

This paper was for a professional seminar focused on humor. I was curious to investigate how simulated laughter impacted peoples physiological health.

Abstract

This archival research analysis of the literature focuses on the impact of simulated laughter and corresponding interventions on psychological and physical health and overall well-being. A collection of 11 different peer-reviewed articles were examined and results, as well as common techniques, are presented. While many studies have small sample sizes and may lack generalizability, the research shows strong consistency. The literature supports that simulated laughter programs show promising results as an adjunctive form of alternative treatment when individuals are faced with the difficulties and setbacks of traditional medical and psychological treatments.

Keywords: Simulated laughter, laughter therapy, laughter yoga, alternative treatment.

Let's start with a warm-up, "haha, hahoo, heehaw, heehoo, meehoo, meehee, meehaa, seehaa, seemoo" (Mora-Ripoll, 2017, p. 3). Now let's get a little more into it, pretend to sneeze and then start laughing, "ah, aaah, aaaaaaah, ha ha ha haaaaa" (Mora-Ripoll, 2017, p.4). Now to close up our exercise let's sit down and get into a comfortable position for a short meditation. Remain completely silent and keep your eyes closed. After a little bit, let the laughter in your body come out freely. If you have no laughter to let out, then create simulated laughter. While this may initially feel like an absurd exercise and you may be questioning why anyone would choose to start self-inducing laughter, studies have shown that simulated laughter even if ingenuine can improve mood (Heo et al., 2016), reduce anxiety (Tanaka et al., 2018; Yim, 2016), decrease the amount of cortisol release (Meier et al., 2021), improve sleep (Ghodsbin et al., 2015; Yazdani et al., 2014), improve depression and life satisfaction (Greene et al., 2017; Shahidi et al., 2010), and improve general health (Ghodsbin et al, 2015; Yazdani et al, 2014).

Since many programs aimed at promoting psychological and physical well-being are often costly, invasive, and demanding (Mora-Ripoll, 2017; Yim, 2016), alternative treatments that are more appealing in these realms, but are as effective as traditional treatment are often sought after. One type of program that could fit this criterion is laughter therapy. Since laughter is a universal experience (Greene et al., 2017; Meier et al., 2021) it comes with great accessibility and affordability. Laughter therapy is a broad category that includes programs that use laughter as a main or adjunctive means to improve well-being (Mora-Ripoll, 2017; Yim, 2016). Laughter therapy often focuses on two types of laughter: simulated laughter and spontaneous laughter (Meier et al., 2021; Mora-Ripoll, 2017). Simulated laughter is the process in which an individual self-induces laughter not related to positive affect or humor, while spontaneous laughter is an uncontrollable response to external stimuli (Meier et al, 2021; Mora-Ripoll, 2011; Mora-Ripoll, 2017; Yim, 2016). As laid out by Mora-Ripoll (2017), laughter therapy usually takes form in three steps: "opening and warm-up; experiencing positive emotions, humor and laughter; [and] recovery, closure, and evaluation" (p. 2). It consists of a large variety of techniques, including laughter sounds, gymnastics, icebreakers, emotional wellness, playful behaviors, and a countless number of others. Specific exercises include, "[g]reeting laughter: greet everybody the way you normally greet

(e.g., shake hands) and replace words with laughter” (p.2); “[e]levator laughter: stand all in a clump as if in a crowded elevator and laugh” (p.2); and “[h]ead on belly laughter: have each participant put their head on the abdomen of the person behind them. When all are in position invite them to try and bounce the head on their abdomen laughing” (p. 2). While these exercises may appear to be rather uncomfortable or embarrassing, many studies have shown the beneficial impacts they have on physiological well-being (Ghodsbin et al., 2015; Green, et al., 2016; Heo, et al, 2016).

