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Review

How do you measure trust in the health system? A systematic review of the literature

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ABSTRACT

People's trust in the health system plays a role in explaining one's access to and utilization of medical care, adherence to medications, continuity of care, and even self-reported health status. Yet it is not easy to find trust measures and understand what they are measuring. A systematic review of scales and indices identified 45 measures of trust within the health system with an average of 12 questions each, which quantified levels of trust among various relationships across the health system. Existing evidence was narrow in scope, where half examined the relationship between doctors/nurses and patients, and the majority were designed, tested and validated in the United States. We developed a health systems trust content area framework, where we identified that honesty, communication, confidence and competence were captured frequently in these measures, with less focus on concepts such as fidelity, system trust, confidentiality and fairness. Half of the measures employed a qualitative method in the design of these measures and 33% were pilot tested. Reporting of test–retest reliability and inter-rater reliability were less common. This review identifies a need to develop measurements of trust beyond doctor–patient relationships and outside of U.S. contexts, and strengthen the rigor of existing trust measures. Greater development and use of trust measures in the health system could improve monitoring and evaluation efforts, which may in turn result in better health outcomes.

Introduction

The concept of trust has always been regarded as ambiguous and fuzzy, and thus difficult to define and investigate. Yet trust plays an essential role in the health system where the entire arrangement is largely relational. Healthcare is delivered by people and for people, where interactions among patients, doctors, nurses, pharmacists, insurers, suppliers, regulators and other agents play a significant role in the health system. As Gilson notes, "trust is important to health systems because it underpins the co-operation throughout the system that is required for health production" (Gilson, 2003). Trust measures can be used by health workers, health program implementers and researchers to better monitor and evaluate people's trust towards building a trusted health system with better health outcomes.

Trust has been linked with a number of important healthcare objectives, that range from access, health-related behavior uptake, continuity and quality of care, and finally to self-reported health status. First and foremost, trust is associated with better access to and utilization of medical care (Russell, 2005) and is highly correlated with satisfaction with and loyalty to the physician (Safran et al., 1998). Trust increases the likelihood that patients recommend treatment to others and may affect the effectiveness of and adherence to treatment among patients (Hall, Zheng, et al., 2002). The quality of interaction, degree of disclosure, amount of autonomy in decision-making, continuity of care and level of engagement in behavioral change are all influenced by trusting patient–provider relationships. Finally, there is some evidence that suggest that trust is in fact associated with better self-reported health (Wang, Schlesinger, Wang, & Hsiao, 2009).

Trust is also important at the institutional level, as people's trust in hospitals, insurers and healthcare systems may affect their use of services and thus their economic and political viability (Rowe & Calnan, 2006). For instance, patients' trust in interpreters (Hsieh, Ju, & Kong, 2010), health insurers (Ozawa & Walker, 2009) and in the finances of the healthcare system (Smith, Stepan, Valdmanis, & Verheyen, 1997) can each affect the healthcare experience. Trust within a health system may also be influenced by professional norms and power dynamics between nurses, doctors and others in a healthcare organization and may shape attitudes and practices towards patients (Gilbert, 2005). Trust also plays a critical role in

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public–private health partnerships (Jones & Barry, 2011), as it manages the problem of information asymmetry and diminishes the transaction costs of large amounts of external monitoring (Bloom, Standing, & Lloyd, 2008). Having a trusting and trusted health system can then contribute to fostering wider social value and social order (Gilson, 2003).

Only in the past couple decades have researchers started measuring and analyzing trust within the health system. To date there is no systematic review of trust measures evaluating their quality. This paper attempts to fill that gap by asking the following research questions: How many trust measures are there? What relationships and populations do they study? What content areas do they capture? How rigorous are the measures?

Methods

We conducted a systematic literature search, in three major databases (PubMed, HaPI and PsycINFO), to identify scales and indices that have been developed to measure trust within the health system. The following search terms and their variants were applied: ('trust' OR 'mistrust' OR 'distrust') AND 'measure' AND ('scale' OR 'index'). Additional records were included by searching citations and dissertations. Our search was limited to English articles. Beyond having been published prior to April 2012 when the review was conducted, no restrictions were applied on the year of publication. Titles and abstracts were screened by two separate reviewers, where we applied inclusion and exclusion criteria. Full text articles were retrieved and reviewed by the same two reviewers for additional screening. The remaining records were abstracted for analysis.

This search focused specifically on developed scales and indices that measure trust, distrust or mistrust. We excluded conceptual pieces that discussed but did not quantify these concepts. Articles that developed a new scale or index, or revalidated an existing scale in a new population were included in the review. We also excluded articles that measured trust without a scale or index or developed a scale or index to measure a related concept such as social capital, of which trust was one of the components. The search focused only on measures within the health system. The reviewers engaged in a deliberative process to resolve any conflicts around article identification, screening and eligibility.

