

Effect of music on the level of happiness



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ABSTRACT

The present study was designed to investigate the role of music in increasing the level of happiness of college students. The convenient sample comprised of 120 (sixty men and 60 women) undergraduate students from G. C University, Lahore. Their age range was 17 - 23 years ($M = 20.38$, $SE = 0.11$). This study used a 2(Gender) X 3(Music) X 2(Phase X S) mixed factorial design, with gender and type of music as between-subject factors and phase as repeated measures factor. Type of music had three levels, viz., classical, popular and mystical and phase was divided into pre- and posttest measures. After taking informed consent, participants were randomly assigned to the three conditions. Each participant was assigned a computer and was provided with a set of headphones through which they heard the specific kind of music. The Depression Happiness Scale (Joseph and Louis, 1993) scale was administered once before and then after the participants listened to the music. The results of (2 X 3 X 2) mixed factorial Analysis of Variance and post-hoc Tukey tests revealed that popular music had significantly increased the level of happiness of college students, unlike classical and mystical music. No gender differences were found.

CHAPTER 1

INTRODUCTION

This thesis examines the enhancing effects of music on happiness. Music is the purest form of art. It can be said that it has an impact on almost everyone. Certain pieces of music have a relaxing effect, while others stimulate us to act, and some cause change in or emphasize our mood. This

work specifically investigates if listening to different kinds of music can increase the level of happiness or not.

1. 1 Defining Music

The word music basically comes from the Greek word “mousike” meaning art of the muses. Technically, all sounds are the result of atmospheric vibrations; however, unlike mere sounds and noises, music consists of a set of sounds with particular frequencies, amplitudes, and timbres which are organized into highly predictable patterns. The Social and Cultural meanings by people turn these sounds into music (Smith, 1989).

Culture and social context is very important while defining some construct (Matsumoto & Juang, 2008). Thus, the definition of music varies according to culture and social context. The artists may view music as a performing art, a fine art, and an auditory art. According to J. P. F. Richter, “Music is the poetry of the air”. William Shakespeare called music the “food of love”, (Galwitz, 2001). Humanistic psychologists view music as a means of self fulfillment, integration and self actualization. For existentialists it is another department of choice and freedom. Music in any form has a universal appeal, like an international language, it is understood and spoken everywhere, and its charm and penetrating power cannot be denied (Malik, 1983).

Components of Music

Music consists of particular frequencies, amplitudes, and timbres etc which are organized into patterns. (North, Hargreaves & Hargreaves, 2004). The components of music are,

Musical note is a single sound of definite pitch and duration which can be identified in writing.

Rhythm, is the arrangement of sounds in time, this arrangement is a complex arrangement of notes into a mixture of short and long durations within a single bar or a series of bars. Regular pulse groupings are called bars or measures. Rhythm is one of the most central features of many styles of music, especially jazz and hip-hop (Lerdahl & Jackendoff, 1983). A Scale is a progression of notes in an ascending or descending order.

Melody or tune assembles a series of notes into recognizable musical shapes. The notes of a melody are created with respect to pitch systems such as scales. A melody usually though not necessarily possesses rhythm. The rhythm of a melody is often based on the tones of language, the physical rhythms of dance or just periodic beatings (Narveson, 1984).

The beat of a piece of music is its regular pulse, determined by the bar lines by which music are metrically determined.

Pitch, is the height or depth of a note in relation to other notes or in relation to an absolute pitch. The absolute pitch has internationally been set at A= 440 Hz that is, the A above the middle c has a frequency of 440 cycles or vibrations per second. Pitch is determined by the sound's frequency of vibration. The process of assigning note names to pitches is called tuning. The difference in frequency between two pitches is called an interval. The interval indicates either the doubling or halving of the base frequency (Machlis & Kristine, 2007).

Harmony is the study of vertical sonorities in music. A vertical sonority refers to considering the relationship between pitches that are together. Harmony can also be implied by melodies that outline a harmonic structure. Larger structures involving multiple pitches are called a chord (Darmschroder & Williams, 1990). Harmony in music can be analyzed through Roman numeral system. A system of chord symbols is used in popular and jazz music (Friberg, 1991).

