Yoga and Psychiatry

Nina K. Vollbehr

Summary

Treatment for most psychiatric disorders, such as major depression, bipolar depression and anxiety disorders, usually consists of a combination of pharmacotherapy and psychotherapy. Although these treatments are effective, the effects usually are moderate, meaning that many people with psychiatric disorders do not fully recover with these treatments. Also, many people suffer from side-effects of prescribed medication. Therefore it is important to continue to seek for new and better treatment options for psychiatric disorders. In recent years yoga has been used more and more as an intervention for patients with psychiatric problems and the effects have been studied. So far, yoga has shown a positive effect on depression, anxiety disorders, post-traumatic stress disorder and schizophrenia. In this lecture the current evidence for yoga for psychiatric disorders is shown and the preparations of a yoga intervention and study for patients with a broad range of psychiatric disorders at an outpatient center for psychiatric disorders are presented.

Author and Center

Nina K. Vollbehr is a psychologist, researcher and yoga teacher at the Center for Integrative Psychiatry (CIP). This center is part of Lentis, a large mental health care institution in the northern part of the Netherlands. The CIP serves about 500 adult outpatients a year. Patients of the CIP suffer from a large variety of psychiatric disorders, most common are mood disorders (36%) and anxiety disorders (15%) as well as personality disorders (34% of the patients). Patients usually have a long history of illness (median of 11). The mean treatment duration at the CIP is 288-388 days.

At the CIP patients are treated with conventional therapies (medication, cognitive behavioural therapy, EMDR, psychotherapy and counselling by specialized nurses), lifestyle training (diet, exercise, relaxation, communication, and heart rate variability training), mindfulness-based cognitive therapy (MBCT), and a selection of evidence-based complementary medicines such as Saint John's Wort, omega-3 fatty acids, SAMe and methylfolate. The CIP follows the principles of stepped care and applies a protocol with an algorithm to guide clinical decision making (Hoenders et al., 2011).

Introduction

Treatment for most psychiatric disorders, like major depression, bipolar depression and anxiety disorders, usually consists of a combination of pharmacotherapy and psychotherapy (Van Balkom et al., 2012; Spijker et al., 2012). Although these treatments certainly are effective, the effects usually are moderate, meaning that many people with psychiatric disorders do not fully recover with current treatments. Response rates for both pharmacotherapy and psychotherapy are usually between 50-65% (Unduragga, 2012; DeRubeis, 2008; Van Balkom et al., 2012; Baldwin, 2005). Also, many people suffer from

side-effects of medication. Therefore it is important to continue seeking new and better treatment possibilities for psychiatric disorders.

Originally, yoga emerged in India and was developed as a system of philosophy, meditation and physical exercise. For thousands of years yoga was used to systematically study and explain the human mind and the human condition (Becker, 2000). The goal of the yoga practices is the 'development of a state of mental and physical health, well-being, inner harmony (…)' (Khalsa, 2004, p.269).

The introduction of yoga in the West began with the presentation of Swami Vivekananda in front of the World Parliament of Religions in Chicago in 1893. In 1919 the physical form of yoga, called Hatha yoga, was presented to the Americans by Yogendra Mastamani (Becker, 2000). In the following years yoga spread more and more in the Western world. It is estimated by a survey of Yoga Journal in 2012 that 8.7% of the American adults use yoga (Yoga Journal, 2013).

In 1924 Swami Kuvalayananda opened the first laboratory for scientific research in yoga. Here, scientists started to map the physical effects of yoga. The application and scientific investigation of yoga for therapeutic reasons began more recently, in the 1970s (Khalsa, 2004). The use of randomized controlled trials (RCT) to study the effects of yoga has grown over the years and is stable after around 1990 (Khalsa, 2004). Research has shown that yoga promotes good mental and physical health and reduces pain (McCall, 2007). Also that yoga is relatively cheap since it's easy to offer it to a group of patients (Da Silva et al., 2009) and also that yoga complements other treatments well (Weintraub, 2012). In Figure 1 the potential effects of yoga are shown (adapted from Balasubramaniam et al., 2013).

Evidence for yoga for psychiatric disorders

In a 2013 review Cramer et al. included twelve RCTs on yoga for depression. They found moderate evidence for short-term effects of yoga compared to usual care on severity of depression, relaxation and aerobic exercise. This was only the case for meditation-based yoga interventions and not for studies with complex or exercise-based yoga interventions. They found no short-term effects for yoga compared to group therapy, social support groups, massage or pharmacological treatment. At a longer follow-up they found no significant differences for yoga compared to usual care, group therapy or social support groups.

In their 2005 review on yoga for anxiety Kirkwood et al. included eight controlled trials, of which six were randomized. They found positive results in favour of the yoga group for all studies, compared to relaxation, placebo medication, diazepam, anxiolytic and antidepressant drugs, Jacobson's progressive relaxation technique and reading and writing. Anxiety disorders that were included are obsessive-compulsive disorder, anxiety neurosis, psychoneurosis, psychosomatic disorder, examination anxiety and snake phobia.

