



The Effect of the Combination of Music and Rhythmic Movement Used in Teaching on the Psychology of Students

Yu Wang*

One Wang Psychological Workshop, Haerbin China

*Wangyu6744216@163.com

Abstract. The combination of music and rhythm as an emerging method to enhance people's psychological state has received increasing attention from society and professionals in recent years. By reviewing relevant literature and research results, this paper explores how the use of music and rhythm in teaching affects students' psychology, analyzes its possible mechanisms, and looks forward to the prospect of its application in the clinical and educational fields. After reviewing a large amount of literature, it was found that the combination of music and rhythm can activate areas of the brain related to motor control, emotional regulation and cognitive function, promote neurotransmission and plasticity, improve physical and mental health, enhance learning and teamwork. If applied in the teaching method will greatly improve the quality of teaching, improve the psychological state of students, will reduce the present social pressure brought about by the mental and psychological causes of depression and even the probability of light life. Let the students in the course of the subtle change in the psychological state, to prevent the problem before it occurs. It is believed that in the future, with the deeper understanding of this research and technological progress, the combination of music and rhythm will become a more widely used and educational tools.

Keywords: music therapy, rhythm, psychological impact, brain impact, integration

1 Introduction

Music has been widely used in medicine, psychology and education as an ancient and effective therapy. Rhythm, on the other hand, is the most primitive baby-like swaying of the body, and even some of the movements of the fetus in the mother's womb. The combination of music and rhythm not only makes the effect of music more prominent, but also integrates some primitive reflexes that have not yet been integrated, which leads to a very obvious improvement in both physiology and psychology. Combining music and rhythm can not only enhance the effect of music therapy, but also change the psychological and cerebral effects caused by neurological reflexes in the process of

integration, and also expand its scope of application to bring more physical health and well-being to people.

2 Advantages of Combining Music and Rhythm

The effect of music and rhythm on the mind and brain is an area that has attracted much attention in recent years, and interdisciplinary research has been increasingly emphasized in the field of research in China, and the combination of music and rhythm is one that involves a number of disciplines such as cognitive neuroscience, psychology and musicology. [1] Music and rhythm can not only stimulate various activities of the brain, but also have a long-term effect on brain structure and function. Music and rhythm can activate multiple regions of the brain, including the auditory cortex, motor cortex, and emotional centers. When people hear music, the brain generates a series of neural activities involving music processing, emotional experience and memory. And when music and rhythmic training can improve the brain's cognitive abilities, including attention, memory, learning and executive function. People who receive music training perform better in cognitive tasks, which is related to the fact that music training promotes neuronal connectivity and activity in the brain. In terms of emotion regulation, pleasurable music activates the brain's reward system, releasing neurotransmitters such as dopamine, which produces feelings of pleasure and fulfillment, while sad music elicits activity in the emotional regions of the brain, helping people to release their emotions. Many studies have found that when a person who doesn't know how to express his happiness or sadness he will be able to release his emotions quickly when he hears the right kind of music. [7] When rhythm is added to music, the density of gray and white matter increases, promoting neuronal growth and connectivity.

When a person has precise mastery and control over his body's muscular abilities, he is able to be more confident, more accomplished, and able to face and resolve setbacks in life with courage. The cerebellum is part of the brain and is located in the posterior fossa of the skull. It plays a vital role in motor coordination and balance, helping us to perform complex motor tasks and maintain postural stability. Rhythmic training stimulates the cerebellum through a sense of rhythm and beat, which promotes its activity and improves coordination and precision of movement. It is well documented that when one is in balance with the earth, one is in balance with one's body and with society. But when you want to control your own emotions, then another organ of the brain has to be mentioned, that is, the "basal ganglia" is closely related to motor control, emotional regulation and learning and memory functions. It plays a regulating and moderating role in motor control, and can help us to carry out smooth movement and action regulation. Rhythmic training can stimulate the basal ganglia through the rhythm and beat of music, which we usually call the "brake pads" in our brain, for example: when you are experiencing a very painful memory, this organ can quickly help you to get out of this emotion, which can be interpreted as stopping the bad emotion immediately and transferring it to another emotion. It can be understood as immediately stopping the bad emotion and shifting to another one. So when you have a problem with the basal ganglia, it is as if someone is "stuck" there and can't get out. Because music and rhythm

can effectively integrate these areas of the brain, and these areas are closely related to psychology, emotion, and cognition, the synergistic effect of combining the two will have a multiplier effect on the growth of the students in the classroom.