Musical texture is the overall sound of a piece of music . It is described as the number of parts or lines and their relationship. The perceived texture of a musical piece can be affected by the interval between each musical line, the timbre of instruments or the number of instruments used. Monophony, homophony and polyphony include musical textures. Monophony is the texture of a melody. The texture of homophony is achieved when a melody is accompanied by chords. The melody in homophony is usually voiced in high notes. Polyphony consists of several simultaneous melodies of equal importance (Temperley, 2001). Form, is a feature of musical theory that explores the concept of musical syntax, on a local and global level. The syntax is often explained in terms of phrases and periods or sections or genre respectively (Juslin & Laukka, 2004).

1. 1. 2 Types of Music

Different types of music help in soothing one's disturbed soul and cheer us up. There are various types of music i. e., classical music, rock, hip-hop, folk, opera, mystical etc.

Classical music is a complex form of music as it requires high musical skills like learning the ragas and ability to coordinate with other musicians'. The one who wants to learn, he/she has to go through proper training in this field of music (Bhattacharyya, 2008). Classical music is different from other types due to its instruments and form. Classical music can be described as of having two kinds, western classical music and eastern classical music.

The central norms of western classical music were codified from 1750 to 1820, which is known as the classical period. The major instruments used in western classical music include, the piano, harpsichord, the organ and bagpipes. Western Classical music is also capable of taking on different forms such as, concerto, symphony, sonata, opera, dance music, suite, etude, symphonic poem etc. The composing of classical music aims to instill the music with a complex relationship between the emotional and the intellectual aspects. Classical musicians get extensive training and schooling to attain technical mastery before performing classical music. They understand the principles, and gain the knowledge that is essential for the performance of classical music (Grout et al, 1996).

The origin of eastern classical Music was from, the Hindu traditions. The oldest of the scriptures and the Vedas describe music at length. The major instruments used include, the tabla, sitar, sarood, pakhawaj, tanpura, tambura, swarmandal, bansuri and sarangi. The eastern classical music is basically monophonic, and is arranged around a single melody line. The composition based on a particular raga, begins with the performers coming out in a ritualized order, first the drone instruments, then the soloist, then accompanists and percussionists. The musicians first tune their instrument.

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The tambura is played at a steady tone throughout the raga, by a student of the soloist. The raga begins with the melody being developed gradually. The beginning of the raga is called an alap. Once the raga is established, the ornamentation begins to become rhythmical, which gradually speeds up. This section is the jor. After the jor reaches its climax, everything stops and then finally the percussionist begins to play while interacting with the soloist. Beginning from India, the classical music tradition has extended towards Pakistan and also Afghanistan. The major vocal forms of eastern classical music include,

Dhurpad, which is a style of singing, is accompanied by tambura and pakhawaj. The lyrics are heroic in theme, or otherwise in a praising tone.

The Ghazal originally being Persian in form, exists in multiple variations. The Khayal is an informal form of vocal music. It is partially improvised and emotional in nature.

The Tarana, are songs that are used to convey a mood of elation. They have a few lyrics and are mostly composed of rhythmic sounds.

Thumri is an accessible and informal vocal form. The lyrics are typically in a language called braj bhasha, and are usually romantic.

The system of notation called sargam holds a very important place in classical music of the east. For eastern classical music, the expertise of voice, rather than the instruments is emphasized (Patnaik, 2006).

Popular Music is music belonging to any number of musical styles that are widely popular. It covers mainstream music that does not fall into any

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specialized style such as jazz or hip hop. Popular music essentially includes the use of instruments such as guitar, violin, fiddle, piano, bass and drums. In these types of music, the bass guitar is an important instrument. This can be used in different intensities to evoke feelings of anger, pride and others.

As compared to classical music, popular music does not require expertise. Many people play popular music together with their friends, on a casual amateur basis. The roots of the music are found in African American and West African music (Moore, 2004).

