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Israeli Oncology Nurses' Religiosity, Spiritual Well-Being, and Attitudes Toward Spiritual Care: A Path Analysis

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Purpose/Objectives: To investigate the relationship among the antecedent factors of age, ethnicity, and education and the mediating variables of intrinsic religiosity, extrinsic religiosity, and spiritual well-being on Israeli oncology nurses' attitudes toward spiritual care.

Design: A correlational, explanatory study.

Sample: Members (N = 155) of the Israeli Oncology Nursing Society. **Method:** Subjects completed a mailed research package. A path model guided the testing of the hypotheses.

Main Research Variables: Spiritual well-being, intrinsic religiosity, extrinsic religiosity, age, ethnicity, and education.

Results: Variables of interest accounted for a small but significant amount of the total variance in attitudes toward spiritual care. However, only spiritual well-being, extrinsic religiosity, and education demonstrated direct relationships with these attitudes. In addition, intrinsic and extrinsic religiosity, mediated through spiritual well-being, demonstrated indirect relationships with attitudes.

Conclusion: Nurses' attitudes toward spiritual care are influenced by their education, intrinsic and extrinsic religiosity, and spiritual well-being.

Implications for Nursing: Because spiritual well-being is a good predictor of nurses' positive attitudes toward spiritual care, nurses' spiritual well-being should be supported. In addition, nursing education needs to examine ways that may support more positive attitudes toward spiritual care. Future research also should be conducted on other nursing populations and across cultures and religious affiliations.

Research has demonstrated that an important relationship exists between a cancer diagnosis and an individual's spiritual well-being. Studies have confirmed that a diagnosis of cancer may affect an individual's spiritual well-being seriously (Buchanan, 1988; Feher & Maly, 1999; Fehring, Miller, & Shaw, 1997). In turn, spiritual well-being has been correlated positively with the intrinsic religiosity of patients with cancer—the living of a person's religious faith for the sake of the faith itself (Fehring et al.; Mickley, Soeken, & Belcher, 1992). Because spiritual considerations play such an important part in the lives of patients with cancer, oncology nurses who are concerned with the whole person have a crucial role to perform. Therefore, exploring attributes that influence the provision of spiritual care is important.

Research studies have focused on nurses' assessment of the significance of spiritual care. Nurses who believed in the importance of spiritual care were much more likely to assess the religious beliefs of their patients and write care plans that incorporate spiritual care (Scott, Grzybowski, & Webb, 1994). In addition, nurses who had increased levels of spiri-

Key Points...

- ➤ Oncology nurses' spiritual well-being should be supported through their relationships with God, others, and self.
- ➤ Oncology nurses' education should include ways to meet the spiritual needs of patients with cancer.
- ➤ Studies need to be conducted on oncology nurses' attitudes toward spiritual care in different cultures and religions.

tual well-being were more comfortable with and had more positive attitudes toward spiritual care (Cimino, 1992; Harris, 1994; Vance, 2001). The age of the nurse (Boutell & Bozett, 1987; Taylor, Amenta, & Highfield, 1995), ethnicity (Taylor et al., 1995; Taylor, Highfield, & Amenta, 1994), and nursing education (Kuuppelomaki, 2001; Taylor et al., 1994, 1995) also were related to nurses' attitudes toward spiritual care.

Studies have reported high levels of spirituality among hospice nurses and a positive correlation between hospice and oncology nurses' spirituality and their attitudes toward spiritual care (Taylor & Amenta, 1994; Taylor et al., 1995). Despite this, the body of nursing knowledge related to oncology nurses' spiritual well-being, their religiosity, and the variables that impinge on their spiritual well-being needs to be expanded. As alluded to previously, research has demonstrated an important link between spiritual well-being and religiosity (Fehring et al., 1997; Genia, 1996; Mickley et al., 1992). In addition, research has demonstrated that an individual's religiosity may be influenced by personal characteristics of age (Thorson & Powell, 1990), ethnicity

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(Thorson, Powell, Abdel-Khalek, & Beshai, 1997), and education (Levin & Taylor, 1993; Mickley et al.). However, studies about oncology nurses' spiritual well-being and their religiosity, as well as the way these variables may be related to their attitudes toward spiritual care, are limited.

