

Neuro Linguistic Programming and Emotional Freedom Technique for Reducing Psychological Distress among Cardiac Patients

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Introduction

The present research aimed to study the effectiveness of Neuro Linguistic Programming and Emotional Freedom technique for reducing Psychological distress among Cardiac patients. The importance of psychological interventions was targeted to reduce psychological factors that become the risk factors for developing cardiovascular disease.

World Health Organization (2014) defined Cardiac Vascular Disease as a cluster of disorders of heart and blood capillaries which includes coronary heart disease, cerebro-vascular disease, rheumatic heart disease and peripheral arterial problems.

According to World Health Organization survey (2014) presented that death due to Coronary Heart Disease in Pakistan has reached almost 111,367 or it is 9.87% of total deaths occurring in Pakistan. Pakistan ranked in this list at 63rd number.

Angio Patients are defined as the patients who undergo through procedure of angiography or angioplasty. Angiography is a diagnostic procedure for locating heart problem's exact location while angioplasty is a procedure in which blocked veins and arteries are cleared and stents are inserted for proper blood flow (American Heart Association, 2013).

Neuro Linguistic Programming and Emotional Freedom Technique are the new psychological interventions that are emerging as a potential treatment programs for different medical and psychological issues. Neuro Linguistic Programming is an attitude which defines sense of eagerness to learn the skills for finding the types of communication which impacts an individual. It is a methodology that organizes information and perception of unconceivable terminologies (Smart, 2008). This therapy was founded by Bandler and Grinder (1975).

Emotional Freedom Technique is also named as Emotional Freedom Tapping is a general healing procedure that provides remarkable results for healing emotional, performance and physical issues (Craig, 1995).

Rationale of the Study

The current study was conducted in order to find out Psychological distress among the patients who went angiography or angioplasty and emphasizes to reduce the level

of psychological distress by applying neuro linguistic programming and emotional freedom technique.

This research is important to examine the effectiveness of Neuro linguistic programming and Emotional Freedom Technique with angio patients. It will help to determine the impact of therapies in decreasing psychological distress which includes depression, anxiety problems and loss of behavioral control and promote psychological well-being including emotional ties, general positive affect and life satisfaction among angio patients.

Literature Review

Distress

American Psychological Association (2000) defined distress is a feeling of unhappiness, pain or suffering that affects mind and body. Distress is a state of severe anxiety or strain (Reber & Reber, 2006). It is a negative emotional reaction to the output resources due to stress (Darling, 2010). In other words, it is a medical term for all kinds of mental health difficulties for which people are very likely to receive clinical, psychological or psychiatric interventions.

Cardiac Patients

Calma (2015) defined angioplasty also known as or balloon angioplasty as an **endovascular** procedure to open up narrowed or blocked arteries or veins of heart, to treat arterial **sclerosis**. Angio patients are cardiac patients who undergo the procedure of angioplasty or angiography.

Outcome of Psychological Distress in Cardiac Patients

Mcguire, Ahearn and Doering (2015) found that psychological distress is caused by multiple factors in which personality factor is the most prominent one while family and interpersonal problems, occupational stress, health stress and stress related to financial matters causes distress. Multiple behavioral factors such as alcohol intake, physical activity, cigarette smoking and physiological factors such as body aches, inflammation, hemodynamic disturbances or any other physical problem

produces psychological distress causing Cardio Vascular Diseases.

Prevalence of Cardiac Disease in Western Countries

Cardiovascular disease (CVD) has increasingly becoming death cause in various countries of the world including the United States. World Health Organization suggested that in upcoming 2020 main cause of disability in adjusting life would be depression and cardiac problems would be the dominant ones. Some of the census studies told that estimation of hypertension in six largest European countries is 44 percent in which 50 percent are men, while, 39 percent are women. European guidelines (2012) wrote on cardiovascular disease prevention which underlined the significance of psychological factors and relating risk of growing cardiovascular disease (Ringoir & Peterson, 2014).

