

Exploring the Emotional Perception of High School Students When Utilizing Music as a Coping Mechanism During the COVID-19 Pandemic

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ABSTRACT

Since December 2019, the SARS-CoV2 pandemic has caused intense stress for all citizens across the globe. Specifically, students have been experiencing high-stress levels due to social isolation and virtual learning environments that have caused significant changes to their daily lives. This study explores the emotional perception of music listening to analyze whether listening to self-selected music is an effective coping mechanism. An online questionnaire consisting of two closed-ended and six open-ended questions was created on Google Forms and sent out to high school students through email and social media platforms to understand the students' perceptions better. 16 participant responses were thoroughly analyzed and manually coded to create different themes and average values. Findings from the survey revealed that the majority of the students experienced some level of stress due to the pandemic, and the frequency of listening to music increased since social distancing regulations were implemented. Analysis of student responses revealed that their emotions when listening to music were happiness, sadness, motivation, relaxation, and stimulation. Additionally, pop and hip-hop were the most preferred genres of music by students, and listening to music was generally viewed as a positive form of coping. This study explores whether listening to music can be used as a stress therapy in young adults. However, future research needs to be conducted to make broader implications and investigate the reasoning behind the emotional impact of music.

Introduction

Music is a widespread and significant form of media associated with every culture worldwide. Ranging from a source of enjoyment to a mode of therapy, music is an integral part of many lives. Specifically, this study focuses on how music impacts human emotions. Musical preference has most likely played an integral part in shaping human social behavior and continues to have a powerful influence on the listener's personality and mood (Rabinowitch, 2020). Due to these numerous impacts of music, people of all ages, especially teenagers, can start adopting these behavioral changes. As technological advancements create more opportunities for music sharing and streaming, teenagers can listen to music during any time of the day with the possession of any music streaming device. Music is a universal concept, a shared experience that unifies groups of people and contributes to their collective actions and celebration (Donegani, 2004). Regardless of preference, music conveys feelings, lightens moods, and helps understand thoughts and emotions (Schafer, 201). In order to dive deeper into the emotional aspects of listening to music, hearing meaningful and pleasurable music can lead to a blend of emotions and a desire to motivate citizens to live better lives and connect with others (Leeuw, 2021). This change in emotion can alter people's perspectives on their lives and potentially act as a coping mechanism for stressful situations or evoke positive emotions that lighten their moods. Many studies confirm the relationship between music and emotion and further analyze how this change in emotion can change humans' lives.

However, with the current circumstances of the COVID-19 pandemic, there is a lack of concentration on the emotional implications that music can provide for students who have experienced negative emotions during the pandemic. In order to address this gap, the emotional function of music can prompt researchers to ask questions exploring this association, such as “how students shape music in their mind, the importance of music, and which genres they listen to and why?” (Gurgen, 2016). In an attempt to answer these questions, this study will specifically focus on the emotions evoked in high school students during the stressful situations caused by COVID-19.

In late December 2019, the SARS-CoV-2 emerged from Wuhan, China resulting in a rapid outbreak in many cities in China and globally, affecting numerous countries including Thailand, Korea, and United States (Wu et al., 2020). According to Wu, as of December 2021, the United States recently surpassed 50 million COVID-19 cases and more than 800,000 deaths since the start of the pandemic. With the increasing number of cases, it is reasonable that many citizens are undergoing levels of stress and discomfort from the inevitable situation. Teenagers in high school have been experiencing rising stress levels and lower engagement with learning since the start of the COVID-19 pandemic (Stanford Education, 2021). Moreover, the American Psychological Association reports that 81% of Gen Z teens of age 13 to 17 have experienced intense stress during the global pandemic (Rao and Rao, 2021). In Maya Rao and Dhananjai Rao’s study, they found that there has been a statistically significant degradation in the students’ mental health, with online learning having the most influence on the degradation (Rao and Rao, 2021). Due to the intense academic and social stress students faced in the pandemic, exploring the connection between music and positive emotions can help ease teenagers’ emotional conflicts.

As for high school students’ relation with music during these stressful times, the COVID-19 pandemic generally changed the frequency of music listened to by students. According to a survey conducted by a team of researchers, including Emily Carlson and Johann Wilson, 60.7% of participants reported that their use of music in daily life has changed due to the Coronavirus pandemic. The behavior mainly affected by the pandemic was listening to self-selected music, with 38.7% of respondents listening more frequently than before the pandemic (Carlson and Wilson, 2021). Due to this pronounced link between music listening and COVID-19, there may be a deduction that listening to music can evoke certain emotions in high school students and act as a possible coping mechanism for the virus. From the investigations of Myriam Thoma and Roberto La Marca, they have collected that listening to music before a “standardized stressor” mainly affected the autonomic nervous system and contributed to a lower degree of psychological stress response (Thoma and Marca, 2013). Furthermore, listening to music was the most effective strategy for coping with stress. Music listening remained an accessible and effective method for managing stress during times of physical distancing and stay-at-home restriction (Vidas et al., 2021).

