Hypothesized predictors of patient–physician trust and distrust in the elderly: implications for health and disease management

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Abstract: This study notes the differences between trust and distrust perceptions by the elderly as compared with younger populations. Given the importance of trust and distrust in compliance, changing behaviors, and forming partnerships for both health and disease management, it is necessary to be able to measure patient–doctor trust and distrust (PDTD). Following recent conceptualizations on trust and distrust as coexistent states, this study hypothesizes predictors of PDTD. We are proposing that these predictors form the basis for designing, developing and validating a PDTD scale (PDTDS). It is important to capture the trust–distrust perceptions of older patients as they confront the complexities and vulnerabilities of the modern healthcare delivery system. This is necessary if we are to design interventions to change behaviors of both the healthcare provider and the older patient.

Keywords: physician, trust–distrust, predictors, elderly

Introduction

Trust in the doctor and the healthcare system is important for patient satisfaction, compliance and partnership towards successful aging and better disease management. Williams (2001) defined trust as "one's willingness to rely on another's actions in a situation involving the risk of opportunism." Recent work on trust has increasingly focused on conceptualizations regarding distrust (Sitkin and Ross 1993; Bies and Tripp 1996; Sitkin and Stickel 1996). Distrust entails "the belief that a person's values or motives will lead one to approach all situations in an unacceptable way" (Sitkin and Ross 1993). Distrust is not mistrust or no-trust, the contradictory notion of trust. Distrust is a qualified conditional trust in doctors and/or the healthcare delivery system on the part of the patient. The latter may be burdened by cost, beset by anxiety, having to cope with difficulties of navigating the managed care system, and confused by the complexities of modern medicine. In the midst of such a multifaceted healthcare delivery system, positive and legitimate distrust can co-exist with positive trust during patient–physician encounters. This area of positive distrust has received minimal attention in the medical literature (McGary 1999; Goold 2002; Rose et al 2004), when compared with the numerous studies relating to patient–physician trust (Thom and Campbell 1997; Kao, Green, David, et al 1998; Kao, Green, Zaslavsky, et al 1998; Safran et al 1998; Thom et al 1999; Leisen and Hyman 2001; Thom 2001; Hall et al 2002), that followed the sentinel work of Anderson and Dedrick's (1990) patient–physician trust scale. When it comes to the elderly, however, there appears to be a paucity of research on trust or distrust (Montgomery et al 2004; Moreno-John et al 2004; Trachtenberg et al 2005), despite the fact that the elderly account for over 30% in medical resource utilization as a group in the US. Moreover, with increasing

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longevity and the growing numbers of the elderly worldwide, the issue of patient–doctor trust and distrust (PDTD) in this group of patients clearly merits research. In this exploratory study we will focus on the concept of trust and distrust as perceived by a convenient sample of older patients with chronic diseases who had interacted with their doctors and healthcare delivery systems over a long period of time. We will then review the literature as it relates to the dynamics of trust–distrust in the day-to-day patient–doctor encounter and define a set of hypothesized predictors of PDTD. We hope these predictors will serve as a basis to develop a PDTD scale (PDTDS).

Importance of patient trust–distrust determinants

It is important to understand the concept of PDTD. We would therefore like to expound on the trust–distrust concept based on various theories of trust and distrust and accordingly, derive hypothesized predictors of trust–distrust. Traditionally, patients have relied on trust in medical professionals to minimize the stress and uncertainty associated with their illness. If in addition, patients have to worry about their physician's control, given the increasing strictures of managed care and the perceptions related to the trustworthiness of the Health Maintenance Organization (HMO), it may become a major factor in how patients trust their physicians (Gray 1997). In the last four to five years, state regulators have reported a 50% rise in complaints about HMOs by patients and physicians, particularly regarding healthcare service denials or delays, and most of these complaints reflect the public's increasing distrust of managed care rather than a true decline in quality healthcare (Mechanic and Rosenthal 1999). Obviously, increasing trust of patients in the entire healthcare delivery system, inclusive of managed care, is critical.

This trust–distrust bi-dimensional but mutually complementing perspective may provide a better and more insightful framework to understand the dynamics of patient–doctor trust-relations than those expressed in existing trust scales (Anderson and Dedrick 1990; Thom and Campbell 1997; Safran et al 1998; Leisen and Hyman 2001; Thom 2001; Hall et al 2002). Distrust is not mistrust, nor the opposite of trust, but a complimentary dimension that can enable doctors, nurses, managed care executives, and even governments who subsidize healthcare, to understand the specific and even positive role of distrust in patient–doctor trust. High levels of patient–doctor trust can coexist with high levels of patient–doctor distrust. Given the current complex US healthcare delivery system, patients are bound to experience high levels of trust and distrust with healthcare providers. Moreover, the perceived complexity, ambiguity, and vulnerability of healthcare delivery inputs, its processes and outcomes, and patient–physician encounters are bound to be a mix of high trust and distrust states that need to be carefully studied, predicted, and managed.

Measuring PDTD in older populations is important, especially, to better understand patient perceptions and design interventions to influence both doctor and patient behaviors. In chronic disease management, trust and distrust are important if patients are to adhere to care plans in partnership with their doctors.

Methodology

As an initial and experimental approach to the understanding of patient trust–distrust in doctors, we analyzed the results from an earlier study of patient trust in doctors where distrust was only a component of a scale that measured patient trust and satisfaction with doctors. This scale was administered to a convenient sample of 515 patients with chronic diseases. The scale (see Table 6) was designed to assess four major trust factors: Trust 1 (cooperation and caring attributes by doctors); Trust 2 (quality and hospital reputation); Trust 3 (patient's confidence in doctors); and Trust 4 (patient's distrust and fear in the healthcare delivery system).

Based on these preliminary results we undertook to investigate in depth the trust–distrust literature both in the management and the medical sociology fields and accordingly, derive a set of hypothesized predictors which we believe can be used as the basis for developing a PDTDS.

Results

Our preliminary study involved a mixed population of 200 breast cancer survivors, 174 hospitalized patients, and 141 ambulatory care patients. The demographics of the study population are presented in Table 1. We then compared the age–trust relationship and patient satisfaction (Figure 1). As observed in Figure 1, whereas the first three constructs of the trust instrument (Trust 1, Trust 2, and Trust 3) moved in tandem with patient satisfaction, the fourth component that measured trust–distrust (Trust 4) significantly departed from the other three trust components and the satisfaction construct. Additionally, when the patient data was classified into age-groups, elderly (aged 65 years and above) and younger (aged less than 65), there were significant

