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The stress and distress of infertility: Does religion help women cope?

In this evaluation of nearly 200 infertile women, high levels of religiosity and spirituality are significantly correlated with low levels of psychological distress. Clinicians should be prepared to discuss religious and spiritual issues with their patients, as those issues may play an important role in the psychological health of infertile women—and in their response to infertility treatment.

Patients with strong religious faith, studies show, sustain medical crises with better outcomes than those who do not hold strong spiritual beliefs or maintain religious practices.¹ Research also shows that religious people tend to have a greater sense of well-being, greater life satisfaction, lower levels of depression and anxiety, and a decreased risk of suicide.²⁻⁷

Society, especially religious society, has traditionally valued woman for her life-giving role. So it is not surprising that living with unrealized hopes for a child can negatively affect a woman's psychological well-being.

Infertility and depression

Women who experience infertility report significantly higher levels of depressive symptoms⁸ and anxiety⁹ than women in the fertile population. In one study, 11% of infertile subjects met the criteria for a major depressive episode, compared to 3.6% of fertile subjects.¹⁰ In another study of infertile women, half of the subjects reported changes in their sexual function, and 75% reported changes in mood, such as increased feelings of sadness.⁹

There is also evidence that depressive symptoms are associated with decreased fertility and can interfere with the success of infertility treatment. In one investigation, women with a lifetime history of clinical depression were nearly twice as likely to report infertility as those not depressed.¹¹ *In vitro* fertilization (IVF) patients who reported

heightened levels of depressive symptoms prior to beginning IVF treatment had significantly lower success rates than women with lower levels of depressive symptoms.^{12,13} In general, infertility-related stress has been found to have direct and indirect adverse effects on treatment outcomes.¹⁴

In caring for the infertile woman, then, it is important to identify and minimize factors that lead to depressive symptoms and psychological distress and to identify and emphasize factors that are associated with healthy coping. If, for example, religious women were to report lower levels of depressive symptoms or psychological distress dur-

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KEY POINTS

- Women who experience infertility are more likely to suffer from heightened depression and anxiety symptoms than women in general. The longer the infertility and the greater the associated distress, the more likely a patient will suffer depressive symptoms, which can in turn diminish fertility and interfere with treatment success.
- A high level of spiritual well-being is significantly linked with less infertility distress and fewer depressive symptoms, suggesting a relationship between spirituality and the psychological well-being of women undergoing infertility treatment. Conversely, self-reported depressive symptoms and lower levels of spiritual well-being predict higher levels of infertility distress.
- Spirituality and religion are important sources of solace for most individuals. Many physicians do not describe themselves as personally religious, and most are not trained to discuss spiritual matters with patients. However, physicians may be well-advised to inquire about and support patients' religious beliefs to help promote their physical and psychological well-being.

Give me
children,
or I die.

—Rachel
(Genesis 30:1)



ing infertility than less religious women, health care professionals might want to encourage their patients to consider religious or spiritual practices that have provided comfort in the past.

One study was located which considered the relationship between faith and fertility, and it only assessed Jewish women in Israel. Women undergoing IVF were asked to indicate their attitude toward religion and to classify themselves as secular, traditional, or orthodox.¹⁵ The study uncovered a significant relationship between religious observance and conception rates, with the highest rates in the traditional group. Of those who conceived, 70% classified themselves as “traditional.” Among the women who didn’t conceive, only 27% reported traditional religious practice. Folkman and Chesney suggest that “reliance on spiritual beliefs and engaging in spiritual activity have been identified as ways of coping in stressful situations.”¹⁶ Adherence to traditional faith may provide an effective way to cope with adversity and disappointment.

Religion’s advantages— and possible drawbacks

Strong religious beliefs may help or interfere with coping and healing. On the one hand, some may find comfort by believing that infertility is part of a divine plan, while others may interpret infertility as punishment from a higher power for past sins and indiscretions.

Some infertile women who display strong religious or spiritual beliefs may achieve relaxation through prayer. Others may experience heightened levels of distress from feeling that their prayers for a child have gone unanswered, or from agonizing over whether to pursue a treatment that may be specifically banned by their religion.