By acknowledging the potential benefits of listening to music as a coping method during COVID-19, this study seeks to explore the changes in listening music behavior caused by the pandemic and the emotional impact that music can offer to improve moods and decrease distressed emotions.

Methodology

Method

When analyzing the emotional perception of high school students when listening to music during COVID-19, this study used a content analysis of online questionnaires that incorporated both quantitative and qualitative questions. The questionnaire acted as a way to gather and measure students’ perspectives on stress levels related to the pandemic, and their views on music as an effective coping mechanism. In addition, high school students were asked to elaborate on their personal experiences during the pandemic and how they regarded music as emotional assistance in their lives.

Table 1. Questions Asked in Online Questionnaire

Questions Asked in Online Questionnaire
(1) Do you think COVID-19 affected your frequency of listening to music? If so, did you listen to more or less hours of music per day?
(2) What types of music do you like to listen to the most?
(3) Why do you listen to music, specifically your favorite type of genre?
(4) What emotions are felt most frequently when you listen to music?
(5) If you perceive that the music expresses a certain emotion, do you also feel that emotion?
(6) On a scale of 0 to 5, how high did your levels of stress related to Covid-19 get?
(7) During the stressful times caused by the pandemic, did listening to music help you manage negative emotions? If so, what are some ways that music listening benefited you?
(8) On a scale from 0 to 5, how effective do you perceive listening to music as a stress management strategy during the global pandemic?"

The eight questions above aligned with the study’s goal to determine how listening to music during this universally difficult time helped them cope. By asking multiple students to dictate their perspectives on an ordinal scale of 0 to 5, a coherent understanding was obtained of how high school students across different regions felt and experienced music in their personal lives. As situations can vary from person to person, the perspectives of sixteen total students were recorded and analyzed to create themes. Additionally, this specific design is the optimal choice for my research process and will accomplish the study’s goals because it is one of the most direct ways to collect students’ perspectives. By including a combination of quantitative and qualitative questions, a holistic perspective of respondents was attained by averaging the rating scores and graphing it. Qualitative data is gathered with open-ended questions by forming detailed questions to gather specific responses. The connection between stress-related to COVID-19 and students’ perceptions of listening to music can therefore be established.

The content analysis process was arranged specifically: promoting the questionnaire, organizing the data, inductively coding the data, identifying themes, and averaging values. The online questionnaire was created through Google Forms, which was approved by an Institutional Review Board, allowing human participants. The online form consists of a consent and assent form that requires both the parent and respondent’s signatures to confirm that they have read and agreed to engage in the study. The questionnaire was promoted to a random small sample of high school students through emails and social media platforms, such as Tumblr and Instagram. After 16 responses were gathered, the data was organized for further analysis. All the responses from each student were recorded into a Google Document and organized by the different questions. Specific key details of the responses were bolded in order to interpret all the open-ended responses in an easier manner. The responses were also manually distinguished based on each responder, making it easier to determine what each person said without further complication. Next, after all responses were organized, inductive coding, a process of developing themes from raw data, was used to identify codes of the open-ended replies. This process of coding included creating codes covered within the samples, rereading the samples and applying the codes in

order to identify multiple concepts. As for the close-ended questions, the mean of all the values from each respondent were gathered in order to understand the general viewpoint of the students regarding the two questions. Finally, the quantitative and qualitative data was synthesized to create a general understanding of students' emotional perceptions of the effectiveness of music listening to overcome negative emotions.

Results

Do you think COVID-19 affected your frequency of listening to music? If so, did you listen to more or less hours of music per day?

The students' responses broke up into two main categories: increased frequency and decreased frequency. Specifically, 93.75% of students claimed that their frequency of music listening increased during the pandemic. The reasons for this increase are characterized into four sections: additional spare time, daily activities, background music, and exploration of new genres.