Mystical music is an outburst of the soul. It comprises of spacious, contemplative, heartfelt, trance inducing and psychedelic sounds. It is a mix of entrancing drones, structures, and rhythms. Mystic music is different from classical music in terms of its lyrical content. The sole theme of Mystical music is of building a connection with God. The singer addresses God as his beloved and tries to gain his acceptance. Mystical music makes one explore a kind of rich sound experience that lifts and awakens one above normal consciousness. It is relaxing. Mystic music fulfills the purpose of music which is to help us contact the spiritual dimensions of life and reveal the secret to us and to, “keep the spirit alive” (Nasr, 1997). An important feature of Pakistani mystical music is the interchanging of gender of the singer.

1. 1. 3 Effects of Music

Music holds a very significant position in our lives since the beginning. From the early beginning to the present day, interest in music with reference to healing and therapeutic experience has sustained (Bartlett, 1996).

Researchers have found that about two-thirds of the inner ear's cilia

resonate only at the higher frequencies that are commonly found in music (3, 000 - 20, 000 Hz). This seems to indicate that primitive humans communicated primarily through song or tone.

There are references to the divine alliance of music and medicine in classical antiquity and the healing function among primitive people (Schullian & Schoen, 1948). Recent work on music has confirmed the effectiveness of music too. Music has been found to be capable of triggering Endorphins in the human body, which help the mind in creating sound images, thus making it possible for people to escape into painless worlds sheltered by their imaginations. Music can regularize or disturb the heart beat or relax or tense the nerves; it is also able to affect digestion, respiration and blood pressure (Tame, 1984).

Ansdeell (1995) suggested that music could act as a powerful tool with neuro-disability. In many instances it has been found that people with brain related problems were able to function in better ways while being exposed to music (Bunt & Hoskyns, 2002). Mc Carty (1999) described how music could reduce negative emotions and increase positive emotions in healthy as well as clinically ill. Music can decrease pain and depression while increasing mood and self esteem. A study indicated that tempo affected arousal, while mode of the music affected the mood (Husain, Thompson & Schelenburg, 2002).

Wellness is a product of healthy body, mind, spirit interactions, and, as a result music can be an important asset in creating the appropriate environment for persons' healing (Stewart, 1990). Music's appeal to us is primarily emotional and psychological. Music has been noted for its ability to

enhance people's moods, move them to tears, make them want to rejoice or just move them emotionally in both negative and positive ways (Goldstein, 1980). Radocy and Boyle (1979) suggested eight kinds of affective responses to music. Some are related to an innate sensory perception of the sound whereas; others are related to images, experiences and emotional context of the experiences. These responses may include simple, negative and positive feelings, and moral or religious temperaments. Thus, music is often capable of helping people in dealing with the issues which they have not dealt with earlier in their lives. (Bright, 1993; Levine, 1999; Ortiz, 1997).

According to Stewart (1990) music can act as an affective therapeutic agent under the right circumstances. Music can be helpful to us in initiating psychological movement by altering our mental states and leading us towards more positive affirmations (Blaking, 1990). Menuhin (1972) revealed further that music can bring order out of chaos, because rhythm makes the divergent unanimous, melody turns the disjointed into continuous, and harmony is capable of imposing compatibility among the incongruous.

Sloboda (1989), states that, most of us take part in musical activities because it can arouse deep and significant emotions in us. The music itself cannot have extra musical meaning unless the experience to which it refers already exists in the mind of the listener. When music is similar to the connections with human life, then people experience intense emotions. Particular kinds of music are capable of moving painful memories or the unresolved problem in life. Storr (1990) believes that apart from the relations between seeing an emotional arousal, the relation between hearing and emotional arousal is stronger.

Campbell & Angus (1976), in a study observed that when people communicate with the emotional centers of our being through the use of music; we become better able to reduce stress and achieve a sense of well-being. Diamond (1979) suggests that music can be used as an important part of primary preventative health care at a psychosocial level. It has been reported that music is an activity which the healthy, impaired, talented and interested enjoy, because it provides them with a relief from their stress, anxiety (Blacking, 1995). Music if combined with personal attention and, can provide satisfaction and restore a sense of value to people who may be feeling depressed or low in self-esteem (Crystal, Grober & Masur, 1989).

In view of Hallan & Price (1998), calming music led to better participant performance on arithmetic and memory tasks. Music can line up patterns of emotions, structures of consciousness and / or psychic energy (Stewart, 1990).

