fraternal organizations such as Sigma Theta Tau or the International Network for Doctoral Education in Nursing. The homogeneity of these relationships can provide comfort and support for individuals.

Bridging

Bridging, a more complex and dynamic attribute than *bonding*, incorporates interactions among groups with different knowledge. While bonding is based on connections among individuals with similar positions and functions (eg, nurses to nurses or receptionists to receptionists), bridging networks are linkages among individuals with different positions and functions such as nurses to physicians or nurses to receptionists. Bridging requires a skill that may be more difficult to master than bonding since often individuals are more comfortable with those who are similar to themselves.

Granovetter³² referred to a form of bridging social capital when he discussed the importance of “weak” ties when seeking a job. He suggested that the weak ties (bridging linkages) that connect individuals to distant acquaintances are more valuable than strong ties (bonding linkages) because weak ties connect

people to external assets and information not available in one's own niche, as compared to bonds, which reinforce assets and information that one already possesses. The idea of bridging has also been ascribed to the historical success of certain regions of Italy that were structured horizontally (bridging).³³ The different members of these societies were connected not only within their own social-economic groups (bonding) but also across the various socioeconomic groups (bridging) of their regions.

The flow of information between individuals at different levels of a system or society is an example of bridging. Among members of an organization, bridging may contribute to information flow and organizational success. As organizational members at various levels contribute their perspectives and knowledge about patient care, the picture becomes more comprehensive and accurate. Furthermore, it is not the sharing of information alone that occurs during "bridging" but more importantly the development of the meaning of information.²² Diverse individuals, such as nurses and physicians, may interpret experiences and data differently on the basis of their educational backgrounds. For example, many physicians rely on a biomedical model to make patient care decisions, whereas nurses often base their care for patients on a more holistic perspective. Consequently, bridging between nurses and physicians may lead to a more comprehensive and accurate understanding of ways to improve patient care in a practice than a perspective based solely on the perspective of either nurses or physicians alone.

Furthermore, we hypothesize that both bonding and bridging are the precursors to fluid alliances.

Fluid alliances

The term *fluid alliances* has neither been used by Nahapiet and Ghoshal, nor is it included in the literature on social capital. We derived "fluid alliances" from the literature on CAS, which is based on the concept of self-

organization.⁸ Self-organization occurs when individuals from all levels have the opportunity to initiate and develop linkages to accomplish their work. Fluid alliances are a more refined form of self-organization and occur when opportunities for specific linkages (bonding and bridging) are facilitated. Fluid alliances are evidenced when relationships are adaptable to the extent that an individual's title and role, as well as previous bonding and bridging, do not limit the formation of new bonds and bridges that support high performance.

Relational social capital

While bonding, bridging, and fluid alliances describe the structural dimension of social capital, Nahapiet and Ghoshal describe relational social capital as the quality or substance of interactions. Within the dimension of relational social capital, Nahapiet and Ghoshal cited many attributes. We selected 3 attributes: reciprocating,^{19,34,35} cooperating,³⁶ and trusting^{33,37} because they are the most frequently cited attributes in the social capital literature.

Reciprocating

Putnam²² developed the notion that *reciprocating* is a valuable ingredient of social capital and is fostered by civic engagement such as voter turnout. A society that relies on reciprocating is efficient, just as money is more efficient than barter. On the basis of the representation of reciprocity as civic participation, Bolino³⁸ theorized that behaviors that are analogous with good citizenship in the larger society are efficient and effective in the work setting. Reciprocating in an organization goes beyond job requirements, is voluntary in nature, is not recognized by formal reward systems, and facilitates organizational functioning.³⁹⁻⁴¹ Reciprocating allows for greater "credit risk" to be extended. An example of this may occur when someone thinks, "I'm more willing to extend a favor such as occasionally driving another person to

and from work because I know that ultimately someone in the organization will return the favor and perhaps cover for me for a day if I need to stay home with a sick child."^{22(p65)}

