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November 2005 Articles of the Month

This month's article selection is by Chaplain John Ehman,
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Bormann, J. E., Smith, T. L., Becker, S., Gershwin, M., Pada, L., Grudzinski, A. H. and Nurmi, E. A. "Efficacy of frequent mantram repetition on stress, quality of life, and spiritual well-being in veterans: a pilot study." *Journal of Holistic Nursing* 23, no. 4 (December 2005): 395-414.

SUMMARY and COMMENT: This pilot study sought to assess the potential efficacy of a stress management strategy using mantrams [--note that the authors prefer *mantram* to *mantra*, which is the more common form of the term in Western literature] and emphasizing words of spiritual meaning, as taught through a particular 5-week, 90-minute per week program. The authors' two hypotheses were confirmed:

Hypothesis 1: Persons completing the mantram course will demonstrate a significant decrease in perceived stress, state and trait anxiety, state and trait anger, and PTSD symptom scores from pre- to postintervention ($p < .05$).

Hypothesis 2: Persons completing the mantram course will demonstrate a significant increase in quality of life enjoyment and satisfaction and spiritual well-being scores from pre- to postintervention ($p < .05$). [p. 402]

The intervention was adapted from research on stress management in HIV patients. Conceptually, though, the mantram strategy was rooted largely in research on the *relaxation response*, popularized by the work of Herbert Benson [--see Related Items of Interest, below], except that in this case there was no need to block out a period of quiet time, to close one's eyes, or focus on muscle relaxation. The mantram strategy could be used continuously or immediately in response to stress, even while engaging in other activities.

The five classes of the program were: 1) How to Choose a Mantram, 2) How to Use and Track Mantram Practice, 3) Developing One-Pointed Attention, 4) Slowing Down, and 5) Putting It All Together. The concepts of "one-pointed attention" (i.e., devoting attention to a single task) and "slowing down" were presented as key complementary practices to mantram repetition. Program participants were given a list of possible mantrams drawn from major religious traditions [--see the table on p. 401]. "The structure of the course was based on reading assignments taken from *The Mantram Handbook* by Eknath Easwaran, a spiritual teacher of meditation...[and]...[a] manual of experiential weekly exercises was created for group discussion" [pp. 399-400]. The researchers were especially concerned with the management of "intrusive stressful thoughts" [pp. 396, 398, and *passim*].

Participants in the study were 62 veterans--a convenience sample from a total of 173 who had taken the course. The sample was "90.3% men with an average age of 61.8 (SD=13.2) ranging from 33 to 84 years old" [p. 399]. They completed five self-report measures [--see the table on p. 104], including Ellison's Spiritual Well-Being Scale. "[T]he relaxation response itself was not directly assessed..." [p. 408]. Veterans were chosen as the

population for this test of the mantram program in light of reports that VA outpatients "have a substantially worse health status than non-VA populations" [p. 398].

Summarizing the analysis of the data, the authors state:

There were significant improvements in all outcome measures in the hypothesized direction, despite small sample sizes and convenience sample. Results show...that, in general, changes throughout time from pre- to postintervention may be mediated by mantram practice. There were two medium-to-large effects that were significant--trait anxiety and existential spiritual well-being.... [p. 409]

Limitations of the study are well considered, including: "Words chosen by participants were not assessed, and this lessens confidence that spiritual mantram words had a different effect than secular words" [p. 410].

The value of this study for chaplain researchers is at least two-fold. First, it pilots an intervention that may show outcome changes in only a matter of weeks, so it could be replicated with a number of patient groups: the authors suggest "patients with HIV/AIDS, Alzheimer's caregivers, and veterans diagnosed with PTSD" [p. 410]; but other possible patient groups with whom chaplains may have prolonged contact could include cancer outpatients receiving radiation or chemotherapy, cystic fibrosis patients, lung transplant patients, congestive heart disease patients, some orthopedic rehabilitation patients, and patients or family members coping with post-traumatic stress or grief. While the intervention in the study is geared for nurses, it would seem to be easily adaptable for chaplains' use. Second, this stress-reduction strategy holds out great potential for use with religiously diverse populations and for people who have difficulty protecting blocks of time for private meditation (as is often a problem for inpatients). Chaplains may, however, want to supplement the older Spiritual Well-Being Scale with one of the more recently developed measure of spiritual well-being (e.g., FACIT-Sp, which was the subject of the [February 2004 Article-of-the-Month](#)).