In a research study conducted by Greene et al. (2017) with the purpose of increasing physical activity engagement and overall health of older adults, 27 older adult participants were engaged in a laughter-based exercise program for 45 minutes twice a week for six weeks. The program included 8-10 laughter exercises as well as aerobic and strength-building activities. Measures on subjective and objective health, as well as self-efficacy ratings, were taken pre- and post-participation. Green and colleagues found significant improvements in mental health, aerobic endurance, and exercise related self-efficacy. A similar study conducted by Ghodsbin et al. (2015) recruited 72 community-residing older adult participants who engaged in a laughter therapy program. After six weeks Green and colleagues found a significant difference in somatic symptoms, general health, insomnia, and anxiety. Furthermore, a study by Heo and colleagues (2016) found improved health-related quality of life and elevated mood among hemodialysis patients following a four-week simulated laughter program. These studies all indicate significant effects on both mental and physical health with the primary component being simulated laughter. Thus, laughter therapy seems to be an effective main or adjunct treatment for improving overall well-being.

Another important form of laughter therapy that has been gaining attention in recent years is laughter yoga. Laughter yoga combines simulated laughter with traditional yogic techniques (Shahidi et al., 2010; Tanaka et al., 2018; Yazdani et al., 2014). Laughter yoga was first suggested by Madan Kataria in 1995 (Meier et al., 2021; Shahidi et al., 2010; Yazdani et al., 2014). The process of laughter yoga is very similar to that of laughter therapies, where the initiation of laughter is self-induced and usually becomes genuine throughout the exercise (Yazdani et al., 2014).

Laughter yoga focuses on the deep inhalation and exhalation from the diaphragm that is required from laughter, specifically homing in on interspersed breathing techniques between simulated laughter exercises (Yazdani et al., 2014). Much of the literature suggests that laughter yoga decreases cortisol release (Meier et al., 2021), lowers depression (Shahidi et al., 2010; Yazdani et al., 2014) and anxiety (Yazdani et al., 2014), increases life satisfaction (Shahidi et al., 2010), and improves psychological and physical well-being (Tanaka et al., 2018).

Meier and colleagues (2021) investigated if the effects of a single 30-minute session of laughter yoga would have a beneficial impact on cortisol levels and general well-being in healthy individuals between the age of 18 and 34 ($M = 23.77$). They used three conditions: a control group that received no intervention; a group that engaged in relaxation breathing techniques; and a group that engaged in laughter yoga. They found evidence to support that while neither the control group nor the relaxed breathing condition showed a decrease in cortisol response, the laughter yoga participants did. Similarly, Tanaka et al. (2018) replicated Meier and colleagues' findings of a decreased level of cortisol release within the demographic of older adults residing in Japan. Another study on laughter yoga conducted by Yazdani et al. (2014) investigated if laughter yoga could benefit the general well-being of nursing students. Two one-hour sessions were held a week for four weeks, and a control group that received no intervention was used as a baseline. Yazdani and colleagues found that general well-being increased significantly in the participants that engaged in the laughter yoga program compared to the control group. In addition, their study suggests that anxiety and sleep disorder symptoms, such as insomnia, decreased. It seems apparent that laughter yoga is another beneficial alternative main or adjunct treatment to improve mental and physical health.

While the studies conducted are promising in their results, Martin (2002) suggests that most of the studies in the literature have sample sizes that are too small for generalizability or use methods of measurement that are not sufficient in proving a causation, nor even a correlation to laughter being an effective intervention. While laughter still needs further research on its effects physiologically, and small sample sizes are a common limitation to many of these studies, Martin's claims hold little strength when considering the more recent studies that have come a decade after his rebuttal to laughter intervention research. Recent literature has found almost consistent results

in studies across the globe concerning laughter therapy and laughter yoga programs. It is still important to consider that while these results are promising in nature, they still struggle to become generalizable. However, this is also a cause of the lack of literature found on these topics (Mora-Ripoll, 2011; Mora-Ripoll, 2017; Shahidi et al., 2010).

The effects observed and recorded from various research studies concerning simulated laughter inventions show a clear positive direction between engagement and general well-being and overall health. It seems that this cost-effective, easily accessible, and non-invasive treatment, that can even be conducted in one's own home could serve as a strong supplement to psychological and physical health for individuals looking for alternative treatment when faced with traditional options. Remember, something as simple as reciting this tongue twister three times in a row could turn your struggle into a chuckle: "I wish to wash my Irish wristwatch" (Spatola, 2012, para. 1).

