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EMOTIONAL RESPONSES AND MUSIC STRUCTURE ON HUMAN HEALTH: A REVIEW

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Abstract: The distinction between emotion responses by a listener and emotion expressed by a music structure has become a challenging part of researchers. Impact of music appears deeply on cerebral, emotional, and physiological states also on stress and anxiety of human. This paper reviews the different methods related with emotion and music. These methods also show the relation between musical structure and emotion. Different methods defined for emotional responses of human after hearing of musical structure.

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INTRODUCTION

Music has vital role in the world of entertainment. As per the interest of listener, music can listen different situations in day to day life like doing sports, relaxing, studying or travelling etc. The features of music and music structure are used for selection of appropriate music as per the emotional interest of its listeners. The relationship between specific musical structure and emotional responses is challenging issue for a researcher. Automatic emotion or mood detection was present in early stages associated with various fields like music information retrieval, music and emotion psychology, and more recently affective computing evaluates the music emotion or mood based on which music structure is heard. In inducing emotion, a lot of research work is carried out on understanding the vital role of various music features and music structure [1].

Emotion is a complex phenomenon for which no definition that is generally accepted has been given. However, a commonly used definition considers emotion as "an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems (Information processing, Support, Executive, Action, Monitor) in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism". The term feeling points to a single component denoting the subjective experience process and is therefore only a small part of an emotion. Moods are less specific, less intense affective phenomena, product of two dimensions energy and tension. Sentiment is a personal confidence or decision which is not found on proof or certainty [2].

Emotions may prepare the individual to act on the prevailing conditions for accomplishing or maintaining a state of well-being. In contrast, music does not obviously change an individual's material state, nor does it necessarily extract any action. Psychological evidence indicates musical emotions are at least to some degree like other emotions despite all these differences. The styles organize musical sounds by providing technical descriptions of music theory and listener's expectations might underlie musical structures [3].

The music research is increasingly focusing on understanding the complex characteristics of this interaction is the link between music and emotions. Since, fundamentally, it only consists of non-living frequencies for a long time; the fact that music has an emotional impact upon us was one of the greatest of mystery [4].

Idea that music expresses emotion is an ancient and very pervasive. There is also solid experimental evidence from psychological research, that listeners often agree rather strongly about what type of emotion is expressed in a particular piece apart from the many literature to this effect contributed by composers, musicologists, and philosophers. Music can actually

produce emotion in listeners. Emotional effects in the listener produced by music go beyond the cognitive inference of what the music can be said to express. Formalization of emotional effects of music will consist in defining the emotional changes that music is supposed to produce in the listener and to identify the determinants of the listening situation [5].

METHODS:-

In this method music database was use of different popular different songs. The songs are selected by using criteria like songs should be distributed uniformly in each quadrant of the emotion plane, each music sample should express a certain dominant emotion. The DWCH algorithm, spectral contrast algorithm and two programs Marsyas and PsySound to extract musical features [6].

Theoretical framework has six additional mechanism are introduced through which emotions are induced after the listening of music. Through mechanisms music evokes emotions that are not unique to music, and that the study of musical emotions could benefit the emotion field as a whole by providing novel paradigms for emotion induction [7].

The exaggerated responses increase the stress level, and this can damage the cardiovascular system. In addition to that during stress (reactivity) the magnitude of the cardiovascular responses and the factors that affect the return to baseline levels after the stressor has ended (recovery).In this study, participants listen the classical music had significantly lower post-task systolic blood pressure levels (M¼2:1 mmHg above pre-stress baseline) than did participants who heard no music (M¼10:8 mmHg). Music improve the cardiovascular recovery from stress [8].

Music effect shown changes in heart rate (HR) and heart rate variability (HRV). During the musical performance, greater modulation shown in HR and HRVas compared to listening of music i.e Cerebral flow was significantly low. Music significantly decreases the level of nervousness for patients in a preoperative setting. Listening to music while resting in bed after open-heart surgery leads to significant differences in cortisol levels between the music (484.4 mmol/l) and the non-music group (618.8 mmol/l) (p<0.02) [9].

Using emotional association, music can elicits emotion for a particular chord progression. The goals of music therapy is examines the mechanisms of how music affects emotion. For expressing the specific emotions, music used as a tool in psychomusicology [10, 11].

The interaction between listener expectation and sound play a central role in creating musical relaxation. This program evaluating dynamic aspect of musical emotion in cognition of musical

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structure. Musical tension was related to the cognition of musical structures with musical emotions [3].

This system extracts the musical parameters. By using synthetic music systems pitch, velocity, expression, tempo, scale, mode, harmony, and tone can generate. It also generates a collection of wellcontrolled musical stimuli, and analysis of musical structure, timbre on emotional responses. Effect of musical structure on emotion focused on fundamental structural parameters i.e. mode (Random, C Minor, C Major) and register (Bass, Tenor and Soprano). These parameters are experimentally tested and evoked different emotional responses [12].

psychophysiological responses to emotional quantities are compared of Pygmy music. There are two culture shows the subjective and physiological arousal similarly of presented different low-level acoustical features of music. As a result mean arousal and valence ratings separated by music excerpt and participant group. High valence was defined as positive, low valence as negative [13].

CONCLUSION:-

This paper focuses on different approaches related to human emotional reactions. Different approaches related with emotional responses and music structure was discussed. Human emotions are changes according to emotions are express by music. These physiological changes are found after listening of music structure.

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