In Israel, no research studies have been conducted on nurses' religiosity and spiritual well-being and the part that these variables play in influencing their attitudes toward spiritual care. In a nation where many of the population have encountered death through wars and the Holocaust, Israeli oncology nurses care for patients who not only are battling a life-threatening disease but also may be reliving past tragedies. Nurses who care for these patients need to be cognizant of their own spiritual selves so that they may appropriately attend to the spiritual dimension of these patients. Therefore, the purpose of this study was to investigate the relationship of the antecedent factors of age, ethnicity, and education and the mediating variables of intrinsic religiosity, extrinsic religiosity, and spiritual well-being on attitudes of Israeli oncology nurses toward spiritual care. To achieve the study's purpose, a path analysis was conducted. Figure 1 presents the hypothesized relationships among the research variables.

Study Hypothesis

A relationship between attitudes regarding spiritual care and spiritual well-being is well documented in the literature. Nurses' spiritual well-being is related positively to their attitudes toward spiritual care (Cimino, 1992; Harris, 1994; Vance, 2001). In addition, higher spiritual well-being scores have been correlated with the importance of routinely assessing and including spiritual care in nursing care plans and attending a continuing education course on spirituality (Wagner, 1998). Therefore, the authors hypothesized that spiritual well-being would have a direct influence on attitudes regarding spiritual care.

Although no research studies have examined the relationship between intrinsic and extrinsic religiosity and nurses' attitudes toward spiritual care, researchers have found a strong direct relationship between intrinsic and extrinsic religiosity and spiritual well-being. College students' spiritual well-being was correlated positively to intrinsic and extrinsic religiosity (Genia, 1996). In nursing research, the spiritual well-being of patients with breast cancer and older adults with cancer also has been shown to have a significant positive relationship with intrinsic and extrinsic religiosity (Fehring et al., 1997; Mickley, 1990). Thus, the authors hypothesized that intrinsic and extrinsic religiosity would have an indirect influence on attitudes toward spiritual care.

Research has demonstrated a link among religiosity and the antecedent factors of age, ethnicity, and education. Thorson and Powell (1990) found that age was related positively to intrinsic religiosity. Ethnicity also has been shown to be a significant predictor of religiosity. The intrinsic religiosity scores of Kuwaiti students were found to be significantly higher than those of American students (Thorson et al., 1997). In another study among American Hawaiian students and American students from Missouri, the Hawaiian students had significantly higher intrinsic religiosity scores that those from Missouri (Johnson et al., 1989). Education and religiosity have a significant negative relationship. Mickley (1990) found a significant inverse relationship between intrinsic and extrinsic religiosity and education among patients with breast cancer. In a sample of 1,975 African Americans, 10 of 12 religious indicators were correlated negatively to education, with the most significant inverse relationship noted between education and self-rating of level of religiosity (Levin & Taylor, 1993). Thus, the authors hypothesized that the antecedent factors (age, ethnicity, and education) would have an indirect influence on attitudes toward spiritual care.

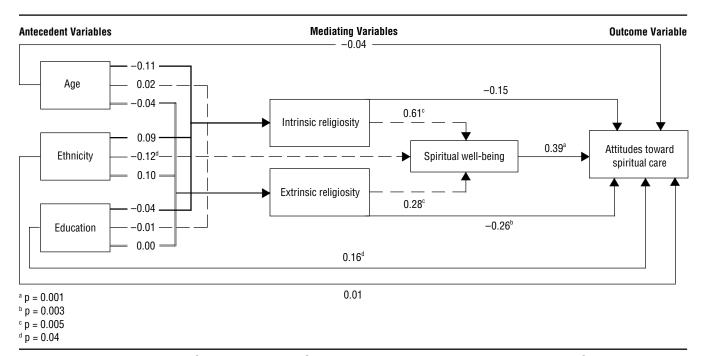


Figure 1. Path Model With Path Coefficients: Israeli Oncology Nurses' Antecedent Factors, Religiosity, Spiritual Well-Being, and Attitudes Toward Spiritual Care

Methods

A correlational, explanatory design was selected for this study. The study employed a causal model and, with the use of a path analysis, attempted to explain relationships among the variables. In this study, the exogenous variables were antecedent variables (age, ethnicity, and education). The endogenous variables were intrinsic religiosity, extrinsic religiosity, spiritual well-being, and attitudes toward spiritual care. Intrinsic religiosity, extrinsic religiosity, and spiritual well-being were considered mediating variables. Attitudes toward spiritual care was the dependent variable.

