



Important role of music in stress reduction: A qualitative study

Dr. Renu Aggarwal

Assistant Professor, Department of Psychology, Shri Varshney Degree College, Aligarh, Uttar Pradesh, India

Abstract

Stress has become a universal experience in modern life. It affects our physical and mental health negatively. Music therapy can be an effective tool for dealing with stress. The aim of this paper is to identify the important role of music in reducing stress. A qualitative survey was conducted with a sample of 100 participants (both males and females) age range 18-30 for this purpose. Findings show that more participants like to listen and playing music to lessen their stress in comparison to other stress relievers.

Keywords: Music, stress reduction

Introduction

Today's fast-moving world is said to be a world of achievements as well as stress. Every individual is exposed to many stressful situations like family responsibilities, work pressure in jobs, school projects and exams, financial worries and so on, all produce stress. Stress has been defined as a stimulus i.e. Psycho-social demands leading to personal strain (Holmes and Rahe, 1967) a response to demand made upon the organism (Seley 1956)^[31] and as an interaction between persons and his environment (Lazarus, 1966). It is a state of the total organism under exhausting circumstances produced by a grate variety of environmental conditions. According to Lazarus, (1966) stress exists when the demands on a person are perceived as taxing or exceeding that person's adjusting capacity. It is the body's reaction to change or danger, often causing a feeling of being overwhelmed, anxious or unable to cope. Cherniss (1980)^[8] suggests in his model, that the level of stress experienced by individuals, is a function of their demands and resources to meet the demands. The cognitive theory of psychological stress and coping proposed by Lazarus and Folkman, is transactional theory which states that the person and environment exist in a dynamic, mutually reciprocal bidirectional relationship.

Although, stress is not a good emotion, a moderate level of stress improves performance, but acute and chronic stress (too much and long-term stress) can harm physical and mental health. Often people do not realize that stress is one of the hidden causes behind many physical and mental problems such as cardiovascular diseases, cancers, anxiety disorders, depression and burnout (Steptone & Kivimaki, 2012)^[32]. To cope with stress, many people use medications which can have a lot of negative contraindications and side effects, including substance dependence and abuse (Bandelow *et al.*, 2015; Olfson *et al.*, 2015; Puetz *et al.* 2015)^[3, 25, 28]. Therefore, it is necessary to examine the effects of non-pharmacy therapies for the prevention and management of stress (Dewitte *et al.* 2020; Kamioka *et al.* 2014; Martin *et al.* 2018; Raglio *et al.* 2015)^[10, 15, 21, 29].

All over the world, the music has been used to be calm and relaxed. It is an art, entertainment, pleasure and medicine for the body. Listening, playing and dancing to music all are useful in reducing stress of our daily life. It has a quality of creating an atmosphere of peace and harmony. It has a

miracle power for treating mental health problems as depression, anxiety disorders, dementia and many more. It reduces negative emotions like anger and fear. Researchers have found that music can decrease the amount the cortisol, a stress related hormone produced by the body in response to stress. It stimulates the brain in producing dopamine and serotonin which are happy hormones for the brain. They are known to regulate body temperature, mood, hunger and tiredness in human beings. Music has sound waves at different frequencies. Brain can understand the pattern which music makes in tone, frequency and rhythm and enjoy it. This is when the brain actually releases these two main hormones into our body. Music has a capacity to pleasure and happiness to listeners and performers. Our thoughts, feelings and emotions have been reported to be greatly influenced by music listening and participation.

Music crosses boundaries between age, background, culture, cognitive, social and physical abilities. In India music has been cultivated art from the Vedic period. Chant is an essential element of Vedic rituals. Music was regarded as of the source of devotion to God. Swami Prajnananda says, "Indian music breaths spiritually. It brings Heaven down to earth and uplifts the mind of every earthy". Music has a universal language. Indian music is based on the concept of Raga and Rasa. Raga is arrangements of notes in a particular way so as to create a musical environment. According to Pt. Ravi Shankar, "A raga is an aesthetic projection of an artist's inner spirit, it is representation of his most profound sentiments and sensibilities set through tones and melodies".

Literature Review

The therapeutic use of music goes back to the ancient times and there is evidence that demonstrate existence of music. Music was used to control mental health problems of many ancient Kings. In the 1830's it was proclaimed that music influences the circulation of blood and alternates the BP. Florence Nightingale recognized the potential of music in caring for sick (Biley, 1999). Studies related to stress reducing qualities of music have found positive effects of music (Chanda & Levitin, 2013; de witte *et al.* 2020; Juslin & Vastfjall, 2008; Koelsch, 2015; Mehr *et al.* 2019)^[7, 10, 14, 20, 22]. Therefore, music therapy interventions are being increasingly to reduce stress and the wellbeing of clients