Table 1 Sample sociodemographics

Variables	Study 1	Study 2	Study 3	Entire study
Sample size	200 (100.0 %)	141 (100.0 %)	174 (100.0 %)	515 (100.0 %)
Gender				
Female	200 (100.0 %)	108 (76.6 %)	78 (44.8 %)	386 (75.0 %)
Male	0 (0.0 %)	33 (23.4 %)	96 (55.2 %)	129 (25.0 %)
Ethnicity				
African American	101 (50.5 %)	119 (84.4 %)	140 (80.5 %)	360 (69.9 %)
Caucasian	69 (34.5 %)	15 (10.6 %)	22 (12.6 %)	69 (20.6 %)
Others	30 (15.0 %)	7 (5.0 %)	12 (6.9 %)	49 (9.5 %)
Marital status				
Married	105 (52.5 %)	40 (28.4 %)	32 (18.4 %)	177 (34.4 %)
Separated/divorced	27 (13.5 %)	32 (22.7 %)	39 (22.4 %)	98 (19.0 %)
Widowed	50 (25.0 %)	38 (26.9 %)	18 (10.3 %)	106 (20.6 %)
Never married	18 (9.0 %)	31 (22.0 %)	85 (48.9 %)	134 (26.0 %)
Age (years)	58.5 ± 11.7	59.3 ± 18.2	50.5 ± 13.9	56.1 ± 14.9
Education (years)	13.0 ± 2.7	13.0 ± 3.0	11.3 ± 3.2	12.4 ± 3.1
Highest degree				
None	28 (30.4 %)	26 (18.4 %)	69 (39.7 %)	128 (23.9 %)
High School	36 (39.1 %)	76 (53.9 %)	96 (55.2 %)	208 (40.4 %)
Associate's	13 (14.1 %)	13 (9.2 %)	2 (1.1 %)	28 (5.4 %)
Bachelor's	13 (14.1 %)	18 (12.8 %)	5 (2.9 %)	36 (7.0 %)
Master's/Doctoral	2 (2.2 %)	8 (5.7 %)	2 (1.1 %)	2 (2.3 %)
Occupation				
Employed	131 (65.5 %)	92 (65.2 %)	72 (41.4 %)	295 (57.3 %)
Unemployed	69 (34.5 %)	49 (34.8 %)	102 (58.6 %)	220 (42.7 %)
Income (In $US)				
≤ $20 000	36 (40.0 %)	54 (42.5 %)	137 (80.6 %)	227 (44.1 %)
$20 001–60 000	30 (33.3 %)	61 (48.0 %)	27 (15.9 %)	118 (22.9 %)
$60 001–100 000	16 (17.8 %)	8 (6.3 %)	4 (2.3 %)	28 (5.4 %)
≥$100 000	8 (8.9 %)	4 (3.2 %)	2 (1.2 %)	14 (2.7 %)
Health insurance				
Insured	199 (99.5 %)	141 (100.0 %)	126 (72.4 %)	466 (90.5 %)
Uninsured	1 (0.5 %)	0 (0.0 %)	48 (27.6 %)	49 (9.5 %)

Note: Values are mean ± standard deviation or n and %. Percentages are derived from column totals and adjusted for missing data.

Table 2 Comparison between trust and satisfaction among elderly (age ≥65 years) and younger (age <65 years) groups

Variables	Younger group (Age <65 years) [n = 364]	Elderly group (Age ≥65 years) [n = 141]	t	p
Trust 1 (cooperation, caring, vulnerability)	4.62 ± 0.54	4.68 ± 0.53	-1.149	0.251
Trust 2 (quality & hospital reputation)	4.70 ± 0.55	4.81 ± 0.43	-1.976	0.049
Trust 3 (confidence)	4.48 ± 0.69	4.47 ± 0.70	0.159	0.874
Trust 4 (distrust & fear)	4.28 ± 0.90	4.03 ± 0.92	2.808	0.005
Total trust	4.52 ± 0.54	4.49 ± 0.47	0.523	0.601
Satisfaction	4.62 ± 0.64	4.69 ± 0.50	-1.199	0.231

Note: Values are mean ± standard deviation.

differences (p=0.005) in trust and distrust levels between the elderly and younger patients (Table 2). To further investigate and analyze this phenomenon, we chose the first sample of 200 female breast-cancer patients. In this sample, we studied two major groups: 101 African-American and 69 Caucasian patients. These results are provided in Table 3. As observed in Table 3, while the first trust components are statistically equivalent across both groups, the fourth component of trust–distrust shows significantly (p=0.028) higher levels of distrust among African-American patients. These results caused us to study the conceptual and theoretical foundations of patient trust–distrust and their determinants.

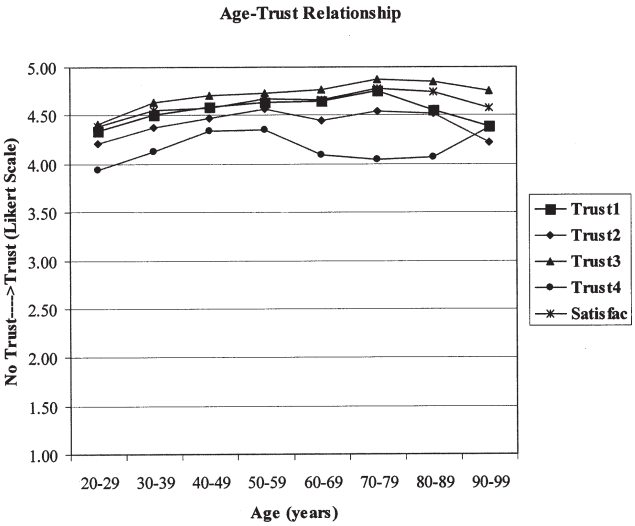

Figure 1 The relationship between age, trust (Trust 1 – cooperation, caring, and vulnerability; Trust 2 – quality and hospital reputation; Trust 3 – confidence; Trust 4 – distrust and fear) and patient satisfaction.

Conceptual and theoretical foundations of patient trust–distrust in doctors

While there is widespread agreement on the importance of trust–distrust in human conduct, there also appears a bewildering diversity in defining the construct of trust (Hosmer 1995). Trust researchers have developed different trust constructs in response to disparate sets of questions regarding social phenomena (Bigley and Pearce 1998). There has been remarkably little effort, however, to integrate these different perspectives (Lewicki and Bunker 1996; Bigley and Pearce 1998). The formidable variety in approaches to trust is largely a function of the diverse theoretical perspectives and research interests of scholars engaged in trust research (Lewicki and Bunker 1996). For instance, personality theorists view trust as an individual attribute or difference; sociologists and economists study trust as an institutional phenomenon or arrangement, and social psychologists conceptualize trust as behavior in a situational context: eg, an expectation of another party in a transaction (Sitkin and Ross 1993; Lewicki and Bunker 1996). Whereas earlier trust literature in the management field contrasts trust with distrust as polar opposites, later developments reveal a complimentary approach to trust and distrust. Trust and distrust are separate dimensions that can coexist and mutually reinforce each other. It is therefore necessary to review these two streams of literature for a better understanding of the concepts of trust and distrust. Table 4 summarizes the discussions to follow.

Trust and distrust as polar opposites

Psychological view of trust and distrust

The earliest views on trust reflect a psychological approach. Mellinger (1956) defined trust as an individual's confidence in another person's intentions and motives, and the sincerity of that person's word. Following this approach, Read (1962) argued that trusting individuals: (a) expect their interests to be protected and promoted by those they trust; (b) feel confident about disclosing negative personal information about themselves; (c) feel assured of full and frank information sharing; and (d) are prepared to overlook apparent breaches of trust relationship. Deutsch (1960) viewed trust as an individual's confidence in the intentions and capabilities of the trust partner and the belief that he or she would behave as hoped. Deutsch (1960) also viewed *distrust* as confidence about a relationship partner's undesirable behavior, stemming from the knowledge of his or her capabilities and intentions. Our first research hypothesis in this regard is:

Hypothesis 1: The higher the patients' sense that their interests are not being protected or promoted by doctors and nurses, the higher their distrust is with doctors and other healthcare providers.