Sample and Procedure

During a one-week period, 520 research packets were enclosed and mailed with the February 2000 issue of the Israeli Oncology Nursing Society's journal, *Suid Oncologi* [Oncology Nursing]. This was the approximate number of the total membership of the association. To encourage participation in the study, every subject who completed the questionnaires was given an opportunity to participate in a lottery to win Israeli currency to the U.S. equivalent of \$500. By the middle of May, 167 (32%) research packets had been returned. Of the 167 returned research packages, only 155 (a response rate of 30%) could be used because 12 of the returned packets contained one or more questionnaires with less than 75% of the items completed.

The study was approved by the institutional review board of Catholic University of America in Washington, DC. To ensure protection of human subjects, identity was hidden in two ways. First, coded numbers were placed on all questionnaires. These code numbers were used only to identify research packets and not to identify subjects. Second, someone other than the researcher inserted the research packets in the journals in which the packets were being mailed. Consent to participate in the study was assumed if the completed questionnaires were returned.

Instruments

Antecedent factors: Data related to the antecedent factors of age, ethnicity, and education were gathered using a personal information form completed by study subjects. Ethnicity was categorized according to the area of the world where a nurse was born: Israel, Asia, North Africa, South Africa, Eastern Europe, Western Europe, North America, South America, and other. This is appropriate within the Israel context. The term edah (community) is used in Israel to distinguish Israeli-Jewish groups according to their country of origin (Ben-Rafael & Sharot, 1991). However, for the purpose of analysis, ethnicity was merged into two categories: nurses born in Israel and nurses born outside of Israel. The categories measuring education included RNs, nurses with a baccalaureate degree, and nurses with a master's degree or higher.

Mediating variables: The study used three instruments to collect data on the mediating and outcome variables: the Revised Age Universal I/E Scale (I/E–R), Spiritual Well-Being Scale (SWB), and Spiritual Care Perspective Survey subscale. The instruments were translated into Hebrew and then translated back into English to check the reliability of the translation.

Intrinsic religiosity was defined as "the motivation for experiencing and living one's religious faith for the sake of faith itself" (Gorsuch, 1994, p. 317). Extrinsic religiosity was defined as a utilitarian approach to religious beliefs where religion is perceived as a tool that provides security and sociability (Mickley et al., 1992). I/E-R was used to measure these two variables. I/E-R is a 14-item, five-point Likert scale that measures intrinsic and extrinsic religiosity. The responses range from "strongly disagree" to "strongly agree." This study omitted words that were present in two of the items of the original questionnaire. The brackets identify the words omitted: item 4, "It is important [to me] to spend time in private thought and prayer," and item 7, "I try hard to live [all] my life according to my religious beliefs." In addition, a word was added to item 14: "Although I believe in my religion, many other things are more important in [my] life." These changes occurred as a result of reproduction errors when the document was prepared. These errors were reviewed by a panel of three expert researchers, including an international expert on research in spirituality. A judgment was made that the changes, although unfortunate, did not result in substantive problems with the final data analysis.

Cronbach's alpha coefficient for the Intrinsic Religiosity Scale was 0.72 in this study as compared with the reliability coefficients of 0.83 in a study of 771 college students and 0.76 in a study of 467 5th- to 11th-grade students (Gorsuch & McPherson, 1989). The Cronbach's alpha coefficient for the Extrinsic Religiosity Scale was 0.68 in this study as compared with the reliability coefficient of 0.65 in a study of 771 college students and 0.66 in a study of 467 5th- to 11th-grade students (Gorsuch & McPherson).

