

Guided Imagery and Progressive Muscle Relaxation in Group Psychotherapy

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A majority of Americans experience stress in their daily lives (American Psychological Association, 2017). Thus, an important goal of psychological research is to evaluate techniques that promote stress reduction and relaxation. Two techniques that have been associated with reduced stress and increased relaxation in psychotherapy contexts are guided imagery and progressive muscle relaxation (McGuigan & Lehrer, 2007). *Guided imagery* aids individuals in connecting their internal and external experiences, allowing them, for example, to feel calmer externally because they practice thinking about calming imagery. *Progressive muscle relaxation* involves diaphragmatic breathing and the tensing and releasing of 16 major muscle groups; together these behaviors lead individuals to a more relaxed state (Jacobson, 1938; Trakhtenberg, 2008). Guided imagery and progressive muscle relaxation are both cognitive behavioral techniques (Yalom & Leszcz, 2005) in which individuals focus on the relationship among thoughts, emotions, and behaviors (White, 2000).

Group psychotherapy effectively promotes positive treatment outcomes in patients in a cost-effective way. Its efficacy is in part attributable to variables unique to the group experience of therapy as compared with individual psychotherapy (Bottomley, 1996; Yalom & Leszcz, 2005). That is, the group format helps participants feel accepted and better understand their common struggles; at the same time, interactions with group members provide social support and models of positive behavior (Yalom & Leszcz, 2005). Thus, it is useful to examine how stress reduction and relaxation can be enhanced in a group context.

The purpose of this literature review is to examine the research base on guided imagery and progressive muscle relaxation in group psychotherapy contexts. I provide overviews of both guided imagery and progressive muscle relaxation, including theoretical foundations and historical context. Then I examine guided imagery and progressive muscle relaxation as used on their own as well as in combination as part of group psychotherapy (see Baider et al., 1994, for

more). Throughout the review, I highlight themes in the research. Finally, I end by pointing out limitations in the existing literature and exploring potential directions for future research.

Guided Imagery

Features of Guided Imagery

Guided imagery involves a person visualizing a mental image and engaging each sense (e.g., sight, smell, touch) in the process. Guided imagery was first examined in a psychological context in the 1960s, when the behavior theorist Joseph Wolpe helped pioneer the use of relaxation techniques such as aversive imagery, exposure, and imaginal flooding in behavior therapy (Achterberg, 1985; Utay & Miller, 2006). Patients learn to relax their bodies in the presence of stimuli that previously distressed them, to the point where further exposure to the stimuli no longer provokes a negative response (Achterberg, 1985).

Contemporary research supports the efficacy of guided imagery interventions for treating medical, psychiatric, and psychological disorders (Utay & Miller, 2006). Guided imagery is typically used to pursue treatment goals such as improved relaxation, sports achievement, and pain reduction. Guided imagery techniques are often paired with breathing techniques and other forms of relaxation, such as mindfulness (see Freebird Meditations, 2012). The evidence is sufficient to call guided imagery an effective, evidence-based treatment for a variety of stress-related psychological concerns (Utay & Miller, 2006).

Guided Imagery in Group Psychotherapy

Guided imagery exercises improve treatment outcomes and prognosis in group psychotherapy contexts (Skovholt & Thoen, 1987). Lange (1982) underscored two such benefits by showing (a) the role of the group psychotherapy leader in facilitating reflection on the guided imagery experience, including difficulties and stuck points, and (b) the benefits achieved by social comparison of guided imagery experiences between group members. Teaching techniques and reflecting on the group process are unique components of guided imagery received in a group context (Yalom & Leszcz, 2005).

Empirical research focused on guided imagery interventions supports the efficacy of the technique with a variety of populations within hospital settings, with positive outcomes for individuals diagnosed with depression, anxiety, and eating disorders (Utay & Miller, 2006). Guided imagery and relaxation techniques have even been found to “reduce distress and allow the immune system to function more effectively” (Trakhtenberg, 2008, p. 850). For example, Holden-Lund (1988) examined effects of a guided imagery intervention on surgical stress and wound healing in a group of 24 patients. Patients listened to guided imagery recordings and reported reduced state anxiety, lower cortisol levels following surgery, and less irritation in wound healing compared with a control group. Holden-Lund concluded that the guided imagery recordings contributed to improved surgical recovery. It would be interesting to see how the results might differ if guided imagery was practiced continually in a group context.