Behavior theory of trust and distrust

Examining trust and distrust from a rational (predictive) choice perspective, behavior decision theorists define trust as co-operative conduct and distrust as nonco-operative conduct in a mixed-motive game situation, and see trust and distrust as polar opposites (Coleman 1990). Some earlier social psychological studies also considered trust and distrust as conflicting psychological states, and hence as unstable and transitory, and reckoned trust and distrust as opposing attributes (Lewis and Weigert 1985). Normatively, therefore, trust was viewed as something good, and distrust as something bad or as a psychological disorder. Distrust was considered to reflect psychological imbalance and inconsistency, both adverse conditions that must be avoided (Deutsch 1960). Our second research hypothesis in this regard is:

Hypothesis 2: The higher the patients' sense of nonco-operative conduct and conflicting interests on the part of doctors and nurses, the higher their distrust is with doctors and other healthcare providers.

Table 3 Characteristics of the female breast cancer patients (Study 1: n=170)

Variable	African-American (n=101)	Caucasian (n=69)	p value
Nr of patients	101 (59.4)	69 (40.6)	…….
Age (years)	60.0 ± 10.5	54.3 ± 10.7	0.001
Education (years)	12.1 ± 2.4	14.5 ± 2.6	0.001
Marital status			0.022
Never married	9 (9.7)	4 (8.7)	
Married	36 (44.4)	54 (71.7)	
Separated/divorced	21 (19.4)	4 (4.3)	
Widowed	35 (26.4)	7 (15.2)	
No. of children	3.2 ± 1.9	2.1 ± 1.4	0.001
Occupation			0.634
Unemployed	50 (92.0)	10 (100.0)	
Employed	4 (8.0)	17 (0.0)	
Annual household income (In $US)			0.001
Up to $20 000	33 (29.2)	2 (0.0)	
$20 001–40 000	17 (66.7)	3 (66.7)	
$40 001–60 000	2 (0.0)	4 (33.3)	
$60 001-80 000	0 (4.2)	6 (0.0)	
$80 001–100 000	0 (4.2)	5 (4.2)	
$100 000+	1 (4.2)	6 (4.2)	
Year of breast cancer diagnosis			0.298
1970–1993	18 (17.8)	6 (8.7)	
1994–2003	83 (82.2)	63 (91.3)	
Type of breast cancer treatment			0.184
None	13 (16.9)	1 (2.2)	
Chemotherapy	10 (11.3)	6 (11.1)	
Radiation therapy	3 (4.2)	3 (6.7)	
Tamoxifen (Nolvadex)	8 (9.9)	5 (11.1)	
Combination/other	67 (57.7)	54 (68.9)	
Type of breast cancer surgery			0.018
None	4 (5.6)	1 (2.2)	
Lumpectomy	43 (50.0)	31 (43.5)	
Mastectomy	46 (36.1)	20 (23.9)	
Mastectomy & breast reconstruction	5 (4.2)	14 (23.9)	
Combination/other	3 (4.2)	3 (6.5)	
Measures of trust & satisfaction			
Trust1 – cooperation, caring & vulnerability	4.7 ± 0.5	4.6 ± 0.4	0.328
Trust2 – quality & hospital reputation	4.6 ± 0.6	4.6 ± 0.6	0.976
Trust3 – confidence	4.8 ± 0.4	4.9 ± 0.3	0.181
Trust4 – distrust & fear	4.2 ± 1.0	4.5 ± 0.7	0.028
Total trust	4.6 ± 0.5	4.6 ± 0.4	0.400
Satisfaction	4.8 ± 0.5	4.8 ± 0.4	0.452

Personality dispositional view of trust and distrust

For personality researchers who view trust as an individual difference, trust and distrust exist at opposite ends of a single trust–distrust continuum (Rotter 1971). They are mutually exclusive and opposite conditions. In general, low trust expectations are indicative of high distrust from this point of view (Stack 1978; Tardy 1988). The central focus of these theories is how individuals develop their propensities to trust, and how these predilections affect their thoughts and actions regarding persons (Rotter 1967, 1971, 1980). According to these theories, factors exist within individuals that predispose them to trust or distrust others, especially when they do not know them. Rotter (1967, 1971, 1980) argues that trust is a stable belief based on individuals' extrapolations from their early life-experiences. Trust develops during childhood as

Table 4 A synthesis of theories and definitions of trust and distrust

Theory (Authors)	Approach	Definition of trust	Definition of distrust	Implications for patient–physician encounters
Table 4A: Trust and distrust as polar opposites				
Psychology (Meillinger 1956; Deutsch 1960; Read 1962)	Trust as an individual trait	Trust is one's confidence in another's positive intentions and promises.	Distrust is one's confidence about one's undesirable behavior.	Foster trusting and avoid distrusting confidence of patients.
Behavioral (Deutsch 1960; Lewis and Weigert 1985)	Trust as a rational predictive choice of a partner. Devoid of real social context, trust is a function of incentives.	Trust is cooperative conduct in a conflicting interpersonal encounter.	Distrust is a non-cooperative conduct in a mixed-motive game situation. Distrust is a psychological disorder.	Normatively, trust is good, distrust is bad. Nurture trust to solve intractable conflict situations and to promote effective collaboration.
Personality disposition (Rotter 1967, 1971; Stack 1978; Tardy 1988)	Trust is a personal pre-dispositional attribute	Trusting pre-dispositions indicate low expectations and cooperate better.	Distrusting predispositions indicate high expectations and cooperate less with the trusted.	Distrust is a psychological disorder that needs to be corrected. Trust–distrust transcends the social context.
Expectation (Rotter 1980; Zucker 1986; Gambetta 1988)	Trust as a generalized expectancy	Trust is a set of expectations that the trusted will behave in a helpful manner as expected by the trustor.	Distrust is a set of expectations that the trusted will not behave helpful as expected by the trustor.	Assure patients that you will act always in their interests, thus converting distrust to trust.
Table 4B: Trust and distrust as complimentary constructs				
Organizational psychology (Garfinkel 1963; Baier 1986; Lewis and Weigert 1985; Zucker 1986; Shapiro 1987)	Trust as an organizational phenomenon supported by institutional mechanisms.	Trust as believing in the institutional systems (normal situations and structural assurances) that support trust.	Distrust as believing in the institutional systems (abnormal situations and structural non-assurances) that support distrust.	Complexity, undesirability and vulnerability of modern healthcare outcomes can weaken situation normality and structural assurances that, in turn, could result in high distrust levels.
Sociology (Luhmann 1990; Lewicki et al 1998)	Trust–distrust as a mechanism for reducing social complexity and uncertainty.	Trust and distrust coexist as functional equivalents or substitutes for reducing social complexity.	Trust is a positive expectation of beneficial action; distrust is a positive expectation of injurious action.	Do not over-trust. Total, unconditional trust could be dangerous for managing social relations.
Social psychology (Cacioppo et al 1997; Lewicki et al 1998)	Trust–distrust as a continuum of a psychological state that is unstable and transitory.	Trust as positive-valent and distrust as negative-valent attitudes can coexist.	Trust involves confident positive expectations and distrust involves confident negative expectations regarding trusting partners.	Trust is a necessary ingredient for social order; hence, focus on nurturing trust. Be sensitive to sources of patient distrust and manage them carefully.
Interdependence (Sitkin and Ross 1993; Mayer et al 1995; Williams 2001)	Trust–distrust as interdependent behavioral expectations amidst complexity and vulnerability.	Trust is a function of one's dependence upon and vulnerability regarding the other party.	Distrust is also a function of one's dependence upon and vulnerability regarding the other party.	Trust–distrust investment should not be too high, or too low, but geared to meet all situations within the complexities and risks of modern healthcare systems.

