



Stress Monitoring using Music therapy Techniques for health care and wellness

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Abstract: As per reports of world Health Organization, stress is a major problem of any times and affects both physical as well as the mental health of people. This study aimed to investigate the application of music therapy technique to reduce the stress. In this study, a proposed framework has to be deployed for stress monitoring in health care.

Keywords: Music Therapy Technique, stress, evidence based techniques, musical memory, interpretation, Indian Classical Music

I. INTRODUCTION

Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program.

Music Therapy is an established health profession in which music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals. After assessing the strengths and needs of each client, the qualified music therapist provides the indicated treatment including creating, singing, moving to, and/or listening to music[1].

Stress is defined as a state of threatened or perceived by the individual as threatened homeostasis and it is re-established by a complex repertoire of behavioral and physiologic *adaptive responses* of the organism. The Stress System present in both central and peripheral nervous system, generically activated whenever a threshold of any stressor is exceeded, plays a major coordinator role in the re establishment of homeostasis by eliciting a complex behavioral and physical adaptive response. This response is defined as the stress syndrome and represents unfolding of a relatively stereotypic, innate program of the organism that has evolved to coordinate homeostasis and protect the individual during stress[2,3].

Music and other art forms have long been utilized in the realm of health and healing across cultures and times, with applications ranging from traditional healing rituals, to the social use of music in communities, to more prescriptive use of the arts in biomedical settings [4].

II. RELATED WORK

In this paper author discusses the different evidence-based techniques, Some evidence-based techniques are as follows:

A. *Progressive Muscle Relaxation (PMR):*

It is a technique for reducing stress and anxiety by alternately tensing and relaxing the muscles.

To reduce pain or pain perception and tension, create a pleasant mental state, reduce anticipatory anxiety, reduce anxiety as a response to stress, increase parasympathetic activities, increase knowledge concerning muscle tension and autonomous stimuli, improve concentration, increase the feeling of control, relaxation must be attempted.

B. *Autogenic Training (AT):*

It is a self-relaxation procedure by which a psychophysiological determined relaxation response is elicited. This technique achieve deep relaxation and reduce stress. In this technique there are some set of directions that gives the command to body for relaxation and control the breathing. It consists of six standard exercises that -with the use visual imagination and verbal cues- make the body feel warm, heavy, and relaxed.

It is useful in a range of diverse disorders including tension headache/migraine, mild-to-moderate essential hypertension, coronary heart disease, asthma bronchiale, somatoform pain disorder (unspecified type), anxiety disorders, mild-to-moderate depression/dysthymia, and functional sleep disorders.

C. *Relaxation Response (RR):*

It is a easy practice that once learned takes 10 to 20 minutes a day to achieve relaxation. During technique, the body moves from a state of physiological arousal, including increased heart rate and blood pressure, slowed digestive functioning, decreased blood flow to the extremities, increased release of stress hormones, and other responses preparing the body to fight or flight, to a state of physiological relaxation, where blood pressure, heart rate, digestive functioning and hormonal levels return to their normal state.

D. **Biofeedback:**

Biofeedback has its roots in the concept of homeostasis and cybernetic theory, proposing that systems are controlled by monitoring their results[2,5].

It is a process that enables an individual to learn how to change physiological activity for the purposes of improving health and performance. This training is done in the presence of qualified biofeedback therapists. The therapists work with their patients and explain to them the process of reading and then responding to the physiological information relating to their body using various biofeedback devices.

E. **Transcendental Meditation:**

This technique is simple and easily learned, requiring to be practiced for 20 minutes twice daily while sitting with eyes closed and repeating a 'mantra', a meaningless sequence of sounds specific to each individual, to promote a natural shift of awareness to a wakeful but deeply relaxing state.

F. **Cognitive Behavioral Therapy (CBT):**

This technique was developed through a combining of behavior therapy with cognitive therapy and though rooted in different theories, at the present time these two traditions share a common focusing and on alleviating symptoms [2,6].

G. **Emotional Freedom Technique (EFT):**

EFT is able to rapidly decrease the emotional impact of memories and incidents that trigger emotional distress. Once the distress is reduced or removed, the body can often rebalance itself, and accelerate healing. EFT works by a person tapping on nine of acupoints, while speaking aloud a specific, meaningful short phrase [2,7].