Balasubramaniam et al. (2013) included three RCTS on yoga for schizophrenia. The yoga group showed in all studies significant improvement of positive and negative symptoms, general psychopathology and / or physical and psychological health and social

and occupational functioning. The yoga intervention was compared to a wait-list control group and physical exercise. In their 2013 meta-analysis Cramer et al. included 5 RCTs and conclude that yoga is only effective for short-term improvement of quality of life compared to care as usual and not for improving positive and negative symptoms and social function.

Balasubramaniam et al. (2013) included two RCTs on attention-deficit hyperactivity disorder (ADHD) in children. In one study yoga shower significant improvement of ADHD symptoms compared to conventional motor exercises and no difference between a yoga group and co-operative activities group in another study. For eating disorders they also included two studies. In one study in the yoga group was a significant reduction of binge eating and increase in physical activity compared to a control group. In another study there were no differences between a yoga group and control group. For sleeping problems they found three studies. In all studies the yoga group showed significant improvement of sleep compared to a wait-list control group and an ayurvedic treatment group. On yoga for cognitive problems they included two studies. In one study the yoga group showed significant improvement of cognition, compared to a medication-only group. In another study there were no significant differences between a yoga group, walking group and wait-list control group.

So far no review for yoga for addiction disorders has been performed. Two RCTs on yoga for smoking are known. In one study (Elibero et al., 2011) yoga was more effective than a control group and as effective as an exercise group in reducing the craving to smoke. In another study (Bock et al., 2012) participants in the yoga group were more able to remain abstinent of smoking than participants in a control group. Up to today no studies on yoga for bipolar disorders are performed.

None of the studies reported adverse events in the yoga group. The methodology in most studies is a limitation in interpreting this evidence. Balasubramaniam et al. (2013) rate the quality of all RCTs they included as low, mainly because of insufficient follow-up and a low follow-up rate (<80%). Other limitations of this research is that most studies are of small sample size, the method of randomization is unclear, the type and intensity of yoga are not described, the severity of illness is of great variety and the blinding of the participants is difficult. Also, in studies with a wait-list control group there might be a group effect in stead of an effect of the yoga intervention.

Yoga at the Center for Integrative Psychiatry

The CIP is planning to start a yoga intervention in 2014. This study will investigate the effects of yoga for a diverse range of psychiatric patients with a long history of illness. Currently a literature study of the effects of yoga in previous research is being performed and a curriculum for a yoga intervention is being developed. In this curriculum important steps are deciding the style of yoga (most likely hatha yoga), the amount of yoga (most likely classes of 1 hour, combined with home practice) and the specific ingredients of the yoga intervention (asana, pranayama, meditation, ethical concerns). Other important concerns are whether or not to include specific sequences for specific disorders. Most likely not since the research at

the CIP will focus on a broad range of psychiatric disorders. Also the competence and therapeutic qualities of the instructors need to be taken into account and necessary modifications of the program for patients with physical limitations need to be made. In preparing the study important choices need to be made about the control group (most likely starting with a wait-list control, possibly later comparing yoga to relaxation and / or mindfulness meditation) and the blinding of the participants, instructors and researchers (Sherman et al., 2012).

Integrating this Eastern tradition into Western psychiatry calls for an awareness of a certain cultural sensitivity. The Eastern tradition of yoga is based on different working mechanisms (about prana, nadis and charkas) than is Western medicine (neurotransmitters, hormones). In the East yoga is a very individualized practice, whereas in research a standard curriculum is desirable. The Hindu mythology and use of Sanskrit words might make it difficult for people from other religious backgrounds to practice yoga. In Indian tradition the amount of yoga is very high, with a practice of several hours a day. By introducing this practice in Western psychiatry it is important to find an achievable and sustainable amount of practice for psychiatric patients. Because yoga comes from a rich tradition that is focused on developing mental and physical health and well-being it is important to keep yoga based on the tradition and not turn it into 'just gymnastics'.

Conclusion

Yoga seems a promising intervention for a diverse range of psychiatric disorders. More high quality research is necessary. Therefore the Center for Integrative Psychiatry is preparing a study to the effects of yoga for psychiatric patients with a broad range of psychiatric disorders. The first step is to develop and test a curriculum. Then further study of working mechanisms and physiological processes involved in yoga is needed. By developing this curriculum and introducing this Eastern tradition into Western Psychiatry it is important to adapt the tradition of yoga to the needs of Western psychiatric patients and also keep yoga rooted into it's long and rich tradition.