Thus, music has great influences on a listener. It can take the mind and body to do spontaneous things. Depending on the type of music and the inner message it has, music can influence a person and his/her actions (Cassidy & Byo, 2008).

Happiness

In this older sense, Happiness was used to translate the Greek Eudemonia. There has been a surge of interest in Positive Psychology during the last quarter of this century. There has been a huge amount of interest and research on happiness, well-being and satisfaction among all positive fields (Diener & Diener, 1995). The term happiness is synonymous to subjective

well-being (Seligman and Csikszentmihalyi, 2000). Happiness can be defined as a feeling about yourself and the outside world. It is born from the internal workings of our own minds (Diener et al., 1997).

Yew-Kwan Ng and Siang Ng (2000), define happiness as a complete state of mental health. They have defined emotional happiness as the presence of positive affect and life satisfaction with the absence of negative affect.

It is a positive emotional state that is defined by every person on a subjective level. Diener, Scolon & Lueas (2003) define Happiness as an overall appraisal of life, where the good and the bad are balanced.

According to one of the founders of positive psychology, Seligman (2002), happiness consists of “ positive emotions” and “ positive activities”, emotions can be categorized as they are related to the past, present and future. Positive emotions concerning the past include satisfaction, contentment, pride and serenity whereas, positive emotions that are associated with the future include optimism, hope and trust.

Veenhoven (1997) has defined happiness or subjective well-being as the degree to which one judges the quality of his life favorably. According to Schwartz & Strack (1999), even very minor incidents in life can affect the level of happiness; however, Kahneman & Schkade (1998), state that external circumstances are have little effect on happiness or subjective well-being.

Theories of happiness

The basic theories of happiness have been divided into two types,

Top – down theory

Bottom – up theory

Bottom-Up Theory:

Happiness and satisfaction depend on the sum of many smaller pleasures and happy moments (Diener & Schwartz, 1984). In the perspective, of the bottom-up theory, well-being or happiness is a summing up of the positive experiences in a person's life. The assessment of satisfaction is considered in a small number of life's domains. According to this theory, people self-rate their subjective well being with the help of a variety of external circumstances. The frequency of the pleasant moments makes a person happier. These circumstances may include the level of one's marriage, income work and family etc (Linley, Joseph & Seligman, 2004). In this view, the objective life experiences, postulate the overall happiness.

Top-Down Theory:

The other perspective assumes that happiness is more related to general tendency to assess and infer to experiences in a positive way. From this point of view, a person brings tendencies of positivity towards the situations that he encounters. This view to subjective well being is known as top-down theory. This approach is mostly considered by observing personality traits or attitudes (Linley, Joseph & Seligman, 2004). This theory states that people, who are over all satisfied with life, are satisfied with everything. People possess a disposition to judge life's experiences in negative of positive ways. There are also other models of happiness which include,

Need/goal satisfaction model,

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Process/activity model,

Genetic/personality predisposition models.

Psychoanalytic and humanistic theorists believe that reduction in tension and satisfaction of needs lead to the achievement of happiness. It was theorized that people were happy as they had achieved their goals (Compton, 2005). Emmons & Diener (1986) has also emphasized how pursuing goals generates happiness.

According to the process/activity theorists, participating in activities generates happiness. Csikszentmihalyi (1990) proposed that people who indulge in interesting and challenging activities, and experience the feelings of flow, as a result, are happier.

The genetic/personality theorists view happiness as a stable construct. A Research by Costa and McCrae (1986) suggested that happiness is based on personality and genetics. Similarly, Lucas (1996) also found in a research that personality traits were closely related to happiness.

Most of recent researches agree with idea of happiness being a combination of psychological, emotional, and physical well-being.

Correlates of Happiness

Individual differences in the levels of happiness have their significance, but studies have shown that predictors of happiness can be indicated and generalized. Evidence has been found that environmental factors and happiness can be correlated. However, it was also found that demographic variables, together account for less than 20% variance in happiness or

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subjective well-being (Campbell et al., 1976). A study by (Suhail & Chaudary, 2003) found that work satisfaction, social support, religious affiliation, social class, income level, and marital status and marital satisfaction can be the predictors of happiness.

