

Mental Problems Due to Global Change and the Positive Effect of Piano Education in Healing Process

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Introduction

It has been observed that the number of children diagnosed with ADHD because of deteriorated environmental factors, problems experienced along with global change and increasing distractors is rising today. Experts have proved that in addition to hereditary genetic predisposition, the effect of environmental biological factors and being exposed to hazardous chemicals lead neuro-biological disorders in brain.

Digitization process increasing day by day causes emotional disorder especially among children and adolescents.

This diagnose which I often encounter due to my profession with my students, to whom I teach piano in one to one lessons, complicates concentration and staying in the present moment. Their duration of concentration is quite limited and they have difficulty in focusing their attention on something.

At this point, the benefits of music and especially piano education come to the foreground. More than one part of the brain function in the children who have piano education and it is seen that synchronization in their sensory motor skills develops.

Research by Dr. Shaw and Dr. Rauscher

Physicist Gordon L. Shaw who is employed in Irvine University in the department of learning and memory neurobiology in California and psychologist Frances H. Rauscher from Wisconsin University conducted a study on 78 preschool children and found out that the brains of the children are like plastic and it is possible that brains can be formed and nourish through some training from an early age.

Dr Shaw and Dr. Rauscher chose 78 children whose socioeconomy and cultural structures are similar and divided them into 4 groups. The 1st group was taught piano, the 2nd group was taught singing, the 3rd group was taught computer skills and the 4th group was not taught anything at all. The children received 15 minutes of lessons twice a week. It was paid attention that each children had lessons in equal amounts of time. This study was carried out for 8 months.

After this training, an intelligence test was applied to the children and the results were not surprising for the researchers. The increase in the intelligence of the children in piano group was way higher than the other groups. An intelligence test was run at the beginning of the study. There has been a 34% of

development in the IQs of the children in the group having piano lessons at the end of 8 months, whereas there were no significant changes in the intelligence of children in other groups. All the children were tested 5 tests for these evaluations. These tests consisted of doing puzzle, creating the displayed pattern, recognizing geometrical shapes, identifying true colors of the objects and the mistakes in the pictures.

Although Dr Shaw and Dr Rauscher performed this experiment on children from preschool level, they stated that piano lessons until 12 years old is also going to be effective. They further explain it like this: “Just like mathematics or chess, music is also an engagement that necessitates high brain functions. These fields also lay the foundations of well-developed “spatial” intelligence.

Spatial intelligence is the name given to the skill to perceive visual world, to create images of the objects in mind and to comprehend the differences of them. It is definitely the type of intelligence needed in piano education.

Dr. Rauscher states that “Piano lessons train the nerves and enable the perceptual development in the cortex of the brain”.

It will be beneficial to explain cortex here; it is the part that carries out the ultimate functions in the brain and has a significant role in thinking, memory, perception, attention, awareness, language and consciousness.

A lot of other studies validate the statements of these two scientists. Biologists say that some of the excess cells in the brain of a newborn stays outside of the neural network of cells. Situations such as listening to conversations, playing with brightly colored toys and listening to music strengthen these nerves and provide a development in intelligence for babies. The foundation of research by Dr. Shaw and Dr. Rauscher is also based on this . Two scientists argue and prove that the piano strengthens neural connections in the brain.

As a teacher who has had many students with this diagnosis over the years and has personally experienced the positive development created by the piano lessons, which are taught especially with patience and special attention, in children with attention deficit and hyperactivity, I have observed that they have displayed different, positive developments over time compared to the first day I started the lessons.

Mindfulness

At this point, the importance of the concept of mindfulness which we have often heard recently becomes prominent.

Mindfulness “includes paying attention to the things happening at the present moment, recognizing the quality of this attention and politely accepting all the things we have recognized by being aware of our judgments”.

Prof. Dr. Zümra Atalay who is also the owner of the explanation which she describes as “Conscious Awareness” is the person who mentions this topic in Turkey for the first time and established Mindfulness Institute.

Although Mindfulness (Conscious Awareness) is based on Buddhist Philosophy, it is not connected to

any religious or philosophical movement. Prof. Dr. John Kabat Zinn (Massachusetts Institute of Technology) started first studies related to the subject in 1979. Zinn who is originally a molecular biologist started to try sorts of meditation in order to help people suffer from chronic pain and other health problems that changes life and he established his clinic. As the program he practiced got beneficial, it started to spread all over the world.

There are a lot of practice and research centers on Mindfulness in a lot of universities today and postgraduate, research and educational activities are carried out there. Mindfulness-based stress reduction programs are used in schools, kindergartens, adolescence, children with learning difficulties, autistic children and many more.

As a close follower of this topic, I think that our children, who are greatly affected by the increasing distractions and digitization in the environment, should be supported with the benefits of Mindfulness while studying music and the piano especially for the reasons I have mentioned earlier.

Conclusion

Brain that perceives the notes, fingers that touch the keys, feet that step on the soft pedals are in complete coordination during piano training. This coordination requires a complete concentration.

At this point, problems that children with attention deficit disorder appear. Since their concentration duration is relatively short and they are greatly affected by their impulsivity, they have some difficulties during the lessons.

I believe that mindfulness can be employed at this stage. It is necessary to help children to focus on their feelings in their bodies during lessons and throughout all piano training, to make them realize each touch and sound by being aware of all the senses while playing the piano. In fact, we play the piano with our brain not with our fingers. Our fingers are just a means. While training children who are tend to be distracted, to make them listen to themselves and to maintain the mood when they are happy with what they are doing and with their achievements at that moment should be the target.

The major achievement while teaching children with this type of problems is to rehabilitate them through music. To make them regain self-confidence, to make them achieve to stay in the moment with the help of music, to make them focus on every task in their daily life is precious.

It is a fact that not only our children but also the majority of the society have mental problems today, as we are all surrounded by so many negative external factors.

At this point, music and especially piano education will benefit individuals of all ages.

References

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