Prevalence of Cardio Vascular disease in Pakistan

Under developing country like Pakistan, researcher was unable to find current studies on the cardiac death rate or anything that explores the occurrence of patients with non cardiac symptoms. In fact, there is a study conducted in Pakistan to determine the occurrence and underlying factors for developing depression and anxiety among cardiac patients. Another study entailed one hundred patients located from Lahore. In this study 68 cardiac patients showed symptoms of major depressive disorder or generalized anxiety disorder, or some of them showed both. In this research 87.5 percent were females met the criteria for depressive disorder or anxiety disorder or may be both (Doger, Khawaja & Azeem, 2008).

Neuro linguistic Programming

Neuro linguistic Programming is a move toward better communication skills, personal development by providing psychotherapy; this was created by R. Bandler and J. Grinder in 1975. According to the neuro-psychologists there is strong bond between neurological processes i.e neuro, language i.e linguistic with behavioral patterns which are learned through our experience i.e programming. These are then changed to attain specific target in life. Neuro-linguistic programming is designed to enhance the curative process by changing the conscious as well as subconscious beliefs of people about themselves, about others, and the world. These restrictive beliefs are "reprogrammed" using different techniques taken from other therapies including **hypnotherapy** and psychotherapy.

Techniques of Neuro Linguistic Programming

Bandler and Grinder (1975) proclaimed following techniques for neuro linguistic programming

Circle of Excellence is the most one commonly used technique of neuro-linguistic programming. It is mostly used in seminars, classrooms and meetings for boosting motivation and confidence. It entails a magical and imaginative circle on the ground floor and fill this imaginary bright light, desired symbols, colors, feelings of excellence, and then stepping into the circle .This can be imaginably done to enhance positive energies, and to diminish negative thoughts and energies.

Time Line Technique is another technique in which NLP uses time line to remove you to negative past life or future life situations which are undesirable and need to be change to uncover bad memories of past abuse and remove traumas, and to create new good future life realities. Neuro Linguistic Programming utilizes the idea of taking time back into past repairing damaging memories and remaking new image that a client has faced.

Eye Accessing is also a method in which eye accessing cues is done. It involves assessing the eyes of an individual to know the thinking pattern of the individual. Eye accessing is also similar to Neuro Linguistic Programming researcher claimed it useful for mirror technique and skillful communication as well. Proponents of Neuro-linguistic Programming proposed that assessing eye movements can be practiced to change, persue, and influence individual's subconscious processes.

Perceptual positions. It is a technique in which state of client is viewed from different angles which involve individual's self, other's view, neutral observer view and GOD's view. This method was proposed to inspect high levels of individual's interactions.

Neuro Linguistic Programming Modeling. This method is utilized for multiplying behavior, increasing potential, motivating or duplicating positive energies as magical abilities with the help of professionals. This method enables finding extra potentials in geniuses or experts for attaining desirable results. Proponents of Neuro-linguistic Programming state that these patterns and circle of excellence is used for geniuses in any field to enhance their level of.

Emotional Freedom Technique Emotional Freedom Technique is commonly known as Tapping Technique. This is a healing technique which provides instant and remarkable results for emotional, performance and physical issues. Emotional Freedom Technique is based on premise that unresolved emotional issues are resolved by using this therapy to bring betterment in individual's life that needs help. This is used for chronic pains, physical problems, any diagnosed conditions and for any kind of stress that interferes which individual's normal functioning. (Craig, 2011).

Techniques of Emotional Freedom Technique. Emotional Freedom Technique operates by tapping method on pressure points (acupressure meridians) to release block energies. As these blockages are cleared, the trouble feeling is released and energies start moving through the body. Therapy is started with a beginning statement in which the problem feeling is being accepted completely and acknowledgement of underlying problem is brought into the client's consciousness. The process is started by Emotional Freedom Technique, the person would say, "Even though I have this (fear) about (the time I was

criticized for being clumsy), I completely accept myself anyway." Modify statement and say, "I am willing to learn to accept myself" or "I want to accept myself." The client repeats following statement three times and tapping on the point of karate chop. The client then focuses on the feeling (fear) in the body and rate its intensity from 1 to 10. After this client starts tapping on the face points and say I release and let go this feeling (fear). The process is repeated until the level of stress is rated to its minimum point (Craig, 2010).

