

Chronic depression treated successfully with novel taping therapy: a new approach to the treatment of depression

Chang Hyun Han^{1,*}

Hwa Soo Hwang^{2,*}

Young Joon Lee³

Sang Nam Lee⁴

Jane J Abanes⁵

Bong Hyo Lee⁶

¹Clinical Research Division, Korea Institute of Oriental Medicine, Daejeon, ²Chims-Saengvit Oriental Medicine Clinic, Seoul, ³Department of Preventive Korean Medicine, ⁴Department of Qigong, College of Korean Medicine, Daegu Haany University, Gyeongsangbuk-do, South Korea; ⁵Daniel K Inouye Graduate School of Nursing, Uniformed Services University of the Health Sciences, Bethesda, MD, USA; ⁶Department of Acupuncture, Moxibustion and Acupoint, College of Korean Medicine, Daegu Haany University, Daegu, South Korea

*These authors contributed equally to this work

Introduction: Despite improved research in the treatment, depression remains difficult to treat. Till date, successful treatment of depression using taping therapy has not been known yet. We report cases where patients with severe depressive symptoms were successfully treated by taping therapy, a new approach.

Methods: In case 1, a patient was taking several psychiatric medications for 10 years and admitted often to the psychiatric hospital with a leaning head, flexible legs, and nearly closed eyes; in case 2, a patient after a hysterectomy complained with heart palpitations, depressive- and anxiety-like behaviors, insomnia, and gastrointestinal problems; and in case 3, a patient with complaints of adverse effects from antidepressant medications had suicidal thoughts frequently. The medical tapes were placed on acupoints, trigger points, and pain points found by finger pressing examination in the chest, sides, and upper back of the patients.

Results: In case 1, the patient started weeping immediately after the first treatment. He discontinued psychiatric drugs and returned to baseline functioning after 2 months. In case 2, the patient felt at ease showing decreased palpitation immediately after the first treatment, and after 1 week, she quit medications. In case 3, the patient experienced a sense of calmness following the first treatment and recovered from her symptoms after 2 weeks.

Conclusion: These results suggest the following key points: examination of acupoints and trigger points of chest, sides, and upper back is useful in the assessment of depression; regulating bioelectric currents on these points is helpful in the treatment of depression; and depression can be treated successfully with taping therapy.

Keywords: fatigue, insomnia, bioelectricity, bioelectric current, acupoint, trigger point

Introduction

Depression is a debilitating disease with costly consequences.^{1,2} Depression has been associated with the poor quality of life, sleep disturbances, and suicidal behaviors.³ Therefore, development of treatments for depression is imperative to decrease individual distress and societal burden as a result of depression. However, despite the widespread availability of antidepressant medications, depression remains difficult to treat.

In an effort to find useful treatments for this disease, practitioners and researchers have sought other strategies beyond conventional treatment approaches.⁴ One of the ways that practitioners attempt to treat psychiatric diseases, such as depression and insomnia, is by using complementary and alternative medicine.⁵⁻⁷

One of these complementary and alternative medicines that has been gaining interests and may be considered as a useful method in diverse fields is taping therapy.

Correspondence: Bong Hyo Lee
Department of Acupuncture,
Moxibustion and Acupoint, College
of Korean Medicine, Daegu Haany
University, 165 Sang-dong, Suseong-gu,
Daegu 706-828, South Korea
Tel +82 53 819 1828
Fax +82 53 819 1850
Email dlqhdgy@dhu.ac.kr

However, taping therapy's main targets have been focused on muscular dysfunctions typically accompanied by a movement disorder, and till date, there has been a dearth of reports about the usefulness of taping therapy in depression. In our previous study,⁸ we have suggested that taping therapy regulating bioelectric currents at the acupoints and trigger points (TPs) related to the neurological symptoms is useful for insomnia, and patients with depressive symptoms have been successfully mitigated with taping therapy.

There are some therapies for depression using electronic stimulations, ie, electroconvulsive therapy,^{9,10} transcranial magnetic stimulation,^{11,12} and transcranial direct current stimulation.¹³ However, these electrical therapies are different from our taping therapy in that they use artificial electrical or magnetic stimulations given from outside along with therapists' setting, while our taping therapy just adjusts the over or down flow of patients' bioelectric currents without injecting external stimulation.

Based on these practical experiences, we have further examined if taping therapy attenuates chronic depression, and here, we report for the first time that severe depression symptoms can be successfully treated with taping therapy.