Guided imagery has also been shown to reduce stress, length of hospital stay, and symptoms related to medical and psychological conditions (Scherwitz et al., 2005). For example, Ball et al. (2003) conducted guided imagery in a group psychotherapy format with 11 children (ages 5–18) experiencing recurrent abdominal pain. Children in the treatment group ($n = 5$) participated in four weekly group psychotherapy sessions where guided imagery techniques were implemented. Data collected via pain diaries and parent and child psychological surveys showed that patients reported a 67% decrease in pain. Despite a small sample size, which contributed to low statistical power, the researchers concluded that guided imagery in a group psychotherapy format was effective in reducing pediatric recurrent abdominal pain.

However, in the majority of guided imagery studies, researchers have not evaluated the technique in the context of traditional group psychotherapy. Rather, in these studies participants usually met once in a group to learn guided imagery and then practiced guided imagery individually on their own (see Menzies et al., 2014, for more). Thus, it is unknown whether guided imagery would have different effects if implemented on an ongoing basis in group psychotherapy.

Progressive Muscle Relaxation

Features of Progressive Muscle Relaxation

Progressive muscle relaxation involves diaphragmatic or deep breathing and the tensing and releasing of muscles in the body (Jacobson, 1938). Edmund Jacobson developed progressive muscle relaxation in 1929 (as cited in Peterson et al., 2011) and directed participants to practice progressive muscle relaxation several times a week for a year. After examining progressive muscle relaxation as an intervention for stress or anxiety, Joseph Wolpe (1960; as cited in Peterson et al., 2011) theorized that relaxation was a promising treatment. In 1973, Bernstein and Borkovec created a manual for helping professionals to teach their clients progressive muscle relaxation, thereby bringing progressive muscle relaxation into the fold of interventions used in cognitive behavior therapy. In its current state, progressive muscle relaxation is often paired with relaxation training and described within a relaxation framework (see Freebird Meditations, 2012, for more).

Research on the use of progressive muscle relaxation for stress reduction has demonstrated the efficacy of the method (McGuigan & Lehrer, 2007). As clients learn how to tense and release different muscle groups, the physical relaxation achieved then influences psychological processes (McCallie et al., 2006). For example, progressive muscle relaxation can help alleviate tension headaches, insomnia, pain, and irritable bowel syndrome. This research demonstrates that relaxing the body can also help relax the mind and lead to physical benefits.

Progressive Muscle Relaxation in Group Psychotherapy

Limited, but compelling, research has examined progressive muscle relaxation within group psychotherapy. Progressive muscle relaxation has been used in outpatient and inpatient hospital settings to reduce stress and physical symptoms (Peterson et al., 2011). For example, the U.S. Department of Veterans Affairs integrates progressive muscle relaxation into therapy skills groups (Hardy, 2017). The goal is for group members to practice progressive muscle

relaxation throughout their inpatient stay and then continue the practice at home to promote ongoing relief of symptoms (Yalom & Leszcz, 2005).

Yu (2004) examined the effects of multimodal progressive muscle relaxation on psychological distress in 121 elderly patients with heart failure. Participants were randomized into experimental and control groups. The experimental group received biweekly group sessions on progressive muscle relaxation, as well as tape-directed self-practice and a revision workshop. The control group received follow-up phone calls as a placebo. Results indicated that the experimental group exhibited significant improvement in reports of psychological distress compared with the control group. Although this study incorporated a multimodal form of progressive muscle relaxation, the experimental group met biweekly in a group format; thus, the results may be applicable to group psychotherapy.

Progressive muscle relaxation has also been examined as a stress-reduction intervention with large groups, albeit not therapy groups. Rausch et al. (2006) exposed a group of 387 college students to 20 min of either meditation, progressive muscle relaxation, or waiting as a control condition. Students exposed to meditation and progressive muscle relaxation recovered more quickly from subsequent stressors than did students in the control condition. Rausch et al. (2006) concluded the following:

A mere 20 min of these group interventions was effective in reducing anxiety to normal levels

. . . merely 10 min of the interventions allowed [the high-anxiety group] to recover from the stressor. Thus, brief interventions of meditation and progressive muscle relaxation may be effective for those with clinical levels of anxiety and for stress recovery when exposed to brief, transitory stressors. (p. 287)

Thus, even small amounts of progressive muscle relaxation can be beneficial for people experiencing anxiety.