Cooperating

According to Prescott and Bowen,^{42(p131)} *cooperating* is defined as "an association with another for mutual benefit." According to Putnam, "networks of civic engagement embody past success and provide a historical repertoire of forms of cooperation that having proved their worth in the past, are available for new problems of collective action."³³ Cooperating and reciprocating are considered precursors of more complicated experiences such as "trusting."¹⁰

Trusting

Trusting is the "belief and reliance on the honesty, integrity, and reliability of others."^{37(p72)} Pg Trusting develops in an environment where behavioral norms are rewarded, such as reciprocating and cooperating, and where fairness is consistent.^{19,43} Trusting is one of the most prominent features of social capital and is highlighted across the social capital literature. We describe it as the result of cooperating and reciprocating over time.

Cognitive social capital

The dimension of cognitive social capital is the shared system of representation and meaning among the members of an organization.⁴⁴ The presence of structural and relational social capital, as it reflects individual behaviors, has implications for the development of cognitive social capital, which may occur across a system.

Transformative shared understandings

We use the term *transformative shared understanding*⁸ as the culmination of bonding, bridging, fluid alliances, reciprocating, cooperating, and trusting. The term is defined

as the changes that occur among individuals on the basis of the development of their mutual knowledge, beliefs, and assumptions that they use to meet daily challenges. This process should not be interpreted as the emergence of "group think." Members of an organization can hold different information and may not have the same opinions; transformative shared understanding is the result of the modification of various perspectives that contribute to a larger more representative understanding that leads to creative and well-informed ways of addressing organizational challenges.

SUMMARY

Because healthcare organizations are CAS, they need to develop social capital to succeed. Before that can be done, a model of social capital must be available to direct the development of resources from successful relationships. We have used the work of Nahapiet and Ghoshal as well as our own extrapolation to structure a model of social capital through levels of model development. The outcome of this effort has been to identify the dimensions and related attributes of social capital. The following exemplar case provides empirical data, suggesting further refinement to the attributes selected from the preceding literature.

Exemplar case: A primary care practice

An important part of model development is the use of an exemplar case that comes from the "real world" and extends the understanding of definitions and attributes. Our exemplar case is based on data collected from a single practice that was part of a large study funded by National Heart Lung and Blood Institute (R01 HL70800A-PI-Crabtree). The data for the larger study were not collected to study social capital; however, the depth and richness of the data set made it possible to do a secondary data analysis. The following practice was selected for the high degree of social capital evidenced between the nurse

and other members of the practice. In-depth information about the practice included (1) observational field notes of the practice environment; (2) notes from key informant interviews that were used to validate observations; (3) field notes and tape recordings of depth interviews with practice members; (4) notes from practice meetings; and (5) reflections of the field researcher who collected the data for the purpose of confirming interpretations. We have changed some descriptions of the practice to maintain its anonymity.

Practice A is located in a suburban area. The practice members include 1 full-time lead physician, 5 half-time physicians, an office manager, 1 RN, 2 medical assistants, and 2 receptionists. The infrastructure of the practice suggested that the relationships were loosely organized around functional areas, viz, physicians-providers, clinical support (nurse and medical assistants), office manager, and administrative support staff (receptionists, billing, and referrals clerks). An important aspect of Practice A's philosophy is its emphasis on teamwork and the value of every member's contributions. The lead physician's introductory remarks included references to quality care that patients received ("the best care we all can offer together"). The practice members had regular opportunities for sharing ideas at weekly 2-hour staff meetings. Regular office hours were suspended at that time so that all staff could participate.

The following stories, "the flow chart experiment" and "solving specimen confusion," were taken from the qualitative data. They represent 2 examples of the ways that social capital was manifested by practice members who cooperated to meet a challenge that interfered with workflow and performance.

The flowchart experiment

During a weekly meeting, staff members discussed how they could be more efficient in handling test results and communicating about them with patients. Everyone admitted that the current process was problematic. One physician suggested making a diagram of

the present process to help understand it better; his idea was seconded by the nurse who had used a similar approach in nursing school, where she had mapped out the clinical experience of an emergency department patient.