Case presentation

Materials

The medical tape used in this study (chimsband; Saeng-Vit Oriental Medicine Clinic, Seoul, Korea)⁸ has specific materials of silver and optical fiber (Figure 1). One piece has two

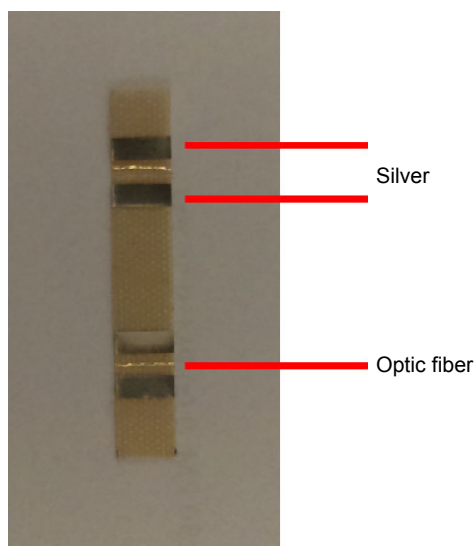


Figure 1 Appearance of type C of chimsband.

Notes: One piece has two functional units, and one unit is composed of two silver lines (length of 4 mm and width of 2 mm) and one optical fiber (length of 4 mm and width of 0.5 mm).

functional units, and one unit is composed of two silver lines (length of 4 mm and width of 2 mm) and one optical fiber (length of 4 mm and width of 0.5 mm). These materials were used for their high electrical conductivity.

Methods

Intervention

Method of intervention was attaching tapes to the related sites after finding sensitive or painful response against finger pressure examination.

Evaluation

Effectiveness of this taping therapy was evaluated using the following measures: change in radial pulse and symptoms, termination of taking medications, and the patients' ratings on the visual analog scale (10: worst and 0: perfect satisfaction).^{14–16}

Ethics information

Ethical approval was not sought for this study, however, this study was performed in compliance with general ethical standard regarding a case study with written informed consents having been provided by the patients.

Results

Case I

History and examination

A 21-year-old male visited our clinic immediately after discharge from a psychiatric hospital with the status of a leaning head at 45° and a salivating mouth; he seemed to be drug intoxicated. His legs were flexible under holding arms, his eyes were nearly closed as though he felt they hard to lift up, pupils were too bleary to focus, and it was obvious that conversation was impossible. Medical information was obtained from his mother and grandmother as guardians. The patient exhibited gradually worsening sleep and concentration from 7 years of age and was prescribed neurological medications. In middle school, the patient was diagnosed with depression, and symptoms became more severe. Since then, he has been admitted to the psychiatric hospital several times a year. Whenever the patient is leaving the hospital, he showed an increased sedation including this intoxicated-like status. As a routine assessment, we examined the patient's pulse, and it was strong at 95 bpm.

Treatment and progress

Type C of chimsband was attached to the chest (Figure 2), both sides (Figure 3), and upper back (Figure 4) of the patients. Typically, we palpate using finger pressure to elicit

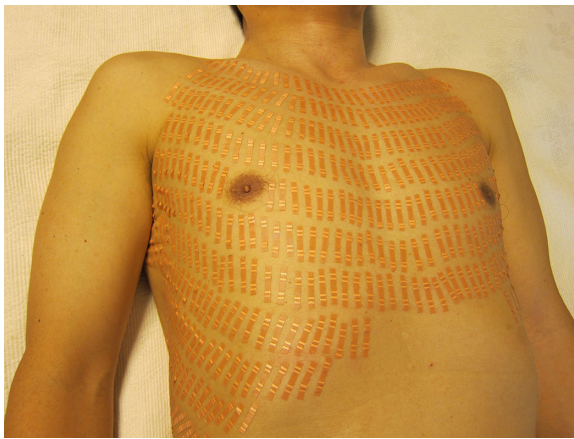


Figure 2 Attachment of type C of chimsband on the chest for depression.