an infant seeks and receives help from its benevolent caregiver. Children of trusting parents trust others more easily than children of distrusting parents, and children with trusting siblings are better predisposed to trust. The more novel, complex, and unfamiliar the situations, the more influence such predispositions bear on trusting (or distrusting) behavior. According to Hardin 1998. people with trusting dispositions co-operate better, whereas people with distrusting predispositions tend to avoid co-operative activities, fearing exploitations. The latter, have fewer positive interaction experiences that beget trust; the former have more and progressively increase their trust. In this sense, trust begets trust, and distrust perpetuates distrusting predilections.

Cognition-based trust researchers, however, would argue that trust relies on rapid, cognitive cues or first impressions, as opposed to personal dispositional characteristics of trust (Lewis and Weigert 1985; Meyerson et al 1996). Especially, during first new patient–doctor encounters, parties may have to develop trust based on initial cognitive cues and first impressions. In such situations, individuals may have to rely either on one's predispositions to trust or on institution-based trust-development cues. Our third research hypothesis in this regard is:

Hypothesis 3: The higher the patients' predispositions to distrust the complex, unfamiliar, and costly healthcare system, the higher their distrust is with doctors and other healthcare providers.

Expectation theory of trust and distrust

Expectation theory defines trust as "a generalized expectancy held by an individual that the word, promise, oral or written statement of another individual or group can be relied upon" (Rotter 1980). Trust is "a set of expectations shared by all those involved in an exchange" (Zucker 1986). Trust is based on an individual's expectations that others will behave in ways that are helpful or at least not harmful (Gambetta 1988). Zucker's (1986) definition of trust as a preconscious expectation suggests that vulnerability is only salient to trustors after a trustee has caused them harm. In reciprocal terms, distrust is understood as the expectation that others will not act in one's best interests, even engaging in potentially harmful behavior (Govier 1994). Our fourth research hypothesis in this regard is:

Hypothesis 4: The higher are the patients' expectations regarding doctors, nurses, hospitals and managed healthcare, the higher their distrust is with doctors and other healthcare providers.

Criticism of trust and distrust as polar opposites

Research within management literature has focused on trust primarily in terms of "rational prediction" (Lewis and Weigert 1985) wherein agents conceive distrust as a highly risky situation that must be reduced or avoided by rational choices that predict distrust. Such "predictive" accounts of trust "appear to eliminate what they say they describe", thus disregarding or removing core elements of trust (Lewis and Weigert 1985). Under this view, trust exists only in an uncertain and risky environment; that is, trust cannot exist in an environment of certainty (Bhattacharya et al 1998).

The expectation-approach views trust as a disposition that would be most predictive in situations where individuals are relatively unfamiliar with one another. Trust, in this tradition, is viewed as a calculated decision to cooperate with specific others, based on information about others' personal qualities and social constraints: a context that very much reflects the patient–doctor trust encounter situation. Under this view, trust reflects an aspect of predictability, that is, it is an expectation; it cannot exist without some possibility of error. That is, trust can exist with some distrust. For instance, when patients say they trust a doctor, they do not necessarily make a statement whether the doctor is good or bad; but they reflect the notion of trust as a prediction of the doctor's behavior in a given context (Bhattacharya et al 1998).

Table 4A summarizes various polar theories of trust and distrust. Key assumptions of these theories are: (a) trust and distrust are mutually exclusive and opposite unidimensional conditions; that is, trust and distrust are polar opposites; (b) trust is good and distrust is bad; (c) the social context of trust and distrust is either irrelevant or of low consequence (Lewicki et al 1998). Most of these models are "undersocialized" and omit the role of concrete personal and social relationships and structures of such relations.

The major problem for these divergent views on trust and distrust is that scholars (a) have given limited attention to the *role of social context* in trust and distrust research, and (b) have considered trust–distrust as a one-dimensional construct. In the latter case, scholars have considered interpersonal relationships within organization or exchange situations as one-dimensional, with a single dimension or component of relationship to determine the quality of the entire relationship (Lewicki et al 1998).

Trust and distrust as complimentary constructs

Trust and distrust are reciprocal terms. Both trust and distrust are separate but linked dimensions. They are not polar opposites on a single continuum such that low trust means high distrust and high trust means low distrust. Trust and distrust both entail certain expectations, but whereas trust expectations anticipate beneficial conduct from others, distrust expectations anticipate injurious conduct (Lewicki et al 1998). Both involve movements toward certainty: trust concerning expectations of things hoped for and distrust concerning expectations of things feared. Hence, both states can coexist (Priester and Petty 1996); they are functional equivalents (Luhmann 1990).

Organizational psychology theory of trust and distrust

Institution-based trust means that one believes the necessary impersonal structures are in place to enable one to act in anticipation of a successful future endeavor (Zucker 1986; Shapiro 1987). Zucker (1986) describes how certain specific institutional or social structures and arrangements generate trust. Institution-based distrust means that one believes the necessary impersonal structures are not in place. For instance, rational bureaucratic organizational forms could be trust-producing mechanisms for situations where the scale and scope of economic activity overwhelm interpersonal trust relations. Public auditing of firms, Securities and Exchange Commission (SEC) regulations, Federal Trade Commission (FTC) mandates and other government vigilance programs may increase customer trust in those companies. Institution-based trust researchers maintain that trust reflects the security one feels about a situation because of guarantees, safety nets, or other structures (Zucker 1986; Shapiro 1987). Thus, the safe and structured atmosphere of a classroom may enable students to develop high levels of initial trust (Lewis and Weigert 1985; Shapiro 1987). Tough screening and high professional experience levels of new recruits may help senior employees to trust then implicitly.

Trusting intention at the beginning of a relationship may be high because of institution-based trust stimulators. Institution-based trust literature speaks of two such stimulators: situation normality and structural assurances. *Situation-normality*: defined as the belief that successful interaction is likely because the situation is normal (Garfinkel 1963) or customary (Baier 1986), or that everything is in proper order (Lewis and Weigert 1985). *Structural assurances*: defined as the socially learned belief that successful interaction is likely because of such structural safeguards or contextual conditions as promises, contracts, regulations, legal recourse, and guarantees are in place. The current healthcare crisis as a result of lack of insurance, high prices of prescription drugs in the US and fragmentation of care are instances of breakdown of situation normality and structural assurances such that high levels of trust and distrust could coexist. A fifth researchable hypothesis in this regard is:

Hypothesis 5: The higher the patients' sense of situation abnormality and lack of structural assurances in modern health delivery system, the higher their distrust is with doctors and other healthcare providers.