Objective

The objective of this present study is to determine the efficacy of Neuro-Linguistic Programming and Emotional Freedom Technique for reducing Psychological distress in cardiac patients. Moreover, to highlight the importance of that medical and psychological interventions for the better health maintenance among cardiac patient.

Research Question Do Neuro-linguistic Programming and Emotional freedom technique have any effect in angio surgery?

Does psychological distress decreases after the application of neuro-linguistic programming and emotional freedom technique?

Method

The current study was intended to analyze the effectiveness of Neuro Linguistic Programming and Emotional Freedom Technique for reducing Psychological distress among angio patients. Non equivalent Quasi Experimental research design was used. The research was carried out in 3 phases.

Phase I

Phase I consisted of the selection of the sample, taking permission from the institute, informed consents from the patients and Pre-Assessment sample.

Sample selection. Purposive and convenient sampling techniques were used for the selection of 40 participants which were referred for angiography or angioplasty procedure. A small sample was selected because of exploratory research tends to find efficacy of therapies. The sample was divided into 4 groups i.e NLP Group, EFT Group, NLP and EFT Group and Control Group. 10 participants were taken for each group. All participants were collected from Punjab Institute of Cardiology (Lahore). All the groups were matched on age, gender, education, socio-economic status and the severity level of psychological distress. NLP Group was provided with Neuro linguistic Programming, EFT Group was given Emotional Freedom Technique, NLP and EFT Group was provided both of the therapies and Control Group was not given any therapy.

Pre-assessment

Pre-Assessment of four groups was done. Pre- Assessment was done in order to see the effect of therapy at the end. It was carried out in the first month of the implementation of the research program. Baselines were taken for socialization which

was based on eye-contact, non-verbal communication, verbal communication and flexibility.

Rapport building

Rapport was build with the client and a relationship of trust was build to ease the hospital environment. This made easy for the participants to communicate about their personal matters.

Behavioral observation

Behavioral observation was carried out to understand behavioral manifestation of participant's problem. The nonverbal gestures and responses were carefully observed in order to acquire clear understanding of occurrence and manifestation of their complaints. The indicators of nonverbal gestures and responses were eye-contact, voice tone, movement of eye balls, rigidity in body parts, nodding, fidgeting of hands and repetitive movements.

Assessment measures

The assessment measures used for pre assessment of the sample are as follows:

Semi-structured interview

A semi-structured interview was conducted with the participants. This questionnaire was made in order to collect brief history of participant's childhood, education, family, marital issues, occupational problems, medical history of participant cardiac problems and related issues. The information provided by the participants was also counter checked by asking from the relevant doctor and participant's family member.

Subjective ratings

After taking semi-structured interview when participant problem was sorted out, the participant was asked to specify psychological complaints they were facing with their cardiac problem. The participants specified their problems easily. They were further asked to rate their each problem on 1-10 rating scale where "1" is least severe and "10" is at the peak highest level of severity. The participants were further asked to specify that whether these psychological symptoms were due to cardiac problem in their point of view and it was up to them if they wanted to eliminate these psychological complaints. Further steps were preceded with those participants who were willing to seek psychological treatment.

Mental health inventory (Veit & Ware, 2002). It is a 38-item self-rated questionnaire. It was used to assess the nature and severity of psychological distress and psychological well-being in cardiac patients before going through angiography or angioplasty. Its urdu translated version (Bashir & Arooj Naz, 2016) was used.

Phase II

In phase II, implementation of therapeutic intervention was done with the selected participants who were assessed in phase

1. The intervention was provided to the participants before going through angiography or angioplasty.

Neuro linguistic programming. This approach was used for better communication, enhancing personal skills and psychotherapy in the field of psychology (Bandler and Grinder). This intervention helped to build connection between the neurological processes, language and behavioral patterns

Techniques used in therapy. In the first step participants were given direction of what they want.

Mindfulness meditation. Mindfulness is the psycho-therapeutical process which is responsible for bringing one's conscious attention to the internal and external experiences taking place at the present moment which was brought by meditation in this study.

