Music and Mental Health: Understanding When Music Helps and When It Harms

Ruolin Zhao

Abstract

In recent years, music has been widely recognized as a mood regulator and beneficial to mental health. However, mounting evidence suggests that the effects of music are not universally positive, but rather vary depending on the individual, the context, and the music itself. This literature review examines current research on the relationship between music and mental health, considering both the beneficial and harmful psychological effects of music. The review explores the neural mechanisms behind the positive effects of music, as well as issues such as occupational stress for musicians, music performance anxiety (MPA), harmful lyrics, and music-related ruminative thinking. The findings indicate that music itself does not directly produce beneficial or harmful effects; rather, the effects depend on how and why listeners listen to music and the specific context. Future research should include more diverse populations and longitudinal study designs to better understand the complex interplay between music and mental health.

Introduction

People spend approximately 15% of their waking hours listening to music, making it one of the most pervasive influences on daily human experience (Rentfrow, 2012). Yet, despite its ubiquity, the psychological effects of music remain far from simple. While music is widely regarded as a source of emotional and mental comfort, a growing body of research presents a more complicated picture. Sometimes, music can, under certain circumstances, contribute to negative psychological outcomes (McFerran et al., 2015).

This tension between both positive and negative effects of music is an important question that existing literature has not fully resolved: when and how does music support mental health, and when does it not? This paper reviews and synthesizes findings from multiple studies to address this question, examining the positive effects of music on emotion and mental health, the contextual and individual factors that shape those effects, the relationship between music preference and psychological vulnerability, and the circumstances under which music may lead to harmful outcomes.

Method

I conducted a narrative review to synthesize research examining the relationship between music and mental health. Literature was identified through searches in Google Scholar for articles published between 1993 and 2024. Search terms included combinations of "music" AND "mental health," "music" AND "emotional support," "music preference mental health status," "music mode" AND "emotion," "music performance anxiety" AND "psychology," "musicians" AND "burnout" AND "mental health" and "music" AND "rumination." Additional studies were identified through manual searches of reference lists from relevant articles and reviews. Titles and abstracts were then screened for relevance. Full-text articles were then reviewed, and those meeting the inclusion criteria were included (n = 15). Articles were included if they stated related information about music, psychology and mental health, emotional support, music preference, music mode, and music performance anxiety. Articles were excluded if they were not in English.

The Positive Effects of Music on Emotion and Mental Health

One well-known function of music is to regulate emotions, usually promoting emotional well-being, which in turn supports mental health. Building on this, cultural background plays a significant role in shaping how music affects individuals. For example, traditional folk music is able to show more obvious and unique effects to groups with special familiarities and cultural experiences. A study found that Guozhuang Dance, as a kind of traditional dance in Tibetan and also one of the Intangible Cultural Heritages (ICHs) in China, shows the ability to bring joy and happiness to local students (Ning, 2023). On average, students feel more excited and positive after listening to Guozhuang Dance music (Ning, 2023). This suggests that folk music, which usually consists of special scales and structures, is able to bring special effects, especially for the people with the same culture.

Beyond cultural familiarity, the structural properties of music itself also shape its emotional impact differently across traditions. The major/minor scale modes, which were invented in Europe, affect people in different ways from the Chinese pentatonic scales (Jiang & Zheng, 2024). Jiang & Zheng (2024) point out that the major/minor modes express clearer emotions with higher intensity, which enables the audience to feel the emotions in the music more easily because of stronger music construction, while the pentatonic scales usually show emotions more gently. The pentatonic scales, frequent in Chinese music, show better abilities to bring pleasure and gain more preference, meaning that people are more likely to choose to listen to these kinds of music for more pleasure. However, the major/minor scales have higher arousal points, and more participants with music training experiences prefer them.

The experience of music is also physiological: different scale modalities have different effects on people's heart rate and skin temperature (Jiang & Zheng, 2024), both of which change when the body is more stressed and more relaxed. Because prolonged stress is known to weaken immune function, music's ability to lower these physiological stress signals may explain its indirect effects on the immune system. However, the effect of music is not homogenous across a group of people; a person's psychological and physiological reactions to music depend on personal factors such as their cultural experiences, previous musical training.