Being religious may benefit the infertility patient by providing a feeling of community and reducing social isolation. Conversely, a religious perspective may heighten a woman’s sense of social isolation from a religious community that emphasizes childbearing. Infertile couples may be stigmatized by religious doctrines that make parenthood a core identity, such as the Old Testament commandment to “be fruitful and multiply” (Genesis 1:28). Thus, religious beliefs may actually compound the negative psychological effects of infertility.¹⁷

An investigation

In order to explore these connections in further detail, the authors conducted a study to investigate the role of religiosity and/or spirituality in shaping the subjective psychological well-being of infertile women. The 3 specific questions addressed in this research were:

- (1) Is there a relationship between spirituality (either religious well-being or existential well-being) and depressive symptoms?
- (2) Is there an association between increased spirituality and decreased infertility distress? and
- (3) Do women who report more depressive symptoms also report more distress with their infertility?

Materials and methods

Subjects

Those eligible to participate included all English-speaking women who had a scheduled appointment or procedure at any of the 4 offices of Boston IVF, a hospital-affiliated infertility practice, during the recruitment phase (March 1 through August 1, 2000).

Materials

Each participant was asked to complete 4 questionnaires while waiting for an appointment with an infertility specialist. The questionnaires included:

- the Beck Depression Inventory,¹⁸ which measures depression severity and is a wide-

ly-used self-report instrument for assessing depression

- the Fertility Problem Inventory,¹⁹ which measures perceived infertility-related stress and identifies and measures domains of stress specific to infertility such as social, sexual, and relationship concerns
- the Spiritual Well-Being Scale,²⁰ evaluating the quality of one's spiritual health in a 2-dimensional construct: religious well-being and existential well-being, and
- a demographic form, collecting information on religious denomination, current religious practices, infertility history, and mental health history.

The Spiritual Well-Being Scale was developed to measure the quality of spiritual health. It has two constructs—religious well-being (well-being as it relates to God) and existential well-being (well-being as it relates to life satisfaction).

Methods

The study was approved by the Institutional Review Board of the Beth Israel Deaconess Medical Center in Boston. Each questionnaire packet included a letter from the investigators explaining the study's purpose and procedures. It informed the prospective subject that completing the questionnaires implied consent to become a participant.

During the recruitment phase, each reception desk at the 4 Boston IVF waiting rooms had a sign indicating that any woman undergoing any infertility treatment was eligible. The sign also explained that participants would remain anonymous, that the study would take approximately 20 minutes to complete, and that participants would receive a free relaxation audiotope when they handed in the questionnaires.

Women who expressed interest received a packet that included the introductory letter from the investigators, the questionnaires, and a set of directions.

Statistical analysis

Participants were requested to fully complete all 4 questionnaires, though not all were expected to do so (actually, 168 of 195 participants completed all 4). At present, there are no formal procedures for scoring Beck Depression Inventory, Fertility Problem Inventory, and Spiritual Well-Being Scale questionnaires that are missing data.¹⁷⁻¹⁹ Prior to

beginning the study, we elected to use the standard scoring procedures of a widely used anxiety questionnaire (State-Trait Anxiety Inventory) for scoring and weighing questionnaires that were missing data.²¹

Separate linear regression models (stepwise algorithm) were used to determine if demographic, religious, or medical characteristics were independent predictors of depressive symptoms (Beck Depression Inventory) or infertility distress (Fertility Problem Inventory). Predefined potential predictors included a number of continuous variables (age, education, duration of infertility, duration of infertility treatment, Spiritual Well-Being Scale, and, depending on the regression model, Beck Depression Inventory or Fertility Problem Inventory.) Potential predictors also included a number of discrete variables (marital status, employment status, number of children [if any], whether or not each subject considered herself to be optimistic or pessimistic, religious education, frequency of attendance at religious services, current religious practice, prayer or meditation, lifestyle change in religion, infertility diagnosis, and number of office visits.) Variables were included in the final Beck Depression Inventory model or Fertility Problem Inventory model if they had a *P* value of 0.05 or less. Statistical analyses were performed using SPSS 10.1 (www.spss.com).

Strong religious beliefs can help or interfere with coping and healing. On the one hand, some may find comfort by believing that infertility is part of a divine plan, while others may interpret infertility as punishment from a higher power.

