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Autism in the Context of Ecopsychology

Introduction

Despite over four decades of research, autistic spectrum disorder remains largely misunderstood due to the uncertainty of its cause and the inconsistencies of its symptoms. Rates of those diagnosed with autism have increased; research shows that 1 in 166 individuals is diagnosed with the disorder, making autism more prevalent than diabetes, pediatric cancer, and AIDS combined (Autism Speaks). Both biological (medicinal) and nonbiological (behavioral) methods are currently being used to treat symptoms of ASD in children and adults. Newer techniques other than those involving medication have come under much scrutiny because of the subjectivity of the researchers' results and disagreements on long-term effects of medication. Ecopsychology, while a relatively new avenue of environmental science, has contributed significantly to the rehabilitation of patients suffering from an array of mood disorders similar to those of autism, specifically aggression. Ecopsychology is founded on the assumption that the human being and the environment are linked both internally and externally. That is, our physical and psychological well-being is tied directly into our relationship with nature. There is a possibility that ecopsychology can positively impact patients with autism.

I. Autism

Susan Levy, a researcher with the University of Pennsylvania Medical School, states that in no area of developmental pediatric practice is there more controversy regarding the symptoms

and choice of treatment than that related to children with autistic spectrum disorder. The term “spectrum disorder” denotes the possibility that an individual could experience any number of symptoms to varying degrees of severity. Moreover, two people who have the same diagnosis can behave in ways that are startlingly different (Autism Society of America). Current scientific research has identified neither a genetic nor a neurobiologic basis for all the symptoms of autism, and consequently practitioners and researchers have created multiple hypotheses that may not be compatible with current scientific understanding of neuroscience (Levy 132). The nature of autism is complicated; it is most markedly expressed in significant regression in language and communication skills. A study done by David Sobel of Brown University’s Department of Cognitive and Linguistic Studies compares a normally developing five-year-old to one with ASD, and concludes that regularly developing five-year-olds can recognize that others have internal emotions, desires, beliefs, and intentions. This, in turn, combined with the child’s social experiences and exposure to norms by way of family and peer groups, helps guide the way in which the child’s cognitive functions allow him or her to react to different social scenarios. In contrast, an autistic five-year-old performs poorly on tasks requiring him or her to judge what another person is thinking, judge emotion in others, and measure the production of mental and emotional terms in the context of any given social situation (Sobel 159).

Amidst seemingly endless uncertainty, however, scientists do see a possible link between a “genetic component to the disorder which could be the cause of numerous factors” (Levy 132). Several chromosomes, a group of scientists hypothesize, may contain genes associated with ASD, but others say that genetic predisposition alone is not sufficient to account for the variety of symptoms that accompany the disorder. Because a single cause of autism is still unknown,

researchers are currently focused on treating the symptoms of ASD. This strategy may allow researchers to ascertain the root of the disorder.

Because of the lack of patterns in patient symptoms, autism remains an obscure realm of psychiatry to this day. Susan Levy describes the autistic child, generally speaking, as one that seems socially withdrawn, maladjusted, or unusually aggressive. Another, more obvious autistic symptom in some patients is the inability to initiate or maintain conversations, or talking *at* another person instead of speaking *to* them. There is no single guaranteed symptom exhibited by an autistic person; the diagnosis is dependent on several characteristics and unique ways in which the individual communicates. These habits include insistence on sameness, the repetition of selected words or phrases, aloofness, obsessive attachment to objects, resistance to normal teaching methods, fearlessness, unresponsiveness to verbal cues, and aggression aimed at the self, objects, or other people (Autism Society of America). Despite advances in neuroscientific methods and technology, the array of tendencies and symptoms as well as the varying degrees to which they are experienced by the individual make autism one of the most complicated psychiatric disorders to effectively treat.

Treatment for Autism

Conventional therapies for ASD focus on educational or developmental interventions designed to address the development of skills associated with communication and language (Levy 131). Case studies of individuals with ASD and similar spectrum disorders have been long disputed by researchers and scientists because of the subjectivity of the results. Despite this, the uses of biological treatments for autism have yielded somewhat stable results. The term “biological treatment” refers to treatments that seek to alter physiology or change the underlying

processes that result in the symptoms of autism. This treatment includes prescription medications like anti-psychotics, which were originally used to treat schizophrenia, but are now used for autistic patients to relieve hyperactivity and aggression. Up-to-date research has also proposed nutritional supplements, special diets, and treatment of bacterial overgrowth in the intestines for this subcategory of therapy (Lopez 4). Secretin is an intravenous form of biological treatment that, after administration, stimulates receptors in the area of the brain known as the amygdala. According to Carole Wade and Carol Tavris' introductory psychology book, stimulation of the amygdala can contribute to the patient's ability to process sensory information and evaluate emotional importance.