Anchoring. To establish an anchor means that anchor (stimuli) is fired when desired state is experienced so that the desired state is paired to the anchor. For example, touching the knuckle of the right hand when the desired state is experienced to pair the two events.

Eye assessing cues. According to Neuro-linguistic programming, unconscious and automatic eye movements go together with particular thought processes, and specify to access and use of picky representational systems.

Administration. Attention of unconscious mind was taken with the help of rapport meanwhile they were assessed with their sensory acuity and their behavior flexibility was observed. This first step was named as "Fundamentals of Neuro linguistic Programming". In the next step mindfulness meditation was done with Anchoring. These were two different techniques which were combined to reduce negative thoughts that produced negative feelings. In this process the participant was asked to relax and asked to put all his focus on breathing. When the participant was asked to focus on one single thing by keeping eyes closed. That was a deep trance state that a participant acquired. With the help of soothing voice he was asked to relax further. At this point the participant was asked to go to the past where relax and peace. As participant's gestures and responses showed relax state then an anchor was fired on the right hand by saying that participant is relax. Participant was asked to feel negative feeling and report where it was being felt in the form of pressure, pain, strain or rigidity. Again anchor is fired and participant was asked to feel that. Again his/her attention was diverted on the breathing rate and asked to deep breath. He/she was asked to let go negative feelings. Positive anchor was fired and client was asked to remember that past pleasant experience again with the positive anchoring firing again and again. When facial expression of participant showed relaxed state firing of positive anchor was done and client was asked to remember that negative feeling which was changed into positive with the help of anchoring. Participant was unable to find that negative feeling again. Then participant wrist was wrapped and was asked to rate his distress from 1-10 where "1" is least and "10" is maximum. Asked the client to relax and feel the warmth of the wrist and focus on the breathing cycle. The participants who state little amount of change were asked to repeat the same until they had brought it to zero.

In the end reality testing was done specially with the clients who showed resistance in the start. This was provided to group 1. In group 3 it was combined with Emotional freedom technique.

Emotional Freedom Technique. This counseling intervention was drawn from different theories of acupuncture, neuro-linguistic programming, thought field therapy and energy medicine (Craig, 2011). It is itself a technique in which tapping of pressure points is done while repeating discovery statement again and again.

Administration. Study was conducted in a room which was distraction free. The door was closed and others were asked not to disturb while session is going on. The discovery statement was given to the participants was that the basis of all negative energies and emotions are due to imbalances in the body's energy system. There were thirteen pressure points that taken in this technique. According to this technique the cause of negative emotions is disruption in the body's energy system. It has four steps.

In the first step the participant was asked to relax. And sit in an easy and comfortable posture.

In the second step participants were asked to memorize the reminder phrase which they repeated while tapping on every pressure point.

In the third step participant was asked to start the sequence simply by taping beginning of eyebrow by saying the reminder face three times. Then by taping corner side of the eye, under the eye in the centre, under the nose in the middle, under the chin and then beginning of the collar bone repeating the reminder face.

The fourth step was 9 Gamut procedure in which participant was asked to do nine steps in the following sequence. They were asked to close their eyes taking a deep breath then opened their eyes moved their eyes hard down right and the hard down left. After that they would asked to roll their eye balls in a circle and repeat rolling of eyes in the other direction. Hum 2 seconds of a song, poem or naat. Count to 5 and again hum 2 seconds song, poem or naat.

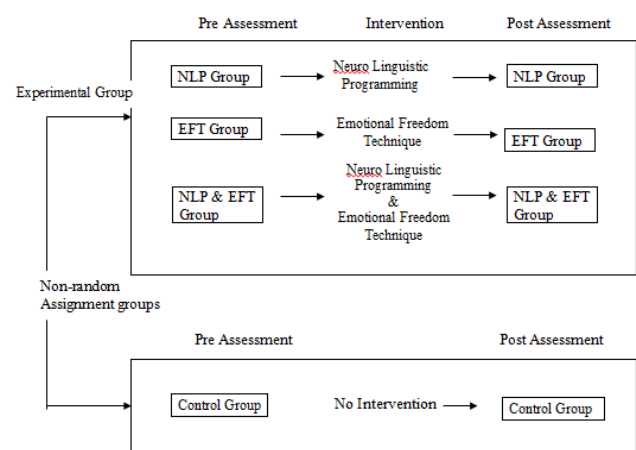


Figure 1: Figure showing intervention plan of the study.

