45th Biennial Convention (16-20 November 2019)

Mindfulness-Based Intervention for Nurses: A Systematic Review and Meta-Analysis

Rodenick Navalta Agtarap, MAN, RN

Nursing Division, Baguio General Hospital and Medical Center, Baguio City, Philippines

Introduction

Nurses are the largest group in the health care system who experience extreme stress and burnout in the hospital with multiple factors which negatively impact nurses. However, mindfulnessbased interventions can possibly be one of the possible solutions that can improve stress relief, reduce anxiety, improve coping, improve self-care, reduce symptoms of depression and reduce burnout.

Method

The reviewed articles were coded based on specific characteristics of study and the overall inclusion criteria used are mindfulness intervention, varied outcomes, and hospital nurses. On the other hand, the exclusion criteria is composed of abstract only, non-English language, no mindfulness intervention in the program provided by the study, qualitative design studies, and studies mixed with other health care professionals except for studies that almost 90% of the participants are staff nurses. The search was conducted on April 2018 by using PsychInfo, Francis & Taylor, JSTOR, Cochrane Central, Pubmed, EMBASE, EBSCOHOST, Elsevier, Wiley Online Library, Springer, Semantic Scholar, Google scholar, Gale Cengage Learning, DOAJ, NCBI, Proquest, Clinical Key, and Science Direct. The bibliographic search and reference list of various articles were used to locate for other related articles, unpublished dissertation, and thesis papers. The reviewed articles have been explored and assessed the effects based on specific characteristics of study which were included for the research synthesis and meta-analysis of different outcome measures using the Comprehensive Meta-analysis (CMA). Random-effects model was used and bias was analyzed.

Results and Discussion

The variation of twenty (20) studies evaluated was heterogeneous because of different study designs, mix of interventions with mindfulness, low number of samples included in each study, and different effects observed. Indeed, the review and analysis was a good evidence which provides rigorous background and present a current trend in utilizing mindfulness as a way of helping nurses cope with stress, burn-out, and improve well-being as a whole. Conclusion

Overall, the reviewed studies garnered a small effect as the results were statistically varied and the level of effects are spurious in most of the studies. Nonetheless, empowering professional nurses through mindfulness will better equip them to act with more awareness and attention.

Title:

Mindfulness-Based Intervention for Nurses: A Systematic Review and Meta-Analysis

Keywords:

mindfulness-based intervention, staff nurses and systematic review

References:

Alexander, G. K., Rollins, K., Walker, D., Wong, L., & Pennings, J. (2015). Yoga for self-care and burnout prevention among nurses. *Workplace Health & Safety*, 63(10), 462-470.

Bazarko, D., Cate, R. A., Azocar, F., & Kreitzer, M. J. (2013). The impact of an innovative mindfulness-based stress reduction program on the health and well-being of nurses employed in a corporate setting. *Journal of Workplace Behavioral Health*, 28, 107-133.

Beins, B. C. (2012). *APA styles simplified: Writing in psychology, education, nursing, and sociology*. Chichester, West Sussex: John Wiley & Sons Ltd.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (Eds.). (2009). Chapter 1: How meta-analysis works. *Introduction to meta-analysis*. Chichester, UK: John Wiley & Sons, Ltd.

Brown, K. W., Ryan, R. M., Creswell, J. D. (2007). Mindfulness: Theoretical and evidence for its salutary effects. *Psychological Inquiry*, *18*(4), 211-237.

Brown, S. A., Upchurch, S. L., & Acton, G. J. (2003). A framework for developing a coding scheme for mete-analysis. *Western Journal of Nursing Research*, 25(2), 205-222.

Carmody J. & Baer, R. A. (2009). How long does a mindfulness-based stress reduction program need to be? A review of class contact hours and effect sizes for psychological distress. *Journal of Clinical Psychology*, 65(6), 627-638.

Calisi, C. C. (2017). The effects of the relaxation response on nurses' level of anxiety, depression, well-being, work-related stress, and confidence to teach patients. *Journal of Holistic Nursing*. doi: 10.1177/0898010117719207.