Results

Participants included a total of 195 women who were currently seeking treatment at Boston IVF. Their ages ranged from 22 to 47 years (mean age, 36.4 years), and approximately 61% were in their 30s (Table 1). Half of the group had some level of graduate education, and a large majority of the women, 78%, were married. Approximately 86% were currently employed, and over three-quarters (77%) did not already have a child.

The religious demographics in Table 2 in-

Twenty-four percent of women in the study grew more active in their faith after experiencing infertility.

TABLE 1

Demographic characteristics of the study population

Participants (n=195)

Mean age in years ($\pm$ sd)	36.4 (5.2)
Age (n, %)	
<30	17 (8.7)
30–34	58 (29.8)
35–39	60 (30.7)
40–44	46 (23.6)
>45	13 (6.7)
Missing	1 (0.5)
Mean education in years ($\pm$ sd)	16.8 (2.3)
Education (n, %)	
High school degree	12 (6.2)
Some college	25 (12.8)
College degree	59 (30.3)
Graduate work	96 (49.2)
Missing	3 (1.5)
Marital status (n, %)	
Single	11 (5.6)
Committed relationship	25 (2.6)
Married	152 (77.9)
Divorced	1 (0.5)
Missing	26 (13.3)
Currently employed (n, %)	
Yes	167 (85.6)
No	28 (14.4)
Already have a child (n, %)	
Yes	43 (22.1)
No	150 (76.9)
Missing	2 (1.0)
Optimistic/pessimistic (n, %)	
Optimistic	48 (24.6)
Pessimistic	136 (69.7)
Missing	11 (5.6)

indicate that 75% of the subjects were Christian (52% Catholic), 17% were Jewish, 4% had “other” religions, and 2% reported no religious affiliation. The vast majority (85%) had received some formal religious education. Some 65% reported “regular” religious attendance. About 35% said they attended religious services at least monthly, while 30% said they never attended services. A sizeable majority of respondents, 79%, said they currently pray

TABLE 2

Religious characteristics of the study population

Participants (n=195)

Religious denomination (n, %)	
Catholic	101 (51.8)
Protestant	35 (17.9)
Other Christian	10 (5.1)
Jewish	34 (17.4)
Other	8 (4.1)
None	4 (2.1)
Missing	3 (1.5)
Religious education (n, %)	
Religious school	58 (29.7)
Occasional studies/ Sunday school	108 (55.4)
None	15 (7.7)
Missing	14 (7.2)
Current religious service attendance (n, %)	
Yes	126 (64.6)
No	68 (34.9)
Missing	1 (0.5)
Frequency of religious service attendance (n, %)	
Daily	2 (1.0)
Weekly	51 (26.2)
Monthly	16 (8.2)
Religious holidays only	21 (15.4)
Several times a year	30 (10.8)
At least once a year	15 (7.7)
Never	59 (30.3)
Missing	1 (0.5)
Current religious practice (n, %)	
Secular	50 (25.6)
Traditional	74 (37.9)
Religious	48 (24.8)
Very religious	13 (6.7)
Missing	10 (5.1)
Currently pray or meditate (n, %)	154 (79.0)
Lifestyle change in religion (n, %)	
More active	46 (23.6)
Less active	9 (4.6)
No change	136 (69.7)
Missing	4 (2.1)

or meditate. Nearly one quarter of the subjects (24%) reported becoming more religious since experiencing infertility, while 4.6% reported a decline in religiosity.

The mean duration of infertility among participants was 31 months, and the mean duration of infertility treatment was 18.4 months (Table 3). One quarter of the subjects had been attempting to conceive for more than 3 years, whereas over half (56%) reported infertility treatment of 1 year or less. Infertility diagnoses varied: 36% involved female factor infertility, 6% male factor, and 11% both female and male factor. More than a third (37%) had “unexplained” infertility.

The mean score ($\pm$ SD) on the Beck Depression Inventory was 10.6 (7.4), with a range of 0 to 39. On the Beck scale, a score of 10 to 18 indicates mild to moderate depression, 19 to 29 reflects moderate to severe depression, and 30 or more describes severe depression. For the Fertility Problem Inventory, the mean score was 148.1 (32.8) in a range of 67 to 219. For the Spiritual Well-Being Scale, the mean was 88.6 (16.5) in a range of 47 to 120. A low score on the Spiritual Well-Being Scale is 20 to 40, a medium score is 41 to 99, and a high score is 100 to 120.