Sociological theory of trust and distrust

Sociologists recognize the importance of trust and distrust as mechanisms for reducing social complexity and uncertainty, and, accordingly, view them as functional equivalents or substitutes. Luhmann (1990) argues that both trust and distrust function to allow rational actors to understand, contain, and manage social uncertainty and complexity, but they do so by different means. Trust reduces social complexity and uncertainty by disallowing undesirable conduct from consideration and replacing it with desirable conduct. Conversely, distrust functions to reduce social complexity and uncertainty by allowing undesirable conduct and by disallowing desirable conduct in considering alternatives in a given situation. In the latter case, distrust becomes a "positive expectation of injurious action" (Luhmann 1990). Distrust simplifies the social world, allowing the individual to move rationally to take protective action based on these positive expectations of harm. Social structures appear most stable where there is a healthy dose of both trust and distrust to generate a productive tension of confidence (Lewicki et al 1998). Luhmann (1990) even argues that "trust cannot exist apart from distrust, and trust cannot increase without increases in distrust. Increases in trust or distrust – apart from increases in the other – may do more harm than good." An over-trusted person can often exploit the over-trusting person. "Apart from a genuine openness to the possible necessity of distrust, benign and unconditional trust appears to be an extremely dangerous strategy for managing social relations" (Lewicki et al 1998). Our sixth research hypothesis in this connection is:

Hypothesis 6: The higher the patients' sense of social complexity and uncertainty brought about by undesirable behaviors of doctors, managed healthcare and other healthcare providers, the higher their distrust is with doctors and other healthcare providers.

Social psychology theory of trust and distrust

Human psychology functions in a social context. Hence, if the social context of an exchange situation or an organizational relationship is properly focused and fully brought into the social equation, then it is quite possible that an individual who trusts a partner on some attributes (eg, scientific knowledge, technical skill) may distrust that partner on other features (eg, social skills, ethical conduct, compassion skills), and both these states can coexist.

According to social psychologists (Cacioppo et al 1997), positive-valent and negative-valent attitudes can coexist, and thus, trust which involves confident positive expectations and distrust which implies confident negative expectations regarding trusting partners, can operate simultaneously in the same individual, although from different viewpoints (Lewicki et al 1998).

Watson and Tellegen (1985) noted that high positive affectivity (eg, active, strong, excited, enthusiastic, and elated) was not synonymous with low negative affectivity (eg, calm, relaxed, and placid). Similarly, low positive affectivity (eg, sleepy, dull, drowsy, and sluggish) was not synonymous with high negative affectivity (eg, distressed, scornful, hostile, fearful, nervous, and jittery). These and other studies (Cacioppo and Gardner 1993) clearly indicate that positive-valent and negative-valent constructs are separable. The two constructs may systematically and negatively correlate, but their antecedents and consequences may be separate and distinct (Cacioppo and Gardner 1993). The factors related to positive affect are distinct from those surrounding negative affect (Watson and Tellegen 1985). These considerations indicate that the bases of trust and distrust may be different and separable. That is, trust is not the opposite of distrust; there may not be a singular trust–distrust continuum. High trust may be opposed to low trust; and high distrust may be antithetical to low distrust. The two states, even though ambivalent, could coexist. Our seventh research hypothesis may be stated as follows:

Hypothesis 7: The higher the patients' level of negative-valent attitudes regarding doctors, nurses, hospitals, and managed healthcare, the higher their distrust is with doctors and other healthcare providers.

Interdependence theory of trust and distrust

Recent definitions of trust imply interdependent behavioral expectations. Thus, Hosmer (1995) defines trust as one party's optimistic expectations of the behavior of another, when the party must make a decision about how to act under conditions of vulnerability and dependence. According to Moorman and colleagues (1992) and Mishra (1996), vulnerability is an important constituent of trust. That is, in the absence of risk or vulnerability trust is not necessary, since outcomes are not of consequence to trustors. Sabel's definition of trust assumes vulnerability: "trust is the mutual confidence that no party to an exchange will exploit the other's vulnerability" (Sabel 1993). According to Mayer and colleagues (1995), vulnerability accompanies trust. They define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party." Zucker's (1986) definition of trust as a preconscious expectation suggests that vulnerability is only salient to trustors after a trustee has caused them harm. Following this important trend, we will incorporate the domain of vulnerability in the trust–distrust scale, since so much of modern medicine in all its complexity, speed on innovation, and cost-conscious managed care involves vulnerability. Williams (2001) defines trust as "one's willingness to rely on another's actions in a situation involving the risk of opportunism." In contrast, distrust entails "the belief that a person's values or motives will lead one to approach all situations in an unacceptable way" (Sitkin and Ross 1993).

In fact, trust-research "appears to be premised on the general idea that actors (ie, individuals, groups or organizations) become, in some ways, vulnerable to one another as they interact in social situations, relationships and systems" (Bigley and Pearce 1998). As organizational arrangements become more complex (as in the current healthcare environment), actors' vulnerability to one another could become broader and deeper, and trust may be one of the best mechanisms actors have to cope with these new conditions (Bigley and Pearce 1998). Often, patients are unfamiliar with physicians, surgeons, nurses, and hospitals. Gathered information in this regard may not be complete or totally reliable for establishing affective bonds with one another. Patient trust may be an effective surrogate in this regard. Our eighth related research hypothesis is:

Hypothesis 8: The higher the patient's sense of unfamiliarity and vulnerability with the complexity of modern health delivery system, the higher their dependence upon and distrust with doctors and other healthcare providers.

Complimentary theories of trust and distrust

Table 4B summarizes various complimentary theories of trust and distrust. They make some key assumptions: (a) Trust and distrust are mutually inclusive and complementary bi-dimensional conditions; that is, trust and distrust can

coexist and reinforce each other; (b) Trust is good and positive and distrust is also good and positive, although based on different expectations; trust relates to beneficial expectations; distrust involves hazardous expectations; life experiences involves both, and often at the same time; (c) Trust–distrust is embedded in the complex, unfamiliar, and vulnerable social context of human relationships.

Discussion

The importance of PDTD cannot be underestimated as it relates to compliance and patient satisfaction. There have been recent changes in the experiences of Medicare beneficiaries as a result of decline in the quality of interactions between patients and their doctors, a breakdown in continuity and integration of care and difficulties with access to care despite improvements in medical technology (Montgomery et al 2004).

Expectations of care by the elderly include trust and the need for a sense of personal touch. Trust is complex in the older person given that they could be satisfied but not trust providers or they could trust providers but not be satisfied (Hupcey et al 2004). A recent study on how patients' trust relates to their involvement in medical care (Trachtenberg et al 2005) identifies age as an important predictor with older patients being more compliant, deferential, passive, and trusting of their doctors as compared with younger patients. Our preliminary studies and those of other research workers appears to support that the perceptions of PDTD in the elderly are different from the rest of the patient population. It is therefore necessary to have an ability to measure PDTD as a basis for developing interventions that can positively affect both patient and doctor behaviors during the clinical encounter. We are proposing a set of eight hypothesized predictors, based on the trust distrust theories that could serve as a basis for developing a PDTD scale.