On the other hand, nonbiological treatments have also made apparent the possibility of changing behaviors and responses. An autistic child's difficulty with language oftentimes is the result of a challenged sense of auditory perception – this can jeopardize social relationships and lead the child to feel isolated. What we hear is directly related to the rest of our senses, and it is through the ability to organize sounds that we build the foundations of both verbal and nonverbal communication (Wade and Tavris 202). One such treatment that seeks to influence a child's response to sound is known as Auditory Integration Training. This treatment uses repeated exposure of selected sounds through earphones to “retrain” the ear and central listening mechanism. However, because this method has not been consistently successful, and because several complications occasionally arise, the American Academy of Pediatrics does not currently endorse this method of therapy (Levy 139).

Both of the aforementioned avenues of treatment are not without their drawbacks. At a certain point, a child may have begun to adapt to his or her environment, and the initiation of therapy of any kind can cause the child physical and emotional stress (Autism Society of

America). An avenue of treatment that is often viewed as perhaps less intrusive is behavioral therapy. Many behavioral therapy methods used to treat autism are based on Applied Behavior Analysis (ABA), the theory that rewarded behavior is more likely to be repeated than that which is ignored (Autism Society of America). Strategies included in this method are often time-consuming and infringe on family time. While this method attempts to develop habits in the autistic child to assist in acclimation to various social groups, it does not prepare them for new situations that the child has not experienced while working with a therapist.

Biological medications are most often prescribed for symptoms ranging from hyperactivity to anxiety. Many scientists see biological methods as a gateway to behavioral and educational methods, as they calm symptoms that obstruct the child's ability to learn and respond to behavior therapy adequately (Erickson 6). Secretin and antipsychotics, while having been shown to increase focus and calm obsessive behaviors in autistic children, have side effects that include sedation (Autism Society of America). By the same token, it is possible that the use of one or more drugs concurrently can harm the delicate nervous systems of autistic patients, and thus, they may require a change in dosage or frequency of administration.

Summary of Autistic Spectrum Disorder

It is truly difficult to determine a single type of therapy that would be completely effective for the treatment of autistic spectrum disorder. When one takes into account the possible causes and accompanying symptoms of ASD, it seems as though the best solution is to target the symptoms as opposed to the relatively unknown cause of the disorder. Ideally, a reverse process would be desirable, in which scientists would have the ability to understand the core causes of symptoms resulting from autism (Gomes 8). This, in turn, would allow them to

develop appropriate treatments. In addition, studies that evaluate the positive and negative effects of therapy can help guide practice and further the information available to families and clinicians so they can better treat children with autism (Levy 139).

II. A Brief Overview of Ecopsychology

Ecopsychology can be seen as the study of the ‘ecology of the mind.’ This relatively new avenue of environmental science is concerned primarily with what facilitates the balance of mind in individuals and what guides humans in achieving ‘right action,’ which in turn harmonizes the needs of the whole (Totton 17). According to many scientists involved in this field, human behavior is observed in the context of things with which we come into contact. It is hypothesized that bringing people back into nature and allowing them to witness its beauty can help them to experience internal calm. A case study done by Jason SurrIDGE of Nottinghamshire Mental Health facility in England reveals that, while this treatment did not originate as a form of therapy, some research indicates that there is a possibility that the visual experience of interacting with nature can alter neuron structure in the neocortex area of the brain. This school of thinking began as a guide that can be used to probe many aspects of human existence, but the majority of the most recent research on the subject focuses on this concept as a tool for rehabilitation.

A newly developed ecopsychological technique called adventure therapy was featured in an article written by researcher Jason SurrIDGE in Mental Health Practice in which patients at a mental health hospital participated in group activities outdoors. The concept of adventure therapy was derived from the Outward Bound movement, which was established by Kurt Hahn in the late 1930s (SurrIDGE 2). Adventure therapy targets individuals that suffer from mental health problems allied with social dysfunction. Hahn believed that pro-social values can be instilled in

children through outdoor activities, and these activities allow participants to develop experiential learning skills such as teamwork and communication while encouraging awareness of nature and its calming effects (SurrIDGE 3). The project began with a group of patients from Nottinghamshire Mental Health Center in England accompanied by a small team of researchers and doctors. The participants were middle aged white men who had responded negatively to institutionalization and conventional methods of rehabilitation for an array of mental disorders. The team began the adventure therapy sessions by participating in a six-hour long walk through the woods.