The physician, the office manager, and the nurse formed an *ad hoc* group to collect data for 2 weeks on the process of handling test results. Over the next 2 weeks, the *ad hoc* group members created a chart tracking this process. At the weekly meeting, the office manager presented the findings, and the nurse and physician made changes to the chart based on the group's suggestions. One of the receptionists, who had been quiet during the presentation, offered valuable suggestions when prompted by the nurse to speak. By the end of the meeting, the group agreed that the chart accurately represented their current situation.

The staff decided that there were too many steps between specimen collection and patient notification, and they discussed possible solutions. The nurse suggested that the current schedule—in which the nurse and medical assistants were assigned to a physician and then rotated daily—was inefficient. Although the patients saw the same physician each time, referrals, test results, and other individual patient needs were transferred among the nurse and medical assistants on a daily basis.

This alternating schedule had originally been adopted to ease the pressure on the clinical staff. The lead physician's schedule was more heavily booked than that of the other physicians, and her patients tended to be sicker than the patients seen by the part-time physicians. Thus, working for the lead physician entailed more complex responsibilities. The nurse and medical assistants took turns sharing these responsibilities and worked hard to keep each other informed about the patients. When laboratory results from one of their patients came in a day or 2 after their assignment with the lead physician, the staff member would (if appropriate) call the patient with results, regardless of whom they were working for on that day. Moreover, the nurse and medical assistants

often stayed late to help each other with these tasks. Although they responded with good humor to the situation, they also expressed concern about the amount of time spent updating each other about information, such as laboratory test results, to be shared with patients.

As staff discussed ways to improve efficiency, the nurse suggested that she and the lead physician work together as a stable pair for 1 month to determine whether that could reduce the handoffs involved with patient laboratories, tests, and other information. This made sense to the group, including the medical assistants, as the nurse's skills would be well suited for the needs of the lead physician's patients. Staff also agreed that a month would be a sufficient amount of time to evaluate the results. The nurse offered to keep a diary about the physician-nurse experience, and one of the medical assistants volunteered to keep a record of other practice care processes that might be affected. Another physician offered to transfer data from the flowchart to a computer program to create a permanent record of this experiment.

A month later, the group analyzed the data that were collected and decided that the experiment was successful. The success was attributed to the capacity of the nurse-physician pair to work as a long-term team caring for the same group of patients. On the basis of this outcome, the lead physician along with the practice members decided to hire 2 new nurses and create "care team trios" (a nurse teamed with 2 part-time physicians). The medical assistants would continue to work in the practice assisting the nurses.

Solving specimen confusion

Later that same month, one of the medical assistants approached the nurse during a busy afternoon with a suggestion for solving confusion that had been occurring around specimen collection. The medical assistant handed the nurse a diagram of colored specimen collection containers to be used in the office. Since the practice used 2 different laborato-

ries to process patient specimens, there were 2 kinds of containers for each test. The nurse had made 2 mistakes over the previous weeks by sending high-priority specimens to the laboratories in the wrong containers. After reviewing the diagram, the nurse seemed genuinely pleased and thanked the assistant. The nurse then put the chart in a plastic sleeve to protect it and took it to show other staff members standing nearby. One of the physicians immediately tacked the chart to the wall near the specimen containers. The other practice members offered their congratulations and teased the medical assistant in a good-natured way about her artistic talent. Two of the physicians admitted that they had also made mistakes collecting specimens in the wrong containers.

THE ANALYSIS

The 2 brief stories recounted here contain instances where social capital can be observed in action. We argue that there are specific qualities in the interactions and relationships among practice members that are evidence of the connection and social support that they share. The data reveal moments where bonding, bridging, reciprocating, cooperating, fluid alliances, trusting, and transformative shared understanding resulted in stable, dynamic connections among different practice members. These connections are stable because practice members have "banked" them as part of their relationship resources built over time and through the experience of working together. At the same time, these qualities are dynamic because they emerge in different configurations, between and among different individuals as the need arises. *Ad hoc* pairs and trios are formed on the basis of the tasks at hand.

