

A Mixed Method Study of Spirituality and the Influence on TB Medication Adherence

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Abstract: Nonadherence to medication for tuberculosis (TB) can lead to new cases of TB and death. Interest in spirituality in healthcare has grown among adult educators, health educators and healthcare workers (Tisdell, 2003). This mixed-method study will explore spirituality and TB medication adherence among African American and Haitian populations.

Globally, TB remains one of the leading causes of death from infectious disease. An estimated 2 billion persons are infected with the bacteria causing TB annually. In addition, approximately 9 million persons become ill from TB; of these, 2 million die (CDC, 2005). In the U.S., an estimated 10 to 15 million persons are infected with TB and more than two-thirds of reported cases occur in racial minority and ethnic groups such as African-Americans (CDC, 1992); unfortunately, this trend continues (CDC, 2005). In many cultures, the social stigma of tuberculosis contributes to lengthy delays in seeking professional care and abandonment of treatment (Iiongo, 1994; Rubel & Garro, 1992). TB is a curable disease that requires long-term medication therapy; however, failure to adhere to a treatment regimen creates potential for drug resistance, further spread of the disease, disability, and death. To break the cycle of TB infection and disease within the community, appropriate diagnosis, education, treatment, and follow-up care by healthcare providers caring for minority TB patients is necessary (CDC, 1998; Halverson, Mays, Miller, Kaluzny, & Richards, 1997). In adult education spirituality has gained a prominence that is reflective of an interest in spiritual matters (English & Gillen, 2000). Spirituality is an important aspect of both African Americans' and Haitians' lives.

The purpose of this mixed-method study will be to explore the relationship between spirituality and TB medication adherence among African Americans and Haitians. A correlational study will be conducted to determine if there is a relationship between spirituality and medication adherence. Also, simultaneously a phenomenological study will be conducted to explore the influence of spirituality on TB medication adherence. The first section will discuss spirituality, spirituality in adult education and spirituality and health. The next section will discuss African Americans and Haitians. This will be followed by a description of adult learning theory, the proposed research design and summary.

Spirituality

There continues to be a growing interest in spirituality in health care among adult education, health educators and healthcare workers (Tisdell, 2003). Spirituality has defined as a "basic inherent quality in humans that involves a belief in something greater than the self and a faith that positively affirms life" (Musgrave, Easley, Allen, & Allen, 2002, p. 557). In addition, studies have shown support for the relationship between spirituality and health outcomes (Delgado, 2005; Kirschner, 2003; Koenig et al., 2000; Miller & Thoresen, 2003; Musgrave et al., 2002, Weaver & Ellison, 2004). Although often used interchangeably, religion and spirituality have different meanings and may have different effects on the use of health services. Whether used together or separately, religion and spirituality provide a framework for African Americans to make sense of the world and cope with life (Musgrave et al., 2002). "Spirituality is a

relationship with a transcendent force that brings meaning and purpose to one's existence, and affects the way in which one operates in the world" (Armstrong, 1996, p. 106). Spirituality can be described as individual focused and is not associated with involvement in a supportive community (Koenig, George, Titus & Meador, 2003). Religions are differentiated by particular beliefs and practices, requirement of membership, and modes of social organization (Miller & Thoresen, 2003). Religion and spirituality have been conceptualized to influence the development of each other. For example, religious practices encourage spiritual growth and spiritual practices are often an important aspect of religious participation (Armstrong & Crowther, 2002; Miller & Thoresen, 2003). Religion and spirituality have been linked to health behaviors and health outcomes such as decreased hospital length of stay and improved health (Hansel, Wu, Chang & Diette, 2004; Johnson, Elbert-Avila & Tulskey, 2005; King, Burgess, Akinyela, Counts-Spriggs, & Parker, 2005; Miller & Thoresen, 2003; Westlake et al., 2002).

The spirituality in adult education is seen as a means of knowledge construction. Spirituality is about how people construct knowledge through largely unconscious and symbolic processes, often made more concrete in art forms such as music, art, image, symbol, and ritual, which are manifested culturally (Tisdell, 2003). Spirituality works with the individual's affective, rational or cognitive, unconscious and symbolic domains of knowledge creation. This mixed-method research will focus on spirituality and its relationship to TB knowledge construction and health behaviors such as medication adherence.