Guided Imagery and Progressive Muscle Relaxation in Group Psychotherapy

Combinations of relaxation training techniques, including guided imagery and progressive muscle relaxation, have been shown to improve psychiatric and medical symptoms when delivered in a group psychotherapy context (Bottomley, 1996; Cunningham & Tocco, 1989). The research supports the existence of immediate and long-term positive effects of guided imagery and progressive muscle relaxation delivered in group psychotherapy (Baider et al., 1994). For example, Cohen and Fried (2007) examined the effect of group psychotherapy on 114 women diagnosed with breast cancer. The researchers randomly assigned participants to three groups: (a) a control group, (b) a relaxation psychotherapy group that received guided imagery and progressive muscle relaxation interventions, or (c) a cognitive behavioral therapy group. Participants reported less psychological distress in both intervention groups compared with the control group, and participants in the relaxation psychotherapy group reported reduced symptoms related to sleep and fatigue. The researchers concluded that relaxation training using guided imagery and progressive muscle relaxation in group psychotherapy is effective for relieving distress in women diagnosed with breast cancer. These results further support the utility of guided imagery and progressive muscle relaxation within the group psychotherapy modality.

Conclusion

Limitations of Existing Research

Research on the use of guided imagery and progressive muscle relaxation to achieve stress reduction and relaxation is compelling but has significant limitations. Psychotherapy groups that implement guided imagery and progressive muscle relaxation are typically homogeneous, time limited, and brief (Yalom & Leszcz, 2005). Relaxation training in group psychotherapy typically includes only one or two group meetings focused on these techniques (Yalom & Leszcz, 2005); thereafter, participants are usually expected to practice the techniques by themselves (see Menzies et al., 2014). Future research should address how these relaxation

techniques can assist people in diverse groups and how the impact of relaxation techniques may be amplified if treatments are delivered in the group setting over time.

Future research should also examine differences in inpatient versus outpatient psychotherapy groups as well as structured versus unstructured groups. The majority of research on the use of guided imagery and progressive muscle relaxation with psychotherapy groups has used unstructured inpatient groups (e.g., groups in a hospital setting). However, inpatient and outpatient groups are distinct, as are structured versus unstructured groups, and each format offers potential advantages and limitations (Yalom & Leszcz, 2005). For example, an advantage of an unstructured group is that the group leader can reflect the group process and focus on the “here and now,” which may improve the efficacy of the relaxation techniques (Yalom & Leszcz, 2005). However, research also has supported the efficacy of structured psychotherapy groups for patients with a variety of medical, psychiatric, and psychological disorders (Hashim & Zainol, 2015; see also Baider et al., 1994; Cohen & Fried, 2007). Empirical research assessing these interventions is limited, and further research is recommended.

Directions for Future Research

There are additional considerations when interpreting the results of previous studies and planning for future studies of these techniques. For example, a lack of control groups and small sample sizes have contributed to low statistical power and limited the generalizability of findings. Although the current data support the efficacy of psychotherapy groups that integrate guided imagery and progressive muscle relaxation, further research with control groups and larger samples would bolster confidence in the efficacy of these interventions. In order to recruit larger samples and to study participants over time, researchers will need to overcome challenges of participant selection and attrition. These factors are especially relevant within hospital settings because high patient turnover rates and changes in medical status may contribute to changes in treatment plans that affect group participation (L. Plum, personal communication, March 17, 2019). Despite these challenges, continued research examining guided imagery and

progressive muscle relaxation interventions within group psychotherapy is warranted (Scherwitz et al., 2005). The results thus far are promising, and further investigation has the potential to make relaxation techniques that can improve people's lives more effective and widely available.



References

- Achterberg, J. (1985). *Imagery in healing*. Shambhala Publications.
- American Psychological Association. (2017). *Stress in America: The state of our nation*.
<https://www.apa.org/news/press/releases/stress/2017/state-nation.pdf>
- Baider, L., Uziely, B., & Kaplan De-Nour, A. (1994). Progressive muscle relaxation and guided imagery in cancer patients. *General Hospital Psychiatry, 16*(5), 340–347.
[https://doi.org/10.1016/0163-8343\(94\)90021-3](https://doi.org/10.1016/0163-8343(94)90021-3)
- Ball, T. M., Shapiro, D. E., Monheim, C. J., & Weydert, J. A. (2003). A pilot study of the use of guided imagery for the treatment of recurrent abdominal pain in children. *Clinical Pediatrics, 42*(6), 527–532. <https://doi.org/10.1177/000992280304200607>
- Bernstein, D. A., & Borkovec, T. D. (1973). *Progressive relaxation training: A manual for the helping professions*. Research Press.
- Bottomley, A. (1996). Group cognitive behavioural therapy interventions with cancer patients: A review of the literature. *European Journal of Cancer Cure, 5*(3), 143–146.
<https://doi.org/10.1111/j.1365-2354.1996.tb00225.x>
- Cohen, M., & Fried, G. (2007). Comparing relaxation training and cognitive-behavioral group therapy for women with breast cancer. *Research on Social Work Practice, 17*(3), 313–323. <https://doi.org/10.1177/1049731506293741>
- Cunningham, A. J., & Tocco, E. K. (1989). A randomized trial of group psychoeducational therapy for cancer patients. *Patient Education and Counseling, 14*(2), 101–114.
[https://doi.org/10.1016/0738-3991\(89\)90046-3](https://doi.org/10.1016/0738-3991(89)90046-3)
- Freebird Meditations. (2012, June 17). *Progressive muscle relaxation guided meditation* [Video]. YouTube. https://www.youtube.com/watch?v=fDZI-4udE_o
- Hardy, K. (2017, October 8). Mindfulness is plentiful in “The post-traumatic insomnia workbook.” *Veterans Training Support Center*. <http://bit.ly/2D6ux8U>

