

A study to assess the Effect of Laughter Therapy on Anxiety

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Abstract

Life is running fast; everyone is on toes to win the race. No one has free time to stop and care for themselves. Though today's world is overloaded with hi-tech facilities, yet people are not happy. They are attaching more value to personal achievement and trying to seek material pleasure in life, most of which are temporary and do not make anyone happy. Laughter therapy is a breakthrough technique allowing laughter to actually be prescribed as part of a daily routine in order to realize all of the health benefits. It enables everyone to laugh, even those who are serious, introverted and uncomfortable being funny.

Objective: To assess effectiveness of laughter therapy on anxiety among people.

Aim of Study: The present study aimed to add some more humor in life of people to reduce anxiety.

Methodology: Quasi-experiment non-equivalent control group pre-test post-test design was used to study the effectiveness of laughter therapy. Study was conducted at Shiva ji Park, Rani Ka Bagh (experimental group) and Jallianwala Bagh, (control group) Amritsar, Punjab. 30 participants for experiment group and other 30 for control group with the help of convenient sampling technique. The Hamilton Anxiety Rating Scale (HAM-A) developed by Max Hamilton administered to study participants to assess anxiety before and after laughter therapy.

Results: Paired t-test applied on mean values of experimental group in pre-test ($\bar{X} = 14.01$, SD = 1.64) and post-test ($\bar{X} = 15.24$, SD = 1.67) and found statistically significant difference ($t = 2.88^*$, $df = 29$) at 0.05 level of significance. Hence, study results revealed that laughter therapy was

significantly effective to lower the anxiety among people.

Conclusion: After statistical analysis this study leads to the conclusion that a considerable part of adult population survives with mild or moderate anxiety. The present study findings also revealed that laughter therapy does have a significant effect on anxiety. Thus, it is clear that simulated laughter i.e., laughter therapy helps to lower anxiety.

Keywords: Laughter Therapy; Anxiety; people.

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## INTRODUCTION

Laughter, in its basic form defined as a psycho-physiological response to a stimulus that leads to the production of muscle contractions, facial expressions, and other neuro-physiological processes. Physiological benefits include improved respiration, general muscle relaxation, and enhanced mental functioning. Typically, laughter has been investigated in terms of its ability to reduce negative emotions like anxiety, stress and depression. This property was used to propose a stress-buffering hypothesis, following their revelation that individuals who reported more frequent laughter experienced less negative affect during stress. In addition to reducing negative emotions, unsurprisingly, laughing also increases positive emotions more than simply smiling.

In India laughter therapy was developed by Dr Madan Kataria in 1999, and is predicated upon the proposition that simulated laughter can elicit the same physiological and psychological benefits as authentic laughter. People who cannot achieve genuine laughter may benefit by minimizing the overt behaviour of laughter. He stated that laughter therapy is a form of therapy which encourages one to use the natural physiological process of laughter to release the painful emotions of anger, fear and boredom. Laughter Yoga combines unconditional Laughter with Yogic Breathing (Pranayama). Anyone can laugh for No Reason, without relying on humor, jokes or comedy. Laughter is simulated as a body exercise in a group; with eye contact and childlike playfulness, it soon turns into real and contagious laughter. The concept of Laughter Yoga is based on a scientific fact that the body cannot differentiate between fake and real laughter. One gets the same physiological and psychological benefits. As scientist states, laughing produces happy chemicals in the body called endorphins which work in the brain to give an overall feeling of well being. Laughing, however, does not have to be genuine. Fake laughter will also cause the body to respond as if the laughter is real.<sup>1</sup>

**Problem Statement:** A quasi-experimental study to assess the effect of laughter therapy on anxiety among people residing in Amritsar, Punjab, India.

## OBJECTIVE

To assess effectiveness of laughter therapy on anxiety among people.

**Aim of Study:** The present study aimed to add somemore humor in life of people to reduce anxiety.

## NEED OF STUDY

In this high pressure, high tension, modern world, laughter is fast disappearing. They are attaching more value to personal achievement and trying to seek material pleasure in life, most of which are temporary and do not make happy. Another reason people are not laughing enough because they are constantly being bombarded with negativity. Faced with such circumstances, people find it hard to express their feelings, pain and emotions which make them more anxious, stressed. Laugh defuses painful emotions like fear, anger and resentment; instead cultivates positive emotions like unconditional love, generosity, openness, compression and willingness to help and serve others.

Medical treatment is becoming expensive and people are spending huge amount of their hard earned money on it. Scientific studies show that laughter therapy strengthens the immune system and one does not fall sick easily. Studies also revealed that regular laughter therapy lessens the frequency of common cold and cough and respiratory tract infections.