Beyond these cultural and structural factors, neuroscience offers a deeper explanation for why music affects human emotion. Some researchers propose that people's brains react differently to music's changeable structures. For example, a study found that music activates parts of the brain important for generating predictions. It is worth noting that there is no one specific area for prediction in the brain, so music actually activates several brain parts that involve movement, emotion, and reward, such as the amygdala and nucleus accumbens, and leads to the expression of various emotions. When music matches or resolves according to the expected outcome, people feel comfortable and satisfied, and when it doesn't, people feel more nervous or excited (Vuust et al., 2022). This is not an isolated incident, and other researchers have found similar results in neuroscience as well. Another study by Lin et al. (2011) found that even when music doesn't contain verbal components, it is still communicative, which means it could be helpful for individuals who have difficulty with verbal speech, or people with mood disorders (Lin et al., 2011). Researchers have found that music can contribute to supporting patients with mental illness, such as depression, anxiety, and autism, and suggest that therapists should try to add music to their treatments to get better outcomes (Lin et al., 2011). This matters because most psychology research relies on self-report surveys, where people describe their own feelings after the fact, a method that can be shaped by memory or personal bias. Neuroscience studies, by contrast, measure brain activity directly, so they do not depend on someone accurately describing their own emotional state. Because both types of evidence

point to the same conclusion, these studies help address a common limitation in the field of psychology of over-relying on self-report surveys, which can be too subjective, and provide more scientific and objective evidence to support music's ability to regulate emotions and support mental health.

These neurological findings are further supported by real-world clinical applications of music therapy. In Kennelly (2001), the researcher recorded the experience of "Jack," a boy who just finished bone marrow transplant treatment and used music with the guidance of a music therapist in his recovery. The researcher stated that "Jack" received great inspiration from music during the transplant phase, and "Jack" himself also reported that music lets him release his emotions. He received energy and positive effects and was more able to face coming treatment. During the early recovery phase, he was able to actively use music to control the treatment, and he created different music in his continuously changing conditions. "Jack"'s experience shows music's effect on recovery after surgery, supporting its ability to provide mental and spiritual support. "Jack"'s experience also illustrates that music plays an important role in the development of self-identity and belonging. Research by Rentfrow (2012), shows that when listening to music, people engage in a process to reflect their identities, which is a kind of self-affirmation. People also use music to show distinctiveness, individuality, and to reveal their personalities. This suggests that music is not only a tool for emotions but also a method for spiritual growth.

Furthermore, researchers find that music can help people cope during times of transformation and stressRebecchini (2021) points out that music has a great effect on pregnancy and Mother-Infant Interaction. Research proposes that singing is a great way of communication between mother and newborn and can help build a positive relationship. This research proves music's effect on emotions more specifically, showing music therapies' possibilities across a range of contexts.

Factors That Shape Music's Effects

Based on these findings, it is clear that music is often associated with better emotional conditions. However, research also shows that the context and mode of engagement will influence music's functions and impact. Gustavson et al.(2021) proposed that there active and passive ways of engaging with music.. Active engagement means that people actively participate in music, such as singing, playing instruments, and making new music. Passive engagement means that people listen or consume music.Furthermore, deeper exploration of these methods of engagement shows that actively participating in music has a more pronounced effect on human emotions and mental conditions than passive engagement (Rebecchini, 2021). This study affirmed the importance of separating the use of music into different modes of engagement and points out how specifically those modes have different effects.

Beyond how people engage with music, a person's motivations or intentions for using it shape the effect it has on them. . For example, Musgrave (2023) found that on average, musicians have a higher risk of having poor mental health. While this finding appears contrary to previous findings that music can provide psychological support, it is also possible that there are financial and economic influences responsible for the association. Although this theory needs to be studied and proved in future research (Musgrave, 2023).research found that when music is only used to express, it can bring positive benefits, while when it's related to perfectionism, such as performance, it will be associated with negative outcomes (Musgrave, 2023). Another study

by Rentfrow (2012) also proposes that people may use music for emotional regulation or intellectual stimulation. These studies reveal various reasons people use music and the different results based on these reasons, showing the relationship between music's effect and the purpose of using music.

