

Trends in the Studies Involving Music and Psychology: A Review

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Abstract

Some of the perspectives on the area of research indulging the two disciplines- Psychology and Music are - the studies around the effects of classical music on human brain, hormonal changes, behavior (mood and emotions), effects of lyrical music versus instrumental music, effect of meaningful versus pleasurable music, effects of learning music on the neuroplasticity etc. These studies are focused on the changes in physiology and behavior as variables where the music as the stimulant remains constant. In classical music or performance-based music, the music has to be limited to pre-determined parameters to keep the individual identities of the art forms.

In the Social Science context of music and Musicology, the perspectives of music are more expanded as they include folk music as a cultural expression of the thought processes of any community where some indigenous tribes add melody in their day-to-day conversations; i.e., Music becomes the variable depending on the mood and emotions of the person. This paper reviews the existing literature of 10 years on the area of music, human emotions and behavior; and attempts to find out the gaps, if any, in this area of research to explore further scopes of research.

Keywords: Psychology and Music, function of music, music cognition, Music and Anthropology, Music performance

Introduction

Music is scripted or unscripted expression of emotion and emotion may take place first before performing it. The relation between emotion and expression is an area on which the studies have been done extensively. The personal experiences of listeners of music, as ‘cognitivists assume, is the representation of emotions’ (Evans and Schubert, 2008). Emotion in its true nature is silent and verbal expressions cannot comprehend the total subtlety of it. But musical expressions of human can be nearly as organic as laugh or cry. The studies of musical expressions may lead to the way of the source of the emotions. In the existing researches on Music and Psychology, the behavioral studies are much expanded and diversified. “The mind identifies the stimulus and the resultant behavior is determined by how the mind reacts to the stimulus” (Phelps, 1975). This present study explores the existing studies of Psychology on the musical experiences in an attempt to find studies that are not “rigidly controlled experimentations” (Phelps, 1975).

Objectives

The review study attempts to provide an overview of the broader perspectives on the area of Music and Psychology, to understand the trajectory of the study line, identifies the gaps in the existing studies and suggests the empirical and theoretical pre-context for future research for better understanding of Human Psychology.

Methodology

The study is a systematic thematic review of 10 years research with the approach to include recommendations in the research gap. The research articles are chosen purposively as per the subject of the present research from the year 2012-2022.

The Medical database is not researched.

The Review

Donnelly (2015), while understanding the film music psychologically, suggests that the framework from other disciplines may reduce in comprehending the psychological understanding of film music as it is supposed to be based on audiovisual phenomenon in human perception.

To understand the source of the strong immediate effect of music on people than other arts, **(Mitchell, 1957)** says psychologically music attempts to revert the listener's experience to taste a "primitiveness" and as classical music produces a mood of serenity, romantic music give rise to personal association.

Which is similar to the study on the perspective in understanding music and religion **(Belzen, 2013)** that observes that some pieces of music are potentially effective in achieving a state of mind to "mystical truth" and not the texts or the rigorous practice of "attendance in church". The study concludes quoting "not conceptual speech, but music rather, is the element through which we are best spoken to by mystical truth" (James, 1902/1982, pp. 420-421).

To study in more detail on the certainty of the type of music and its effect, **(Bullock et al., 2018)** in the experiment on 32 adults found out that "happy music" evokes more happiness, higher skin conductance level, higher respiratory rate and more zygomatic facial muscle activity than "sad music", whereas sad music generates higher corrugator muscle activity than happy music.

Another factor to determine the nature of emotion in musical experience is memory. Emotions like "happiness" invoked by a past good memory and "sadness" is contagious. The occurrences of both the reactions depends on the level of processing **(Guevera and Dibben, 2022)**

However, individual personality traits are determinant factors to influence the autonomous responses to music **(Liljeström et al., 2013)**.

Therefore, to categorize the respondents as musicians and non-musicians, the Goldsmiths Musical Sophistication Index (Gold- MSI) **(Schaal et al., 2014)** was developed. The Gold-MSI is a self-evaluation tool for measurement of musical skills and expertise by the general

population. Arguing the idea that “musical expertise cannot only be developed through musical training on an instrument but also through active engagement with music in its many facets, a set of questionnaires (experimented on large English population) comprising of five determinant factors along with other general factors was developed to understand musical expertise level of the population.