Table 2. COVID 19's effect on music listening
Increased Frequency (IF)

Codes	Full Label	Definition	Direct Quotes
IF-AST	Additional Spare Time	Due to the COVID-19 restrictions; students had more spare time at home to listen to music.	<p>“Yes, since I was at home for most of the day while I was virtual, I listened to music more often while working which was not something I did much before.”</p> <p>“With the extra time at home and less school there was plenty more time to listen to music.”</p>
IF-DA	Daily Activities	While students were carrying out daily activities, they listened to music more while finishing everyday tasks.	<p>“Also, the pandemic has made me exercise more at home, and I typically listen to music while working out.”</p> <p>“I feel like I listened to music more as I had more time for independent work and exercise, which are the main activities I listen to music while doing.”</p>
IF-BM	Background Music	During the COVID-19 lockdown, students listened to music in the	<p>“Now, I listen to music every day whether it's as background music or for relaxation purposes.”</p>

		background rather than focusing on the songs.	
IF-NG	Exploration of New Genres	Students were able to discover new genres of music during COVID-19, which led to them listening to music more frequently.	“I listen to much more music per day as I explored new genres of music such as hip-hop and started playing a lot of classical music. ”

Decreased Frequency (DF)

Codes	Full Label	Definition	Direct Quotes
DF-S	Presence of In-Campus School	Since the pandemic caused schools to shut down, students listened to less music as they were not physically at the campus.	“No; I believe school is the variable for the amount of music I listen to per day. However, during the lockdown, I listened to music a lot less because I didn’t go to school. ”

Students found themselves with extra time due to social distancing regulations, which can be shown in Table 1, where participants stated that there was “extra time at home and less school” leading to “plenty more time to listen to music.” Additionally, students listened to music more while carrying out their daily activities like “exercising at home” or engaging in “independent work,” since there was also more time to pursue these activities. Students would listen to music in the background rather than deeply focus on the songs, which allowed them to listen to music more frequently than they would have done if they were to purely engage in deep listening, which “requires the temporary suspension of judgment, and a willingness to receive new information” (Center for Spirituality and Healing). Moreover, as students had more time to discover new songs they were not initially familiar with, they enjoyed a new broad range of songs. In the case of decreased frequency, students would mostly listen to music when they were at school, which is why the frequency decreased with schools going virtual to ensure social distancing.

What types of music do you listen to the most?

When asked what kind of music participants listen to, participants selected from 7 main genres: pop, rap/hip hop, rock, classical, country, alternative, rhythm, and blues. From Figure 1 below, pop and rap/hip hop were the most popular types of music, being significantly higher than the other genres such as rock, country, and alternative. These results were important to understand each of the participants’ perceptions individually and identify which type of music contributed to the greatest evocation of emotions in high school students.

Genres of Music Listened by Participants

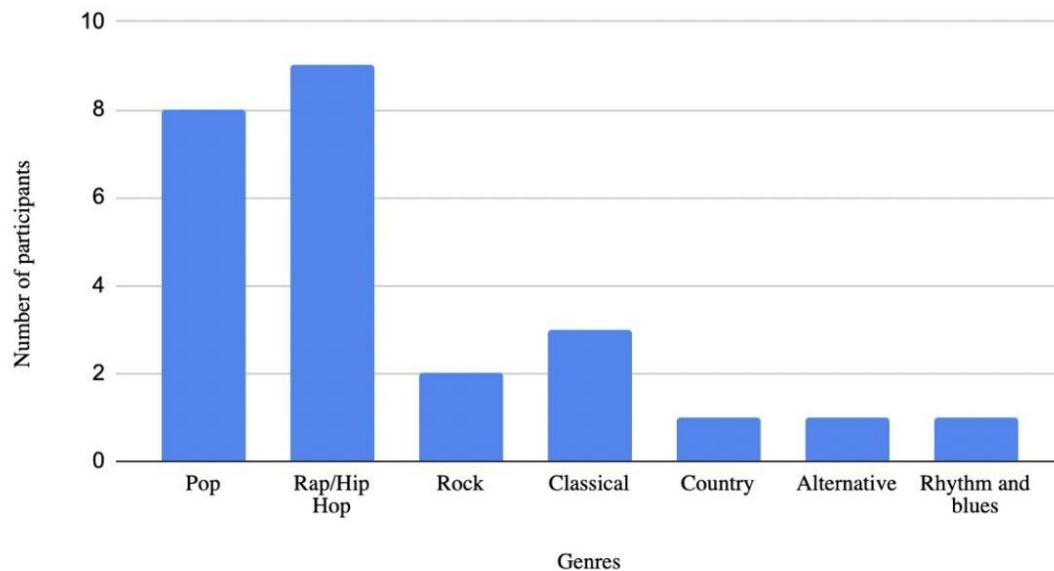


Figure 1. Genre of Music Listened by Participants

What emotions are felt most frequently when you listen to music?