To determine whether scores on the Beck and Fertility Problem instruments could be independently explained by demographic, religious, or medical factors, 2 separate stepwise linear regression models were conducted:

- Table 4A shows the final Beck model. Three factors—elevated fertility distress on the Fertility Problem Inventory, a greater number of fertility specialist office visits, and lower spiritual well-being on the Spiritual Well-Being survey—predicted higher levels of depressive symptoms on the Beck Depression Inventory.
- Table 4B shows the final Fertility Problem Inventory model. Two factors—elevated depressive symptoms on the Beck scale and a longer duration of infertility—were predictive of increased fertility distress scores on the Fertility Problem Inventory.

There were significant positive correlations between the Beck Depression Inventory, Fertility Problem Inventory, duration of infertility, and number of office visits. Significant negative correlations were exhibited for the Spiritual Well-Being Scale and both the Beck Depression Inventory and Fertility Problem Inventory (Table 5).

TABLE 3

Medical characteristics of the study population

	Participants (n=195)
Mean duration of infertility in months ($\pm$ sd)	31.0 (24.2)
Duration of infertility (n, %)	
0–12 months	22.5
13–24 months	33.1
25–36 months	17.4
37+ months	24.4
Missing	2.6
Mean duration of infertility treatment in months ($\pm$ sd)	18.4 (20.4)
Duration of infertility treatment (n, %)	
0–6 months	31.3
7–12 months	25.1
13–24 months	22.6
25+ months	20.0
Missing	1.0
Infertility diagnosis (n, %)	
Female factor	71 (36.4)
Male factor	12 (6.2)
Male and female factor	22 (11.3)
Unexplained	72 (36.9)
No diagnosis	12 (6.2)
Missing	6 (3.1)
Number of office visits (n, %)	
First visit	16 (8.2)
1–4 visits	30 (15.4)
5–9 visits	31 (15.9)
10–14 visits	29 (14.9)
15 or more visits	88 (45.1)
Missing	1 (0.5)

Discussion

The survey results suggest a link between depressive symptoms and fertility distress in women undergoing infertility treatment. Additionally, there is an inverse correlation between spiritual well-being and depressive symptoms and fertility distress.

A majority of Americans report some degree of religious belief. Recent surveys indicate 94% of Americans believe in a god, 63% belong to a church, 44% have attended religious services within the past week, and 59% say religion is “very important” in their lives.²²

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TABLE 4A

Multiple linear regression for Beck Depression Inventory model (n=168)

Predictor	Beta	t	P value
Fertility Problem Inventory	0.606	8.758	0.0005
Spiritual Well-Being Scale	-0.211	-3.056	0.003
Number of office visits	0.133	2.003	0.048

TABLE 4B

Multiple linear regression for Fertility Problem Inventory model (n=168)

Predictor	Beta	t	P value
Beck Depression Inventory	0.674	89.984	0.0005
Duration of infertility	0.186	2.752	0.007

Spirituality and religion are thus important sources of solace and support for most individuals.

Health professionals, however, tend to be less religious than the general public. In one study, while 72% of the American public reported that "my whole approach to life is based upon my religion," only 39% of psychiatrists and 33% of psychologists felt the same way.²³ In a study comparing the spiritual views of family physicians and their patients, patients were more likely to believe in God (91% vs 64%) and the afterlife (60% vs 45%). Patients were also more likely than their physicians to pray (85% vs 60%) and to feel close to God (74% versus 43%).²⁴

Religious variables are often neglected in clinical research and medical practice. In a 1993 study of 1,666 abstracts published in *Clinical Research*, only 1% included religious measures.²⁵ In a study of hospitalized patients, 80% reported their physician rarely or never addressed spiritual issues, although 77% be-

lieved they should. Nearly half (48%) wanted their doctor to pray with them, and 42% wished their physician would ask them about their faith healing experiences.²⁶

In a national poll of 1,000 adults, 63% wanted their physician to talk to them about their spiritual health, but only 10% reported their physician had done so.²⁷ In another poll of 1,004 adults, 82% of respondents reported belief in the healing power of prayer, and 64% stated physicians should pray with their patient, if requested to do so.²⁸