Marital status and satisfaction: It has been found that marriage and happiness correlate significantly. Diener, Suh, Lucas, Smith (1999), found that unmarried people who cohabit with their partners are significantly happier in a few cultures. Research has shown that married people are happier as compared to unmarried, divorced, separated or widowed people. Shields & Wooden (2003) found that married women and men were consistently happier than unmarried men and women.

Finances: Financial status is related to happiness; however with an increase the effect diminishes (Diener, Diener & Carol, 1995). Veenhoven (1994), stated that People of third world countries relate their happiness more to wealth. Evidence shows that relationship between happiness and wealth depends on the value that one associates with money (Burroughs, James & Rindfleisch, 2002).

3) Health: Physical health is strongly related to levels of happiness. If one is physically healthy he/she would have higher levels of happiness as compared to a person who is sick. Ryan & Deci (2001) found that perceptions of health have more effect on happiness than objective health. If one is healthy (physically), then one experiences a feeling of well-being (Feist, Bodner, Jacobs, Miles & Tan, 1995). According to physicians, Brief, Butcher,

George & Link (1993) a strong correlation exists between happiness and health.

4) Gender: women have been generally found to report higher levels of subjective well-being or happiness. Fujita, Diener & Sandvick (1991) reported that women showed greater capacity for joy. Similarly, in a study by Wood, Rhodes & Whelan (1989), it was found that women report slightly higher levels of happiness. However, Shayam and Yadev (2006) found that elderly men scored higher on well-being as compared to elderly women. In a study by Pennebaker, Rime & Blankenship (1996), women expressed more intense emotions than men. Women also rated themselves as more verbally expressive than men.

5) Education: education does affect the happiness of people positively. Layard (2005), found that education is capable of increasing happiness indirectly, as it effects the ability to earn. Education has greater affect on the happiness levels of people with lower incomes (Campbell et al, 1976). Education appears to have only small direct influence on happiness.

Life Events: Peak experiences have been found to be due to religion music or other intense activities. Diener & Lucas (1999), state that subjective well-being correlates with friendship activities, having frequency of occurrence. The number of positive events correlates with positive affect (Schimmack, Diener & Oishi 2002). Heady & Wearing (1989) found that areas of friendship and work, increase happiness.

7) Culture: Diener & Suh (1999) found that some nations appear to be more emotional than other nations. It was also found that happiness varies with

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interpersonal trust of people (Diener & Suh, 2000). It was found that people in individualistic cultures had higher subjective well-being as compared to collectivistic cultures (Ball, 2001).

8) Religion: Many researches support that people who are religious tend to be happier. Studies have found that engagement in religious activities is significantly related to higher well-being (Donahue & Benson, 1995). Peacock and Poloma (1999) found that one's perceived closeness to God was a very strong predictor of happiness.

1.3 Literature Review

Immense research has been done to investigate the effects of music on physical as well as mental health. Researches have found that music has made positive influences on the physiological, psychological and the social domains.

In a study, Fratianne, Prensner, Huston, Super, Yowler & Standley (2001), conducted a study on patients at a burn care centre and found that the group which received the music therapy intervention, reported significant reduction in pain, compared to the groups having no music therapy. This conformed that music therapy is a valuable non-invasive intervention for the treatment of pain after burn injury.

Nering (2002), in an experimental study investigated the effect of piano and music instruction on intelligence of monozygotic twins. Post-tests on the Wechsler standardized intelligence tests indicated that, that music instruction through individual piano lessons increased intelligence.

Weinberger & Norman (1998) conducted research to investigate if music is capable of improving brain development. They found that music not only improves our brain development, it even enhances skills like reading and mathematics. Music promotes social development, self-worth, personality adjustment, and also enhances creativity. It was also found that music making provides the most all-embracing exercise for brain cells and the synaptic interconnections.

A study on the effect of music therapy in treatment of social isolation in visually impaired children was conducted. It discussed how that music therapy can be helpful in making the child explore his environment, and modify stereotypic, autistic-like behaviours, and encourage social awareness and interaction with other children. The results indicated that Music evokes profound responses without the help of words and therefore, can reach children with the severest disabilities (Gourgey, 1998).