When listening to music, frequent emotions that students felt were happiness, sadness, relaxation, excitement and motivation. These emotions were primarily felt by students in two main ways: the variance in song type and mood’s effect on song choice. Specifically, some students would perceive the specific emotions that were evoked in songs, while in other cases, students would listen to certain types of songs depending on their mood. In one scenario, Table 2 portrays that happy songs can “lift [one’s] spirit” and sad songs allow one to “wallow.” In another case, when one is feeling happy and upbeat, they will listen to happy songs to match their mood. Others may avoid listening to music that will make them feel sad, as they are currently feeling happy and do not want to “worsen their mood.” Furthermore, listening to music allowed students to relax during the stressful time caused by the pandemic. Specific songs allowed participants to feel “warmth” and “comfort” and even enter a state of tranquility (the state of being at peace). On the other hand, some felt that music also motivated and energized them, allowing them to perform better when pursuing actions such as exercise. However, motivation does not always need to come from upbeat songs, as students felt that the same genre of music can convey two different emotions.

Table 3. Perceived Emotions when listening to music
Frequent Emotions (FE)

Codes	Full Label	Definition	Direct Quotes
FE-H	Happiness	During the pandemic, when students listened to music, a recurring emotion they felt was happiness.	“I feel happy most of the time when I’m listening to music.” “ Happy songs definitely lift my spirit... My songs

			are mostly happy, so I most frequently feel happy. ”
FE-S	Sadness	During the pandemic, when students listened to music, a recurring emotion they felt was sadness.	“ sad songs either allow me go wallow or allow me to move on.” “ sadness depending on the indie pop/alternative music I’m hearing.”
FE-CR	Calm and Relaxed	During the pandemic, when students listened to music, a recurring emotion they felt was relaxation.	“ Calm for specific songs I deem as my comfort songs, sad for indie songs, warm for my comfort songs, ” “Most of the time I lay in bed for a couple of min chilling to some more melancholic music that eases me into the evening and doing my homework.” “When listening to music alone you feel like you are in a state of tranquility. ”
FE-EM	Excitement/ Motivation	During the pandemic, when students listened to music, a recurring emotion they felt was excitement and motivation.	“ Excitement/Pump-Up: When listening to music while exercising it makes you perform at the top of your game. ” “I feel a sense of serenity or motivation usually when listening to Classical music... energy when listening to rock”

Variance in Song Type

Codes	Full Label	Definition	Direct Quotes
V	Variance in Song Type	The emotions that students felt when listening to music depended on the	“ It depends on the music I’m listening to. Happy songs definitely lift my

		type of song. Different emotions were induced for different song types.	spirit , and sad songs either allow me go wallow or allow me to move on.”
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Mood’s Effect on Song Choice

Codes	Full Label	Definition	Direct Quotes
ME	Mood’s Effect on Song Choice	Students would listen to certain types of song depending on what mood they were in.	“Happy songs in the morning because I am a morning person , and other times a bit more introspective tunes when I am not feeling sad but not energetic either. ” “I try to avoid listening to music that will make me sad , so I listen to songs that are more upbeat to not worsen my mood. ”

Why do you listen to music, specifically your favorite type of genre?

Students believed that they had a strong connection with music due to nostalgia and memory associated with each song and also the meaning and melody of the lyrics. Participants stated phrases such as “been a big part of my life” and “grew up listening to them” which emphasizes the connection that music had on them since their childhood. Certain songs can evoke memories that are associated with particular events of their life, while others also appreciate the lyrical aspect of music, claiming that they simply love hearing “lyrics with a beat behind it.” Music also offered a soothing or uplifting stimulus, which is why students felt inclined to listen to their favorite songs. As these are favorable emotions that students seek to obtain, music also helps students in other real life situations such as offering motivation when “going on runs.” Others also claimed that they felt “immersed into another world” which relates to the aspect of becoming relaxed and ignoring all other distractions that may cause them to feel negative emotions. In relation to student musicians, listening to music helped students improve their musical abilities by observing other classical performances and analyzing different styles and techniques. Rather than listening to songs to cope with stress caused by the pandemic, musicians would analyze the songs for their career rather than their emotional state.

Table 4a. Reason for music listening
Natural Love for Music (NL)

Codes	Full Label	Definition	Direct Quotes
NL-N	Nostalgia/Memory	Listening to music evokes a sense of nostalgia and memory, which inspires students to listen to music	“I love music and it has been a big part of my life (band kid) so I listen to it because it gives life a lot

		that is related to their past.	more flair to it.” “I listen to the genres of music that I like just because I grew up listening to them.”
NL-L	Lyrics	Students pay close attention to the lyrics of a song, which is an attractive factor when listening to music.	“I love being able to hear lyrics with a beat behind it.” “ I like listening to songs that have stories behind them (I pay attention to the lyrics a lot)”

Table 4b. Reason for music listening
Change in Activeness (CA)