The examples in the next section explain how we see different attributes of social capital emerging from the flowchart experiment and the specimen confusion resolution. Table 1 includes the final operational definition of each social capital attribute based on a

Table 1. Operational definitions that emerge from the analysis

Bonding	Connecting on the basis of similarity of everyday purpose of task, shared physical and occupational space, as well as familiarity
Bridging	Connecting that supports information sharing and resource flow between or among individuals who normally share different occupational and physical space in an organization and have different educational backgrounds and responsibilities
Fluid alliances	Regrouping based on task and changing conditions, shared leadership not confined to title and role, emergent, not predictable, dependent on knowing the value of all individuals within the work environment
Reciprocating	An exchange, not necessarily task oriented, not requiring equal value [not barter, not negotiated]
Cooperating	Task oriented, pulling together, actions that reflect 2 or more individuals working on an immediate task together
Trusting	Expressed, inferred by discussion or behavior-corrective action conducted with the assumption that the group will accept the spirit of the corrective action, which is to improve the practice
Transformative shared understandings	Development of a newly expanded group awareness based on the input of perspectives from all members regardless of educational background

combination of the literature and the empirical evidence from the exemplar case.

Bonding

The structural connection of bonding was demonstrated in both stories by the nurse and the medical assistants. Their connections were based on their responsibilities of caring for patients and supporting the physicians. Moreover, these clinical staff members displayed affection toward one another and had access to similar practice and patient information. Their work together in a high-demand primary care setting was both successful and complementary as they connected both verbally and nonverbally over their daily work.

Bridging

The structural component of bridging can be seen in the problem-solving teamwork of the physician, nurse, and office manager who brought together different perspectives and experiences by creating the flowchart as a way of creatively teasing apart a problem. The idea of the lead physician working with the nurse exclusively over time is another ex-

ample of bridging. The nurse's background, which is different from the physician's, fostered a broader and more comprehensive approach to patient care than would have been possible if the lead physician worked alone.

These examples show how bonding and bridging support different processes in a complex practice system. Both are vital to a practice's effectiveness.

Fluid alliances

The fluidity of leadership as an emergent process, based on the person with the necessary information to solve a problem, is a hallmark of CAS. The spontaneity of the group's decision to experiment with a nurse-physician pair replaced the ever-changing physician-nurse-medical assistant groupings. This alteration reflected the flexibility of linkages.

Reciprocating

The attribute of reciprocating was demonstrated through several instances during the practice-wide meeting: (1) the medical assistant volunteered to take notes during the

experiment to support the work of the nurse-physician pair, and (2) the nurse included the medical assistant in the presentation.

Cooperating

The attribute of cooperating was demonstrated in the actions of the medical assistants and the nurse. When one was busier than the others, they would all stay late to get the work done. Moreover, the shared responsibility of calling patients with laboratory results also shows ways that the nurse and medical assistant cooperated in delivering patient care.

Trusting

The attribute of trusting was demonstrated by the action of the medical assistant who drew the diagram of the specimen containers. The motivation for making the diagram represented a corrective action that could have been perceived as threatening to the nurse. Instead, the nurse shared the drawing with other members of the practice, including the physicians. This suggests that the medical assistant trusted that the corrective action would be perceived by the nurse as an effort to improve practice performance rather than to place blame. The acknowledgment by the physicians that they too had made errors when selecting specimen containers also represented trusting. Admitting a mistake makes one vulnerable, and trusting makes the admission more likely followed by the improvement of practice processes.

Transformative shared understandings

The attribute of transformative shared understandings was demonstrated when all members of the group came to an agreement that the nurse-physician stable pair experiment was a success. The decision that a success had occurred and warranted further action was based on the ideas and perspectives of all members of the practice. Also, the group response in which the medical assistant's diagram was adopted and displayed was based on the shared understandings of a number of practice members.

IMPLICATIONS FOR NURSING IN PRIMARY CARE PRACTICES

In this article, we have developed and operationalized a model of social capital. The model extends the meaning and the value of social capital by providing dimensions, attributes, and operational definitions that can be used to measure outcomes and guidelines for the development of future interventions. We analyzed a primary care practice as an exemplar using the social capital model while simultaneously enhancing our ability to understand emergent self-organization within CAS. Our model brings new insight and logic to the understanding of relationships to create resources to improve primary care practices. Furthermore, our model provides a preliminary focus on the importance of integrating RNs into the work of primary care practices and as facilitators of social capital.