Table 5 synthesizes patient–physician interpersonal relations as a function of Low versus High, Trust and

Table 5 Patient–physician interpersonal relations as a function of low and high, trust and distrust

Patient trust:	**Patient distrust**	
	Low: Low fear Low skepticism Low cynicism Low monitoring Low vigilance	**High:** High fear High skepticism High cynicism High monitoring High vigilance
High: High hope, High faith, High confidence High assurance High initiatives	**Patient–physician:** High value congruence; common objectives; frequent interactions; Pooled positive and trust-reinforcing experiences; few defense mechanisms; Conversations are rich, deep, personal and occasionally complex; Hence, reason to be mutually confident; No reason for suspicion; High willed pooled interdependence and cooperation; All opportunities for sharing information pursued; New trust-building initiatives sought.	**Patient–physician:** Sustained trust and distrust; trust constantly verified; Strong reason to be confident in certain areas and diffident in others; Relationships are multiplex, multifaceted, highly segmented and bounded; like in strategic alliances; Significant amounts of information shared under strict confidentiality; Collaboration opportunities pursued but risks assessed; Vulnerabilities continuously monitored and protected.
Low: Low hope, Low faith, Low confidence Low assurance Few initiatives Low resistance	**Patient–physician:** Casual acquaintance; Careful, bounded, arms-length discrete transactions; No pooled trust-reinforcing experiences; Conversations simple and casual; No closeness or intimacy; No threats to confidentiality as little information of consequence is shared; No reason to fear or be confident; Limited interdependence and cooperation; Just professional courtesy.	**Patient–physician:** Undesirable eventualities expected and feared; Conversations are cautious, guarded, and often laced with cynicism Pooled negative distrust-reinforcing experiences; bureaucratic checks; No reason for mutual confidence; Strong reason for watchfulness; Significant resources for monitoring; Harmful or exploitative motives not ruled out; Interdependence difficult over time or at best, carefully managed; Offensive self-defense.

Note: Adapted from Lewicki et al 1998.

Distrust. Each quadrant suggests clear implications to physicians, doctors and other healthcare givers, as well as to patients. It is a challenge for all healthcare givers to generate in their patients lower levels of fear, skepticism, and cynicism such that costs of patient monitoring and fragmentation of care is significantly reduced. Analogously, healthcare providers must do everything within their power and skills to generate in their patients high levels of hope, faith, confidence, assurance, and also welcome high patient cooperation.

Based on the trust–distrust literature reviewed earlier and the various factors of trust–distrust hypothesized, we present a tentative patient's trust–distrust measurement instrument in Table 6. Accordingly, Table 7 indicates which theory reflects which scale statement. Following Table 4, Table 8 projects which statement is best positioned to fall into one of the four quadrants. Both Table 7 and Table 8 ensure nomological (conceptual–theoretical) validity of the trust–distrust scale. Finally, Table 9 sketches costs versus benefits of various patient–physician trust–distrust encounters. The bottom line in healthcare is to have a profit margin so that ongoing research education and development of innovative modes of healthcare is possible.

Table 6 Patient–physician trust–distrust scale statements

[*Bracketed numbers indicate the most likely quadrant the statement fits under Table 5].

1. I have very strong positive hopes about modern medicine and what doctors can do for me. [1]*
2. I have tremendous faith in physicians, doctors, nurses and other healthcare providers. [1]
3. I have every reason to suspect the profitability motives of the health insurance companies (eg, HMO, HAP). [4]
4. My unfamiliarity with our complex healthcare delivery system makes me very distrustful of what my doctors can do for me. [2]
5. The cost-controlling devices of managed healthcare (eg, HMOs) make me very skeptical about the treatment-efficiency of my doctors. [2]
6. At times, I am very cynical about the morality of our healthcare delivery system. [2]
7. The government should very carefully monitor our entire healthcare system. [2]
8. The current complex healthcare system makes me doubt the competence of my doctors, nurses and other caregivers. [2]
9. I deeply distrust managed care (eg, BCBS, HMOs, HAP) that controls my doctor's care for me. [4]
10. I am losing faith in our health delivery system that is controlled by health insurance companies. [3]
11. Our information privacy laws make me feel very uneasy when disclosing vital information about myself to my doctors. [4]
12. I am very scared that when I get sick I will be totally dependent upon doctors, nurses and hospitals. [4]
13. I am afraid my interests and health objectives do not meet those of my primary physician. [3]
14. I am very afraid that my interests and health objectives do not meet those of my specialty doctors. [4]
15. Given our profit-oriented managed healthcare systems (eg, HMOs), I have every reason for suspecting the quality of care my doctors can deliver to me. [2]
16. My conversations with my doctors are rich, deep, personal and very straightforward. [1]
17. Because of my fears and anxiety about my disease, I am not fully ready to cooperate with my doctor. [2]
18. I have tremendous confidence in my doctor's technical and professional skills in handling my case. [1]
19. I have full faith in my doctor, in his/her abilities, skills and decisions. [1]
20. I am very confident about my doctor's sincerity in treating my sickness. [1]
21. I do not give my best cooperation in listening and following my doctor's advice. [3]
22. I am very obedient to whatever my doctor will ask me to do regarding my health problem. [1]
23. I am afraid my doctor will exploit my vulnerability concerning my ill-health and not really care. [4]
24. I am very hesitant about disclosing negative information about myself to my doctor. [4]
25. I am distrustful of my doctor's interests and intentions regarding my treatment. [3]
26. At times, I am scared about my doctor as to what he/she will say, decide and do about my disease. [3]
27. I deeply distrust doctors, nurses, and hospitals, in general. [4]
28. The hospital administration is very careful in its choice of nurses and other support staff. [1]
29. I feel very comfortable in the hospital because of the very cooperative and understanding staff. [1]
30. My hospital has the best reputation for medical excellence. [1]
31. Because modern medicine is so sophisticated, I totally depend upon my doctor's knowledge and skills. [2]
32. Thanks to regular government quality control, I am very trustful of my doctor and his/her treatment. [2]
33. Despite my unfamiliarity with doctors, nurses and hospitals, I feel very confident about my treatment. [1]
34. I trust my doctor to put my medical needs above all other considerations when treating my medical problem. [3]
35. I love my doctors and nurses so much for the sensitivity with which they communicate with my family. [1]
36. My doctor is a very caring person and I feel very happy about it. [1]
37. I feel that my conversations with my doctors are very careful, bounded, guarded and discrete. [3]
38. I have no reason to hope for high levels of mutual confidence as far my doctors are concerned. [4]
39. I am very watchful and vigilant as to what doctor will say, diagnose, and treat about case. [4]
40. I feel no closeness to my doctors and feel forced to deal with them with just professional courtesy. [3]
41. I pursue all opportunities for sharing all my health information with my doctors with utmost openness. [1]
42. I feel my doctor cannot do much for me because of the severity of my illness. [4]
43. I feel the hospital can do only so much for me owing to my health insurance carriers. [4]
44. I feel I cannot rule out harmful motives of my doctors as far as my health is concerned. [4]
45. It is too risky for me to totally collaborate with my doctor during my office visits. [3]
46. It is part of my personality that I deeply distrust doctors, nurses and hospitals in general. [4]

Table 6 continued

47. I naturally distrust my doctors once I know that they do not care. [2]
48. I am a very trusting person when it comes to healthcare, doctors and nurses. [1]
49. Given the complexity of modern healthcare, I cannot but trust doctors and nurses. [2]
50. I am afraid to trust my doctors, nurses and hospitals when I encounter a serious disease. [3]
51. There is great sense of bonding with my doctor because of his/her gentleness and compassion . [1]
52. I am very satisfied with my treatment because of the excellent teamwork skills of my doctors. [1]
53. I am very happy and content with my doctor. [1]
54. I would not change my doctor for anybody in the world. [1]
55. I would gladly recommend my doctor to anybody. [1]
56. I am very satisfied with my doctor. [1]
57. I love my doctors and nurses because they treat me as a person with dignity, feelings and beliefs. [1]
58. I am very satisfied with the entire staff of doctors, nurses, and support people. [1]
59. I am very satisfied with my nurse. [1]

Abbreviations: BCBS, Blue Cross, Blue Shield; HAP, Health Alliance Plan; HMO, Health Maintenance Organization.