Codes	Full Label	Definition	Direct Quotes
CA-TR	Tranquility/ Relaxation	Listening to music helps students experience relaxation and tranquility, which is the feeling of being calm.	“Additionally, music simply helps me relax and destress ... music allows me to relax and just immerse myself into another world. ” “I listen to classical music to calm down ” “I generally listen to music to destress and feel more calm. ”
CA-EM	Excitement/ Motivation	Listening to personally preferred songs causes students to become motivated and excited.	“Generally I listen to music when exercising to give me a motivation/effort boost. This makes me better able to perform ” “I listen to rap music because it helps me when I go on runs. ”

			“Because it brings out the best in me. ”
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Table 4c. Reason for music listening
Improve musical abilities (MA)

Codes	Full Label	Definition	Direct Quotes
MA	Improve musical abilities	Student musicians would listen to music in order to improve their own musical playing and learn from the performance of others.	“I listen to classical music to calm down but also analyze what the musicians are doing so that I can improve my own playing. ”

If you perceive that the music expresses a certain emotion, do you also feel that emotion?

The induced emotions that participants felt were categorized into 5 main sections: happiness, sadness, stimulated/focused, frisson, and relaxation. Students claimed that usually, whenever they listened to upbeat songs that seemed happy, they also felt more positive and happy. In other words, whatever emotions the students thought were being expressed, they also felt that particular emotion. In an example regarding sadness, a participant stated that he felt sad songs were more effective in conveying emotion because it “pulled [him] down more” compared to being uplifted by happy songs. As for being stimulated or focused, students felt that high tempo songs typically caused their adrenaline to spike and also enter a more focused state. The sense of stimulation and excitement contrasts from the emotion of relaxation, where students felt that slow and soft songs cause a relaxing effect. This contrast is mainly due to perception, as students perceived the emotion that they expected when listening to a song. For example, if one “expects that music will cause a relaxing effect,” then the listener will feel relaxed when listening to soft, easygoing songs. Another emotion that is felt when listening to music is frisson, which is a pleasurable sensation that is felt when hearing satisfying sounds. It can be described as getting “chills” when listening to music or goosebumps when one hears a satisfying part of a song that they enjoy.

Table 5. Music’s Ability to Evoke Emotions
Induced emotions (IE)

Codes	Full Label	Definition	Direct Quotes
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IE-H	Happiness	When students listened to songs that they thought were happy, they also felt the emotion of happiness.	<p>“Yes, happier, upbeat music can bring my mood up.”</p> <p>“Normally, happy songs make me feel happy.”</p> <p>“ I do notice that upbeat songs tend to make me feel more positive.”</p>
IE-S	Sadness	When students listened to songs that they thought were sad, they also felt the emotion of sadness.	<p>“Sometimes sad songs make me feel the sadness of them,”</p> <p>“It works more for sad songs than happy songs as I can be pulled down rather quickly compared to being uplifted.”</p>
IE-SF	Stimulated/ Focused	Students felt that listening to music allowed them to stay focused and energized.	<p>“Yes, I feel like I'm in the zone when I listen to music.”</p> <p>“Yes. If I am listening to a more up-beat/high tempo song, I find that my adrenaline spikes.”</p>
IE-F	Frisson	When listening to music, students felt a pleasurable sensation that they received from hearing satisfying sounds.	<p>“Yes; I feel the emotion as it is being conveyed through the music. There's always times where you get chills while listening to music.”</p>

IE-R	Relaxation	When listening to specific, calm music, students felt relaxed and at peace.	“Yes, if you expect that music will cause a relaxing effect , and then play music that is soft and peaceful , you will then feel that emotion. ”
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On a scale of 0 to 5, how high did your levels of stress related to Covid-19 get?

This question sought to measure the level of stress that students felt during COVID-19, which was achieved through a scale from 0 to 5, 0 being unaffected by the pandemic and 5 being overwhelmed with stress. As shown on the graph below, the most frequent level of stress is 3 and 4, with few cases of 0 or 5. The mean of the data was 2.9, which is on the higher end of the 0 to 5 scale. As exhibited from Figure 2, we can see that more participants were in the 3 to 4 range than the 1-2 range, indicating that students were generally impacted by the pandemic in a negative way. Although there were not many cases with extreme levels of stress due to COVID-19, the majority of the students surveyed felt a strong level of stress during the spread of the virus.