The implications for research using the social capital model include monitoring and evaluating elements of practice performance that might not be otherwise identified. For example, previous conceptualizations of practice improvement focused on individual clinicians as the sole decision makers. The new model encourages monitoring the quality of bonding, bridging, fluid alliances, reciprocating, and cooperating, trusting, and transformative shared understandings among members of primary care practices. The model also suggests the value of an exploratory study in which interventions are utilized by the RNs to encourage the development of the social capital attributes to improve primary care practice performance and patient care outcomes.

LIMITATIONS

The exemplar case was selected from a number of primary care practice data sets based on its comparatively rich descriptions of positive examples of social capital. The data were from a large study and were originally

not collected to explore social capital. Therefore, this is a secondary data analysis, which may have limited the complexity and depth of the analysis.

Second, our model is based on the development of social capital in primary practices in the United States, where the majority of primary care practices care for patients with private insurance. In countries with socialized medicine, or universal health coverage, the model of social capital might be different if features of practices that impact relationships are different from those in the United States. On the other hand, there are practices in the United States that take Medicare and Medicaid; it might be instructive to see how or if social capital can be developed there, and how the pressure of having a much higher number of patients affects relationships among staff.

CONCLUSION

Traditional primary care practice research focused on the expansion of the role of the physician as a leader and decision maker. This social capital model sensitizes individuals to the benefits of asking for mutual support and the benefits of obtaining it. Our model can be a framework in which primary care practice nurses facilitate the development of social capital among all practice members by basing interventions on the operationalized definitions of the attributes bonding, bridging, fluid alliances, reciprocating, cooperating, trusting, and transformative shared understandings. Such a model will guide nurses to foster interdependencies among practice members because the quality of care in primary care practices is a function of the quality of social capital among practice members.

REFERENCES

1. Durkheim E. *The Division of Labor in Society*. New York: Free Press; 1893.
2. Marx K. *Capital*. Vol 3. New York: International; 1894.
3. Fukuyama F. Social capital and the modern capitalist economy: creating a high trust work place. *Stern Bus Mag*. 1997;4(1):4-17.
4. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *JAMA*. 2002;288(14):1775-1779.
5. Wagner EH, Austin BT, Von Korff M. Organizing care for patients with chronic illness. *Milbank Q*. 1996;74(4):511-544.
6. Wagner EH, Glasgow RE, Davis C, et al. Quality improvement in chronic illness care: a collaborative approach. *Jt Comm J Qual Improv*. 2001;27(2):63-80.
7. Ashmos D, Duchon D, McDaniel R. Organizational responses to complexity: the effect on organizational performance. *J Organ Change Manag*. 2000;13(6):577-594.
8. McDaniel R, Driebe D. Complexity science and health care management. *Adv Health Care Manag*. 2001;2:11-36.
9. Graham R, Roberts R, Ostergaard D, Kahn N, Pugno P, Green L. Family practice in the United States: a status report. *JAMA*. 2002;288:1097-1101.
10. Nahapiet J, Ghoshal S. Social capital, intellectual capital, and the organizational advantage. *Acad Manag Rev*. 1998;23(2):242-266.
11. Bourdieu P. The forms of capital. In: Richardson J, ed. *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood; 1986:241-258.
12. Gask L. Powerlessness, control, and complexity: the experience of family physicians in a group model HMO. *Ann Fam Med*. 2004;2(2):150-155.
13. Miller W, McDaniel R, Crabtree B, Stange K. Practice jazz: understanding variation in family medicine practice using complexity science. *J Fam Pract*. 2001;50(10):872-878.
14. Oeffinger K, Mertens A, Hudson M, et al. Health care of young adult survivors of childhood cancer: a report from the childhood cancer survivor study. *Ann Fam Med*. 2004;2(1):61-70.
15. Martin J, Avant R, Bowman M, et al. The future of family medicine: a collaborative project of the family medicine community. *Ann Fam Med*. 2004;2(suppl 1):S3-32.
16. Munding M, Kane R, Lenz E, et al. Primary care outcomes in patients treated by nurse practitioners or physicians: a randomized trial. *JAMA*. 2000;283(1):59-68.
17. Roblin D, Becker E, Adams E, Howard D, Roberts M. Patient satisfaction with primary care: does type of practitioner matter? *Med Care*. 2004;42(6):579-590.
18. Jacobs J. *The Death and Life of Great American Cities*. London: Penguin Books; 1965.
19. Coleman J. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press; 1990.