In addition to individual motivations, social and cultural background also plays an important role in shaping musics' effects. Studies by Ning (2023) and Jiang & Zheng (2024) found that people tend to listen more to their own cultural music because of their specific backgrounds, and this leads to more familiarity to some kinds of the music. In Ning's (2023) research, Tibetan students show more understanding and reactions than Han students to their traditional music, Guozhuang Dance. Research by Jiang & Zheng (2024) also shows that cultural experiences will affect people's reactions to music, and five of the eight mechanisms in BRECVEM (A) model depend on the cultural experiences. The acronym stands for eight distinct psychological mechanisms: Brain stem reflexes, Rhythmic entrainment, Evaluative conditioning, Contagion, Visual imagery, Episodic memory, Musical expectancy, and Aesthetic judgment. These studies show real examples of how personal factors make differences on the effect of music, suggesting that music affects people differently.

Closely related to cultural background, formal music training also shapes how deeply and differently people experience music. A few researches found that people who have these experiences when they were very young feel music more intensely. The results of Jiang & Zheng (2024) shows that people with music training experiences generally have more familiarities on music than people without them, for they have spent more time with it and are able to find a piece of memory of specific music pieces, and the people who stay with music for a longer time show more preference on western music. People with music experience also have more pronounced and strong feelings after listening to the music. Another study by Vuust et al., (2022) also points out that the neural mechanisms for music expectations are affected by culture, personal listening history, musical training. These two studies prove the importance of personal experiences with music to people's music preference psychologically and physiologically.

Beyond background and training, individual differences in coping styles also determine whether music has a positive or negative effect. Humans show a variety of attitudes in thinking about and dealing with problems. Research by Garrido & McFerran (2017) suggests that "reflection" is a positive cognitive process, while "rumination" is a negative cognitive process and brings detrimental consequences. They also studied whether listening in a group changed this pattern, and found that a person's coping style, not the social setting, was what determined the outcome: the result shows that listening to music in groups does not bring additional effects beyond what someone's individual coping tendency would predict. Garrido & McFerran (2017) found that people who already have negative ways of coping with life, such as a tendency towards rumination, are more likely to have worse conditions after listening to the music. Researchers point out that music will promote people to use their own ways to deal with problems and life, no matter whether they are harmful or not. This paper shows the influences of personal characteristics to music's overall effect.

Music Preference as a Reflection of Vulnerability

Studies also show that music preference can reflect one's personal traits and values (Rentfrow, 2012). Music can also reflect people's vulnerabilities; for example, adolescents are often vulnerable to their identity development, and researchers have found that it is possible to

see these problems through music. Additionally, research by Baker & Bor (2008) proposed that one person's music preference is relatively stable, and thus music reflects a person's stable personality trait.

This relationship between music preference and vulnerability becomes particularly evident when looking at correlations with mental health and harmful behaviors. Researchers have found a correlation between a perons's consumption of heavy/rock music and social and mental issues and between other specific music genres, such as pop music and suicidal tendencies (Baker & Bor, 2008). It is important to note that this correlation does not mean causation; the relationship suggests that there are certain characteristics of music that someone with suicidal vulnerabilities are drawn to.. Researchers state that music won't increase the risk of suicide, but rather will prime implicit cognitions related to suicide, which means that it is more likely to awake the unconscious awareness and thinking of suicide. Another study by Martin et al., (1993) also found a relationship between music preference, especially metal and rock music, and the situation of having negative social behaviors. The researchers found that students that indicated suicidal thoughts and self-harm tendencies on a survey were more likely to be female, and more likely to prefer rock and metal music. Interestingly, students' depression scores did not differ in the same way; there was little difference in music preference for males with depression, but in females, the depression score of participants with preference of heavy and rock music was much higher. These studies confirm the existence of the relationship between music, especially some specific genres and unhealthy social and mental problems. However, there is no evidence proving that music can directly cause these issues.