[**Editor's Note** (posted 11/8/05): The principal author, Jill E. Bormann, PhD, RN, has subsequently written to the Network that additional reports of research on the use of mantrams are forthcoming. An article on an NIH-funded randomized control trial using mantram repetition in a population of HIV-infected adults is presently in the review stage, a four-year VA-funded study on mantram repetition in veterans with PTSD is underway, and a study of mantram repetition for caregivers of patients with dementia or other debilitating diseases (e.g., Parkinson's and Alzheimer's) is in a pilot data collection phase. Dr. Bormann is also developing "train the trainer" programs in mantram repetition, and she recommends visiting the web site of the Blue Mountain Center for Meditation (www.easwaran.org) for information on Sri Eknath Easwaran's eight-point spiritual program, upon which she notes that her mantram repetition practice is based.]

Suggestions for the Use of the Article for Discussion in CPE:

The article is, overall, very readable. The authors offer a good sense of context for research on stress management intervention, explain the conceptual basis for the intervention, state clearly the hypotheses and methodology involved, discuss the "bottom line" of their results, note well the limits of the research, and list a thorough bibliography. However, most CPE students will probably be left befuddled by some of the statistical material and should be cautioned about this. The list of possible mantrams in a table on p. 401 will likely draw students' attention, and discussion of the article could grow out of interest in the place of mantrams in various religious traditions. What is their own experience with this? What might be the relationship between such word repetition as a *modality* for prayer and the spiritual significance of a particular word being used? Also, chaplains may want to try out for themselves a discipline of mantram repetition to deal with their own job stress, and perhaps investigate further the authors' program (--for a practical outline of the use of mantrams by health care workers, see Bormann's "Frequent, silent mantram repetition: a jacuzzi for the mind," under Related Items of Interest, below). Finally, discussion could easily turn to Ellison's Spiritual Well-Being Scale, which has been considered through other studies highlighted in the [March 2004 Articles-of-the-Month](#).

Related Items of Interest:

Benson, H. and Klipper, M. Z. *The Relaxation Response*. New York: Avon Books, 1975. [This now-classic work explains Benson's method. It may be ordered through the Mind/Body Medical Institute (www.massgeneral.org/bhi), of which Benson is the founding president.]

Bernardi, L., Porta, C., Spicuzza, L. and Sleight, P. "**Cardiorespiratory interactions to external stimuli.**" *Archives Italiennes de Biologie* 143, no. 3-4 (September 2005): 215-221. [This review article explores the physiological effects of the act of praying the rosary (or also mantra recitation) in terms of respiration and the modulation of heart rate variability and baro-reflex and chemo-reflex sensitivity.]

Bernardi, L., Sleight, P., Bandinelli, G., Cencetti, S., Fattorini, L., Wdowczyk-Szulc, J. and Lagi, A. "**Effect of rosary prayer and yoga mantras on autonomic cardiovascular rhythms: comparative study.**" *BMJ: British Medical Journal* 323, no. 7327 (December 22-29, 2001): 1446-1449. [This study found significant effects from praying the rosary and reciting mantras with a breathing rhythm of six times a minute.]

[Added 7/22/11:] Bormann, J., Warren, K. A., Regalbuto, L., Glaser, D., Kelly, A., Schnack, J. and Hinton, L. "**A Spiritually Based Caregiver Intervention With Telephone Delivery for Family Caregivers of Veterans With Dementia.**" *Family and Community Health: Faith-Based Programs Addressing Community Health Issues* 32, no. 4 (October/December 2009): 345-353. [Caring for veterans with dementia is burdensome for family caregivers. This exploratory study tested the efficacy of an innovative, spiritually based mantram caregiver intervention delivered using teleconference calls. A prospective, within-subjects, mixed-methods, and 3-time repeated-measures design with 36-week follow-up telephone interviews was conducted. Sixteen caregivers (94% women, 94% Whites with mean age 69.2 years, SD = 10.35 years) completed the intervention. Significant effects for time and linear terms were found for decreasing caregiver burden, perceived stress, depression, and rumination and for increasing quality of life enjoyment and satisfaction, all with large effect sizes. Findings suggest that teleconference delivery of a spiritually based caregiver intervention is feasible.]

Bormann, J. E. "**Frequent, silent mantram repetition: a jacuzzi for the mind.**" *Topics in Emergency Medicine* 27, no. 2 (April/June 2005): 163-166. [This is an outline of the practice of mantra repetition for use by emergency health care workers, written by the principal author of this month's featured article. The author has made this available to our Network as a [PFD file](#).]