Spiritual well-being was defined theoretically as "the affirmation of life in a relationship with God, self, community, and environment that nurtures and celebrates wholeness" (The National Interfaith Coalition on Aging cited in Ellison, 1983, p. 331). Ellison conceptualized spiritual well-being as possessing both a vertical and horizontal dimension. The vertical dimension is reflected by the sense of well-being in relation to God and the horizontal dimension by a sense of life purpose and life satisfaction. The SWB, developed by Paloutzian and Ellison (1982), was used to measure spiritual well-being. Each item in the instrument is followed by a six-point Likert scale response ranging from "strongly agree" to "strongly disagree." The instrument is composed of two subscales: Religious Well-Being Scale (RWB) and Existential Well-Being Scale (EWB). All RWB items contain the word "God" and all EWB items are concerned with life satisfaction and direction. This study omitted the phrase "and unhappiness" that was present in item 16; the item then read, "I feel that life is full of conflict." This change was also the result of a reproduction error and underwent a similar assessment process as previously described. For test-retest reliability in four studies with 1–10 weeks between testing, the SWB reliability coefficients were 0.93, 0.99, 0.99, and 0.82 (Paloutzian & Ellison, 1991). The internal reliability alpha coefficient for seven studies was also high, ranging from 0.94–0.89 (Bufford, Paloutzian, & Ellison, 1991). In this study, Cronbach's alpha coefficient for the SWB scale was 0.88.

Attitudes toward spiritual care was defined theoretically as "the health-promoting attendance to responses to stresses that affect the spiritual perspective of an individual or a group" (Taylor et al., 1995, p. 31). The variable attitudes toward spiritual care were measured by summed scores on a 10-item subscale of the Spiritual Care Perspective Survey that measures nurses"

attitudes toward the provision of spiritual care (Taylor et al., 1999). Each item is measured with a five-point Likert scale with item-specific anchor phrases at either end of the scale. Example of items from this subscale include, "A patient's spiritual concerns are none of my business" and "The nurse should wait for a patient to raise spiritual issues." Established content construct validity and Cronbach's alpha of 0.75 have been reported by Taylor et al. (1999). In the present study, the direction of three items were reversed so that all the items with the anchor words "strongly disagree" and "strongly agree" were going in the same direction and the direction of the Likert scales' numbers also were ordered so that all the numbers went in the same direction. In addition, in one of the item anchor phrases the word "spiritual" was added to one side because the original scale had the word on one side of the item but not on the converse side. The Cronbach alpha coefficient for the present study was 0.75.

Data Analysis

Data analysis procedures included regression analyses to determine significant paths: (a) the regression of attitudes toward spiritual care on the mediating and antecedent factors, (b) the regression of spiritual well-being on the antecedent factors and the mediating variables of intrinsic and extrinsic religiosity, (c) the regression of intrinsic religiosity on the antecedent factors, and (d) the regression of extrinsic religiosity on the antecedent factors. Standardized beta weights from the regression analysis were inserted as path coefficients into the path model. For the regression-based path analysis, level of significance was set at 0.05 to test the hypotheses. Indirect effects were calculated by summing the products of the appropriate mediating path coefficients as defined by the tracing rule (Polit, 1996; Wolfe, 1980). In addition, to determine sample size, Cohen's power analysis was performed (Cohen & Cohen, 1983). With the alpha set at 0.05, a power of 0.80, and a moderate effect size of 0.13, the analysis indicated the need for a sample size of 112 subjects.

Results

Sample

The majority of nurses were women (99%) born in Israel (61%) with a mean age of 43.39 years (range = 26–68). Thirty-six percent of the nurses were RNs, and 64% held a baccalaureate degree or higher (baccalaureate degree = 43%; master's degree or higher = 21%). The subjects had been nurses a mean of 18.39 years (range = 1–47), and they had worked with oncology patients for a mean of 9.19 years (range = 1–33). The majority of the nurses worked in a hospital setting (69%) and held full-time positions (71%). With regard to the nurses' religious affiliation, 96% were Jewish, 2% were Christian, 1% were Muslim, and 1% were other. Concerning nurses' level of religiosity, 58% of the nurses categorized themselves as secular, 21% as traditional, and 21% as religious. These three categories are used commonly in Israel to identify Israelis' levels of religious practice.

Variables of Interest

The mean, standard deviation, and the study's obtained range of scores for the mediating and outcome variables are presented in Table 1. The path model results are depicted in Figure 1. The path coefficients in the model are the partial

Table 1. Descriptive Statistics for Mediating and Outcome Variables

Variable	$\overline{\mathbf{X}}$	SD	Actual Range	Possible Range
Intrinsic religiosity	23.66	6.17	13-40	8–40
Extrinsic religiosity	13.24	4.03	6–25	6-30
Spiritual well-being	80.71	16.52	46-114	20-120
Attitudes toward spiritual care	37.70	5.80	22–48	10–50

N = 155

correlation coefficients and are represented by the standardized regression coefficient.