Stress Levels Related to COVID-19 from 0-5

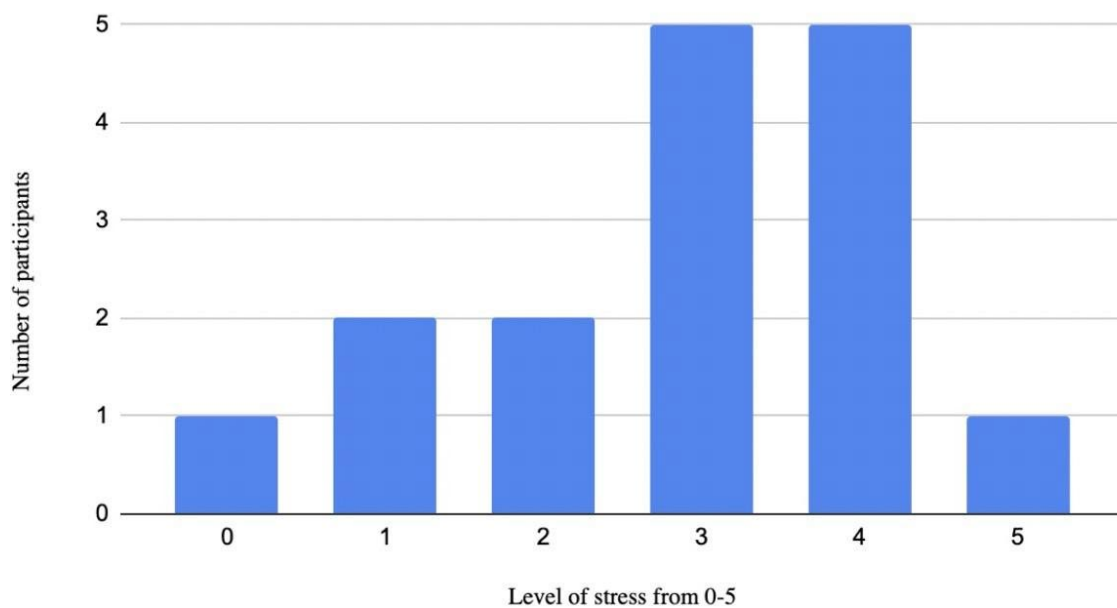


Figure 2. Stress Related to COVID-19

During the stressful times caused by the pandemic, did listening to music help you manage negative emotions? If so, what are some ways that music listening benefited you?

Although music may have not been the most useful form of coping for all the students, listening to music offered beneficial aspects to all of those surveyed. The main forms of coping were distraction, relaxation, motivation, concentration, and happiness. First, listening to music was a helpful distraction for students during

times of lockdown and restrictions, and allowed them to almost forget about their current stress regarding the pandemic. Some described it as an “escape from reality” with pleasurable melodies and rhythms instead of hearing other noises around their house. Second, music listening offered relaxation, which led to management of negative emotions. Even for individuals that were not overwhelmed by negative emotions, music helped students take a break from any troubles they were experiencing by helping them calm down and even “fall asleep at night.” Third, music led to a strong motive to overcome difficult situations and provided a method for students to endure unsettling moments of their life. Fourth, students felt concentrated when listening to music, which helped them focus on tasks instead of thinking about the negative emotions they are facing. Fifth, music offered happiness to students by relating them to the good experiences they had before COVID-19. In one example, listening to songs about summer about “having a good time” helped one obtain the joy that was felt before the circumstances caused by the pandemic.

Table 6. Music as a Possible Coping Mechanism
 Effective Coping Method (CM)

Codes	Full Label	Definition	Direct Quotes
CM-D	Distraction	Listening to music helped students feel distracted from the stressful times caused by the pandemic, which led to a management of negative emotions.	<p>“Yes, music was a helpful distraction for most of the pandemic. It also allowed me to kind of leave my world and just enjoy listening to music.”</p> <p>WJ: “Yes, my music felt like an escape from reality.”</p> <p>“It did help by managing stress, providing me with an escape from just hearing noises around my house,”</p>
CM-R	Relaxation	Listening to music helped students feel relaxed from the stressful times caused by the pandemic, which led to a management of negative emotions	<p>“I was not particularly overcome by negative emotions during the pandemic. However, music definitely assisted me in relaxing and taking a break whenever I felt overwhelmed.”</p> <p>“causing relaxation when wanting to wind down, and sometimes helped me fall asleep at night.”</p>

CM-M	Motivation	Listening to music helped students feel motivated from the stressful times caused by the pandemic, which led to a stronger motive to overcome difficult situations.	“I do not recall having significant negative emotions over the pandemic, but some ways music benefitted me was by providing a boost of motivation... ” “and motivating me to get through my work.”
CM-C	Concentration	Listening to music helped students feel concentrated during stressful times caused by the pandemic, which caused them to focus on tasks instead of being overwhelmed by negative emotions.	“I never really listened to music to handle stress. I primarily used music as a means of concentration. ”
CM-H	Happiness	Listening to music helped students relate to the good experiences before the stressful times caused by the pandemic. This helped students feel happier and less impacted by the negative emotions.	“Listening to songs about the summer and rock songs about having a good time at night were my medium for getting close to the same feeling as the freedom I had before the pandemic. ”

On a scale from 0 to 5, how effective do you perceive listening to music as a stress management strategy during the global pandemic?”