20. De Souza Briggs X. Social capital and cities: Advice to change agents. *Natl Civic Rev.* 1997;86(2):111-117.
21. Lappe F, Du Bois P. Building social capital without looking back. *Natl Civic Rev.* 1997;86:119-128.
22. Putnam RD. *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon & Schuster; 2000.
23. Putnam RD. Bowling alone: America's declining social capital. *J Democracy.* 1995;6(1):65-78.
24. Hakansson H, Snehota I. *Developing Relationships in Business Networks.* London: Routledge; 1995.
25. Larkey L. Toward a theory of communicative interactions in culturally diverse workgroups. *Acad Manag Rev.* 1996;21(2):463-491.
26. Lazega E, Pattison P. Social Capital as social mechanisms and collective assets: the example of status auctions among colleagues. In: Lin N, Cook K, Burt R, eds. *Social Capital: Theory and Research.* New York: Aldine De Gruyter; 2001:185-208.
27. Liukkonen V, Virtanen P, Kivimäki M, Pentti J, Vahtera J. Social capital in working life and the health of employees. *Soc Sci Med.* 2004;59(12):2447-2458.
28. Walker L, Avant K. *Strategies for Theory Construction in Nursing.* 4th ed. Upper Saddle River, NJ: Pearson/Prentice-Hall; 2004.
29. Scott J. *Social Network Analysis: A Handbook.* London: Sage; 1991.
30. Wasserman S, Faust K. *Social Network Analysis: Methods and Applications.* Cambridge, England: Cambridge University Press; 1994.
31. Gittel RJ, Vidal A. *Community Organizing: Building Social Capital as a Development Strategy.* Thousand Oaks, CA: Sage; 1998.
32. Granovetter M. The strength of weak ties. *J Sociol.* 1973;78:1360-1380.
33. Putnam RD. *Making Democracy Work: Civic Traditions in Modern Italy.* Princeton, NJ: Princeton University Press; 1993.
34. Burt R. The contingent value of social capital. *Adm Sci Q.* 1997;42:339-365.
35. Granovetter M. Economic actions and social structure: the problem of embeddedness. *Am J Sociol.* 1985;91:481-510.
36. Axelrod R, Cohen D. *Harnessing Complexity: Organizational Implications of a Scientific Frontier.* New York: Free Press; 1999.
37. Fukuyama F. *Trust: The Social Virtues and the Creation of Prosperity.* New York: Free Press; 1995.
38. Bolino M, Turnley W, Bloodgood J. Citizenship behavior and the creation of social capital in organizations. *Acad Manag Rev.* 2002;27(4):505-522.
39. Organ D, Ryan K. A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Pers Psychol.* 1995;48:775-802.
40. Moorman R, Blakely G. Individualism-collectivism as an individual difference predictor organization citizenship behavior. *J Organ Behav.* 1995;16:127-142.
41. Podsakoff P, MacKenzie S, Paine J, Bachrach D. Organizational citizenship behaviors: a critical review of the theoretical and empirical literature and suggestions for future research. *J Manag.* 2000;26:513-563.
42. Prescott P, Bowen S. Physician-nurse relationships. *Ann Intern Med.* 1985;103(1):127-133.
43. Coleman J. Social capital and the creation of human capital. *Am J Sociol.* 1988 1988;94(suppl):S95-S120.
44. Cicourel A. *Cognitive sociology.* Harmondsworth, England: Penguin Books; 1973.