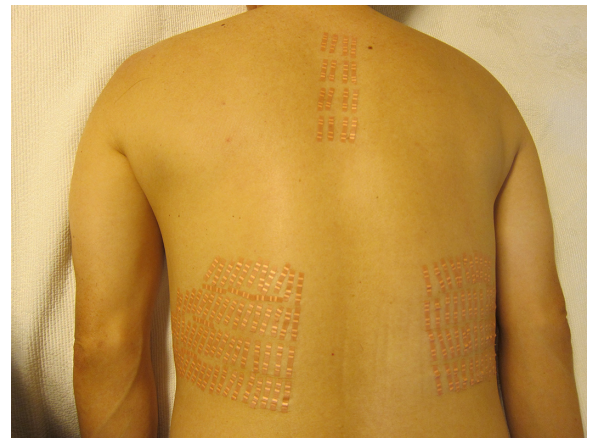


Figure 4 Attachment of type C of chimsband on the back for depression.

a sensitive or painful response. However, in this case, we attached tapes based on our previous study⁸ and practical experiences omitting this typical examination, because we could not obtain exact response from the patient. After attachment, the pulse decreased to 82 bpm. Additionally, when we asked what he felt, he became extremely emotional and started to cry. His grandmother stated that she had never seen him cry since diagnosis of depression. We provided instructions to the guardians on how to attach the medical tape on the

same points used in our clinic and how to check the patient's pulse. After 1 week, the grandmother reported that he slept >14 h/d with no special symptoms, and his face became clearer than before the treatment. Although the guardians worried about him having too much sleep, he did not take psychiatric medications. After 1 month from the initial visit, the grandmother reported that the patient had been more engaged with family, more socialized with friends outside, and maintained a stable pulse which averaged at ~76 bpm. After an additional month, she reported that the patient had recovered completely and that no new and needed medications had been taken since our initial treatment.

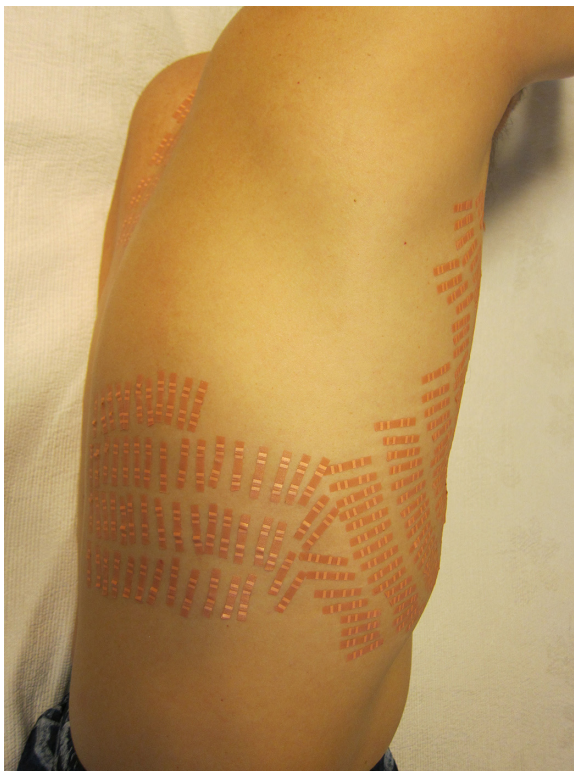


Figure 3 Attachment of type C of chimsband on the sides for depression.

Case 2

History and examination

A 49-year-old female reported flu-like symptoms after a recent hysterectomy. While experiencing these flu-like symptoms, her surgical site burst following a sneeze resulting in a severe bloody discharge. Thereafter, she was depressed, and heart palpitations occurred. As a result, an antidepressant was prescribed, and additionally, medications for insomnia and indigestion were added. Consequently, the patient began to experience anxiety, increasing heart palpitations (pulse 90 bpm), and exacerbation of insomnia. Upon routine examination at our clinic, the patient complained of a painful response when TPs were palpated at the anterior chest but not on other areas, such as back and sides.

Treatment and progress

After eliciting a painful response to the finger pressure examination, type C of chimsband was attached to the chest (Figure 2); thereafter, the pulse improved to 82 bpm. After receiving the tapes, the patient stated that she felt at ease

immediately and noticed that her heart palpitations had decreased. The next day, the patient reported that she was more alert and that her heart palpitations had disappeared completely (ie, pulse was 72 bpm). She also reported sleeping well throughout the night without sleep medication. We observed that her speech was much slower compared with her initial visit. Over the next 4 days, she self-attached the tape at home. At the next visit, she continued to report symptom improvements: she had quit her medications; her digestion became better; her heart palpitations had disappeared; she was more alert; she experienced less fatigue; and her pulse remained stable (ie, 68 bpm). After 40 days (and only 2 days of continuous tape attachment at home), the patient affirmed the following improvements: all her symptoms had disappeared completely, her heart rate remained on average at 68 bpm, and she has completely recovered to her baseline functioning.