From Figure 3, we can see an upward trend of student perception on the effectiveness of listening to music. The mode from the data set is 5, which is the highest rating on the 0-5 scale, 0 being ineffective and 5 being highly effective. The mean of the data is also 4.15, which is on the higher end of the scale. Both the mean and mode help indicate that students generally have a positive perception on music listening as a coping method during COVID-19. This quantitative number matches our qualitative information because students claimed that

listening to music offered a variety of emotional benefits such as happiness, motivation and relaxation, even if music may not have been the most important or useful factor of their lives.

Student Perception on Effectiveness of Music Listening as Coping Method

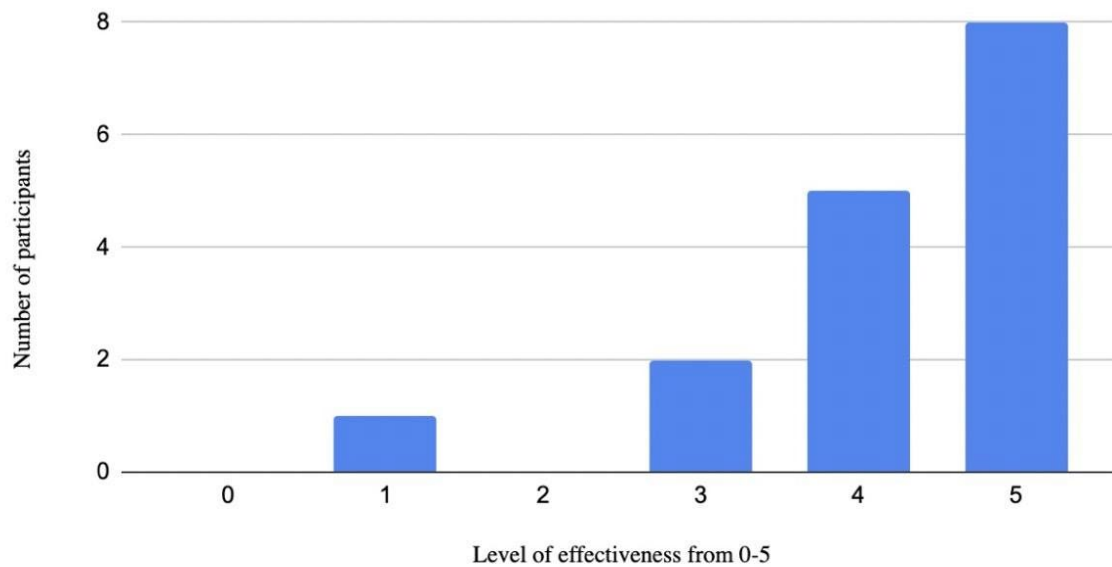


Figure 3. Student Perceptions on Music Listening to Decrease Stress

Discussion

When high school students were asked about their overall stress levels related to COVID-19, the average numeric value of their stress was measured at 2.9 out of the 0 to 5 scale. According to a survey from the American Psychological Association regarding stress levels of teens and adults, teens reported that a healthy level of stress is a value of 3.9 on a 10 point scale, which corresponds to a 1.8 on a 5 point scale (American Psychological Association). As students claimed that their stress levels were a 2.9 of the 5 point scale, it is evident that teenagers are experiencing unhealthy levels of stress due to the pandemic. From this observation, we can conclude that the majority of the students generally had some increased stress related to the pandemic, which conforms with the study by researchers Giannopoulou and Efstathiou, reporting that when surveying high school seniors regarding their mental health during the Coronavirus, their percentage of students who faced anxiety “increased from 23.8% to 49.5% and of those scoring within severe anxiety range (GAD-7 \geq 17) from 3.8% to 20.5%” (Giannopoulou and Efstathiou, 2021). When understanding the increased stress levels of high school students during the virus outbreak, the results of this study also noticed an increased frequency of music listening. 93.75% of students surveyed stated that their music listening frequency increased during COVID-19, where “the behavior that was mostly affected by the pandemic was listening to self-selected music” (Carlson and Wilson, 2021). This increased frequency was commonly related to the additional spare time that high school students had at home, which allowed them to simply engage in daily activities and explore new genres of music. According to the responses, daily activities included activities such as exercising, doing homework, and washing dishes. Students related these daily activities with music listening, as they would listen to music in the background while carrying out necessary tasks. In addition, the spare time also allowed students to explore new

