Comparison of the effects of laughter therapy and breathing exercises on pulmonary function and psychological well-being among smokers at Coimbatore

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ABSTRACT

Background of the study

Nothing is permanent in this world, except change. As a result of changes in physical, mental and social aspects of human beings, we experience a variety of emotions and feelings. One such emotion is stress. Nowadays stress has become a part of everyday life in all individuals. Being the greatest creation of God, human beings use their ideas to cope with stress situations in positive and negative manner. Nurses as member of health team are knowledgeable about complimentary therapies like yoga, meditation, relaxation, exercises, and laughter and music therapies which positively influence stress. There are certain habits that have an influence on stress. One such habit is smoking.

If we ask 100 people to quickly name one thing that’s bad for our health, a vast majority would undoubtedly say smoking. The ill effects of smoking on health are widely known, yet millions of people still continue to smoke despite all the risks involved. WHO defines health as a state of complete physical, mental, and social well-being, not merely an absence of disease or infirmity, yet smoking affects all the dimensions of health.

Globally, smoking is the single biggest preventable cause of death. Smoking kills millions worldwide each year. Tobacco claims 4.9 million lives a year, and if the present consumption pattern continues, the number of deaths will increase by 2020 to 10 million, 70% of which will occur in developing countries. There are an estimated 1.3 billion smokers and half of them (some 650 million people) are expected to die prematurely of a tobacco-related disease. At the current rate, the number of smokers will rise from today’s 1.3 billion to 1.7 billion by 2025.

Deep breathing exercise was found to be statistically significant in improving the pulmonary function of patients with chronic airflow limitation. The parasympathetic nervous system takes over when one is breathing deeply and fully, thus stimulating a relaxation response. Laughter therapy is a modified form of breathing exercise, gives workout to the muscles of respiration. Laughter is a combination of modified respiratory movements. It can be defined as an inspiration x followed by many short convulsive expirations, during which the rima glottides remains open and the
vocal folds vibrate. Laughter is one of the finest, most economical and easy to practice anti-stress measure and one of the best muscle relaxant.

By personal experience, the researcher found that many individuals initiated smoking due to stress. Many smokers reported that one of the reasons for smoking was relieving stress and the frequency of smoking was determined by stressful occasions in daily life. Laughter is the best antidote for stress and stress is the important provoking factor for smoking. It is a well known fact that breathing exercises improve pulmonary function and relaxation, but how far the laughter therapy as a modified breathing exercise improves pulmonary functions and psychological well-being was the interest of the researcher. So the researcher intended to compare the effect of laughter therapy and breathing exercises on pulmonary function and psychological well-being among smokers as part of holistic nursing interventions.

**Aim**
The aim of the study was to compare the effects of laughter therapy and breathing exercises on pulmonary function and psychological well-being among smokers.

**Methods**
Quasi experimental research design was used. In which non equivalent control group pre-test post-test design was adopted for the study. The setting of the study was Coimbatore. Male smokers who fulfilled the inclusion criteria were considered as the population. The study consists of 400 samples, out of which 100 in control group, 100 in only breathing exercises group, 100 in only laughter therapy group and 100 in combination therapy group. Non-probability purposive sampling was adopted. Male smokers alone between the age group of 30 - 60 years were included. In demographic data age, duration, form of smoking, average number of beedi/cigarettes or both per day, and nature of activity at home or work place were collected. To assess pulmonary function of smokers, 4 pulmonary parameters namely FVC, FEV1, PEFR and FEF25-75% were measured with the help of the spirometer (SpiroBank_G). Comprehensive assessment of psychological well-being was carried out by using a standardized psychological General Well-Being Schedule (PGWB) by Dupuy (1984).

The researcher used standardized Tamil version of the psychological general well-being schedule. The tool consists of 22 items, included 6 affective states of mind namely anxiety, depression, positive well-being, self control, general health, and vitality. It contains 22 questions. Responses range from 0 (poor) to 5(excellent). The score was interpreted in the following way; below 60: severe distress; 60 to 72: moderate distress: 73 to 95: no distress; above 95: positive well-being. Laughter therapy, breathing exercises and combination of both were group process; each group consists of 10-15 samples. The interventions were given weekly 6 days (Monday- Saturday) about 30 – 40 minutes in the evening for the period of 6 weeks. In control group no intervention was given and no control on their original activity.
level. Once again the pulmonary function and psychological well-being were assessed after six weeks.

**Results**

There was a significant relationship between the pulmonary parameters such as FVC, FEV1, PEFR (P<0.01), and FEF25-75 % (P<0.05) and types of intervention. The control group showed significant difference with breathing exercises, laughter therapy, and combination therapy group (p<0.01) in the three pulmonary parameters (FVC, FEV1, and PEFR). In FEV1 there was a significant difference obtained only between laughter therapy and combination therapy group (p<0.05). In relation to PEFR, combination therapy group significantly differ with breathing exercises and laughter therapy groups (p<0.01). The pulmonary parameter FEF25-75% significantly differs only between control group and combination therapy group. Otherwise there was no significant difference between any two groups in any of the pulmonary parameters (p > 0.05). The results of the study revealed that the breathing exercises and laughter therapy were equally effective in improving pulmonary function. Combination therapy was more effective than breathing exercises and laughter therapy alone.

The control group showed significant difference with breathing exercises, laughter therapy, and combination therapy group in all the dimensions of psychological well-being (p<0.001) and total general well-being (p<0.01). There was a significant difference between the breathing exercises group and laughter therapy in xii depression (p<0.001), positive well-being (p<0.001), and total general well-being (p<0.05). There was a significant difference between laughter therapy and combination therapy group in anxiety (p<0.01), otherwise no significant difference between any two group in any of the dimensions of psychological general well-being of subjects. The results showed that the breathing exercises as a single therapy was effective in enhancing all dimensions of psychological well-being and total general well-being (p<0.001) except depression (p>0.05). Laughter therapy and combination therapy group were effective in enhancing the total general well-being (p<0.001) and all dimensions of psychological well-being (p<0.001).

**Conclusion**

The study concluded that both laughter therapy and breathing exercises were equally effective in improving pulmonary function among smokers; regarding psychological well-being laughter therapy was more effective than breathing exercises in some of the dimensions of psychological well-being. Combination therapy was more effective on the pulmonary function and psychological well-being than laughter therapy and breathing exercises alone among subjects who were smoking.

**Keywords**
Smokers; pulmonary function; psychological well-being; laughter therapy; breathing exercises; and combination therapy.