Chang, S. J., Kwak, E. Y., Hahm, B., Seo, S. H., Lee, D. W., & Jang, S. J. (2016). Effects of meditation program on nurses' power and quality of life. *Nursing Science Quarterly*, 29(3), 227-234.

Chiesa, A. & Serretti, A. (2010). A systematic review of neurobiological and clinical features of mindfulness meditations. *Psychological Medicine*, 40, 1239-1252.

Cohen-Katz, J., Wiley, S., Capuano, T., Baker, D. M., & Shapiro, S. (2005). The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: A quantitative and qulaitative study. *Holistic Nursing Practice*, *19*(1), 26-35.

Cooper, H. (2010). *Research synthesis and meta-analysis: A step-by-step approach* (4th ed.). Thousand Oaks, California: SAGE Punlications Inc.

Cutshall, S. M., Wentworth, L. J., Wahner-Roedler, D. L., Vincent, A., Schmidt, J. E., Loehrer, L. L., Cha, S. S., & Bauer, B. A. (2011). Evaluation of a biofeedback-assisted meditation program as a stress management tool for hospital nurses: A pilot study. *Explore*, 7(2), 110-112. Davis, D. M., & Hayes, J. A. (2011). What are the benefits of mindfulness? A practice of psychotherapy-related research. *Psychotherapy*, 48(2), 198-208.

Deible, S., Fioravanti, M., Tarantino, B., & Cohen, S. (2015). Implementation of an integrative coping and resiliency program for nurses. *Global Advances in Health and Medicine*, 4(1), 28-33.

dos Santos, T. M., Kozasa, E. H., Carmagnani, I. S., Tanaka, L. H., Lacerda, S. S., & Nogueira-Martins, L. A. (2016). Positive effects of stres reduction program based on mindfulness meditation in Brazilian nursing professionals: Qualitative and quantitative evaluation. *Explore*, *12*(2), 90-99.

Duarte, J., & Pinto-Gouveia, J. (2017). Mindfulness, self-compassion and psychological inflexibility mediate the effects of a mindfulness-based intervention in a sample of oncology nurses. *Journal of Contextual Behavioral Science* (Accepted manuscript).

Fang, R. & Li, X. (2015). A regular intervention for staff nurse sleep quality and work stress; A randomized controlled trial. *Journal of Clinical Nursing*, *24*, 3374-3379.

Gauthier, T., Meyer, R. M. L., Grefe, D., & Gold J. I. (2014). An on-the-job mindfulness-based intevrention for pediatric ICU nurses: A pilot. *Journal of Pediatric Nursing* (Article in press). Higgins, J. P., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions*. West Sussex, England: John Wiley & Sons Ltd

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based theraphy on anxiety and depression: A meta-analytic review. *J Consult Clin Psychol*, 78(2), 169-183.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6(6), 537-559.

Horner, J. K., Piercy, B. S., Eure, L., & Woodard, E. K. (2014). A pilot study to evaluate mindfulness as a strategy to improve inpatient nurse and patient experiences. *Applied Nursing Research* (Article in press).

Isaksson Rø, K. E., Gude, T., Tyssen, R., & Aasland, O. G. (2010). A self-referral intervention for burnout among Norwegian nurses: One-year follow-up study. *Patient and Education Counselling*, *78*, 191-197.

Kabat-Zinn, J. (2003). Mindfulness-based intervention in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144-156.

Koricheva, J., Gurevitch, J., & Mengersen, K. (Eds.). (2013). *Handbook of meta-analysis in ecology and evolution*. Princeton, New Jersey: Princeton University Press.

Liberati, A., Altman, D. G., Tetzlaff, J., Murlow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic review and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Annals of Internal Medicine*, *151*(4), w65-w94.

Mackenzie, C. S., Poulin, P. A., & Seidman-Carlson, R. (2006). A brief mindfulness-based stress reduction intervention for nurses and nurse aides. *Applied Nursing Research*, *19*, 105-109 Mealer, M., Conrad, D., Evans, J., Jooste, K., Solyntjes, J., Rothbaum, B. & Moss, M. (2014).