[Added 7/22/11:] Bormann, J. E., Aschbacher, K., Wetherell, J. L., Roesch, S. and Redwine, L. "**Effects of faith/assurance on cortisol levels are enhanced by a spiritual mantram intervention in adults with HIV: a randomized trial.**" *Journal of Psychosomatic Research* 66, no. 2 (February 2009): 161-171. [(From the abstract:) This study compared the effects of 2 interventions—a spiritually-based mantram intervention versus an attention-matched control group—on faith/assurance and average salivary cortisol levels among HIV-infected individuals. METHODS: Using a randomized design, HIV-infected adults were assigned to the intervention (n = 36) or control condition (n = 35). Faith scores and saliva (collected at 7 a.m., 11 a.m., 4 p.m., and 9 p.m.) were assessed at preintervention, postintervention, and 5-week follow-up. Path analyses tested competing models that specify both concurrent and sequential relationships between faith and average daily cortisol levels while comparing groups. RESULTS: Faith levels increased among mantram participants from pre- to postintervention. Greater faith at preintervention was significantly associated with lower average cortisol at postintervention in the mantram group but not in the controls. The associations between faith at postintervention and cortisol levels at 5-week follow-up were significant among both groups but weaker than the pre- to postintervention association identified in the mantram group. CONCLUSIONS: These results suggest the presence of lagged or antecedent consequent relationships between faith and cortisol, which may be enhanced by mantram use. Decreased cortisol could potentially benefit immune functioning among HIV-infected individuals.]

[Added 9/29/06:] Bormann, J. E., Becker, S., Gershwin, M., Kelly, A., Pada, L., Smith, T. L. and Gifford, A. L. **"Relationship of frequent mantram repetition to emotional and spiritual well-being in healthcare workers."** *Journal of Continuing Education in Nursing* 37, no. 5 September-October 2006): 218-224. [In this study of 42 hospital workers who practiced frequent mantram repetition: " Significant improvements were found in stress ($p < .001$), trait-anxiety ($p = .002$), trait-anger ($p = .02$), quality of life ($p = .001$), and spiritual well-being ($p = .003$). When examining the effects of mantram practice, trait-anxiety and religious and spiritual well-being were significant ($p < .05$). Conclusion: Improvements in emotional and spiritual well-being may be mediated by frequent mantram repetition." (--from the abstract)]

[Added 7/22/11:] Bormann, J. E. and Carrico, A. W. **"Increases in positive reappraisal coping during a group-based mantram intervention mediate sustained reductions in anger in HIV-positive persons."** *International Journal of Behavioral Medicine* 16, no. 1 (2009): 74-80. [(From the abstract:) We examined the hypothesis of whether increases in positive reappraisal coping or distancing coping mediated the sustained decreases in anger found following a group-based mantram intervention that was designed to train attention and promote awareness of internal experiences. METHOD: A secondary analysis was performed on data collected from a randomized controlled trial that compared a group-based mantram intervention ($n = 46$) to an attention-matched control ($n = 47$) in a community sample of human immunodeficiency virus-positive adults. Positive reappraisal and distancing coping were explored as potential mediators of anger reduction. RESULTS: Participants in the mantram intervention reported significant increases in positive reappraisal coping over the 5-week intervention period, whereas the control group reported decreases. Increases in positive reappraisal coping during the 5-week intervention period appear to mediate the effect of mantram on decreased anger at 22-week follow-up. CONCLUSIONS: Findings suggest that a group-based mantram intervention may reduce anger by enhancing positive reappraisal coping.]

[Added 7/28/06:] Bormann, J. E., Gifford, A. L., Shively, M., Smith, T. L., Redwine, L., Kelly, A., Becker, S., Gershwin, M., Bone, P. and Belding, W. **"Effects of spiritual mantram repetition on HIV outcomes: a randomized controlled trial"** *Journal of Behavioral Medicine* 29, no. 4 August 2006): 359-376. [In this study of 93 HIV+ adults: "...Over time, the mantram group improved significantly more than the control group in reducing trait-anger and increasing spiritual faith and spiritual connectedness. Actual mantram practice measured by wrist counters was inversely associated with non-HIV related intrusive thoughts and positively associated with quality of life, total existential spiritual well-being, meaning/peace, and spiritual faith." (from the abstract)] --SUPPLEMENTAL NOTE [added 9/20/06]: Erratum appears in vol. 29. no. 5 (October 2006): 499; stating that *trait-anxiety* should replace *anger* in the wording of the first sentence under the heading of "Mantram Group versus Mantram Practice Effects" on p. 372.

[Added 6/29/06:] Bormann, J. E., Oman, D., Kempainen, J. K., Becker, S., Gershwin, M. and Kelly, A. **"Mantram repetition for stress management in veterans and employees: a critical incident study."** *Journal of Advanced Nursing* 53, no. 5 (March 2006): 502-512. [The article reports analysis of data collected in 2001-2002 from participants of a stress management program that taught a technique of silent mantram repetition. A majority of participants indicated that the technique was useful. The authors present a taxonomy of uses. (The authors cite Oman and Thoresen's "Spiritual modeling: a key to spiritual and religious growth?" which is featured as our July 2006 Article-of-the-Month.)]