African Americans

In the African American culture, spirituality expressed in the form of spiritual beliefs serves as a source of comfort, providing a coping mechanism and support. Spirituality is important in understanding disease, coping, treatment decisions and medication adherence (Johnson, Elbert-Avila & Tulskey, 2005). Spirituality expressed in the form of spiritual beliefs about health and disease treatment may interfere with TB treatment and may result in medication nonadherence.

Family and extended families are important in the lives of African-Americans. Families are their primary arenas for transmission and expression of spirituality, religious practices and values to younger generations of African-Americans. African-Americans generally practice Christianity (Pamphile, 2001; Pinkney, 2000). The predominant church memberships are Baptist and Methodist (Pinkney, 2000; Trotter, 2001). Spirituality and religion has always been an important part of African-American culture. Four major themes on religion/spirituality's influence on African-Americans' health beliefs are as follows: (a) faith in divine healing with no human agency, (b) faith in divine healing through doctors, (c) faith in divine healing through health or religious behavior modifications, and (d) faith in acceptance of health outcomes (King et al., 2005). African Americans believe that God is responsible for physical and spiritual health and the doctor is God's instrument (Green, Lewis, Wang, Person & Rivers, 2004; Johnson et al., 2005; Lewis & Green, 2000). African Americans believe in a strong intimate relationship with God and the ability to overcome health limitations through the power of prayer (King et al., 2005). African Americans TB patients' medication adherence may be influenced by beliefs in God's control over their physical and spiritual health.

Haitians

In the Haitian culture, TB is considered a shameful disease; as a result, patients diagnosed with TB face social exclusion, rejection by family and friends, and placement in quarantine (Farmer, Robin, Ramilus & Kim; 1991; Coreil, Lauzardo, & Heurtelou, 2004). Haitians believe that TB can be either naturally or supernaturally acquired and treated with biomedicine, natural

medicine and Voodoo (Miller, 2000). The majority of Haitians are Catholic, with a small number of other religions practiced (Chierici, 1991; Desrosiers & Fleurose, 2002; Pamphile, 2001). Lower class Haitians are more likely to acknowledge the belief and practice of Voodoo whereas upper class Haitians typically belong to the Catholic Church and deny Voodoo associated with lower class Haitians (Chierici, 1991; Desrosiers & Fleurose, 2002). Many Haitians believe in a spiritual world made up of good and evil spirits, spirits of the dead and many deities. To gain access to the spiritual world, many Haitians practice Voodoo, a religion with African origins, and worship the gods of Voodoo, or Loas, to gain protection and strength. Voodoo ceremonies are traditionally headed by a Voodoo priest known as a Houngan and are devoted to the worship and invocation of the invisible world. Haitian beliefs about TB include a supernatural etiology in which TB is caused by sorcery (Coreil, 2001; Farmer, 1991). Importantly, not all Haitians practice Voodoo. Haitians may practice Christianity, Voodoo, biomedical and spiritual healing (Desrosiers & Fleurose, 2002). Haitians' belief in Voodoo gives patients a sense of optimism because they believe Voodoo provides control over their destiny. These spiritual beliefs have caused TB patients to abandon medical treatment (Farmer, 1991). If the Haitian abandons medical treatment and seeks alternative treatment, this creates a TB control challenge, such as further transmission of TB, drug resistance, and death.

Adult Learning Theory

Spirituality is seen as a means of finding meaning in life and of providing a source for coping with life (Miller, 1995; Reed, 1991). This quest to find meaning is a motivating force behind intellect and emotions. If individuals can find meaning in illness, suffering and death, they can find peace (Dyson, Cobb & Forman, 1997). Finding meaning in a situation is also a means for coping with stress. In adult learning, emotions and imagination are important to the construction of knowledge (Dirkx, 2001). Emotions play an important role in adult learning because emotions can either interfere with or encourage learning. Personally significant and important learning is grounded in and is derived from the adult's emotional and imaginative connection with the self and with the broader social world. The process of mean making is essentially imaginative and extra rational, rather than merely reflective and rational (Dirkx, 2001). Emotions play an important role in how adults interpret and make sense of the events in their lives.