genres of music, which took part in the increased frequency of music listening. The most popular genres of music that were stated by respondents were pop, rap and hip-hop, and classical music. When asked why students would listen to their music of choice, they stated that some songs were associated with memory and nostalgia, and that they had a natural love for lyrics within music. The natural love for lyrics can be described as the enjoyment from listening to lyrics along with a rhythmic beat and also paying attention to the meaning behind the words of a song. Specifically, students expressed that when they listened to music, it helped them feel certain emotions such as happiness, sadness, relaxation, motivation, and stimulation. For these students, music had the power to “convey feelings, lighten moods, and help better understand thoughts and emotions” (Schafer, 2013). Moreover, students stated that they felt different emotions depending on the type of music they were listening to. For example, more upbeat songs would lift the student’s spirit and cause them to feel positive emotions. In one example, listening to music about “summer or rock” and “having a good time” caused one student to experience the feeling of freedom that was present before the pandemic, which caused him to experience joyful emotions and a sense of pleasure. Soft, peaceful songs also helped students relax and take a break from overwhelming situations and even played a role in helping some fall asleep. Motivation was also a significant effect of listening to music while pursuing activities such as exercising or doing independent work. Students also claimed that music gave them a boost of energy, helped them perform better, and inspired them to push through any tedious tasks. Lastly, concentration was also a beneficial effect of listening to music as some students listened to music to focus and stay “in the zone,” which can be described as a state of concentration and enhanced performance. For student musicians participating in musical activities, listening to certain pieces helped them analyze other musicians’ techniques or melodic interpretations. Whether it was for relaxation purposes or a boost of motivation, students surveyed generally perceived music listening as an “accessible and effective method of coping during situations of physical distancing” (Vidas et al., 2021), which can be portrayed with a high mean value of 4.15 out of the 0 to 5 scale (0 being not effective and 5 being very effective).

Conclusion

Summary

By analyzing the responses from the online questionnaire, several major findings were discovered: overall high levels of stress related to COVID-19, increasing frequency of listening to music, and positive perception of music as a stress management strategy. Majority of the students stated that their stress levels were on the higher end of the 0 to 5 scale (3 and 4 being the most presented value). As students were feeling greater magnitudes of stress, there was also an increase in the frequency of listening to music during the pandemic. Since “music listening choices can be made more freely at home” (Rabinowitch, 2021), students revealed that the additional time they had at their house caused them to engage in more daily activities, such as exercising, doing homework, or cooking, and listen to more music at the same time. This direct relationship between daily activities and listening to music may have occurred due the concept that music is “utilized as a background strategy that does not require deep or aware involvement” (Schafer, 2013). When participants were listening to self-selected music, they expressed that they were able to perceive emotions of happiness, sadness, relaxation, excitement/motivation, and concentration/stimulation. With the additional time to include music into daily life in order to feel certain emotions that are evoked in songs, students strongly believed that music listening was an effective coping mechanism with a high mean value of 4.15 out of 5.

Limitations

A limitation to this research project is the small sample size of participants for the survey. With a sample size of 16 students, the conclusions gathered from the survey may not be able to be generalized to high school students across the United States. Students surveyed were also not evenly distributed across the country, as all of the participants were from Bergen County, New Jersey. Another limitation is the interpretation of survey responses, or the manual method of coding. As the responses were coded through an inductive manual approach, there is room for human error involving creating the themes and subthemes when arranging the data. There is also no way to ensure that responses are clear and in-depth, meaning that some responses may have been misinterpreted or unable to be included in the analysis process. A third limitation is that every participant had a different experience regarding COVID-19 and perception of the pandemic will vary from person to person. As there was no way to accurately measure a student's level of stress regarding the pandemic, their perception of listening to music as a coping mechanism could have changed depending on how strongly they felt about the virus.

Implications

The first implication of this research is to offer a method for high school students to deal with the stress caused by COVID-19. As the focus of this research is to explore whether music listening can be an effective stress management system for high school students, the results of this study can provide an option for high school students in order to decrease stress levels and improve moods. There could be a greater emphasis on music listening as a method of coping and also inform readers of capabilities of music healing and therapy.

Future Direction

In order to enhance this research, there could have been an inclusion of hypothesis questions such as "How much time did you spend listening to music before the pandemic?" and "How much time did you spend listening to music after the pandemic?" in order to distinctly understand the difference in music listening behavior that was caused by the pandemic. There could also be an analysis of genre distributions from before and after the pandemic in order to identify whether some genres of music are known to relieve stress more than others. For future possibilities, exploring the psychological association related to music listening can augment the concept of using music as a stress relieving strategy during social distancing restrictions. Although this study analyzed students' perceptions of music during the pandemic, there was no examination on why certain songs would convey specific emotions to humans during moments of intense stress. By delving deeper into the psychological response of the human brain when listening to self-selected songs, there can be a clearer connection between music and decrease of stress levels. When doing this analysis, researchers will be able to establish what specific part of music allows for the evocation of emotions and how to increase the effectiveness of music listening to aid people in improving emotional well-being and psychological health.

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