Phase III

In the phase III, therapy's effect on therapies was assessed again with the help of Mental Health Inventory and comparison was seen between pre and post test assessment scores.

Post assessment. Phase III comprised of post assessment that was conducted by using the Mental Health Inventory measure that was administered before intervention. The participants who were exposed to therapeutic intervention before angiography or angioplasty were assessed again after their angiography or angioplasty to assess the level. The assessment tool used was mental health inventory.

Ethical Consideration

The participants recruited in the study were not stigmatized for their problem behavior. Keeping in view ethical consideration informed consent was taken from the institute and the participants. Before starting the procedure potential training was taken related to the particular techniques. The communication and written records of the participants were kept confidential. Participants were ensured about their personal safety before starting intervention. Debriefing was provided to all the participants to encourage them and increase their moral. Discrimination and biases on the base of language, religion, culture, caste or creed and disability was avoided. Experimental group was also ensured about the closure of follow-up sessions by terminating session.

Results

After the implementation of the intervention techniques on the groups respectively, the post test was applied after two days when participants came right after angiography or angioplasty procedure using Mental Health Inventory (MHI). The scores obtained from the post-test were than compared with the pre-test results in statistical analysis. Following chapter consists of the description of demographic variables including gender, age and education of participants alongside the statistical results which suggests the comparison between NLP group, EFT group, NLP and EFT group and control group.

Demographic Variables

Category	f	%
	NLP (n=10)	
Gender		
Male	6	60
Female	4	40
Education		
Middle	5	50
Matric	5	50
Employment		
Yes	6	60

No	4	40
	EFT (n=10)	
Gender		
Male	6	60
Female	4	40
Education		
Middle	5	50
Matric	5	50
Employment		
Yes	6	60
No	4	40
	NLP and EFT (n=10)	
Gender		
Male	6	60
Female	4	40
Education		
Middle	5	50
Matric	4	40
Inter & above	1	10
Employment		
Yes	7	70
No	3	30
	Control (n=10)	
Gender		
Male	6	60
Female	4	40
Education		
Middle	5	50
Matric	4	40
Inter & above	1	10
Employment		
Yes	6	60
No	4	40

Note. f= Frequency, %= Percentage, NLP=Neurolinguistic Programming, EFT=Emotional Freedom Technique

Table 1: Frequency and Percentage of Gender, Education and Occupation of the Participants.

(Table 1) illustrates that the male have more ratio than the female Cardiac patients among four groups. Moreover, participants who were middle pass are greater in number in all group, Matriculation was done by rest of the participants.

Intermediate and above were very few in NLP and EFT group and Control group

Comparison of All Group

Category	Psychological Distress		Psychological Wellbeing	
	(M)		(M)	
	Pre	Post	Pre	Post
NLP Group	87.50	63.40	55.70	71.40
EFT Group	114.1	67.20	28.80	60.80
NLP and EFT Group	118.2	67.40	23.80	62.10
S-Ratings	91.50	90.20	51.70	51.70

Note. M=Mean, NLP=Neuro Linguistic Programming, EFT=Emotional Freedom Technique

Table 2: Pre and Post Ratings on domains of Psychological Distress and Psychological Wellbeing among all Group.

Table 2 showed the pre assessment and post assessment mean of scores as rated by the participants in all four groups (NLP group, EFT group, NLP and EFT group and Control group). The table suggests a significant increase in the post ratings mean as suppose to pre ratings mean of psychological wellbeing among NLP and EFT group is evident. A prominent decrease is evident in psychological distress among NLP and EFT group among all groups. This supports that NLP and EFT both helps in decreasing psychological distress and increasing psychological wellbeing among angio patients.