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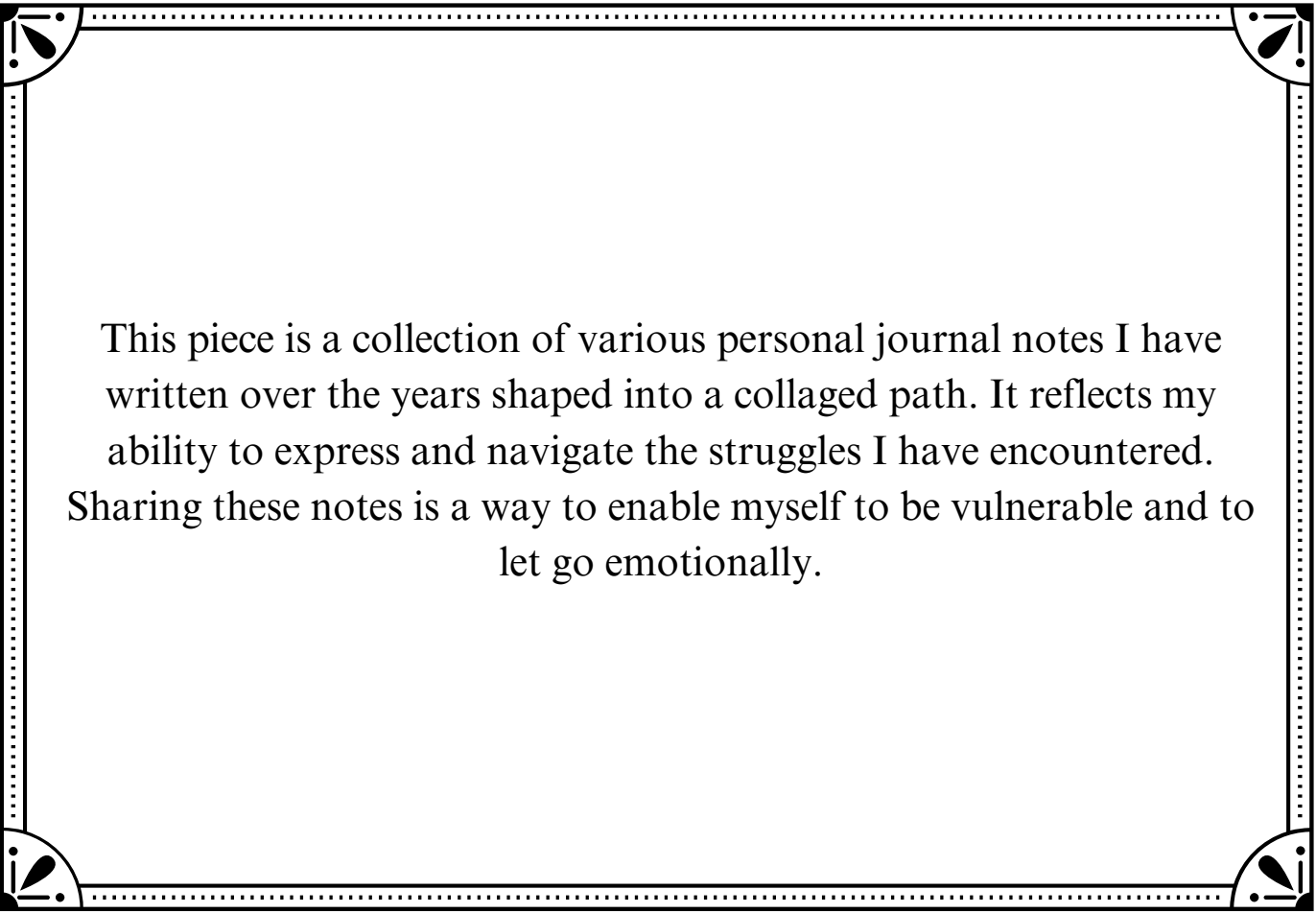
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This piece is a collection of various personal journal notes I have written over the years shaped into a collaged path. It reflects my ability to express and navigate the struggles I have encountered. Sharing these notes is a way to enable myself to be vulnerable and to let go emotionally.