In this paper author discusses the arts, and music in particular, in the contexts of traditional cultures and contemporary biomedicine, psychotherapies and community practice. Also the current research and the trend toward defining two distinct fields of 'arts therapies' and 'arts in healthcare' practices are discussed in-depth in everyday life[4].

III. PROPOSED METHOD

In music therapy, musical experiences and healing of disease relationship developing producing therapeutic change. Relational musical experiences that deepen to the therapeutic relationship are fostered by the use of music therapy techniques which are applied within a systematic process between the client and therapist[1].

Stress level of every client was different. We considered clients who are stress in different circumstances but they are known the Indian Classical music.

In Music therapy therapists plays a vital role. Therapist work in many different settings, including psychiatric and medical hospitals, rehabilitative facilities, outpatient clinics, agencies and schools for persons with disabilities, community mental health centers etc. At the same time the term music therapist is used in different ways. Music therapists in clinic, work as clinicians. In this study music therapy is based on Indian Classical Music.

While those outside the field commonly associate music therapy primarily with the use of music as a

psychotherapeutic tool, the literature from the field, demonstrates its applications across medical disciplines, including the psychotherapies, neurosciences, biomedicine, public health and social services, as well as in community-based practice[4]. This literature describes desirable attitudes of therapist. For application of attitudes or techniques therapist must monitored the stress level and wellness of client. Some elements of literature includes [8] visualization, the auditory sense and the concept of an internal ear, musical memory, technical issues, interpretation and musician psyche. Using those elements we tried to reduce the stress and maintained or increase the optimal health and wellness status.

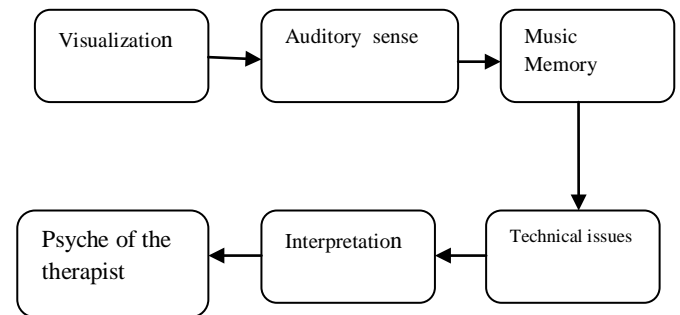


Figure: 1

A. **Visualization :**

The Music visualization exercise is a good way to discover how well one is able to manage her/his stress situation. This is the first step of our framework.

B. **Auditory sense and the concept of an internal ear:**

The musical imagination in the form of 'Raga' is one of the important side of the client. The inner ear hearing is the real thing that the client develops continually. This cognitive structure (inner ear) development carried out through listening and constant practice.

The concept of an "Inner ear" is difficult and more varied than one might think. "Inner ear is the capacity to imagine in one's mind how the peace of music sounds, how can hear it"[8,9].

C. **Musical memory:**

The most used object with musical therapy seems to be reciting from memory. Memory means, kind of "attack" at the material on a physical level, on the level of muscle memory and in the mind's memory and, how would you call after the hearing of classical music, on the level of an abstract memory.

D. **Technical issues:**

One point to be made concerning with musical therapist and client technique is the "Feeling Sense". The feeling sense is continually, slightly some time ahead the therapy.

The definition of the technique seems to be either very easy or difficult for the client to articulate;"The techniques in playing? Well, that means you can do you want to."

E. **Interpretation:**

When the therapist understands music, client he/ she simultaneously tries to interpret the music. This interpretation seems to be suitable for music therapy. In interpretation process reading the notes systematically.

F. *Psyche of the therapist:*

One very important objective for using music therapy is to take care of the therapist psyche. To provide the relief to a client, psyche of the therapist is good.

Music therapy can help to concentrate on the stress situation that most often causes nervousness and lack of being concentrated.

IV. CONCLUSION

The purpose in the practice of arts in healthcare and monitoring, is to use creative activities to reduce suffering and to encourage wellness [4]. This is done by applying North Indian classical music is included in music therapy. The primary goal extends over many applications. Stress reduction techniques constitute a safe and effective approach for reducing stress [2].

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