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### How Does Music Relieve Physical Pain

In the world of doctors and nurses where medicine thrives due to its ability to relieve pain, could anything be more powerful than these effective drugs? Perhaps, the very thing that doctors would never expect to give their hurting patients may be the very thing that will naturally relieve the chronic pain they feel; even more so than medicine. The new, all natural uprising drug in the medical world studied and proven to relieve pain is music. Recently, a countless amount of studies have been conducted to investigate the incredible power music has. The results were shocking: doctors are now finding that music is powerful enough to actually relieve various types of pain, from post-surgery to chronic pain; music was always proven to help reduce their pain and increase the victim's comfort (Neighmond 1). Thus, slowly music is being introduced into the medical world as a form of treatment, such as music therapy. Music relieves physical pain by creating a distraction from the pain in the body so that the victim's pain amount may be reduced (Nauert 1). Music heals through a scientific process, helps specifically overly anxious patients, and is even replacing common over the counter drugs.

Music alleviates pain through precise, scientific research and reasoning. Specifically, music creates a disturbance in the body so that the pain may not reach the brain, thus not being registered (Mann 1). In a recent study, Raffi Tachdjian, MD, MPH worked with children in

hospitals through music therapy and the use of musical instruments to see how the use of music in their hospital helped to relax and ease the children. Raffi Tachdijian presented these results,

‘Besides just a simple distraction, music may also have acupuncture-like effects at interrupting pain pathways’, he says. ‘Let’s say floor one is your finger, and your brain is the penthouse,’ he says. ‘Music helps block the elevator.’ This way the pain signal can’t travel to the brain and cause you to feel and say ‘ouch’ (Mann 2).

The distraction that music creates for the body is much deeper than a mere distraction; it is an actual physical, tangible blockade against the pain. Music is powerful enough to block the signals of pain the body is creating so that it may never reach the brain. Thus, the pain is never registered in the body which allows the patient to not feel the pain; just like the science of acupuncture. Music is acupuncture for the body, which can be more suitable for children as Tachdijian emphasized in his article. Music therapy is more suitable for children because of how dangerous medicine can be to their small bodies. For example, such children experience dangerous side effects from medicine that music could eliminate (Mann 1). Moreover, the interruption music creates is not only physical, but emotional as well. One study that was conducted to prove this account required the test subjects listen to music as maintained shocks were administered to them while they listened to music (Nauert 1). All of the test subjects testified that their pain level was significantly less than when they did not listen to music (Nauert 1). Thus, music distracted them by blocking their pain pathways. Amidst these pain pathways, emotional responses could be found and administered to relieve the pain (Nauert 1). Hence, their emotional reaction to the music distracted them from any pain that they may be feeling. This emphasizes the idea that music can trigger an emotional response to distract

victims from the pain. Instead of focusing solely on pain, rather the patient can focus on the emotion the music is triggering, rather than the pain; it's a form of interference. Further, music diverts the pain through vibration. A new form of therapy that has been introduced is vibration therapy (Novotney 46). Through this upcoming form of therapy, low, deep penetrating vibrations are administered to the patient, often on a bed or chair (Novotney 46). This new vibration therapy has been proven to alleviate intense pain for Parkinson's disease, fibromyalgia victims, and even encourages Alzheimer's victims to remember long forgotten memories (Novotney 46). All of this progressive healing was made possible through vibrations which trigger distractions in the brain to block the intense pain or even memory block (Novotney 46). The power of music, due to its deep, rhythmic pulsing, can help relieve chronic pain all because of the simple distraction it creates for the body. The rhythmic therapy is creating incredible pain relief in a way doctors could have never imagined; all because of the pulse music provides. Music relieves pain scientifically through emotions, vibration, and musical acupuncture.

The healing power music has to relieve pain is more effective for overly anxious patients. Further, anxious patients are more capable of focusing on the distraction that music creates for the body more so than those who do not struggle with anxiety (Nauert 1). Specifically, in a recent study patients were to listen to music as they were shocked by a powerful jolt. The results showed, "Those who were the most anxious reaped the most pain-relieving benefits when they became engaged in the music... engaging activities like music listening may be most effective for reducing pain in high-anxiety persons who can easily become absorbed in activities" (Mann 1). To such a degree, it is easier for anxious patients to truly lose themselves in the music, which will give them the desired results of not feeling the

pain or having their pain level become minimized. Anxious patients were able to focus on the music and block out the pain; which only music was shown to help them do. This made pain relief through music more effective for these select few. Because it is easier for anxious people to become easily consumed in specific tasks, it is also logical that they could then become consumed in the music, in hopes of relieving their pain. Additionally, another study revealed that those who did not listen to music greatly struggled with letting the music distract them from pain. Thus, “The discovery that anxiety appears to aid engagement with a distraction is considered a new finding” (Nauert 1). Concluding, anxiety is a passageway to healing through music, since anxiety is a distraction in itself. Anxiety distracts a person from pain and opens a door for them to commit to distractions that music helps them initially do. Concluding, overly anxious people can competently distract themselves from pain through the aid of music.