The antecedent and mediating variables in the path analysis accounted for a small ($R^2 = 11.9\%$; R^2 adjusted = 8.3%) but significant portion (p = 0.004) of the total variance of attitudes toward spiritual care. The significant variables in this regression analysis were spiritual well-being (path coefficient = 0.39, p = 0.001), extrinsic religiosity (path coefficient = -0.26, p = 0.003), and education (path coefficient = 0.16, p = 0.04). The other path regression analysis that yielded not only a significant F value (35.87, $p \le 0.0005$) but also explained a large portion of the total variance (54.6%) was the regression of the antecedent variables and the mediating variables, intrinsic and extrinsic religiosity, on spiritual well-being. This was largely a result of the significant relationships among spiritual well-being and intrinsic (path coefficient = 0.61, $p \le 0.0005$) and extrinsic religiosity (path coefficient = 0.28, $p \le 0.0005$) (see Table 2).

The hypothesis that the antecedent factors (age, ethnicity, and education) would have an indirect influence on Israeli oncology nurses' attitudes toward spiritual care was not supported. The

Table 2. Regression Analyses Calculated to Determine Path Coefficients for the Hypothesized Model

Outcome Variables	R²	Predictor Variables	В	р
Attitudes toward	0.12			0.0040
spiritual care		Spiritual well-being	0.39	0.0010
		Intrinsic religiosity	-0.15	0.1700
		Extrinsic religiosity	-0.26	0.0030
		Age	-0.04	0.5800
		Ethnicity	0.01	0.8800
		Education	0.16	0.0400
Spiritual well-being	0.55			≤ 0.0005
		Intrinsic religiosity	0.61	≤ 0.0005
		Extrinsic religiosity	0.28	≤ 0.0005
		Age	0.02	0.6900
		Ethnicity	-0.12	0.0400
		Education	-0.01	0.8200
Intrinsic religiosity	0.01			0.5250
		Age	-0.11	0.2000
		Ethnicity	0.09	0.3000
		Education	-0.04	0.6300
Extrinsic religiosity	0.01			0.6960
		Age	-0.04	0.6100
		Ethnicity	0.10	0.2400
		Education	0.00	0.9700

N = 155

Table 3. Direct and Indirect Causal Effects of Predictor Variables on the Outcome Variable

		Causal Effect		
Outcome Variable	Predictor Variables	Direct	Indirect	Total
Attitudes toward spiritual care	Intrinsic religiosity Extrinsic religiosity Age Ethnicity Education	-0.15 -0.26 -0.04 0.01 0.16	0.24 0.11 0.01 -0.06 0.00	0.09 -0.15 -0.03 -0.05 0.16

N = 155

contribution of the indirect effect of age (0.01), ethnicity (-0.06), and education (0.00) through intrinsic and extrinsic religiosity and spiritual well-being was minimal (see Table 3).

The hypothesis that the mediating variables of intrinsic religiosity and extrinsic religiosity would have indirect effects on Israeli nurses' attitudes toward spiritual care was supported. Intrinsic religiosity's indirect effect (0.24) through spiritual well-being was larger than its direct effect (-0.15). This was because of the significant, positive relationships between intrinsic religiosity and spiritual well-being as well as spiritual well-being and attitudes toward spiritual care. Extrinsic religiosity also had an indirect effect (0.11) on Israeli nurses' attitudes toward spiritual care, but the indirect effect was smaller than intrinsic religiosity's indirect effect.

The hypothesis that the mediating variable of spiritual well-being would have a direct influence on attitudes toward spiritual care also was supported. Spiritual well-being was not only a significant, positive predictor of attitudes toward spiritual care (p = 0.001), but it also was the most significant contributor to attitudes toward spiritual care (path coefficient = 0.39).

Discussion

The path model indicates a small but significant portion of the total variance on Israeli oncology nurses' attitudes toward spiritual care. In addition, three of the six predictor variables (spiritual well-being, extrinsic religiosity, and education) demonstrated significant direct relationships to attitudes toward spiritual care. The mediating variables of spiritual well-being, intrinsic religiosity, and extrinsic religiosity accounted for the greatest contribution to the indirect effects on attitudes toward spiritual care.