Group Analysis Graph

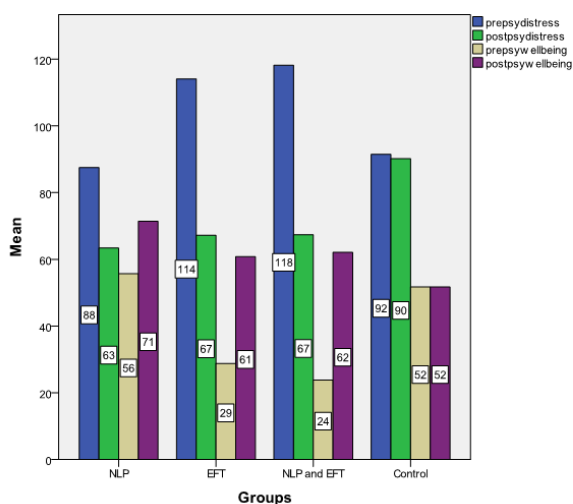


Figure 2: Comparison between pre and post ratings of NLP group, EFT group, NLP and EFT group and Control group.

(Figure 2) shows a pre and post assessment means of NLP, EFT, NLP and EFT and control group. The figure shows a significant improvement observed in the Psychological Wellbeing by decreasing Psychological Distress symptoms of clients participating in NLP and EFT group in post-test results. No

change is observed in the severity of psychological distress and psychological wellbeing symptoms of clients belonging to control group. A slight improvement is observed in clients of NLP group. A significant change is also reported in EFT group. This not only reflects the effectiveness of NL Programming and EFT in reducing psychological distress the patients who go through angiography or angioplasty increasing their psychological wellbeing improving overall health of the cardiac patients.

Discussion

Neuro Linguistic Programming and Emotional Freedom Technique is an alternative treatment for reducing level of psychological distress. This means that rather than focusing on medical treatment for cardiac patients, psychological intervention is of equal importance for better health results. This present study viewed this topic using a modern psychology perspective that is aimed to evaluate the role of psychological factors responsible for the etiology and prognosis of frequently producing heart diseases (Cromby & Harper, 2013).

The findings of present research suggest that psychological intervention program resulted in overall improvement in reducing psychological distress among angio patients. Comparing pre test and post test performance, the groups of participants who received therapies showed betterment in their physical as well as psychological conditions. The angio patients were assessed before angiography or angioplasty. Therapy was given in a separate room on second session. When these participants returned back to the ward were assessed again to see the effects of therapy provided before procedure of angiography or angioplasty.

It was hypothesized that patients who went through angio procedure develop distress symptoms which affect their health in future. This hypothesis was supported by the psychological study conducted on the patients of angiography and angioplasty which suggested a relationship between anxiety, depression and general psychological distress with this medical problem. The presented results from the study showed that higher rates of anxiety, depression and psychological distress in the patients with coronary slow flow (Karatas, Sahan, Kazim, Yigit & Bans., 2015).

Limitations

Research is always done to make more and more improvements in future. Sample was collected from a single institute. Variety of sample would be suggested from different institutions and different cities to get variety in participants. It was done due to lack of time, energy and resources. Different modes of therapies could also be tested for reducing psychological distress.

Future Discussion

Detailed history should be taken to rule out any other psychological disorder. Long term effects should also be assessed after discharge from the hospital to check the change is temporary or long lasting.

These techniques are the new emerging techniques so more research should be carried out to check their efficacy in health related behaviors and treating anxiety, depression, stress and distress.

Conclusion

In the end it was concluded that Emotional Freedom Technique is more efficient in reducing psychological distress than Neuro Linguistic Programming. The combination of both the therapies gets better result than the application of a single out of both. Hence, it is proved in the light of statistical results and above mentioned literature that Combination of Neuro linguistic Programming and Emotion Freedom Technique is useful in reducing psychological distress among the patients who show distress symptoms after going through angio procedure in their consciousness.

In future this research would be carried out on larger population and on different cultures to see its diversity. Moreover other psychological interventions would be included in order to see better results.

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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