The Effect of Localized Vibrations on the Physiological Signs of Children

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The purpose of the project is to test how localized vibrations affect the physiological signals of children. If vibrations are proven successful in calming children down, then vibration therapy can be used to integrate autistic children into mainstream schools. Autism Spectrum Disorder (ASD) is the fastest-growing developmental disorder today, with an annual growth rate of 10-17%. This disorder is characterized by difficulties in communication and social skills, which the vast majority of autistic children never fully master. Integrating autistic children into mainstream schools is the best way to help them learn to control and overcome these difficulties. However, the disruptive nature of ASD has made mainstreaming a serious challenge. Therefore, this experiment tests whether or not localized vibrations could be a viable, discrete solution to these problems. The project tests the viability of vibrations as a calming mechanism for children (both neurotypical and autistic). The child's heart rate was elevated through a stressful activity, and the time to return to normal heart rates was compared in children who were given and not given vibrations. Each subject was asked to read silently for two minutes to establish a baseline heart rate, and then had ten minutes to solve their respective puzzle, which was rendered impossible. Afterward, vibrations were applied to half the subjects for 20 seconds. Trials revealed that vibrations are extremely effective in bringing the physiological signals of children down to normal faster, which unequivocally substantiates the hypothesis that localized vibration therapy is an effective solution in calming children down, and thus can also be a viable way of bringing autistic children into mainstream schools.

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