Of the three mediating variables, spiritual well-being was the strongest predictor of Israeli oncology nurses' attitudes toward spiritual care. Although no studies have used a path analysis to examine the relationship between spiritual wellbeing and attitudes toward spiritual care, the literature supports a significant relationship between these two variables. Vance (2001) found a positive relationship (r = 0.19, $p \le 0.05$) between nurses' spiritual well-being and frequency of assessing and intervening in the spiritual care of patients. In a study of 272 Massachusetts RNs, a positive correlation (r = 0.41, p < 0.001) was found between nurses' attitudes toward providing spiritual care and their spiritual well-being (Cimino, 1992). Soeken and Carson (1986), using the same scales as Cimino, also found that nursing students with higher spiritual well-being scores possessed a more positive attitude

toward providing spiritual care. Similarly, a study conducted among 61 nurses drawn from an acute care hospital reported a comparable relationship between nurses' spiritual wellbeing and their views about the provision of spiritual care (Harris, 1994).

The data indicate that intrinsic religiosity exerted a stronger indirect than direct influence as mediated through spiritual well-being. Although no studies have examined the relationship between nurses' intrinsic religiosity and their spiritual well-being, some studies support the significance of this relationship. Fehring et al. (1997), using the same spiritual well-being and intrinsic religiosity scales, found a strong relationship between these two variables (r = 0.77, p < 0.01). Other studies that used the same spiritual well-being scale but other intrinsic religiosity scales reported similar relationships in patients with breast cancer (Mickley, 1990), married couples (Quinn, 1988), and college students (Genia, 1996).

The findings of this study support both a direct and indirect influence of extrinsic religiosity mediated through spiritual well-being on attitudes toward spiritual care. No nursing studies have examined the relationship between extrinsic religiosity and nurses' attitudes toward spiritual care. However, studies have demonstrated that an extrinsically religious individual is less likely to use religion to cope with stressful life events (Meyer, Altmaier, & Burns, 1992) or to consider religious belief as important (Donahue, 1985). Interestingly, extrinsic religiosity's indirect effect mediated through spiritual wellbeing was less significant than that of intrinsic religiosity. This was because of the weaker positive association between extrinsic religiosity and spiritual well-being. Other studies also have reported a weaker positive association between extrinsic religiosity and spiritual well-being (Fehring et al., 1997; Genia, 1996; Mickley, 1990; Quinn, 1988).

The antecedent variables of age, ethnicity, and education were negligible contributors to the total variance of attitudes toward spiritual care. Their indirect effect on attitudes toward spiritual care was minimal. In addition, of the three variables, only education had a significant direct relationship with attitudes toward spiritual care. Taylor et al. (1999) reported a similar significant, positive relationship between levels of education and attitudes toward spiritual care. In addition, perceived adequacy of training in the administration of spiritual care had an important role. Training was associated positively with attitudes toward spiritual care in oncology and hospice nurses (Taylor et al., 1999) and the self-reported administration of spiritual care among RNs practicing in four regions of the United States (Piles, 1990). Although no reasons were offered by the researchers for the relationship between level of education and attitudes toward spiritual care, academic programs may sensitize nurses to a holistic approach to patient care.

The theoretical model was supported only partially. Spiritual well-being did have a direct influence on attitudes toward spiritual care. Similarly, extrinsic religiosity directly influenced attitudes toward spiritual care, and intrinsic and extrinsic religiosity, mediated through spiritual well-being, indirectly influenced attitudes toward spiritual care. However, only one of the antecedent factors—education—had a direct relationship with attitudes toward spiritual care. Furthermore, the antecedent variables, mediated through intrinsic religiosity, extrinsic religiosity, and spiritual well-being, had almost no indirect influence on attitudes toward spiritual care.

Limitations

Although the sample size was adequate, a convenience sample was used and the study had a low response rate (30%). Second, the questionnaires for this study were slightly different than the original questionnaires. Finally, the study's sample was composed largely of Israeli Jewish nurses. Therefore, applying its findings to other populations should be done with caution.

Recommendations for Future Research and Practice

This study demonstrates that the spiritual well-being of nurses may be a good predictor of their attitudes toward spiritual care, when spiritual well-being is defined as a horizontal relationship with God and a vertical relationship with others and self. Supporting relationships with God, others, and self are ways of promoting nurses' spiritual well-being and may facilitate positive attitudes toward spiritual care.