[Added 7/22/11:] Bormann, J. E., Smith, T. L., Shively, M., Dellefield, M. E. and Gifford, A. L. **"Self-monitoring of a stress reduction technique using wrist-worn counters."** *Journal for Healthcare Quality* 29, no. 1 (January-February 2007): 45-52. [(Abstract:) In a study of 59 veterans and healthcare workers, the reliability of a self-monitoring method used to track the frequency of a spiritually oriented stress reduction technique was assessed. During a 5-week program of silently repeating a mantram (a spiritual word or phrase) to lower stress and anger and improve spiritual well-being, portable wrist-worn counters were used to track daily mantram practice sessions. All outcomes significantly improved in the hypothesized direction. Mantram practice tracked by the counters was highly correlated ($r = .84$) with retrospective self-reports, indicating that such counters may be a reliable self-monitoring tool and could be used to measure a variety of other behavioral health quality indicators.]

[Added 7/22/11:] Bormann, J. E., Thorp, S., Wetherell, J. L. and Golshan, S. "**A spiritually based group intervention for combat veterans with posttraumatic stress disorder: feasibility study.**" *Journal of Holistic Nursing* 26, no. 2 (June 2008): 109-116. [(From the abstract:) A two group (intervention vs. control) by two time (pre- and postintervention) experimental design was used. METHODS: Veterans were randomly assigned to intervention (n = 14) or delayed-treatment control (n = 15). Measures were PTSD symptoms, psychological distress, quality of life, and patient satisfaction. Effect sizes were calculated using Cohen's d. FINDINGS: Thirty-three male veterans were enrolled, and 29 (88%) completed the study. Large effect sizes were found for reducing PTSD symptom severity (d = -.72), psychological distress (d = -.73) and increasing quality of life (d = -.70). CONCLUSIONS: A spiritual program was found to be feasible for veterans with PTSD. They reported moderate to high satisfaction. Effect sizes show promise for symptom improvement but more research is needed.]

[Added 2/17/16:] Buttner, M. M., Bormann, J. E., Weingart, K., Andrews, T., Ferguson, M. and Afari, N. "**Multi-site evaluation of a complementary, spiritually-based intervention for veterans: the Mantram Repetition Program.**" *Complementary Therapies in Clinical Practice* 22 (February 2016):74-79. [(Abstract:) BACKGROUND: Mental and physical symptoms affect Veterans' quality of life. Despite available conventional treatments, an increasing number of Veterans are seeking complementary approaches to symptom management. Research on the Mantram Repetition Program (MRP), a spiritually-based intervention, has shown significant improvements in psychological distress and spiritual well-being in randomized trials. However, these findings have not been replicated in real-world settings. METHODS: In this naturalistic study, we analyzed outcomes from 273 Veterans who participated in MRP at six sites and explored outcomes based on facilitator training methods. Measures included satisfaction and symptoms of anxiety, depression, and somatization using the Brief Symptom Inventory-18; Functional Assessment of Chronic Illness Therapy-Spiritual Well-being questionnaire; and the Mindfulness Attention Awareness Scale. RESULTS: There were significant improvements in all outcomes (p's < .001) regardless of how facilitators were trained. Patient satisfaction was high. CONCLUSION: The MRP was disseminated successfully yielding improvements in psychological distress, spiritual well-being, and mindfulness.]

Fabbro, F., Muzur, A., Bellen, R., Calacione, R. and Bava, A. "**Effects of praying and a working memory task in participants trained in meditation and controls on the occurrence of spontaneous thoughts.**" *Perceptual & Motor Skills* 88, no. 3, pt. 1 (June 1999): 765-770. [This study showed that meditation practitioners experienced fewer "intrusive thoughts." This was a seminal study for the authors of this month's featured article.]

Luskin, F. "**Transformative practices for integrating mind-body-spirit.**" *Journal of Alternative & Complementary Medicine* 10, Supplement 1 (2004): S15-23. [The author reviews "the clinical use of transformative practices that arose from the varied religious traditions of the world" (--from the abstract), including the use of mantras.]

Smith-Stoner, M. "**How Buddhism influences pain control choices.**" *Nursing* 33, no. 4 (April 2003): 17. [This one-page article notes the use of mantras.]

Tacon, A. M. "**Meditation as a complementary therapy in cancer.**" *Family & Community Health* 26, no. 1 (January 2003): 64-73. [This is a general review of the use of meditation in cancer therapy, and the use of mantras is mentioned specifically, though in passing, on p. 67.]

Wolf, D. B. and Abell, N. "**Examining the effects of meditation techniques on psychosocial functioning.**" *Research on Social Work Practice* 13, no. 1 (January 2003): 27-42. [This study of the use of the *maha* mantra (found in Vedic literature) indicates its potential for addressing stress and depression. The authors (from the State of Florida Department of Health and Florida State University) consider this intervention in terms of a spiritual component for social work practice.]

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