Case 3

History and examination

A 40-year-old female patient presented to our clinic with aggressive behaviors and extreme anxiety. She reported taking several medications prescribed by various doctors. She claimed that the medications were ineffective and with intolerable adverse effects (ie, headache, lethargy, intense anger, and increasing suicidal and homicidal ideations). When she got angry, it was severe enough for her to want to kill her opponent and her heart “filled with anger up to the neck”. She was verbally abusive and had thoughts of suicide countless times because of self-control difficulties. Upon examination, her pulse averaged 90 bpm.

Treatment and progress

Upon palpation response, type C of chimsband was attached to the chest (Figure 2) and upper back (Figure 4). Thereafter, the pulse decreased to 76 bpm, and patient reported experiencing a sense of calmness. We provided instructions on how to attach the tape at home and recommended her to continue her medications. However, the patient claimed her medications’ ineffectiveness and stated a desire to discontinue. Upon follow-up (3 days after initial visit), her symptoms had improved (eg, she exhibited broad smile). She reported sleeping better, feeling calmer, and less fatigue. Her pulse was 70 bpm. After another week of follow-up, her husband confirmed that the patient had less anger (ie, less in intensity, duration, and frequency: once in the past week). Her pulse was 70 bpm. After another week, she reported significant improvement in her functioning whereby she enjoyed taking

care of her children and performed her daily household chores without issues. Her pulse was 70 bpm. After 2 months, her husband reported that the tape had been attached continuously for 1 week and once in a while for about a month. Thereafter, she was not treated with taping for several weeks. According to her husband, although the symptoms reoccur, the reattachment of tapes alleviated her symptoms immediately. Thereafter, no other problems were reported.

Discussion

Typically, depression is associated with various neurological symptoms, and alleviating these symptoms is an effective strategy in the treatment of depression. In this study, patients exhibited the following symptoms: pain response to finger pressure, tachycardia, chest congestion or discomfort, anxiety-like behavior, and fatigue.

In Oriental Medicine, acupoints located on the chest area have been used for psychiatric or neurological manifestations, including chest pain, flank pain, palpitation, chest discomfort, arrhythmia, sighing, insomnia, and depressive behavior.^{17,18} In addition, upon examination of the acupoints in the chest area, many psychiatric patients endorse sensitive or painful responses against palpation. These are the reasons why we focused on the chest area. Furthermore, our patients showed sensitive or painful responses at the sites around BL15 (back transport point of heart) and BL19 (back transport point of gall bladder) in the back and flank, respectively. Because these sites are related to the functions of heart and gall bladder, respectively, the reported sensitivities may be associated with certain neurological symptoms (eg, tachycardia). Therefore, we chose to attach the tape on these areas.

According to the myofascial pain syndrome theory, neurological symptoms (eg, depressive symptoms, chest discomfort, and cardiac-related symptoms) may manifest with sensitivities on TPs in the chest muscles, including pectoralis major, pectoralis minor, and sternalis. Therefore, focusing on the TPs of the chest muscles is important for treating depression. TP is known to be a solidification point of muscle and usually elicits sensitive or painful responses against finger pressure examination. Furthermore, TP exhibits higher temperatures than normal surrounding and accumulations of lactic acid. These are associated with certain deviant bioelectric currents.^{19–21} Therefore, normalizing deviant bioelectric currents is required for the treatment of TP. In addition, bioelectricity in a wound, burn, or amputee is known to be related to the reparative power of nature,²² which supports the importance of bioelectricity in the treatment.

Consequently, normalizing deviant bioelectric currents on the TPs of chest muscles can be a new strategy for the treatment of depression.

Chimsband used in this study was developed as a kind of medical tape. It has two essential materials: silver and optical fiber (Figure 1). Because they have high electric conductivity, these two materials were used to regulate bioelectric currents. When this tape covers the site where the deviant bioelectrical current appears to be exhibited, these materials promote the interchange between the deviant current and the normal current of surrounding; that is, this tape is understood to narrow the gap between the deviant current and the normal current, which restores the normal function at the attached site. This tape can produce such functions because bioelectricity exists on the skin. Most importantly, while physiologically regulating bioelectric current, this therapy is beneficial due to the following features: safe, noninvasive, and introduction of unharmed substances to the body. Based on our experience, the effect of this tape appears immediately, whereby the following responses happen shortly after treatment initiation: calming and relaxing physiological responses and decrease in pulse. Finally, in our previous study,⁸ attaching this tape at the chest area has been shown to be effective in alleviating chronic insomnia.