These findings also reveal notable gender differences in how music preference relates to mental health risks. Research by Martin et al., (1993) found that female adolescents are more likely to prefer pop music than heavy metal/rock music than male adolescents. However, the survey seems to show that once girls prefer metal/rock music, they are at higher risk to have harmful social behaviors and poorer mental health. This suggests that music's influence and reflection is not absolutely fixed, but may be affected by genders and other factors, so more consideration and research is needed.

Beyond gender, music preference has also been linked to broader family and social circumstances. A study by Martin et al., (1993) found a relation between participants' family conditions and their music preferences. Based on the researchers' questionnaire, participants who prefer heavy metal music are more likely to be related to a poor family situation, especially the separation of parents. However, researchers didn't find enough evidence to show a relationship between music preference and the work status of the participants' parents. This research expands the related scope of music preference, showing that many of the individual's daily and personal situations have a possible relation with his/her music preference. Among those studies above, there is a strange finding that it seems to have various associations between preference of metal/rock music and mental issues. A study by McFerran et al., (2015) proposed that the preference of heavy metal music is related to challenging life circumstances. These researches have shown the potential relation between music preferences and personal life situations and psychological problems, showing the necessity of paying more attention and effort to the studies which focus on common issues and personal preferences.

In addition to these background factors, a listener's current mood and emotional state also shape how music affects them. Previous research found that when a person is listening to music with originally positive mood, he/she is more likely to get a better effect. On the other hand, the person will probably feel worse after listening to music if he/she is already in a poor

situation. Research by McFerran et al., (2015) gets the result among a group of students, reporting that most of them, especially those already in a happy or bored mood, feel positively when listening to the music. Researchers also found that participants with psychological distress are more likely to feel more depressed and isolated when listening to the music, even if the music itself is energetic and positive. This result suggests that music may have a behavior of condition-dependence, and it seems to be able to amplify emotions instead of only improving the conditions.

Taken together, these studies point to an important conclusion about the relationship between music and mental health. Lots of research has shown the complex characteristics of music and its complicated associations with humans, so it is important, worthy and helpful to have more attention and studies for these phenomena. However, no such study has attempted to link music preferences with mental illness diagnosis so far. Music is more likely to show the symptoms than cause them (Baker & Bor, 2008).

When Music Leads to Negative Outcomes

1. Professional musicians and occupational stress

While previous studies have shown that music can reflect psychological vulnerabilities, some psychologists also argue that music itself engages in deepening negative mental conditions, and there are examples for when music is directly linked to poorer mental health. Musicians, who are known for getting in touch with music all day long, seem to have a positive mental condition according to previous discussions, but the reality is countless musicians are suffering because of mental illnesses, such as anxiety, depression, etc. Musgrave (2023) points out that some main reasons why musicians have unhealthy mental conditions is the status of work, value and relationships. Also, the study emphasizes the different effects that are made by hobbies and careers. Researcher points out that musicians put music as their work instead of hobbies, which has made the enjoyment of music turn into utility and identity information. In addition, because of the needs of performance, lots of musicians have thoughts of perfectionism, and the researcher states that music for expression can provide positive wellbeing benefits, but performing music with a thought of perfectionism will cause negative results.

Beyond these internal pressures, the external structure of musicians' careers also contributes to their mental health challenges. Unlike traditional careers which are clear to recognize work and non-work, musicians' jobs are more flexible but also unstable. Aalberg et al., (2019) states that musicians may need more personal flexibility and tolerance to face their career challenges. In their research, they found that in Denmark, musicians in symphony orchestras have more challenging jobs than normal workers. They also stated that it's challenging to stay in a job which lacks structure and is unpredictable. The special characteristics of musicians' jobs require them to have a higher ability of dealing with career problems, and both overload and underload of these abilities will cause mental problems.