Literature

Balasubramaniam, M., Telles, S., & Doraiswamy, P. M. (2012). Yoga on our minds: A systematic review of yoga for neuropsychiatric disorders. *Frontiers in Psychiatry / Frontiers Research Foundation, 3*, 117-117. doi:10.3389/fpsyt.2012.00117

Baldwin, D. S., & Polkinghorn, C. (2005). Evidence-based pharmacotherapy of generalized anxiety disorder. *The International Journal of Neuropsychopharmacology / Official Scientific Journal of the Collegium Internationale Neuropsychopharmacologicum (CINP), 8*(2), 293-302. doi:10.1017/S1461145704004870

Becker, I. (2000). Uses of yoga in psychiatry and medicine. In P. R. Muskin (Ed.), *Complementary and alternative medicine and psychiatry* (pp. 107-145). Washington, DC; London, England: American Psychiatric Press

Bock, B. C., Fava, J. L., Gaskins, R., Morrow, K. M., Williams, D. M., Jennings, E., . . . Marcus, B. H. (2012). Yoga as a complementary treatment for smoking cessation in women. *Journal of Womens Health, 21*(2), 240-248. doi:10.1089/jwh.2011.2963

Cramer, H., Lauche, R., Klose, P., Langhorst, J., & Dobos, G. (2013). Yoga for schizophrenia: A systematic review and meta-analysis. *Bmc Psychiatry, 13*, 32. doi:10.1186/1471-244X-13-32

Cramer, H., Lauche, R., Langhorst, J., & Dobos, G. (2013). Yoga for depression: A systematic review and meta-analysis. *Depression and Anxiety, 30*(11), 1068-1083. doi:10.1002/da.22166

da Silva, T. L., Ravindran, L. N., & Ravindran, A. V. (2009). Yoga in the treatment of mood and anxiety disorders: A review. *Asian Journal of Psychiatry, 2*(1), 6-16. doi:10.1016/j.ajp.2008.12.002

DeRubeis, R. J., Siegle, G. J., & Hollon, S. D. (2008). Cognitive therapy versus medication for depression: Treatment outcomes and neural mechanisms. *Nature Reviews.Neuroscience, 9*(10), 788-796. doi:10.1038/nrn2345; 10.1038/nrn2345

Elibero, A., Van Rensburg, K. J., & Drobes, D. J. (2011). Acute effects of aerobic exercise and hatha yoga on craving to smoke. *Nicotine & Tobacco Research, 13*(11), 1140-1148. doi:10.1093/ntr/ntr163

Hoenders, H. J., Appelo, M. T., van den Brink, E. H., Hartogs, B. M., & de Jong, J. T. (2011). The dutch complementary and alternative medicine (CAM) protocol: To ensure the safe and effective use of complementary and alternative medicine within dutch mental health care. *Journal of Alternative and Complementary Medicine (New York, N.Y.), 17*(12), 1197-1201. doi:10.1089/acm.2010.0762; 10.1089/acm.2010.0762

Khalsa, S. B. S. (2004). Yoga as a therapeutic intervention: A bibliometric analysis of published research studies. *Indian Journal of Physiology and Pharmacology, 48*(3), 269-85

Kirkwood, G., Rampes, H., Tuffrey, V., Richardson, J., & Pilkington, K. (2005). Yoga for anxiety: A systematic review of the research evidence. *British Journal of Sports Medicine, 39*(12), 884-891. doi:10.1136/bjsm.2005.018069

McCall, T. (2007). *Yoga as medicine: The yogic prescription for health and healing*. New York, NY: Bantam Dell

Sherman, J. (2012). Guidelines for developing yoga interventions for randomized trials. *Evidence-based Compl and Alt Med, 1-16*

Spijker, J., Bockting, C. L. H., Meeuwissen, J. A. C., Van Vliet, I. M., Emmelkamp, P. M. G., Hermens, M. L. M., . . . namens de Werkgroep Multidisciplinaire richtlijnontwikkeling Angststoornissen/Depressie. (2012). Multidisciplinaire richtlijn depressie (tweede revisie). richtlijn voor de diagnostiek, behandeling en begeleiding van volwassen patiënten met een depressieve stoornis. Retrieved 04/26, 2013, from http://www.ggzrichtlijnen.nl/

Undurraga, J., & Baldessarini, R. J. (2012). Randomized, placebo-controlled trials of antidepressants for acute major depression: Thirty-year meta-analytic review.

Neuropsychopharmacology : Official Publication of the American College of Neuropsychopharmacology, 37(4), 851-864. doi:10.1038/npp.2011.306; 10.1038/npp.2011.306

Van Balkom, A. L. J. M., Van Vliet, I. M., Van Emmelkamp, P. M. G., Bockting, C. L. H., Spijker, J., Hermens, M. L. M., . . . namens de Werkgroep Multidisciplinaire richtlijnontwikkeling Angststoornissen/Depressie. (2012). Multidisciplinaire richtlijn angststoornissen (tweede revisie). richtlijn voor de diagnostiek, behandeling en begeleiding van volwassen patiënten met een angststoornis. Retrieved 04/26, 2013, from http://www.ggzrichtlijnen.nl/

Vancampfort, D., Vansteelandt, K., Scheewe, T., Probst, M., Knapen, J., De Herdt, A., & De Hert, M. (2012). Yoga in schizophrenia: A systematic review of randomised controlled trials. *Acta Psychiatrica Scandinavica, 126*(1), 12-20. doi:10.1111/j.1600-0447.2012.01865.x

Weintraub, A. (2012). *Yoga skills for therapists: Effective practices for mood management*. London, UK & New York, NY: W.W. Norton & Company

Yoga Journal. (2012). Yoga in america study 2012. Retrieved 12/12, 2013, from http://www.yogajournal.com/press/yoga_in_america