- Hashim, H. A., & Zainol, N. A. (2015). Changes in emotional distress, short term memory, and sustained attention following 6 and 12 sessions of progressive muscle relaxation training in 10–11 years old primary school children. *Psychology, Health & Medicine*, 20(5), 623–628. <https://doi.org/10.1080/13548506.2014.1002851>
- Holden-Lund, C. (1988). Effects of relaxation with guided imagery on surgical stress and wound healing. *Research in Nursing & Health*, 11(4), 235–244. <http://doi.org/dztcdf>
- Jacobson, E. (1938). *Progressive relaxation* (2nd ed.). University of Chicago Press.
- Lange, S. (1982, August 23–27). *A realistic look at guided fantasy* [Paper presentation]. American Psychological Association 90th Annual Convention, Washington, DC.
- McCallie, M. S., Blum, C. M., & Hood, C. J. (2006). Progressive muscle relaxation. *Journal of Human Behavior in the Social Environment*, 13(3), 51–66. <http://doi.org/b54qm3>
- McGuigan, F. J., & Lehrer, P. M. (2007). Progressive relaxation: Origins, principles, and clinical applications. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime (Eds.), *Principles and practice of stress management* (3rd ed., pp. 57–87). Guilford Press.
- Menzies, V., Lyon, D. E., Elswick, R. K., Jr., McCain, N. L., & Gray, D. P. (2014). Effects of guided imagery on biobehavioral factors in women with fibromyalgia. *Journal of Behavioral Medicine*, 37(1), 70–80. <https://doi.org/10.1007/s10865-012-9464-7>
- Peterson, A. L., Hatch, J. P., Hryshko-Mullen, A. S., & Cigrang, J. A. (2011). Relaxation training with and without muscle contraction in subjects with psychophysiological disorders. *Journal of Applied Biobehavioral Research*, 16(3–4), 138–147. <https://doi.org/10.1111/j.1751-9861.2011.00070.x>
- Rausch, S. M., Gramling, S. E., & Auerbach, S. M. (2006). Effects of a single session of large-group meditation and progressive muscle relaxation training on stress reduction, reactivity, and recovery. *International Journal of Stress Management*, 13(3), 273–290. <https://doi.org/10.1037/1072-5245.13.3.273>

- Scherwitz, L. W., McHenry, P., & Herrero, R. (2005). Interactive guided imagery therapy with medical patients: Predictors of health outcomes. *The Journal of Alternative and Complementary Medicine*, 11(1), 69–83. <https://doi.org/10.1089/acm.2005.11.69>
- Skovholt, T. M., & Thoen, G. A. (1987). Mental imagery and parenthood decision making. *Journal of Counseling & Development*, 65(6), 315–316. <http://doi.org/fzmtjd>
- Trakhtenberg, E. C. (2008). The effects of guided imagery on the immune system: A critical review. *International Journal of Neuroscience*, 118(6), 839–855. <http://doi.org/xfsbq>
- Utay, J., & Miller, M. (2006). Guided imagery as an effective therapeutic technique: A brief review of its history and efficacy research. *Journal of Instructional Psychology*, 33(1), 40–43.
- White, J. R. (2000). Introduction. In J. R. White & A. S. Freeman (Eds.), *Cognitive-behavioral group therapy: For specific problems and populations* (pp. 3–25). American Psychological Association. <https://doi.org/10.1037/10352-001>
- Yalom, I. D., & Leszcz, M. (2005). *The theory and practice of group psychotherapy* (5th ed.). Basic Books.
- Yu, S. F. (2004). *Effects of progressive muscle relaxation training on psychological and health-related quality of life outcomes in elderly patients with heart failure* (Publication No. 3182156) [Doctoral dissertation, The Chinese University of Hong Kong]. ProQuest Dissertations and Theses Global.