Problem Statement

Management of medication adherence by adults who require long-term medication and treatment can be a complex problem for healthcare providers. Current literature explores cultural factors that affect health beliefs about TB, but there is limited research on the relationship between spiritual factors and TB medication adherence. The field of health lacks research on spirituality, aside from religion, and its relationship to health (Thoresen & Harris, 2002). African Americans' and Haitians' spirituality and its influence on patients' knowledge of TB may require different educational interventions.

Intent of the Study

The intent of the study will be to explore the concept of spirituality and the influence of spirituality on learning and health behaviors, such as TB medication adherence. The primary research question will be what is the influence of spirituality on African Americans' and Haitians' TB medication adherence?

Mixed-Methods Research Design

Mixing methods results in a richer and more accurate understanding of research (Greene & Caracelli, 1997). Mixed methods designs can strive to combine the characteristics of different

inquiry traditions, resulting in inferences grounded in participants' lives but with credible claims about generalizability.

Phenomenological Research Design

The phenomenological form of inquiry shows how complex meanings are built out of simple units of direct experiences (Merriam & Simpson, 2000). This allows the researcher to attempt to deal with inner experiences not probed or explored in everyday life. This type of design will allow the researcher to explore the conscious experience of phenomena (p. 91). Creswell (2003) describes phenomenological research as the "essence" of human experiences concerning a phenomenon as described by participants in a study. This study will be based upon the phenomenological research design under the qualitative strategy of inquiry.

Correlation Research Design

A correlation research design will be utilized to examine the relationship between spirituality and TB medication adherence. A correlational design will be utilized to determine the relationships between spirituality and adherence to TB medication. Correlation design is useful when control over subjects is difficult to obtain. The strengths of this design are that it is economical, easy to implement, and yields results in a short period of time (Bickman & Rig, 1997). The limitations of the correlational design are that it only determines the existence of relationships, and does not investigate cause and effect relationships.

Data Sources

The population of interest is composed of 268 tuberculosis cases in Miami-Dade County (Florida Department of Health, 2004). In 2004, African Americans represented 107 TB cases and Haitians represented 62 TB cases in Miami-Dade County (Florida Department of Health, 2004). Permission to conduct this study will be obtained from the Institutional Review Board of the county hospital, Florida International University and the State of Florida Department of Health. The population of interest, African American and Haitian patients, will be identified and interviewed while in the hospital by the researcher. Nonprobability (convenience) sampling will be utilized in this study to select the sample. All African American and Haitian patients admitted to the county hospital with a diagnosis of TB are eligible for participation in the study.

Data Collection

The study will be conducted during a three-month time period in 2007. Patients will be given education about the study and permission to enroll in the study will be obtained by the researcher. The study site has a bilingual medical secretary who will be trained to assist the researcher with data collection. There will be two means of data collection: (a) voluntary completion of the questionnaire and (b) completion with the assistance of an interpreter. The spirituality questionnaire will be in booklet form in individual envelopes with labels identifying the clinic and research subject by number. Medication adherence will be based on an analysis of the patients' medication administration records (MAR).

A convenience sample of African American and Haitian patients admitted with a diagnosis of TB will be interviewed by the researcher, who will explain the purpose of the study. Haitian patients will be given the option of having an interpreter. A signed informed consent will be obtained and a copy will be given to each patient. The patients will receive the standard verbal and written explanation about their TB diagnosis, medication and treatment regimen. In addition, six African Americans and six Haitians will be selected to interview for the phenomenological phase of the study. Patients will be interviewed in the hospital and clinic to gather further understandings, themes, values and meanings of spirituality.

Summary

This study of African Americans' and Haitians' knowledge of TB and the influence of spirituality on medication adherence may reveal differences and similarities between two minority populations. This knowledge will enable adult educators and healthcare providers to have a better understanding of the two minority populations. In addition, this study will add to the body of knowledge about spirituality and health behaviors. Findings from this study will help adult educators develop better educational interventions to help cure TB, interrupt further transmission of TB and prevent death.

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