These Israeli nurses had positive attitudes toward spiritual care. However, a gap remains between positive attitudes toward spiritual care and the actual administration of spiritual care. Researchers have identified positive attitudes toward spiritual care without the concomitant practice of such care (Soeken & Carson, 1986). One of the barriers identified is lack of educational preparation (Bath, 1993; Piles, 1990). This is supported by the significant positive relationship between level of education and attitudes toward spiritual care identified by this study. To enhance nurses' ability to administer appropriate and effective spiritual care, educational programs may

be introduced during basic nursing education and in the form of continuing education programs after graduation.

Future research using the study's path model could be replicated among different nursing populations. Examples include nursing students, nursing faculty, hospice nurses, intensive care nurses, and community health nurses. In addition, this study could be replicated in nursing populations in other areas (e.g., United States, European countries, Middle Eastern countries) and across other cultures (e.g., Hispanic/Latino, African American) and religious affiliations (e.g., Muslims, Christians) to examine the applicability of the path model.

Conclusions

The body of nursing knowledge related to oncology nurses' spiritual well-being and attitudes toward spiritual care is limited. Studies about oncology nurses' spiritual well-being and their religiosity, as well as the way these variables may impinge on their perspective of spiritual care, are scant. In addition, no nursing research has focused on Israeli or Jewish nurses' spiritual well-being and religiosity, as well as the way these may influence their attitudes toward spiritual care. This research study offers insight into these relationships in an Israeli Jewish oncology nursing population. In addition, it offers an initial model that may help to explain not only some of the variables that influence nurses' attitudes toward spiritual care but also the interrelationships among the different variables in the model.

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References

- Bath, P.D. (1993). Spiritual dimensions of nursing and patient care: Challenges and dilemmas for nursing education and clinical practice (Doctoral dissertation, Lancaster Theological Seminary, 1992). *Dissertation Abstracts International*, 53, 3397.
- Ben-Rafael, E., & Sharot, S. (1991). *Ethnicity, religion, and class in Israeli society*. Cambridge, MA: Cambridge University Press.
- Boutell, K.A., & Bozett, F.W. (1987). Nurses' assessment of patients' spirituality: Continuing education implications. *Journal of Continuing Education in Nursing*, 21, 172–176.
- Buchanan, D. (1988). Loneliness and spiritual well-being of hospitalized and healthy adults: A quality of life study (Doctoral dissertation, University of Alabama at Birmingham, 1987). Dissertation Abstracts International, 48, 2250
- Bufford, R.K., Paloutzian, R.F., & Ellison, C.W. (1991). Norms for the spiritual well-being scale. *Journal of Psychology and Theology*, 19(1), 56–70.
- Cimino, S.M. (1992). Nurses' spiritual well-being as related to attitudes toward and degree of comfort in providing spiritual care (Doctoral dissertation, Boston College, 1992). *Doctoral Dissertation Abstracts*, 53, 74.
- Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum.
- Donahue, M.J. (1985). Intrinsic and extrinsic religiousness: Review and metaanalysis. *Journal of Personality and Social Psychology*, 48, 400–419.
- Ellison, C.W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11, 330–340.
- Feher, S., & Maly, R.C. (1999). Coping with breast cancer in later life: The role of religious faith. *Psycho-Oncology*, 8, 408–416.
- Fehring, R.J., Miller, J.F., & Shaw, C. (1997). Spiritual well-being, religiosity, hope, depression, and other mood states in elderly people coping with cancer. *Oncology Nursing Forum*, 24, 663–671.
- Genia, V. (1996). I, E, quest, and fundamentalism as predictors of psychologi-