Due to sedentary lifestyle, we do not utilize the full capacity of lungs. In anxious state breathing becomes faster, shallow and irregular. Anxious people breathe from the chest and do not use their diaphragm. As a result, part of lung cells does not participate in exchange which leads to an accumulation of carbon dioxide in the blood. The diaphragm is connected to a special branch of the autonomic nervous system called the parasympathetic nervous system which is responsible for relaxation.

An open and loud laugh stimulates the movement of the diaphragm and the abdominal muscles and make people learn to laugh from belly. In this way laughter therapy stimulates the parasympathetic nervous system, the calming branch of autonomic nervous system. This scientific phenomenon coupled with laughter therapy helps to loosen stress and relieve anxiety.

Investigator interacted with people at time of evening walk in local park and felt everyone suffers from free floating anxiety. Investigator noticed everyone is alone even at public place like park. They walk and talk in very formal way, they do not laugh just smiled even on things where one can break a nice laugh. Being certificate holder in short term course of laughter therapy, investigator realized need to do something for society. After an intensive review investigator decided to give

laughter therapy to people to add humor in life of people to reduce anxiety.

## HYPOTHESIS

Hr There will be significant effect of laughter therapy on anxiety levels as assessed by Hemilton's anxiety rating scale among people in experimental group at  $P < 0.05$  as compared to control group.

### Operational Definitions

1. **Laughter Therapy:** A type of therapy that therapeutically uses humor to relieve pain and stress to improve a person's sense of well being. In the present study voluntary laughter was practiced by subjects for 20-30 minutes daily at evening for a month.
2. **Anxiety:** It is a feeling of worry, nervousness, fear or unease about something with an uncertain outcome. In the present study both psychic and somatic anxiety was examined with help of Hamilton Anxiety Scale (HAM-A) before and after the intervention.
3. **People:** In present study all working and non-working people were included in age group 20-60, who were willing to participate as study subject.

## REVIEW OF LITERATURE

A study was conducted to determine the effect of laughter on self-reported stress and natural killer cell activity and found that stress decreased for subjects in the humor group, compared with those in the distraction group ( $U_{32}=215.5$ ;  $p=.004$ ). Amount of mirthful laughter correlated with post intervention stress measures for persons in the humor group ( $r_{16}=-.655$ ;  $p=.004$ ). Subjects who scored greater than 25 on the humor response scale had increased immune function post intervention ( $t_{16}=2.52$   $p=.037$ ) and compared with the remaining participants ( $t_{32}=32.1$ ;  $p=.04$ ). Humor response scale scores correlated with changes in natural killer cell activity ( $r_{16}=.744$ ;  $p=.001$ ). Laughter may reduce stress and improve natural killer cell activity. As low natural killer cell activity is linked to decreased disease resistance and increased morbidity in persons with cancer and HIV disease, laughter may be a useful cognitive behavioral intervention.<sup>2</sup>

A study was conducted on laughter therapy program with community dwelling elderly people in South Korea. The initial laughter therapy session followed a sequence of relaxation, laughing,

clapping, and laughter meditation, and subsequent sessions included dancing and singing to encourage laughter, as well as other laughter exercises. Mean depression scores were reduced for the laughter therapy group following the intervention, whereas no change was evident for the control group. Though the change in depression scores for the laughter therapy group achieved statistical significance, the reduction was just a single point on a 15-point scale. It should also be noted that the depression scores of both groups were elevated at baseline and so the effect of laughter therapy may only apply to those already experiencing low mood levels. Together, these findings provide evidence that forced laughter may be effective at improving positive mood, particularly for those who maybe experiencing a reduction in such mood initially.<sup>3</sup>

A quasi-experimental study was conducted in Mumbai city with an objective to evaluate the effect of laughter therapy on the happiness and life satisfaction among elderly. There was total 80 participants (40 from laughter therapy group and 40 from non-laughter therapy group) from age group of 60-75 years. Participants of the laughter therapy group were chosen on the criteria of completing at least six months of active participation in laughter therapy sessions. Results showed that mean score of the participants from the Laughter therapy group on the subjective happiness scale was 16.425 and SD of 3.92. The mean score of the participants from the non-Laughter therapy group on the subjective happiness scale (SHS) was 14.475 and SD of 2.73. The correlation of the tests was found to be significant at 0.01 levels. Hence the present study shows a positive effect of laughter therapy on happiness and life satisfaction among elderly, and a positive correlation between happiness and life satisfaction was also found.<sup>4</sup>

## METHODOLOGY

### Research Approach

Quantitative research approach

### Research Design

Quasi-experiment non-equivalent control group pre-test post-test design was used to study the effectiveness of laughter therapy.

### Research Setting

Study was conducted at Shiva ji Park, Rani Ka Bagh (experimental group) and Jallianwala Bagh, (control group) Amritsar, Punjab.