The Gold-MSI of questionnaires is further examined on a sample of (n=688) German students (**Fiedler and Mullensiefen, 2015**) testing the reliability, validity and analyzing conformity which concluded that “as structural equation model outlines the relationships between the facets of musical sophistication and demographic as well as socio-economic background variables”.

The Gold-MSI is adapted and validated in Taiwanese (**Lin et al., 2019**), Portuguese (**Lima et al., 2018**) with inclusion of some sub demographic parameters.

Among the researches related to the effectiveness of music in work performances, (**Kiss and Linnell, 2012**) found that, even though playing music in background while work performances does not produce significant shorter Reaction Time compared to silence, but background music does improve performance, “specifically by increasing the ratio of task focus states compared to mind wandering states which is compatible with an increase in arousal to levels that are optional for performances.”

There are many studies on mind wandering explores the effects of the ecological settings of live music concerts on the respondents. The study found out that ambient music is non-rhythmic and unobstructive, and the atmosphere it evokes allows the listeners space to think (**Deil, J. et al., 2023**). Performances in genres such as Rock with a standing audience may invite less mind wandering due to large number of musical cues and the immediate surroundings on which the focus of the mind is of the individual.

Focusing on genres, **Koelsch et al., 2019** studies the thought patterns while listening to music of 62 individuals (m=24.9, sd=9.7) motivation, results show that mind wandering emerged during listening to either a type of music (heroic, sad). The type of music strongly influenced the thought contents during mind wandering. Secondly, heroic sounding music evoked more positive, exciting, constructive and motivating thoughts, while sad sounding music evoked more calm or demotivating thoughts.

Music also touches the ranges of softer emotions. Listening to meaningful music leads to stronger feelings of being moved, having a lump in one’s throat and tears, more contemplation, a stronger motivation to seek what matters in life and a stronger desire to express love to close others, compared to listening to pleasurable music (**Rebecca et al., 2022**).

However, music can also be studied to better understand inter and group communication and behavior if the music performances are studied as “experimental paradigm in social neurosciences to study human interaction and co-operation” (**Acquadro et al., 2016**).

Findings

Four trends of studies are found - emotional responses to music, influence of music in causing and navigating mind wondering, Pre-existing knowledge in Music the effect of the selected genre of music to determine the types of emotional responses. Not much studies are done in ecological setup. The musical genres used for the experiments are all popular genre. No studies have been found on indigenous music. All the researches are done using music as stimulus. No research is found where music is perceived as reaction.

Discussion

A Music piece is not only a linear composition. It is a piece of multi layered data. Different genres have their specific layer of abstract information. Furthermore, Musicians are trained in encoding and decoding the intricate patterns of melody and rhythm from the notations. Musicians also able to perform “complex physical and mental operations” (**Gaser and Schlaug, 2003**) like improvising melody, voice production as per the need of the melody, using fingers and hands to play any instrument. Therefore, the Gold -MSI is a suitable tool for any research that uses Music as stimulus. Every adaptation of Gold-MSI to study reliability and validity also confirms the inclusion of social and demographical data expands the compass to assess the perception of music of the population.

Recommendations

1. The Anthropological approach in psychology to study musical expressions can aid in understanding human mind as collective,
2. Uncontrolled experiments/observations from psychological approach on the conversational music of folk traditions may allow to understand the musical expressions from the source of emotions,
3. Measuring emotional parameters before and after performance in regards to indigenous instant musical expressions may be done,
4. Brain scanning while live performances by the performers (unrehearsed or instant and continuous compositions like Hindustani recitals, tribal conversational music etc.) in ecological setup may be experimented.
5. Interactive behaviour of the group of musicians/artists during live performances may be studied.
6. Researches may be done on the non-lyrical experimental music compositions (E.g., Theatre music) consisting of multiple layers of musical prompts.

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