3 Common Psychological Problems of Students in Teaching

Teaching is a complex process that involves not only the transfer of knowledge, but should also include attention to students' physical and mental health.^[2] Students' psychological problems arise from time to time in teaching and may have a negative impact on learning and growth. Therefore, understanding and paying attention to students' psychological problems is crucial to improving teaching effectiveness and promoting students' healthy growth. It will be an important breakthrough in teaching if we teachers can incorporate some simple ways into our teaching so that students can adjust their psychological state in a subtle way and become physically and mentally healthy talents needed by the society. Then we first need to understand the problems that students often have in their daily studies, so that we can better tailor our teaching to the needs of the students. The biggest students first of all is academic pressure, test anxiety and other problems are students generally face psychological problems, may lead to a decline in learning results, mood swings and so on. There are also different families of origin that bring different pressures to each person, resulting in interpersonal relationships do not know how to deal with so that students have depression, low mood and other problems, low self-esteem, self-negative evaluation of the problem may affect the student's motivation to learn and self-confidence. When the above problems occur most students may have problems such as inattention and impulsive behavior, which affects the teaching order and learning effect. After analyzing a large amount of data, it is found that there are two main reasons for students to have these problems, which we mainly divide into internal and external factors. First of all, external causes we generally refer to the pressure from academics, family, socialization and other aspects may be one of the main reasons for students' psychological problems.^[4] The influence of family environment and family education style on students' mental health is crucial. A bad family environment may be an important and unavoidable external cause of students' psychological problems. Another important external cause is the school atmosphere, teaching methods and other factors may affect the mental health of students, too harsh teaching methods, learning competition is too intense, etc. may have a negative impact on students.^[8] When it comes to internal factors, each student's individual differences may lead to different psychological problems, such as personality traits, psychological qualities and so on.^[5] Then what is the internal cause that affects these behaviors? Actually it is part of our brain's nervous system, some of the body's hormone levels and some important primitive reflexes are still in an active state, which leads to the fact that each person's ability to withstand the same event is very different. For example, Xu Sanduo in the TV series "Soldier's Assault" years ago, he lacked his mother's love and care due to his mother's death, and grew up in his father's long-term scolding, so the primitive reflexes in the fear of paralysis reflexes have not been integrated. That's why he raises his hands

when he opens the door of the compartment at the beginning of the episode when he enters the army. When he entered the army he was timid and cowardly and couldn't do anything well including relationships, so he became more and more self-conscious, and then he started on the path of the King of Soldiers in an abdominal bar wrap. In retrospect, it was his integration of his previously unintegrated primitive reflexes after that high-speed rotation and the integration of his vestibular sense in his sensory system. His brain began to be able to innervate his limbs with precision and allowed the motor nervous system to develop rapidly.^[6] So the show shows us that if done right it can take someone who is unsocialized, unconfident, and under-empowered, and open them up to the highest moments of their life.

4 How the Combination of Music and Rhythmic Movement in the Teaching Application

4.1 Option 1: Static (turn on the Brain)

Breathing + Drinking Water + Spine Spreading + Brain Switch + Music

1, breathing: abdominal breathing, hands on the abdomen, using the abdominal muscles to contract upward and inward to drive the exhalation action, downward and outward expansion to drive the inhalation action. Inhale and count three, close the breath and count three, exhale and then count three (if it is too easy, you can count four or five). At the beginning of the exercise, both hands can be pushed and released in a smooth manner to assist the movement of the abdominal muscles. Feel how the abdomen rises during inhalation and contracts during exhalation.^[9] Pay attention to the expansion of the lungs up and down, side to side, and front to back during breathing, and make sure that all the lung sacs are exchanged. The rationale for this exercise is that brain activity (especially higher-level thinking) requires large amounts of oxygen.