Table 7 Distribution of trust–distrust scale statement by theories of trust–distrust

Theory (Authors)	Approach	Definition of trust	Definition of distrust	Trust–distrust scale items
Table 7A Trust and distrust as polar opposites				
Psychology (Meillinger 1956; Deutsch 1960; Read 1962)	Trust as an individual trait	Trust is one's confidence in another's positive intentions and promises.	Distrust is one's confidence about one's undesirable behavior.	1, 18, 19, 20, 34, 49
Behavioral (Deutsch 1960; Lewis and Weigert 1985)	Trust as a rational predictive choice of a partner. Devoid of real social context, trust is a function of incentives.	Trust is cooperative conduct in a conflicting interpersonal encounter.	Distrust is a non-cooperative conduct in a mixed-motive game situation. Distrust is psychological disorder.	5, 16, 17, 21, 24, 29, 35, 36, 41
Personality Disposition (Rotter 1967, 1971; Stack 1978; Tardy 1988)	Trust is a personal pre-dispositional attribute	Trusting pre-dispositions indicate low expectations and cooperate better.	Distrusting predispositions indicate high expectations and cooperate less with the trusted.	2, 6, 22, 25, 27, 46, 47, 48, 50
Expectation (Rotter 1980; Zucker 1986; Gambetta 1988)	Trust as a generalized expectancy.	Trust is a set of expectations that the trusted will behave helpful as expected by the trustor.	Distrust is a set of expectations that the trusted will not behave helpful as expected by the trustor.	3, 4, 14, 15, 23, 44,
Table 7B: Trust and distrust as complimentary constructs				
Organizational psychology (Garfinkel 1963; Lewis and Weigert 1985; Baier 1986; Zucker 1986; Shapiro 1987)	Trust as an organizational phenomenon supported by institutional mechanisms.	Trust as believing in the institutional systems that support trust.	Distrust as believing in the institutional systems that support distrust.	3, 5, 9, 11, 15, 28, 30, 43
Sociology (Luhmann 1990; Lewickiet al 1998)	Trust–distrust as a mechanism for reducing social complexity and uncertainty.	Trust and distrust coexist as functional equivalents or substitutes for reducing social complexity.	Trust is a positive expectation of beneficial action; distrust is a positive expectation of injurious action.	7, 11, 26, 38, 42, 43
Social psychology (Cacioppo et al 1997; Lewicki et al 1998)	Trust–distrust as a continuum of psychological state that is unstable and transitory.	Trust as positive-valent and distrust as negative-valent attitudes can coexist.	Trust involves confident positive expectations and distrust involves confident negative expectations regarding trusting partners.	8, 16, 37, 39, 40, 44, 45,
Interdependence (Mayer et al 1995; Sitkin and Ross 1993; Williams 2001)	Trust–distrust as interdependent behavioral expectations amidst complexity and vulnerability.	Trust is a function of one's dependence upon and vulnerability regarding the other party.	Distrust is also a function of one's dependence upon and vulnerability regarding the other party.	9, 10, 12, 31, 32, 49

Table 8 Distribution of scale statement in the trust–distrust quadrants

	Patient distrust		
	Low	**High**	
High	**Quadrant 1**	**Quadrant 2**	
	1,2, 16, 18, 19, 20, 22, 28, 29, 30, 33, 35, 36, 41, 48 [15 items]	4, 5, 6, 7, 8, 15, 17, 31, 32, 47, 49 [11 items]	26
Low	**Quadrant 3**	**Quadrant 4**	
	10, 13, 21, 25, 26, 34, 37, 40, 45, 50 [10 items]	3, 9, 11, 12, 14, 23, 24, 27, 38, 39, 42, 43, 44, 46 [14 items]	24
Total number of items	**25**	**25**	**50**

Table 9 Profile of patient–physician trust levels: costs versus benefits

Physician's trust level		**Patient's trust level**	
		Low	**High**
Low	**Costs**	Both patient and physician: low mutual cooperation, low mutual honesty, low mutual benevolence	High agency costs for the patient: high trust investment costs; high affect and emotion costs; high health-loss probability; very few options; low monitoring ability. For the doctor: no significant costs
	Benefits	Both patient and physician: low involvement; low interdependence; low investments, andlow benefits.	Almost none to patients; Significant benefits to doctors.
	Risks	Physician-opportunism Low physician commitment	Patient abuse; Patient exploitation, Patient dissatisfaction; Patient may switch & not return.
High	**Costs**	High agency costs for the doctor: high trust investment costs; high affect and emotion costs; high loss probability; very few options; low monitoring ability. For the patient: no significant costs	Both for patient and physician low agency costs such as: bonding costs monitoring costs warranty-guarantee costs; search costs
	Benefits	Almost none to doctors; Significant benefits to patients.	Both for patient and physician: high commitment; high mutual cooperation, healthy interdependence; high mutual honesty, high mutual benevolence high satisfaction.
	Risks	Doctor abuse; Doctor exploitation, Doctor dissatisfaction; Doctor may refuse treatment. Patient's opportunism. Patient's betrayal.	Sustaining high mutual trust; High dependence; Stifled creativity due to over-trust; Few other options due to over-trust.

Concluding remarks

Distrust of doctors and the healthcare system may be a significant barrier to seeking proper medical care, enforcing effective preventive care and following treatment regimens. Hence, conceiving, formulating, and implementing various strategies to reduce patient distrust and mistrust are an important component of delivering modern healthcare.

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References

Anderson LA, Dedrick RF. 1990. Development in the Trust in Physician scale: a measure to assess interpersonal trust in patient–physician relationships. *Psychol Rep,* 67:1091–100.

Baier A. 1986. Trust and antitrust. *Ethics*, 96:231–60.

Bhattacharya R, Devinney TM, Pillutla MM. 1998. A formal model of trust based on outcomes. *Acad Manage Rev*, 23:459–72.

Bies RJ, Tripp TM. 1996. Beyond distrust: "getting even" and the need for revenge. In: Kramer RM, Tyler TR, (eds). Trust in organizations: frontiers of theory and research. Thousand Oaks, CA: Sage. p 246-60.

Bigley GA, Pearce JL. 1998. Straining for shared meaning in organization science: problems of trust and distrust. *Acad Manage Rev*, 23:405–21.

Cacioppo JT, Gardner WL. 1993. What underlies medical donor attitudes and behavior? *Health Psychol*, 12:269–71.