Feasibility and acceptability of a resilience training program for intensive care unit nurses. *American Journal of Critical Care*, 23(6), e97-e105.

Nisbet, M. (2017). The mindfulness movement: How a buddhist practice evolved into a scientific approach to life. *Skeptical Inquirer*, *41*(2), 24-26.

Pipe, T. B., Bortz, J. J., & Dueck, A. (2009). Nurse leader mindfulness meditation program for stress management. *The Journal of Nursing Administration*, *39*(3), 130-137.

Philbrick, G. (2015). Using mindfulness to enhance nursing practice. *Kai Taiki Nursing New Zealand*, 21(5), 32-33.

Poulin, P. A., Mackenzie, C. S., Soloway, G., & Karayolas, E. (2008). Mindfulness training as an evidence-based approach to reducing stress and promoting well-being among human services professional. *International Journal of Health Promotion and Education*, 46(2), 72-80.

Praissman, S. (2008). Mindfulness-based stress reduction: A literature review and clinician's guide. *Journal of the American Academy of Nurse Practitioners*, 20, 212-216.

Sarid, O., Berger, R., & Segal-Engelchin, D. (2010). The impact of cognitive behavioral inteventions on SOC, perceived stress and mood states of nurses. *Procedia Social and Behavioral Sciences*, 2, 928-932.

Schmidt, F. L. & Hunter, J. E. (2015). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Thousan Oaks, California: SAGE Publications Inc.

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014). The emerging role of buddhism in clinical psychology: Toward effective integration. *Psychology of Religion and Spirituality*, 6(2), 123-137.

Simkin, D. R. & Black, N. B. (2014). Meditation and mindfulness in clinical practice. *Child Adolesc Psychiatric Clin N Am*, 23, 487-534.

Sitzman, K. L. (2002). Interbeing and mindfulness: A bridge to understanding Jean Watson's theory of human caring. *Nursing Education Perspective*, 23(3), 118-123.

Veehof, M. M., Oskam, M., Schreurs, K. M. G., & Bohlmeijer, E. T. (2011). Acceptance-based interventions for the treatment of chronic pain: A systematic review and meta-analysis. *Pain*, *152*, 533-542.

Wang, S., Wang L., Shih, S., Chang, S., Fan, S., & Hu, W. (2017). The effects of mindfulnessbased stress reduction on hospital nursing staff. *Applied Nursing Research* (Accepted manuscript).

White, L. (2013). Mindfulness in nursing: An evolutionary concept analysis. *Journal of Advanced Nursing*, 70(2), 282-294.

Whitehead, A. (2002). *Meta-analysis of controlled clinical trials*. Chichester, West Sussex: John Wiley & Sons Ltd.

Wolf, F. M. (1986). *Meta-analysis: Quantitative methods for research synthesis*. California, USA: Sage Publications, Inc.

Wylde, C. M., Mahrer, N. E., Meyer, R. M., & Gold, J. I. (2017). Mindfulness for novice pediatric nurses: Smartphone application versus traditional intervention. *Journal of Pediatric Nursing*, *36*, 205-212.

Abstract Summary:

The review aimed to synthesize and evaluate the effects of mindfulness-based interventions on different outcomes because there are few studies that translate knowledge on mindfulness practice for staff nurses.

Content Outline:

Introduction A. Nurses B. Mindfulness-based interventions Method A. Inclusion and Exclusion B. Search Strategy C. Coding Process D. Comprehensive Meta-Analysis Results and Discussion A. Summary of Reviewed Articles B. Random-Effects Model Conclusion A. Spurious Effects B. Empowering Professional Nurses <u>First Primary Presenting Author</u> *Primary Presenting Author* Rodenick Navalta Agtarap, MAN, RN Baguio General Hospital and Medical Center Nursing Division Staff Nurse Baguio City Philippines

Author Summary: The presenter is deeply interested with the implementation of programs useful in various health care setting in the Philippines. He is completing his PhD in Nursing at Saint Louis University and working as a staff nurse and member of the Research Ethics Committee in Baguio General Hospital and Medical center.