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EFFECT OF MUSIC ON HEALTH MIND, MOOD AND EMOTION: A SURVEY

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Abstract: Affective aspect of human emotion is a challenging aspect of researchers. This paper describes the emotional reaction by using same parameters like tempo, skin conductance, Electro Dermal Activity (EDA), Heart Rate(HR). The heart rate monitoring and mental stress also consider as a affective aspects of music in human emotion.

Keywords: Raga, Music Therapy, Music Mood, Emotion.

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INTRODUCTION

Music mood or emotion also referred as affective aspect of music. It is a important factor for organizing and accessing music information. Review the theory of music psychology and music information retrieval summarizes fundamental insights that can help interpreting music mood [1].

Recently new metadata emerges Music mood in music. MIR/MDL researcher community has been learning a lot of psychology literature from basic things to music mood category. There are many models designed theoretically for classical music. But this study extends by MIR researchers by means of constructing different classical mood models according to the participants present in research work and ability of music listening [1].

In the process of listening of Indian Classical music induces emotions like happy and sad affective responding. In musical recording there may be stimuli of vocal or instrumental excerpts that included a broad range of genres. Emotions are generates on dimension present in Raga, and have both effects on emotion like happy and sad. For example, fast tempo (drut bandish) is associated with happiness whereas slow tempo (Khyal) is associated with sadness[2].

Physiological Arousal Music conveys many different types of messages through the group of Notes and lyric. In SCR frequency, genre significantly interacted with tempo. This faster tempo increasing activation for North Indian classical music while in case of rock music deceases rapidly[3].

In history, frequently recorded psychophysiological measured by EDA [4]. Heart rate measures and monitors using a special Electrocardiogram machine. This Electrocardiogram (ECG) signals are studied and analyzed using computer. There is a compact microcontroller-based portable system used for control of heart rate on real time [6].

Mental stress can be measure by using HRV. For observing the heart's ability to react the normal regulatory impulses, important parameter provides a window. The rhythm is also affected. This HRV evaluates from the tachogram, also called RR interval time series [7].

METHOD:

During the interpreting of Music mood, MIR researchers summarize the fundamental insights using the study of theory of music psychology. It is also examine whether the classic theories are valid in current music listening environment. In psychological theories, comparison takes place with music mood categories and combination of linguistic resources and human expertise. A set of music mood categories belongs to social tags[1].

The musical beats are conceptualize as a auditory structural features and for greater sympathetic arousal, increase the tempo, measured using skin conductance. In this framework, classical music and fast- and slow-paced rock excerpts were compared to silence. During music processing the skin conductance, response (SCR) frequency was greater than silence. Elicit the greater activation by using fast-paced music, but as compared to fast paced music, the activation is low in slow paced music in Skin conductance level (SCL) data. For greater activation of classical music generally genre interact significantly with faster tempo in SCR frequency but in case of rock music decrease the activation[3].

In this study, 'Emotion in Motion' is construct for understanding the impact of emotional reaction of human using the recording of electrodermal activity (EDA) and heart rate (HR) signals and self-report questionnaires of variety of musical excerpts [8].

In sympathetic nervous system activity, Electrodermal activity (EDA) plays a vital role as a sensitive index. In absence of sensors, that can damage easily during daily activity of human and long period.

Electrodermal activity measurements during everyday activities. The FDA-approved EDA measurement system correlates strongly by using Ag/AgCl electrodes. The future opportunities provides for investigation of far-reaching implications for finding and accepting of psychological or neurological conditions that were previously not feasible [9].

In many aspects of emotion, arousal and attention the phenomenon like electrodermal activity (EDA) is link. In this study, occurrence of electrodermal activity (EDA) present in sleep. EDA is occur in the sleep cycle i.e. slow wave sleep. This study also moderating the mental stress of human tends to increase EDA in sleep with short methodological study. The purpose of this study is examines the relation between negative affect and stress to EDA in sleep. It also discover the utility of EDA in sleep as a index of sympathetic nervous system arousal and sleep quantity [4].

To describes an approach for detecting mental stress using unobtrusive wearable sensors. During the analysis of heart rate variability, the state of autonomic nervous system was estimated. To achieve this non-linear system identification technique is used. This non-linear system identification technique is also called as principal dynamic modes (PDM). It is used to forecast the activation level of the two autonomic branches. These branches are used for stress inducing and relaxation i.e. sympathetic and parasympathetic [10].

In this study, describe the development of a heart rate monitor system based on a microcontroller. It offers the advantage of portability over tape-based recording systems. This explains how a single-chip microcontroller can be used to analyse heart beat rate signals at the

time of listening music in real-time. The system reads, stores and analyses the heart beat rate signals repetitively in real-time. The important feature of this study is that the use of zero crossing algorithm to compute heart rate[11].

Dysmenorrhea is a prevalent problem. To assess the sympathovagal balance noninvasive tool called as heart rate variability is used. Music therapy is a easy approaches to use alleviate the severity of dysmenorrhea. In this research work, consider 30 young adolescent girls suffering from primary dysmenorrhea. HRV was tested for all participants. In music therapy, Raga Malkauns and Yaman was used on flute. The SPSS software was used for analyzing intragroup data using Paired t test. The mean dysmenorrhea score before music therapy was 63.4 ± 5.3 compared to post music therapy (MT) dysmenorrhea score i.e., 57.6 ± 8.49 . Among HRV parameters high frequency domain showed significant difference between pre MT (42.3 ± 13) and post[12].

CONCLUSION:

In this survey, different affective aspects of music related to human emotions and mood was discussed. Apart from that musical psychology is also studied. Firstly, discuss about the music mood on psychological theories. Secondly emotional reaction on human body can be analyze by using parameter tempo, skin conductance, electrodermal activity (EDA) and heart rate (HR) signals. The heart rate monitoring system based on a microcontroller was offers the advantage of portability over tape-based recording systems. Finally, wearable sensors are consider for detecting mental stress. Music therapy also consider for dysmenorrheal problem.

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