Of 212 studies examining the impact of religious commitment on health, 75% demonstrated a positive effect, 17% demonstrated either a mixed effect or no effect, and 7% demonstrated a negative effect.¹ Many of these researchers believe the power of religious belief can promote healing in some patients. Religious belief can provide the positive psychological effect of social support, improve health habits associated with regular church attendance, or make stress-system changes that have important stabilizing effects on the nervous system and the hypothalamic-pituitary axis.²⁹

The results of our study suggest that infertile women with higher levels of spiritual well-being as measured by the Spiritual Well-Being Scale also report fewer depressive symptoms and less overall distress from their infertility experience. Depressive symptoms and infertility-generated distress are unpleasant. Such distress may lead to termination of infertility treatment. Distressed patients may be less compliant and more difficult to work with. Depressive symptoms are also associated with lower pregnancy rates in infertility treatment.^{8,12,13}

While the study results show a relationship between spiritual well-being and distress during infertility treatment, one should not conclude that high levels of spiritual well-being will diminish depressive symptoms or infertility-associated distress. Depending on the patient and the circumstances, religious issues can be either healing or disruptive. Therefore, it may not be clear to physicians whether to encourage patients to discuss their religious beliefs and practices.²⁹

Talking about religion with patients

Most physicians are not trained to converse with patients about their spiritual lives. To better understand the patient's concerns about

TABLE 5

Correlations

	Fertility Problem Inventory	Duration of infertility	Beck Depression Inventory	Number of office visits
Duration of infertility	.232*			
Beck Depression Inventory	.715**	.170*		
Number of office visits	.173*	.223**	.229**	
Spiritual Well-Being Scale	-.301**	.019	-.361**	-.124

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Correlations for 168 subjects who completed all questionnaires.

infertility, however, it may be helpful to address spiritual and religious beliefs. It has been suggested that when a physician ignores these beliefs, the diagnostic assessment is incomplete.³⁰ Health care professionals may be well-positioned to appreciate and support the spiritual journeys of their patients.³¹

If physicians do choose to inquire about the spiritual and religious beliefs of their patients, they could use a simple open-ended question such as, "Do you have any religious or spiritual practices that you would like me to know about?"³² A panel of the American College of Physicians suggests other questions, including:

- Is faith (religion, spirituality) important to you?
- Has faith been important to you at other times in your life?
- Do you have someone to talk to about religious matters?
- Would you like to explore religious matters with someone?³³

Physicians and other health care professionals can also support religious beliefs that aid in coping, including rituals to mark events

In one study, patients were more likely than their physicians to believe in God (91% vs 64%) and the afterlife (60% vs 45%), and more likely to pray (85% vs 60%) and to feel close to God (74% vs 43%).

such as a miscarriage or stillbirth.³⁴ Physicians should not prescribe activities that impose their own religious views or initiate prayer unless they know the patient's religious background and the patient has specifically requested it. Physicians should not provide in-depth religious counseling, which is best handled by trained clergy.^{30,33}

In summary, spirituality appears to play an important role in the psychological health of infertile women. Future studies are needed to replicate and expand these findings. Health care professionals may be well-advised to inquire about and support their patients' religious beliefs to promote the physical and psychological well-being of infertile women. □