In another experimental study on the effect of music, Hallman, Price, and Katsarou (2002), found that calming music led to better participant performance on an arithmetic task and a memory task than no music.

It was also found that background music on cognitive test performance led to improved performance when compared with a control condition (Cockerton, Tracey, Moore, Simon, Norman & Dale, 1997).

A study by Rideout & Taylor (1997), involved 16 female and 16 male undergraduates, who completed two equivalent spatial tests, Results indicated that exposure to classical music, given to undergraduate students caused a small but significant improvement in spatial tests.

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In a study entitled, “ Music therapy for adolescents”, Tervo (2001), suggested that music makes adolescents become expressive, be in contact with and share among themselves feelings of anger, rage, grief, longing and psychological disintegration. It provides opportunities to feel closeness or isolation and to explore sexual fantasies and feelings.

Standley & Hughes (1997) evaluated the effects of music sessions which were designed to enhance pre-reading and writing skills of 24 children (aged 4-5 yrs). The children were enrolled in Early Intervention and Exceptional Student Education (ESE) programs. The music treatment was provided along with the regular prekindergarten course. Pre and post-tests revealed that music significantly improved print concepts and prewriting skills of the children.

A study by Chalmers, Olson & Zurkowski (1999) examined the effect of music on lunchroom noise level and on the behaviours of children requiring intervention. The playing of classical music indicated that the noise level dropped to an average of six decibels, whereas, upon playing popular music the noise level decreased by ten decibels. In both conditions, music was capable of decreasing behavioral interventions.

Covington (2001) stated that, many patients with psychiatric disorders struggle with poor skills in coping, socialization, communication, and self-expression which leads to dysfunctional cognitive, behavioral, and emotional responses. It was found that therapeutic music offers a noninvasive approach which helps in strengthening the skills and effect behavior change.

Ming (2002) explored the Anxiety, Depression and self-esteem of undergraduates. The study examined the effects of music therapy on anxiety, depression and self-esteem of undergraduates. Twenty-four undergraduates showing greater anxiety and depression with lower self-esteem were assigned to experimental and control groups. The experimental group was provided twenty hours of music therapy, unlike the control group which did not receive any treatment. Quantitative and qualitative analyses indicated that the experimental group showed a reduction in anxiety immediately after the music therapy, the group expressed that they experienced more positive changes, including more pleasure, relaxation, and confidence, and less negative emotions.

Chlan & Linda (1998) investigated the effectiveness of a music therapy intervention on relaxation and anxiety for patients receiving ventilatory assistance. They used mystical music as music therapy. Mystical music therapy was found to be effective in decreasing anxiety and promoting relaxation. Decrease in heart and respiratory rate was also found.

In another research, Smith and Noon (1998) investigated mood change induced by contemporary music. When analysis was done, it was found that all the pieces of music produced an overall change in mood.

Popular/independent music produced highly significant changes.

Ostertag (2002), in his article on music therapy with abused children stated that music therapy can play a very important part in the change process of abused children, specially while addressing emotional and relationship issues

which are difficult to address using the cognitive or behavioural treatment models.

Hendricks (2001), in his study on the use of music therapy techniques in a group for the treatment of adolescent depression, stated that one in five adolescents is effected by depression, which results in substance abuse, anorexia nervosa, poor academic performance and adolescent pregnancy. He investigated the use of music in a school setting for the treatment of adolescent depression. The pre and post test scores showed that the use of music therapy techniques positively correlated with reduced depression increased self-concept in the participants.

In a study, Labbé, Schmidt, Babin & Pharr (2007), conducted a study using a sample of 15 males and 41 female college students. They were exposed to classical and relaxing music after experiencing a stressful test. It was found that listening to classical and relaxing music after exposure to a stressor resulted in significant reductions in anxiety, anger, and sympathetic nervous system arousal, and increase in relaxation when compared to listening to heavy metal music or sitting in silence.

In a study titled, " An experience sampling study of emotional reactions to music: Listener, music, and situation", Juslin, Liljeström, Västfjäll, Barradas, & Silva (2008), investigated the prevalence of different musical emotions and how such emotions are related to various factors in th