2. Drinking water: Drink water consciously from clean, natural sources such as mineral water, lake water or running water, followed by properly filtered water such as reverse osmosis or activated carbon filtered water. Take sips of water at short intervals (15-30 minutes). In the process of drinking water you can close your eyes and imagine the feeling of water slowly flowing into your body, making every cell plump, and even flowing to the parts of the body that you need, such as memory before you can flow to the brain, to write you can flow to the fingers, to exercise you can flow to the legs or feet and so on similar imagery.^[10] The principle of why you need to drink water is that water makes up roughly 70% of your body weight, bone and fat only 30-40%, and nerve tissue about 90%. Water moistens the air sacs in the lungs, allowing oxygen to dissolve into the blood stream; it hydrates hemoglobin, increasing its oxygen-carrying capacity; and it is the main component of blood. Water directly determines respiratory efficiency. Water is an excellent conductor of electricity and a solvent for breaking down salts, while the brain and spinal cord are an electrical and chemical system that relies on the efficient transfer of electrical and chemical information to accomplish thinking, feeling, and directing movement. Water directly determines whether the nervous system can

operate normally. Water is the solvent of various nutrients, the main component of digestive fluid and the carrier of digestive enzymes, which directly determines whether the digestive system can operate normally. Cells inhale nutrients and release metabolic wastes by osmosis. Not enough water is not.

3. the exhibition of spine: sitting in front of the table, bending head and hands on the table, fingers slightly inward, the whole body relaxation. Inhalation, fantasy energy from the tailbone into the body, and then up along the spine, first lifting the forehead, then the neck, upper back and waist, during the period to keep the chest loose shoulders. Once the upper body is straight, exhale and bend back to the starting position, fantasizing that you have exhaled the tension as well. Do this for at least four cycles of deep and slow breathing. Today is the age of computers, brain work, these activities emphasize focus and convergence on the front (especially close to the front), depriving the muscles of the back of the opportunity to move. This action makes the spine and the body's range of motion back to normal, thinking to explore the range of possibilities will also become larger.

4. the brain switch: one hand flat on the navel, the other hand's thumb and two fingers rubbing pressure kidney meridian Yu Fu point, the location of the clavicle to the lower, both sides of the sternum, the first and second ribs between the two slight depression. Generally, after doing four deep and slow breathing cycles, turn your hand and do another four deep and slow breathing cycles. This exercise can increase blood flow and oxygen supply to the brain, help eliminate visual tension due to difficulties in binocular coordination, and restore brain integration and improve confusion between left and right.

5. Music: Because this movement to open the brain energy, so equipped with the following music Learning and memorizing: "Symphony No. 29 in A Major" "Violin Concerto No. 7 in D Major"^[3]

4.2 Program 2: Dynamic (Relaxation, Mood Improvement)

Breathing + Drinking Water + Upper Body Exercise + Emotional Link + Music

1. Breathing: as above.

2. Drinking: as above

3. the upper limbs movement: open balance, stand straight feet open as shoulder width, knees slightly bent, the left ear on the left shoulder, loose to be able to hold the paper prevail. Horizontal left arm straight to the front, eyes aiming at the fingers pointing to a distant point, that is, lying 8 in the middle of the intersection. Move the fingers along the line of lying 8, head, hands and the entire torso with the line of ¥ words and flow, imagine the eyes in the distance painting lying 8, do about half a minute. Finish by doing the right arm right ear. Note that the movement is driven by the abs and not the arms. The prone 8 is one of the most integrative movements. It activates all systems of the body and mind in a balanced way, and loosens the tension in the neck muscles caused by hearing, making the operation of the two ears more in tune.

4. Emotional Link: In the first part of the movement, the right leg is placed in front of the left leg in a cross position. The backs of the hands are opposite to each other and raised forward at shoulder level. Right forearm over the left forearm, fingers between

the palm into a fist, internal rotation to the chest. Then hold the posture and breathe slowly and deeply; inhale through the nose and exhale through the mouth. At least four breath cycles. Then put the left leg in front of the right leg, and the left forearm on the right forearm, do the same posture for at least another four breathing cycles. In the second part of the movement, stand with your legs as wide as shoulder width apart and hold the ball with your fingers. Then slowly do four natural breathing cycles. The reflexes communicate with the rational mind. Finally, to achieve calm emotions, the surrounding situation more aware of the effect.

5. Music: soothing and relaxing music that

Bach: Concerto for Four Harpsichords

Vivaldi: Arashi of the Sea

5 Conclusion

In short, the combination of music and rhythm is especially like a universal combination, can be summarized more than one effective and in line with the effectiveness of our teaching pedagogy, I also hope that more education, psychology, medicine and other disciplines can have more research in teaching pedagogy to change the mental state of the students in the invisible, subtle, which will be the next generation of children we do for the most meaningful things.

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