Therefore, we investigated the painful response at the chest area, focusing on acupoints and TPs with finger pressure examination. Following treatment, the patients' severe depressive symptoms have considerably decreased along with the accompanying neurological symptoms. Consequently, patients have to avoid taking needed medications for some of their initial complaints (eg, insomnia). Upon follow-up visits, patients reported satisfactory results from the treatments. In this study, the effectiveness of taping therapy was evaluated by the following measures: termination of taking needed medications, normalization of pulse, alleviation of impairing symptoms (eg, anger, aggressiveness, sedation, suicidality, and homicidality), and improvement in the patients' ratings on the visual analog scale (from 10 [worst] to 1 or 0 [perfect satisfaction] in all cases) used widely in clinical studies.^{14–16}

An interesting finding was that although certain symptoms reoccurred when the tape was removed, symptoms also improved immediately after reattachment (eg, as shown in the case 3). These events demonstrate that this taping was certainly effective and worth to further study.

It appears that the mechanism of action of this taping may be similar to other stress-related interventions, ie, meditation

or relaxation attenuates symptoms by stabilizing the nervous system, decreasing the tension, relaxing the muscles, calming the pulse, and smoothing the diaphragmatic movement.^{23–25} In this study, treating sensitive or painful response resulted in the downregulation of the pulse, calming of the mind, and slowing of the breathing. These results are similar to the effects of meditation or relaxation.

Conclusion

We confirmed our hypothesis through the presented cases that regulating patient's bioelectric currents focusing on the acupoints and TPs in areas of chest, sides, and upper back is effective for depressive symptoms. Additionally, assessing with finger pressure to elicit sensitive or painful response is important for examining and treating depressive symptoms, and Chimsband is a useful taping therapy for depression. To better understand how this taping therapy mitigates depression and psychiatric symptoms, further research studies on its exact mechanism are needed.

Acknowledgments

The authors thank Doctor Kwang H Choi and Doctor Lisa Osborn, Uniformed Services University of the Health Sciences, USA, for their valuable discussions about the symptoms of psychiatric and stress-related diseases. This study was supported by the Establishment of the Evidence for Traditional Korean Medicine Clinical Technology On-Demand Project (K16121) of Korea Institute of Oriental Medicine. The views expressed are those of the authors and do not reflect the official policy or position of the Uniformed Services University of the Health Sciences, the Department of Defense, and the United States Government.

Disclosure

All authors are Korean medicine doctors in South Korea (CHH, HSH, YJL, SNL, and BHL) or experts of nursing practice in United States (JJA), who learned meridian, acupoints, and trigger points professionally. There is no commercial relation regarding this article. The authors report no other conflicts of interest in this work.

References

1. Kim J, Lee J. Prospective study on the reciprocal relationship between intimate partner violence and depression among women in Korea. *Soc Sci Med.* 2013;99:42–48.
2. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry.* 2005;62(6):593–602.