- cal and spiritual well-being. *Journal for the Scientific Study of Religion*, 35, 56–64.
- Gorsuch, R.L. (1994). Toward motivational theories of intrinsic religiosity. Journal for the Scientific Study of Religion, 33, 315–325.
- Gorsuch, R.L., & McPherson, S.E. (1989). Intrinsic/extrinsic measurement: I/E-revised and single-item scales. *Journal for the Scientific Study of Religion*, 28, 348–354.
- Harris, K. (1994). Nurses' attitudes towards providing spiritual care: A replication study (Master's thesis, Bellamine College, 1994). Master's Abstracts International, 33, 174.
- Johnson, R.C., Danko, G.P., Darvill, T.J., Bochner, S., Bowers, J.K., Huang, Y., et al. (1989). Cross-cultural assessment of altruism and its correlates. *Personality and Individual Differences*, 10, 855–868.
- Kuuppelomaki, M. (2001). Spiritual support for terminally ill patients: Nursing staff assessments. *Journal of Clinical Nursing*, 10, 660–670.
- Levin, J.S., & Taylor, R.J. (1993). Gender and age differences in religiosity among black Americans. *Gerontologist*, 33(1), 16–23.
- Meyer, M.S., Altmaier, E.M., & Burns, C.P. (1992). Religious orientation and coping with cancer. *Journal of Religion and Health*, 31, 273–279.
- Mickley, J.R. (1990). Spiritual well-being, religiousness, and hope: Some relationships in a sample of women with breast cancer (Doctoral dissertation, University of Maryland at Baltimore, 1990). *Dissertation Abstracts International*, 51, 2288.
- Mickley, J.R., Soeken, K., & Belcher, A. (1992). Spiritual well-being, religiousness and hope among women with breast cancer. *Image: Journal of Nursing Scholarship*, 24, 267–272.
- Paloutzian, R.F., & Ellison, C.W. (1982). Loneliness, spiritual well-being and the quality of life. In L.A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 224–237). New York: John Wiley.

- Paloutzian, R.F., & Ellison, C.W. (1991). Manual for the Spiritual Well-Being Scale (Version 1.0). Nyack, NY: Life Advance, Inc.
- Piles, C.L. (1990). Providing spiritual care. Nurse Educator, 15(1), 36–41.Polit, D.F. (1996). Data analysis and statistics for nursing research. Stamford, CT: Appleton and Lange.
- Quinn, J. (1988). The relationships between religiosity and marital satisfaction: Correlations among the religious orientation scale, the spiritual well-being scale and the marital satisfaction scale (Doctoral dissertation, Western Conservative Baptist Seminary, 1984). Dissertation Abstracts International, 48, 3729.
- Scott, M.S., Grzybowski, M., & Webb, S. (1994). Perceptions and practices of registered nurses regarding pastoral care and the spiritual need of hospital patients. *Journal of Pastoral Care*, 48, 171–179.
- Soeken, K.L., & Carson, V.J. (1986). Study measures nurses' attitudes about providing spiritual care. *Health Progress*, 67(3), 52–55.
- Taylor, E.J., & Amenta, M. (1994). Midwifery to the soul while the body dies: Spiritual care among hospice nurses. American Journal of Hospice and Palliative Care, 11(6), 28–35.
- Taylor, E.J., Amenta, M., & Highfield, M.F. (1995). Spiritual care practices of oncology nurses. Oncology Nursing Forum, 22, 31–39.

- Taylor, E.J., Highfield, M.F., & Amenta, M. (1994). Attitudes and beliefs regarding spiritual care: A survey of cancer nurses. *Cancer Nursing*, 17, 479–487.
- Taylor, E.J., Highfield, M.F., & Amenta, M. (1999). Predictors of oncology and hospice nurses' spiritual care perspectives and practices. *Applied Nurs*ing Research, 12, 30–37.
- Thorson, J.A., & Powell, F.C. (1990). Meanings of death and intrinsic religiosity. *Journal of Clinical Psychology*, 46, 379–391.
- Thorson, J.A., Powell, F.C., Abdel-Khalek, A.M., & Beshai, J.A. (1997).
 Constructions of religiosity and death anxiety in two cultures: The United States and Kuwait. *Journal of Psychology and Theology*, 25, 374–383.
- Vance, D.L. (2001). Nurses' attitudes towards spirituality and patient care. MedSurg Nursing, 10, 264–268.
- Wagner, J.D. (1998). Spirituality and spiritual well-being among a group of nursing alumni: Correlated with selected and perceptual and demographic variables (Doctoral dissertation, University of Nebraska, 1998). *Disserta*tion Abstracts International, 59, 1590.
- Wolfe, L.M. (1980). Strategies of path analysis. *American Educational Research Journal*, 2, 183–209.