

Brain Regulation through Neurofeedback: An Intervention in the Social-Emotional Lives of Preschool Children with Challenging Behaviors

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Within the past decade an emergent trend has been causing concern among parents, educators and the child care community over the mental health of preschool children. Studies by Walter S. Gilliam (2006, 2005) of Yale's Child Study Center report on an increase in young children's expulsion from pre-kindergarten settings because of disruptive behaviors. Gilliam (2005) suggests that one reason for this phenomenon of expelling children at such a young age is the increase in the number of preschool children, especially "at risk" children attending preschools. With the growing national movement toward universal pre-kindergarten in public settings, a great deal of research has focused on the role of social and emotional issues in preschool children.

Challenging behaviors in preschool children that are normal for the developing child decrease with maturation. However, there is an increasing tendency to label these behaviors as pathological. What happens then to the child in a center that is unable to handle these behaviors? According to Gilliam's national study (2005), it has become more and more prevalent for centers to dismiss the child from the center. The question arises then—is the increase in reported challenging behaviors in preschool children a consequence of the increased demands and needs of the settings?

Children are sent to pre-school to be ready for primary school, yet they are failed out of preschool for disruptive behaviors because they are not "ready" for school. If we send our children to preschool to develop appropriate social and emotional skills and then we fail them for not having these skills, this negates the purpose of preschool education. We all fail in this situation in building the healthy social and emotional development of the young child. As a teacher educator, I believe that the essential purpose of the child development program is to support and enhance the mental health and developing self-esteem of the young child in order to prepare them for the school-age experience.

How can it be that a child fails out of a program prior to age five? As a former director of child care programs and a university professor of early childhood students, I am struck by the incongruity that this presents to the child and family affected by such decisions. These decisions meet the immediate needs of the particular school setting by not having to deal with the stress of the disruptive behaviors, but creates greater issues for families and schools to deal with. Many young children move from center to center or family child care home in an effort to attend preschool. What are the receiving schools to do in order to accept, integrate and assist the "failing preschool child" to succeed?

From my personal experience as a mother of an atypically developing child, I saw the degree of difficulty that my own son had with school, diagnosed with attention deficit hyperactivity disorder (ADHD) at age 5. From preschool to middle school and on to becoming a high school drop-out by the age of 16, he battled depression and addiction. It was a sad and painful journey for my son and our family. It is only now at age 21, having tried multiple medications, family and group therapy, as well as cognitive and behavioral therapies, that he has finally found an alternative that appears to be working more efficiently than any other therapy over the past 16 years.

Serendipitously, a psychotherapist I was working with offered me information that has changed both my son and me in very different ways. When I described my son's condition to him, he suggested that my son would be a good candidate for neurofeedback. Some years earlier, I recalled supervising a graduate student's master's thesis on neurofeedback in her study of children exhibiting social and emotional problems in day care. So I was somewhat familiar with the concept of neurofeedback but did not know that it was also useful with multiple addictive behaviors and many other conditions. (Gruzelier & Egner, 2005; Hammond, 2005; Jarusiewicz, 2002; Monastra, 2005; Raymond, et al., 2005).

Neurofeedback is used for many conditions and disabilities in which the brain is not well-functioning. It is a learning strategy that enables people to alter their brain waves and to make use of the brain's own regulatory mechanisms. Neurofeedback is a safe, non-invasive and painless method for teaching the brain to better regulate itself. Through inhibition or reward of selected brainwave frequencies, the brain receives feedback using visual and sound information via the neurofeedback indicating healthy functioning. Neurofeedback can effectively optimize the brain's own activation level affecting focus, mood and attention. Since it aids the optimal functioning of the brain, it can be used for a variety of emotional and behavioral imbalances and brain trauma. (See <http://www.eegspectrum.com> or <http://www.insr.org>).

Some of the conditions treated by neurofeedback are: ADHD, autism, sleep problems, teeth grinding, chronic pain, headache and stomach pain, severe conduct problems and specific learning and mood disorders, anxiety, depression, reactive attachment disorder, substance abuse, weight control and seizures.

I researched and investigated the field of neurofeedback, also known as EEG biofeedback, and even became trained as a neurofeedback specialist in order to understand its uses so that my son might benefit from this new form of educational training. The research was compelling. It demonstrated how retraining brainwaves that are in states of under arousal or over-arousal in selected areas of the brain bring the brain into optimal regulation. (Levasque, et al., 2006; Lubar, et al., 1995). I began to see that this non-invasive, painless method might also be adapted to working with preschool children well before they are diagnosed with behavioral or social and emotional conditions resulting in school failures.

Not only has my son benefited from this treatment (stemming his drug addiction, anxiety, and depression) but I have moved from an academic teacher to direct service as a provider of neurofeedback services. Currently I, my neurofeedback associate, and a clinical psychologist see children, families and adults with anxiety, depression, ADHD, autism and pain management issues. Since the risks of adverse side effects are not involved as they are with medications, I propose that we explore the multiple uses of neurofeedback as an intervention for children with challenging behaviors in early education settings.

My interest is to focus on providing neurofeedback services to preschool children in order to ameliorate these challenging behaviors before they become labeled as pathological behaviors causing them to fail in preschool. I suggest that providing educational training to young children before medications are prescribed, and offering child care staff education in the ways such treatment works to retrain the young child's brain for more effective coping, would be of direct benefit to the child and family and to the educational setting.

Continued research is needed to further validate the efficacy of this educational training for preschool children. Neurofeedback is a promising intervention for diminishing serious social and emotional difficulties seen in preschool age children. It offers the opportunity to address the mental health needs and discourage the overuse of medications for many of these children.

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Web Sites

<http://www.eegspectrum.org>

<http://www.isnr.org>

<http://www.wellness-unlimited.com>