3. McCall WV, Blocker JN, D'Agostino R Jr, et al. Insomnia severity is an indicator of suicidal ideation during a depression clinical trial. *Sleep Med*. 2010;11(9):822–827.
4. Davidsen AS, Fosgerau CF. What is depression? Psychiatrists' and GPs' experiences of diagnosis and the diagnostic process. *Int J Qual Stud Health Well-being*. 2014;9:24866.
5. Kinser PA, Lyon DE. A conceptual framework of stress vulnerability, depression, and health outcomes in women: potential uses in research on complementary therapies for depression. *Brain Behav*. 2014;4(5):665–674.
6. Wu MC, Sung HC, Lee WL, Smith GD. The effects of light therapy on depression and sleep disruption in older adults in a long-term care facility. *Int J Nurs Pract*. 2015;21(5):653–659.
7. Eisendrath SJ, Gillung EP, Delucchi KL, et al. Mindfulness-based cognitive therapy (MBCT) versus the health-enhancement program (HEP) for adults with treatment-resistant depression: a randomized control trial study protocol. *BMC Complement Altern Med*. 2014;14:95.
8. Lee BH, Han CH, Park HJ, Lee YJ, Hwang HS. A novel taping therapy for chronic insomnia: a report on two cases. *Complement Ther Med*. 2013;21(5):509–511.
9. Dybedal GS, Bjølseth TM, Benth JS, Tanum L. Cognitive effects of bifrontal versus right unilateral electroconvulsive therapy in the treatment of major depression in elderly patients: a randomized, controlled trial. *J ECT*. Epub 2016 Feb 24.
10. Pompili M, Dominici G, Giordano G, et al. Electroconvulsive treatment during pregnancy: a systematic review. *Expert Rev Neurother*. 2014;14(12):1377–1390.
11. Lefaucheur JP, André-Obadia N, Antal A, et al. Evidence-based guidelines on the therapeutic use of repetitive transcranial magnetic stimulation (rTMS). *Clin Neurophysiol*. 2014;125(11):2150–2206.
12. George MS, Post RM. Daily left prefrontal repetitive transcranial magnetic stimulation for acute treatment of medication-resistant depression. *Am J Psychiatry*. 2011;168(4):356–364.
13. Bautovich A, Loo C, Katz I, Martin D, Harvey S. Transcranial direct current stimulation as a treatment for depression in the hemodialysis setting. *Psychosomatics*. Epub 2015 Nov 27; doi:10.1016/j.psym.2015.11.006.
14. Karagülle M, Kardeş S, Dişçi R, Gürdal H, Karagülle MZ. Spa therapy for elderly: a retrospective study of 239 older patients with osteoarthritis. *Int J Biometeorol*. Epub 2016 Jan 26.
15. Komen MM, Breed WP, Smorenburg CH, et al. Results of 20- versus 45-min post-infusion scalp cooling time in the prevention of docetaxel-induced alopecia. *Support Care Cancer*. 2016;24(6):2735–2741.
16. Zhang H, Sun J, Wang C, et al. Randomised controlled trial of contralateral manual acupuncture for the relief of chronic shoulder pain. *Acupunct Med*. Epub 2016 Jan 21;doi: 10.1136/acupmed-2015-010947.
17. Ross J. *Acupuncture Point Combinations: The Key to Clinical Success*. London: Churchill Livingstone; 1995:140, 141, 174, 295.
18. Deadman P, Al-Khafaji M, Baker K. *A Manual of Acupuncture*. Hove: Journal of Chinese Medicine; 2005:518–522.
19. Simons DG, Travell JG, Simons LS. *Travell & Simons' Myofascial Pain and Dysfunction. The Trigger Point Manual. Vol. 1. Upper Half of Body*. 2nd ed. Baltimore, MD: Lippincott Williams & Wilkins; 1999:110, 221, 828.
20. Moldofsky H. The contribution of sleep-wake physiology to fibromyalgia. In: Friction JR, Awad EA, editors. *Advances in Pain Research and Therapy. Myofascial Pain and Fibromyalgia*. Vol. 17. (Chap. 13). New York, NY: Raven Press; 1990:227–240.
21. Becker RO, Seldon G. *Body Electric: Electromagnetism and the Foundation of Life*. New York, NY: William Morrow and Company Inc; 1985:235.
22. Cameron JR, Skofronick JG, Grant RM. *Physics of the Body*. 2nd ed. Madison, WI: Medical Physics Publishing; 1999:255.
23. Mohan A, Sharma R, Bijlani RL. Effect of meditation on stress-induced changes in cognitive functions. *J Altern Complement Med*. 2011;17(3):207–212.
24. Lazar SW, Bush G, Gollub RL, Fricchione GL, Khalsa G, Benson H. Functional brain mapping of the relaxation response and meditation. *Neuroreport*. 2000;11(7):1581–1585.
25. Smith MS, Womack WM. Stress management techniques in childhood and adolescence. Relaxation training, meditation, hypnosis, and biofeedback: appropriate clinical applications. *Clin Pediatr (Phila)*. 1987;26(11):581–585.

Neuropsychiatric Disease and Treatment

Publish your work in this journal

Neuropsychiatric Disease and Treatment is an international, peer-reviewed journal of clinical therapeutics and pharmacology focusing on concise rapid reporting of clinical or pre-clinical studies on a range of neuropsychiatric and neurological disorders. This journal is indexed on PubMed Central, the 'PsycINFO' database and CAS,

Submit your manuscript here: <http://www.dovepress.com/neuropsychiatric-disease-and-treatment-journal>

Dovepress

and is the official journal of The International Neuropsychiatric Association (INA). The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.