(Agres *et al.* 2020; Banbridge *et al.*; Juslin & Vastfjall, 2008; Kemper & Danhauer, 2005;) [14, 16]. The stress reducing effects of music intervention is explained by music itself as well as the continuous attunement of music by the music therapist to the individual needs of patients. Music listening is strongly associated with stress reduction by the decrease of physiological arousal as indicated by reduced cortisol level, lowered heart rate and decrease in mean arterial pressure (Burrai *et al.* 2016; Koelsch *et al.* 2016; Kreutz *et al.* 2012; Linnemann *et al.* 2015) [6, 17, 18, 20]. Music increases positive emotions and feelings like happiness and joy (Jancke, 2008; Juslin & Vastkjail, 2008) [13, 14] and can reduce negative feelings and emotions like nervousness, state anxiety and subjective worry (Akin & Iskendar 2011; Cohan *et al.* 1983; Pittman & Kridle, 2011; Pritchard, 2009) [26, 27]. Studies show that music modulates activity in brain structures as the amygdala and the mesolimbic reward brain system which is involved in emotional and motivational processes (Blood & Zatore, 2001; Koelsch, 2015; Koelsch *et al.* 2016; Levitin, 2009; Moore, 2013; Salimpoor *et al.* 2013; Zatorre, 2015) [5, 17, 23, 30, 34]. Furthermore, empirical evidence shows that music activities in a group may result in synchronization among group members, which leads to positive feeling of togetherness and bonding (Linnemann *et al.*, 2016; Tarr *et al.* 2014) [17, 33]. These feelings of togetherness and bonding may be explained by the release of the neurotransmitters endorphin and oxytocin which play a key role in reducing stress (Amir *et al.* 1980; Dief *et al.* 2018; Myint *et al.* 2017) [2, 11, 24]. Music listening can also help to lower stress levels through its quality to provide 'distraction' from stress-inducing feelings and thoughts (Bernatky *et al.* 2011; Chanda & Levitin, 2013) [7].

Objectives

1. To identify the methods of reducing stress.
2. To identify the role of music in stress management

Research Design & Methodology

The present study is based on qualitative survey research design which focuses on collecting detailed, open-ended data regarding participant experiences, opinions and motivations through questions. Participants were asked questions by semi-structured interview method (both telephonic and face to face).

Sample

The sample of the study consisted of 100 participants including both males and females. The participants were selected using the convenience sampling method. The age range of the participants was 18 to 30 years.

Findings

The study aimed to identify common methods of stress reduction among young adults and to examine the role of music in stress management. Based on qualitative survey data collected from 100 participants aged 18-30, the findings revealed that:

- 48% of participants identified music (listening or playing instruments) as their primary method for reducing stress.
- 36% of participants reported yoga and meditation as their first preference.
- 12% of participants relied on talking to friends or social interaction.

- The remaining participants mentioned other methods such as exercise, Sleeping or hobbies.

Although many participants reported using multiple strategies, music emerged as the most preferred and frequently used method for immediate stress relief.

Discussion

The findings suggest that music play a significant role in stress reduction among young adults. Nearly half of the participants preferred music over other coping mechanism, indicating its accessibility, ease of use and emotional impact. Music may help reduce stress by:

- Promoting relaxation and lowering physiological arousal
- Enhancing mood and emotional expression
- Providing distraction from stressors

Compared to yoga, which requires time, discipline and sometimes guidance, music is more convenient and instantly available, which may explain its higher preference. The results align with previous research indicating that music can influence brain activity, reduce cortisol levels and improve emotional well-being. A meta-analysis of 104 randomized controlled trials (RCTs) found that music intervention provides a significant positive impact on both physiological ($d=.380$) and psychological ($d=.545$) stress related outcomes (de Witte *et al.* 2020a) [10]. While social interaction and other activities also contribute to stress management, they were less frequently chosen as primary methods. Overall, the study highlights that music is not only a popular but also an effective coping strategy among young individuals.

Conclusion

The study concludes the music play a crucial role in stress reduction among young adults aged 18-30. It is the most preferred method among participants, surpassing other techniques such as yoga and social interaction. Music's effectiveness lies in its ability to provide immediate emotional relief, be easily accessible and adapt to individual preferences. The findings emphasize the importance of incorporating music-based interventions in stress management programs, especially for youth. Future research could further explore the types of music and their specific effects on stress levels.

Limitations

Despite providing useful insights, this study has several limitations:

1. Sample size and Demographic

The study was limited to 100 participants within a specific age group (18-30) which may not represent other age groups.

2. Qualitative Method

The use of a qualitative survey limits the ability to measure the exact level of stress reduction level objectively.

3. Self-Reported Data

Responses were based on participants' perception which may be subject to bias or inaccuracy.

4. Lack of Diversity in Variables

Factors such as gender, cultural background and socioeconomic status were not deeply analyzed.

5. Multiple Coping Mechanisms

Many participants used more than one method, making it difficult to isolate the exclusive impact of music.

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