Even more so, music provides the comfort and relaxation exceedingly anxious patients require. Through a personal testimony, this point was emphasized,

Sunitha Suresh was a college student when her grandmother had major surgery and was put in intensive care with three other patients. This meant her family couldn't always be with her. They decided to put her favorite south Indian classical Carnatic music on an iPod, so she could listen around the clock. It was very calming, Suresh says. ‘She knew that someone who loved her had left that music for her and she was in a familiar place.’ Suresh could see the music relaxed her grandmother and made her feel less anxious, but she wondered if she also felt less pain. That would make sense, because anxiety can make people more vulnerable to pain (Neighmond 1).

Music was capable of providing a sense of comfort and community for an overly anxious patient. This comfort was suited to relieve her pain because anxiety contributes greatly to the amount of pain a victim may feel; music relieved her anxiety, thus her pain. Music is enabled to calm down a patient and even relax them in order to help subdue their pain levels as their body relaxes and engages in the distraction that music creates. Music relaxes the body to subdue pain levels.

The intense pain relief music administers to the victim can be strong enough to replace medicine. Likewise, music can even replace prescription medicine. A recent study shared that playing an instrument or listening to any type of music allows the body to create antibodies immunoglobulin, which are cells that fight infection (Novotney 46). Therefore, the cells fight the infection/pain and protect every system in the body. These antibodies can even boost a person's metabolism (Novotney 46). On top of all of this information, music creates a relaxing hormone as well (Novotney 46). The combined antibodies and relaxing hormones that music creates is proven to be stronger than some prescriptions (Novotney 46). Additionally, Novotney theorized, "The goal of all of this work is to develop 'dosable' and 'prescribable' music therapy and music as medicine protocols that serve specific neurologic functions and attend to deficits that may result from many of these neurologically based conditions (46). The power of music runs so deep within the body that is creating natural sources to kill infection and fight pain, which medicine is made to do. Thusly, music is becoming capable of eventually taking over medicine, as it is slowly starting to take the place of some prescription pain relieving drugs. Continuing, music can help children from consuming too much medicine that may hurt their small, fragile bodies. In Patti Neighmond's recent article, she acknowledged,

To measure pain, the researchers used the Faces Pain Scale depicting illustrations such as a smiling, frowning or crying face. The children pointed to which picture best illustrated their level of pain before and after the audio therapy. After a 30-minute session, the children who listened to music or a book reduced their pain burden by 1 point on a 10-point scale compared to the children who listened to silence. That might not sound like much, but Sunitha Suresh says it's the equivalent of taking an over-the-counter pain medication like Advil or Tylenol (1).

Children, due to their size, are incapable of consuming too much medicine. This makes taking any dosage of medicine frightful. The fact that music can relieve a child's pain level enough so that they may not have to take an Advil is revolutionary in the medical world. Music is distracting children and helping them handle their pain more efficiently, as well as naturally.

Lastly, music therapy is beginning to replace medicine because of its effectiveness in relieving pain. Jeanette Bicknell Ph.D informed in one of her numerous articles,

Studies have shown music to be an effective pain reliever, both on its own and as an adjuvant in connection with other types of therapy. Long-term studies of music therapy in pain management have shown it to be associated with improved quality of life and reduced consumption of pain relievers (1).

Music therapy is able work as a pain relief choice due to its effectiveness in reducing pain. Music therapy is proven to relieve pain, as discussed earlier because music distracts people from their pain. Music therapy is now an option for patients to heal because it efficiently reduces the amount of pain a person may feel. Because of music's healing, it will also reduce the dosage of medicine the victim may have to consume as well. Music is powerful enough

now to replace medicine in treatments, which will help patients such as children, with the aid of music therapy because of the antibodies music creates.

In conclusion, music is powerful enough to become a form of medicine in itself due to its ability to distract the body from pain. This prevalent distraction is becoming useful for overly anxious patients through scientific reasoning. Music's ability to relieve pain is important because it is revolutionizing medicine as the world knows it. Previously, music was just fun to listen to. But now, music is found to heal and relax even the most anxious of persons. Music is all natural, affordable, and healthy, which is the reason why it should be used and incorporated into modern day medical treatments. Music is more powerful than ever imagined and more studies are only proving this point further. Music can heal and efficiently relieve pain; even chronic illnesses are becoming bearable due to music. Therefore, music should be pursued by doctors of all kind and incorporated into vast medical treatment options for its effectiveness. Imagine, a world with no more medicine or severe pain, just beautiful music and healthy, calm bodies of all ages and personalities; music can make this a reality.

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