2. Music Performance Anxiety (MPA)

A specific psychological consequence of these realistic factors is Music Performance Anxiety (MPA). This term is used to describe a performer's negative mental condition when performing or before performing. Kenny & Osbome (2006) found that women are more likely to have MPA than men, and children and adults will have the same experiences of MPA. They also proposed that MPA is best predicted by gender and trait anxiety. In addition to these individual characteristics, Kenny & Osbome (2006) also stated that musicians may perceive performance

situations as threatening, and greater personal investment and higher expectations may further increase performance-related anxiety. Together, these findings demonstrate that the psychological demands associated with music performance can contribute to harmful mental health outcomes for musicians.

3. Harmful lyrical or thematic content

While these effects are specific to musicians, the general public is not immune to music's potential harms either. Some studies suggest that music lyrics may contain harmful content, and that prolonged exposure to such music can have adverse effects on psychological well-being. In one paper by Rentfrow, (2012), researchers point out that it is the violent content in the lyrics that causes aggressive behaviors, not the tensed sound. In this paper another experiment is listed, which found that the males who engage in misogynistic music seem to have higher aggressive emotions to females than the males who don't listen to this kind of music. Researchers emphasize that engaging in music with violent, misogyny, and gender stereotypes may cause seriously harmful consequences. This suggests that the values conveyed by music itself also warrant attention, for it can potentially affect listeners' thoughts, either beneficially or harmfully.

4. Rumination and co-rumination through music

In addition to harmful content, using music inappropriately as an emotional regulation tool can also backfire. Garrido & McFerran (2017) has stated the relation between music and emotional rumination. Researchers explained that reflection is a common and harmless process, while rumination is harmful and negative. They also proposed that listening to negative music may deepen the depressive emotion, and when a group of people listen to music together, focusing on their emotions, it is called co-rumination. Based on these, researchers state a few hypotheses and design experiments to examine. Results show that people with high tendencies to ruminate with music are more likely to feel more negatively when listening to music, and the hypotheses of "people with higher level of depression are more likely to join in negative listening and use music to ruminate" and "people with normal level of depression are more able to get positive effects from music when feeling sad" are supported. Researchers suggest that adaptive coping styles can predict the positive emotional effect from music and feel sad. Therefore, it is able to see that music does not regulate emotions to a more positive level automatically. Instead, it depends on the listeners' style of coping life and psychological purpose when music is used.

Taken together, these studies suggest that music's effects are never determined by music alone. Under certain circumstances, music does indeed appear to lead to adverse psychological effects. However, this is not a paradox with music's positive impacts. As said before, why and how to use music matters a lot. In the examples above, people combine music with originally harmful context, purpose of mode, which will always lead to negative results. Therefore, when analyzing the role of music, it is better to evaluate it by integrating a variety of factors instead of only focusing on music itself or only one side of other isolated factors.

Limitations

Several methodological constraints limit the conclusions that can be drawn from existing research. Most studies rely on self-report surveys, which, while practical sometimes, are subjective and cannot establish causal relationships between music and mental health outcomes. Sample sizes are frequently small and homogenous, usually college students or other specific groups, which restricts the generalizability of findings. Also, the majority of studies

come from Western or East Asian countries, leaving most of the rest of the world underrepresented. The influence of time and longitudinal change is also largely overlooked, as is the role of active music engagement among non-musicians. Future research would benefit from larger and more diverse samples, experimental designs that can test causation, and greater attention to how music's effects evolve across different life stages and cultural settings.

Conclusion

The research reviewed in this paper suggests that music is neither inherently beneficial nor harmful. That is, its psychological effects are shaped by a complex interplay of individual, contextual, and musical factors. When used for genuine emotional expression, self-reflection, or therapeutic purposes, music supports mental well-being, with neurological evidence confirming its capacity to regulate emotion and reinforce a sense of identity. However, the same thing can create negative emotions in those individuals who are prone to rumination, contribute to performance anxiety in professional musicians, and reflect underlying psychological problems. Specific factors involved include mode of engagement, cultural background, personal coping styles, and purpose for which music is used all determine whether its effects are good or bad. These findings together suggest that evaluating music's role in mental health requires moving beyond simple good or bad framing and toward a more nuanced understanding of the conditions under which music helps or harms people. Future research should prioritize diverse populations, longitudinal designs, and a broader range of musical engagement beyond just passive listening.

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