REFERENCES

1. Matthews DA, Larson DB. The faith factor: An annotated bibliography of clinical research on spiritual subjects. Vol III. Rockville, MD: National Institute for Health Care Research, 1995.
2. Ellison CG. Religious involvement and subjective well-being. *J Health Soc Behav* 1991;32:80-99.
3. Ellison CG, Gay DA, Glass TA. Does religious commitment contribute to individual life satisfaction? *Social Forces* 1989; 68:100-23.
4. Koenig HG, Cohen HJ, Blazer DG. Religious coping and depression in elderly hospitalized medically ill men. *Am J Psychiatry* 1992;149: 1693-1700.
5. Koenig HG, Ford S, George LK, et al. Religion and anxiety disorder: An examination and comparison of associations in young, middle-aged, and elderly adults. *J Anx Dis* 1993;7:321-42.
6. Martin WT. Religiosity and United States suicide rates, 1972-1978. *J Clin Psychol* 1984;40:1166-69.
7. Stack S. The effect of religious commitment on suicide: A cross-sectional analysis. *J Health Soc Behav* 1983;362-74.
8. Domar AD, Broome A, Zuttermeister PC, et al. The prevalence and predictability of depression in infertile women. *Fertil Steril* 1992;58: 1158-63.
9. Downey J, Yinling S, McKinney M, et al. Mood disorders, psychiatric symptoms, and distress in women presenting for infertility evaluation. *Fertil Steril* 1989;52:425-32.
10. Downey J, McKinney M. The psychiatric status of women presenting for infertility evaluation. *Am J Orthopsych* 1992;62:196-205.
11. Lapane LK, Zierler S, Lasatar TM, et al. Is a history of depressive symptoms associated with an increased risk of infertility in women? *Psychosom Med* 1995;57:509-13.
12. Thiering P, Beaurepaire J, Jones M, et al. Mood state as a predictor of treatment outcome after in vitro fertilization/embryo transfer technology. *J Psychosom Res* 1993;37:481-91.
13. Demyttenaere K, Bonte L, Gheldof M, et al. Coping style and depression level influence outcome in in vitro fertilization. *Fertil Steril* 1998;69:1026-33.
14. Boivin J, Schmidt L. Infertility-related stress in men and women predicts treatment outcomes 1 year later. *Fertil Steril* 2005;83:1745-52.
15. Merari D, Shitrit A, Feldberg D, et al. Psychosocial characteristics of women undergoing in vitro fertilization: A study of treatment outcome. *Israel J Ob Gyn* 1996;7:65-72.
16. Folkman S, Chesney M. Stress and coping and high risk sexual behavior. *Health Psychol* 1992;11:218-22.
17. Berson AR. Quality of life issues for patients with reproductive loss. *Clin Consult Obstet Gynecol* 1994;6:100-8.
18. Beck A, Steer R. Beck Depression Inventory Manual. San Antonio, TX: The Psychological Corporation, 1987.
19. Newton CR, Sherrard W, Glavac I. The Fertility Problem Inventory: measuring perceived infertility-related stress. *Fertil Steril* 1999;72: 54-62.
20. Ellison CW, Smith J. Toward an integrative measure of health and well-being. *J Psychol Theology* 1991;19:35-48.
21. Spielberger CD, Gorsuch RL, Lushene RE. *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press; 1970.
22. 2004 Gallup Index of Leading Religious Indicators. Available at www.gallup.com/poll/content/?ci=14584&pg=1. Accessed August 28, 2005.
23. Bergin AE, Payne IR. Religiosity of psychotherapists: a national survey. *Psychotherapy* 1990;27:3-7.
24. Maugans TA, Wadland WC. Religion and family medicine: a survey of physicians and patients. *J Fam Pract* 1991;32:210-3.
25. Dowell EH, Matthews DA, Larson DB. No room at the inn?: neglect of religious variables by clinical epidemiologists. *Clin Res* 1993;41: 516A.
26. King DE, Bushwick B. Beliefs and attitudes of hospital inpatients about faith healing and prayer. *J Fam Pract* 1994;39:349-52.
27. McNichol T. The new faith in medicine. *USA Weekend*, April 5-7, 1996:4-5.
28. Wallis C. Faith and healing. *Time*, June 24, 1996:62.
29. Fricchione GL. Religious issues in the context of medical illness. In: Stoudemire A, Fogel B, Greenberg D, eds. *Psychiatric Care of the Medical Patient*, ed 2. Oxford, England: Oxford University Press, 2000: 91-104.
30. Sloan RP, Bagiella E, VandeCreek L, et al. Should physicians prescribe religious activities? *N Engl J Med* 2000;342:1913-6.
31. Waldfogel S, Wolpe PR. Using awareness of religious factors to enhance interventions in consultation-liaison psychiatry. *Hosp Community Psychiatry* 1993;44:473-7.
32. Astrow AB, Puchalski CM, Sulmasy DP. Religion, spirituality, and health care: Social, ethical, and practical considerations. *Am J Med* 2001; 110:283-7.
33. Koenig HG. Religion, spirituality, and medicine: Application to clinical practice. *JAMA* 2000;284:1708-11.
34. Lauver DR. Commonalities in women's spirituality and women's health. *Adv Nurs Sci* 2000;22:76-88.

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