Cacioppo JT, Gardner WL, Berntson GG. 1997. Beyond bipolar conceptualizations and measures: the case of attitudes and evaluative space. *Person Soc Psychol Rev,* 1:3–25.

Coleman JS. 1990. The foundations of social theory. Harvard: Belknap.

Deutsch M. 1960. The effect of motivational orientation upon trust and suspicion. *Human Rel*, 13:123–39.

Gambetta D. 1988. Can we trust Trust. In: Gambetta, D (ed). Trust: making and breaking cooperative relations. New York, NY: Basil Blackwell. p 213–38.

Garfinkel H. 1963. A conception and experimentation with "trust" as a condition of stable concerted actions. In: Harvey OJ (ed). Motivations and social interactions. New York, NY: Ronald Pr. p 187–238.

Goold SD. 2002. Trust, distrust and trustworthiness. *J Gen Intern Med*, 17:79–81.

Govier T. 1994. Is it a jungle out there? Trust, distrust, and the construction of social reality. *Dialogue*, 25:161–78.

Gray BH. 1997. Trust and trustworthy care in the managed care era. *Health Affairs*, 16:34–49.

Hall MA, Zheng B, Dugan E, et al. 2002. Measuring patients' trust in their primary care providers. *Med Care Res Rev*, 59:293–318.

Hardin JW. 1998. An in-depth look at congressional committee jurisdictions surrounding health issues. *J Health Polit Policy Law*, 23:517–50.

Hosmer LT. 1995. Trust: the connecting link between organization theory and philosophical ethics. *Acad Manage Rev*, 20:379–403.

Hupcey JE, Clark MB, Hutcheson CR, et al. 2004. Expectations for care: older adults' satisfaction with and trust in healthcare providers. *J Gerontol Nurs,* 30:37–45.

Kao AC, Green DC, David NA, et al. 1998. Patient's trust in their physicians: effects of choice, continuity, and payment method. *J Gen Intern Med,* 13:681–6.

Kao AC, Green DC, Zaslavsky AM, et al. 1998.The relationship between method of physician payment and patient trust. *JAMA*, 280:1708–14.

Leisen B, Hyman MR. 2001. An improved scale for assessing patients' trust in their physician. *Health Market Q*, 19:23–42.

Lewicki RJ, Bunker BB. 1996. Developing and maintaining trust in work relationships. In: Kraemer RM, Tyler TR (eds). Trust in organizations: frontiers of theory and research. Thousand Oaks, CA: Sage, p 114–39.

Lewicki RJ, McAllister DJ, Bies RJ. 1998. Trust and distrust: new relationships and realities. *Acad Manage Rev*, 23:438–58.

Lewis JD, Weigert AJ. 1985. Trust as a social reality. *Soc Forces*, 63:967–85.

Luhmann N. 1990. Familiarity, confidence, trust: problems and alternatives. In: Gambetta D (ed). Trust. London: Blackwell, p 94–107.

Mayer RC, Davis JH, Schoorman DF. 1995. An integrated model of organizational trust. *Acad Manage Rev,* 20:709–34.

McGary H. 1999. Distrust, social justice, and healthcare. *Mt Sinai J Med*, 66:236–40.

Mechanic D, Rosenthal M. 1999. Responses of HMO medical directors to trust building in managed care. *Milbank Q*, 77:3:

Mellinger GD. 1956. Interpersonal trust as a factor in communication. *J Abnorm Psychol*, 52:304–09.

Meyerson D, Weick KE, Kramer RM. 1996. Swift trust and temporary groups, In: Kramer RM, Tyler TR (eds). Trust in organizations: frontiers of theory and research. Thousand Oaks, CA: Sage, p 166–95.

Mishra AK. 1996. Organisational responses to crisis: the centrality of trust. In: Kramer RM, Tyler TR (eds). Trust in organizations: frontiers of theory and research. Thousand Oaks, CA: Sage.

Montgomery JE, Irish JT, Wilson IB, et al. 2004. Primary care experiences of Medicare beneficiaries, 1998—2000. *J Gen Intern Med*, 19:991–8.

Moorman C, Zaltman G, Deshpande R 1992. Relationships between providers and users of marketing research: the dynamics of trust within and between organizations. *J Market Res*, 29:314–28.

Moreno-John G, Gachie A, Fleming CM, et al. 2004. Ethnic minority older adults participating in clinical research: developing trust. *J Aging Health*, 16(5 Suppl):93S–123S.

Priester JR, Petty RE. 1996. The gradual threshold model of ambivalence: relating the positive and negative bases of attitudes to subjective ambivalence. *J Personal Soc Psychol*, 71:431–49.

Read WH. 1962. Upward communications in industrial hierarchies. *Human Rel*, 15:3–15.

Rose A, Peters N, Shea JA, et al. 2004. Development and testing of the healthcare system distrust scale. *J Gen Intern Med*, 19:57–63.

Rotter JB. 1967. A new scale for the measurement of interpersonal trust, *J Personal*, 35:651–65.

Rotter JB. 1971. Generalized expectancies for interpersonal trust. *Am Psychol*, 26:443–52.

Rotter JB. 1980.Interpersonal trust, trustworthiness, and gullibility. *Am Psychol*, 35:1–7.

Sabel CF. 1993. Studied trust: Building new forms of cooperation in a volatile economy. *Am Psychol*, 35:1–7.

Safran D, Kosinki M, Tarlov AR, et al. 1998. The primary care assessment survey: tests of data quality and measurement performance. *Med Care*, 36:728–39.

Shapiro SP. 1987. The social control of interpersonal trust. *Am J Sociol*, 93:623–58.

Sitkin SB, Ross NL. 1993. Explaining the limited selectiveness of legalistic "remedies" for trust/distrust. *Organ Sci*, 4:367–81.

Sitkin SB, Stickel D. 1996. The road to hell: the dynamics of distrust in an era of quality. In: Kramer RM, Tyler TR (eds). Trust in organizations: frontiers of theory and research. Thousand Oaks, CA: Sage, 196–215.

Stack L. 1978. Trust. In: London H, Exner J (eds). Dimensions of personality. London: John Wiley & Sons, p 561–99.

Tardy CH. 1988. Interpersonal evaluations: measuring attraction and trust. In: Tardy CH (ed). A handbook for the study of human communication. Norwood, NJ: Ablex, p 269–83.

Trachtenberg F, Dugan E, Hall MA. 2005. How patients' trust relates to their involvement in medical care. *J Fam Pract*, 54:344–52.

Thom DH. 2001. Physician behaviors that predict patient trust. *J Fam Pract*, 50:323–8.

Thom DH, Campbell B. 1997. Patient–physician trust: an exploratory study. *J Fam Pract*, 44:169–76.

Thom DH, Ribisi KM, Steward AL, et al. 1999. Validation of a measure of patients' trust in their physician: the trust in physician scale. *Med Care*, 37:510–17.

Watson D, Tellegen A. 1985. Toward a consensual structure of mood. *Psychol Bull*, 98:219–235.

Williams M. 2001. In whom we trust: group membership as an affective context for trust development. *Acad Manage Rev*, 26:377–96.

Zucker LG. 1986. Production of trust: institutional sources of economic structure, 1840–1920. In: Straw BM, Cummings LL (eds). Research in organizational behavior (Vol 8). Greenwich, CT: JAI Pr, p 53–111.