The analysis involved extracting both quantitative and qualitative information from the articles. We extracted data on authors, country, context and population, trust domains and dimensions, as well as reliability statistics, validity assessments, and the actual trust questions. In assessing dimensionality, we observed whether scales modeled a singular or multi-factorial construct to examine the specificity of measures (DeVellis, 2012). Where dimensions of the scale were not reported, we classified scales as unidimensional if there were few questions asked and if only one Cronbach's alpha was reported.

Based on the trust domains and questions that were extracted, we developed a framework to categorize the domains based on deliberative reconciliation of groupings. We classified all trust questions into eight content areas: fidelity, competence, honesty, confidentiality, confidence, communication, system trust, and fairness. These substantive content areas help condense information as well as specify and attribute meanings to the latent variable of trust (DeVellis, 2012). They represent different aspects of trust captured across measurements. Opposite sentiments of mistrust, distrust, suspicion, fear or lack of support overlap with these areas and are not analyzed separately. We also grouped the general constructs that were used to validate the trust measures in a similar deliberative fashion.

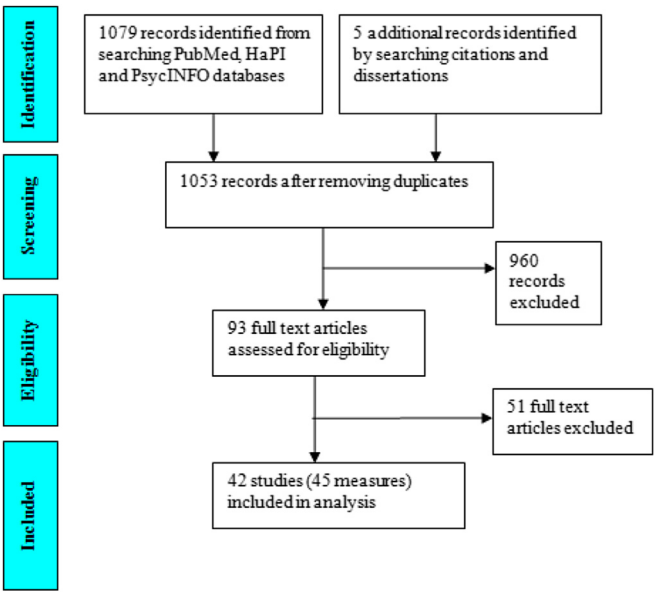

Fig. 1. Flow diagram of study selection.

Results

The overall search yielded a total of 1079 articles; 375 in PubMed, 68 in HaPI and 636 in PsycINFO. Five additional records were included from searching citations and dissertations. There were 26 duplicates identified between PubMed and PsycINFO and 2 additional duplicates with HaPI. Scanning the titles and abstracts of the remaining1053 records with eligibility criteria yielded 93 records. Upon screening the full text articles, 45 measures (43 scales and 2 indices) were retained and abstracted for analysis (Fig. 1). With the exception of one scale (Wallston, Wallston, & Gore, 1973), all measures were developed after 1990, with a majority (87%) published since 2000.

a. Relationships examined

Fig. 2 shows that about half of the trust measures look at the relationship between doctors/nurses and patients (n = 23, 51%). Out of these interpersonal relationships, the majority focused on the doctor–patient relationship (n = 19, 83%), two looked at nurse–patient interactions and two referred to both doctors and nurses interactions with patients. Other relationships captured include those between patients and the health system (n = 12, 27%), patients and insurers (n = 4, 9%), patients and pharmacists (n = 2, 4%),

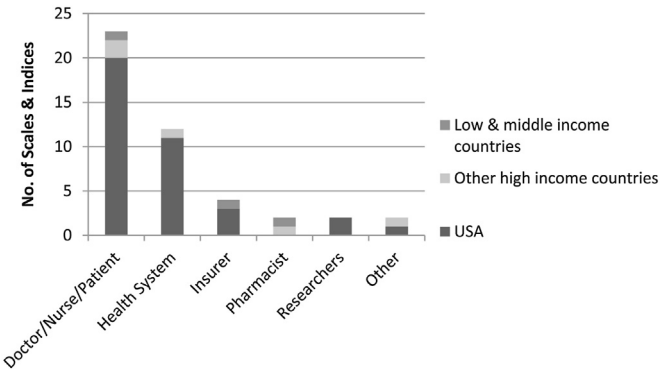

Fig. 2. Trust relationships measured by scales and indices.