**Target Population**

People from age group 20-60.

**Sample**

All adult who daily come to selected parks to spend at least 1 hour or more for evening walk or for other leisure activities were included as study sample.

**Sample Size**

30 participants for experiment group and other 30 for control group.

**Sampling Technique**

Convenient sampling technique

**Inclusion Criteria**

People who were willing to participate.

**Exclusion Criteria**

1. Who had history of chronic medical condition, muscular disorder or diagnosed with any cardiovascular disorder in which exercises will be contraindicated.

**Content Validity**

The content of tool was validated by language experts after translation in Punjabi and Hindi.

**Reliability**

Reliability of tool was checked by split half method after translation.

**RESEARCH TOOL****a) For patients with opioid with drawal**

1. **Part A:** Socio-demographic profile.
2. **Part B:** The hamilton anxiety rating scale (HAM-A) developed by max hamilton

**VARIABLES UNDER STUDY**

*Independent variables* – Laughter Therapy

*Dependent variables* – Anxiety

*Socio-demographic Variables* - Age, Gender, Qualification, Occupation, Religious faith, Marital status, Children.

**ETHICAL CONSIDERATION**

Written permission was taken from local authority of municipal corporation to organize daily evening class of laughter therapy for visitors in park. Written consents were taken from each study subject.

**RESULT****Analysis and Interpretation**

Comparison of pre-test and post-test anxiety among people in both control and experimental group.

**Table 1:** Comparison of pre-test and post-test anxiety among people in both control and experimental group.

N=60

| Group        |       | Pre-test Anxiety    |       | Post-test Anxiety |    |        |
|--------------|-------|---------------------|-------|-------------------|----|--------|
|              |       | Mean                | SD    | Mean              | df | t      |
| Control      | 13.78 | 1.55                | 13.92 | 1.47              | 29 | 0.35NS |
| Experimental | 14.01 | 1.64                | 15.24 | 1.67              | 29 | 2.88*  |
|              | df    | t                   | df    | t                 | —  | —      |
|              | 58    | 0.558 <sup>NS</sup> | 58    | 2.2*              | —  | —      |

NS = Non-significant

\*Significant at  $p < 0.05$

Table depict non-significant mean difference between control and experimental group values in pre-test anxiety, whereas paired 't' value shows significant ( $t = 2.2^*$ ,  $df = 58$ ,  $p < 0.05$ ) difference between control and experimental group values in

post-test anxiety. Paired t-test findings also reveal a significant difference ( $t = 2.88^*$ ,  $df = 29$ ,  $p < 0.05$ ) between pre-test anxiety and post-test anxiety among people participated in experimental group, and non-significant difference in pre and post test

anxiety among people of control group.

Hence, analysis of data revealed that laughter therapy has significant effect on anxiety. Therefore, it can be concluded that simulation laugh i.e., laughter therapy can be advised to people to get relief from anxiety.

## DISCUSSIONS

A study was conducted to investigate the effect of laughter therapy on physiological and psychological function in elders. In this study laughter therapy intervention resulted in a significant reduction in systolic blood pressure and heart rate, accompanied by a significant increase in plasma concentration of serotonin and a significant decrease in salivary concentration of chromogranin A. According to researcher laughter therapy could be expected to become a practical treatment to improve quality of life of older people in an elderly day care centre. The results of present study where laughter therapy caused a reduction of anxiety among people of experimental group are congruence.<sup>5</sup>

A study was conducted to find out whether Yoga Intervention has any effect on State and Trait Anxiety and also on the Subjective well-being. Fifty, first year students were selected from Naturopathy and Yogic Sciences Course; on whom; Spielberger's State Trait Anxiety Inventory and Nagpal and Sell's Subjective well-being Inventory were administered in the beginning of the academic year and second time after a gap of one year. Results revealed a significant decrease in both State and Trait Anxiety levels and positive change in the Subjective Wellbeing of the students. These findings are consistent with the findings of the present study.<sup>6</sup>

## CONCLUSION

After statistical analysis this study leads the conclusion that a considerable part of adult population survives with mild or moderate anxiety. The present study findings also revealed that laughter therapy does have a significant effect on anxiety. Paired 't' test result of post score was significantly higher at 0.05 level than that of pre-test score. Difference of anxiety levels among people of both control and experimental group

showed a significant association between age and anxiety. Thus, it is clear that simulation laughter i.e., laughter therapy helps to lower anxiety.

## RECOMMENDATIONS

- Similar study can be undertaken on a large sample for making more valid generalization and in different settings.
- A study can be conducted to find the effects of laughter therapy on depression.
- A study can be conducted on the therapeutic use of humor for psychiatric disturbances in hospital settings.

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