Researchers found that participants responded positively to this and seemed to be taking in their new surroundings very well. As the sessions progressed, participants were introduced to new aspects of the forest and had goals set for them, such as walking a certain distance by way of numerous trails (SurrIDGE 3). After a couple months, researchers noted that participants seemed excited to be involved in a group endeavor such as this. Adventure therapy fosters a sense of togetherness and community for someone who is socially isolated due to social dysfunction, aggression, or problems with visual or auditory perception as a result of a mental disorder. The group made each participant feel as if he or she was a part of something unique (SurrIDGE 3). The researchers noted that one participant became so immersed in nature that he was seen standing on top of a boulder with his arms outstretched in the wind, laughing out loud. Participants have also reported that the fresh air made them feel free and cleared their minds (SurrIDGE 4). This method, however, is not without its share of obstacles. At times, the researchers reported that participants showed resistance to certain activities and exhibited mood swings and occasional inabilities to communicate with one another to achieve their goal. These problems were remedied through consistency on the part of the researchers in completing the same set of tasks repeatedly to condition the participants to complete their specific task. This is a prime example of the

benefits ecopsychology holds for patients suffering from mental disabilities, as it explores treatment for ASD from a completely different perspective than most conventional therapies.

The Benefits of Ecopsychology

When one takes into account the central assumptions upon which ecopsychology is based in conjunction with the techniques that have been employed in case studies dealing with mental health patients, it can be inferred that ecopsychology accomplishes the goal of calming symptoms of aggression as well as communication problems associated with mental disorders such as autistic spectrum disorder. First and foremost, ecopsychology creates awareness of the environment; through this, the patient can focus his or her attention on the outdoors, where he or she will encounter less stress, both in his or her physical surroundings and in his or her social interactions, therefore experiencing a decrease in aggressive tendencies. The fact that these therapy sessions occur on a regular basis conditions individuals to elicit a desired response while in that specific environment (Wade and Tavis 225-29). Ecopsychology allows the patient to experience nature in a way that he or she would otherwise not be able to and is an alternative to constant institutionalization or biological therapy. The neural structure of the brain has the capacity to change due to the type of stimuli that we perceive, both through vision and sound. It is possible, if ecopsychology accomplishes the aforementioned tasks, that the patient's brain structure may adapt in such a way as to allow them better perception of the world in which they live, and thus, enabling them to adapt as members of society.

Making the Connection

Although current methods are still under much dispute, techniques like ecopsychology are not the first that come to mind when one thinks of treatment that seeks to alleviate symptoms associated with ASD. However, alternative therapies like ecopsychology hold potential benefits that biological therapies alone simply cannot offer. Unlike biological therapy, ecological methods completely eliminate chemical side effects, and although little research has been done on ecopsychology as treatment for mental disorders, currently published studies provide positive results and have shown to instill abilities in patients that positively influence the way they function in social situations. It is entirely possible that, if researchers were to combine medicinal and ecopsychological therapy for the treatment of autism in children, the results would be surprisingly positive.

Children that suffer from ASD and experience aggressive tendencies will benefit from the different ways in which the outdoors stimulates brain function. A normal child's world is filled with several types of stressors that arrive from several sources. These stressors often include emotional tension and frustration within the family, chaotic social situations occurring at school or in one's social group, visual distractions such as television, and auditory stressors such as music or other background noise. To an autistic child, who has an inability to focus, these factors are much more intense and confusing. This leads to anxiety and hyperactivity. It can be hypothesized that, when a child is removed from his or her normal environment and immersed in nature—a setting appreciated for its silence and visual beauty—he or she will be able to take a break from life's daily stressors. It would be wise on the part of practitioners and scientists to immerse a child in nature and combine this immersion with medication shown to calm symptoms of hyperactivity and anxiousness. This has the potential to clear the mind and allow the child to

respond more adequately to things such as adventure therapy, which seek to teach life and social skills.

Behavioral and environmental therapies such as Adventure Therapy make children feel as if they fit in, and, if done with a group composed solely of autistic children, can help children realize they are not alone and that it is possible for to improve their communication skills. Children, especially those that are of pre-school or elementary age, are quite observant. Socially withdrawn children might realize that they don't "fit in" when it comes to social interaction as a result of their ongoing struggle to communicate. It is possible that a group made up of only autistic children can be successful because children can learn to understand others similar to them through both verbal and sometimes nonverbal communication, which can possibly lead to a better understanding of social nuances which are encountered in day-to-day life.

Children with ASD remain socially isolated due to their inability to perceive auditory and visual cues correctly; exposure to nature stimulates neurons in the brain that can form new connections in the neocortex as well as other parts that control perception and the ability to process language, and possibly improve a child's sense of perception of his or her world. Scientists have hoped for some time that this would be accomplished by the use of medication, but as recent research indicates, no significant advances have been made in 'working backwards' to repair the genetic and neurological cause of autism. Therefore, it is possible that the administration of biological therapy can serve as a gateway to fully experiencing the calming effects that nature can have on a human being. Doing this may affect brain areas such as the reticular activating system, which is responsible for processing incoming information, the thalamus, which relays sensory information to brain centers, and the hypothalamus, which regulates emotion (Wade and Tavis 124). Other parts of the brain located in the cerebrum

(which excludes the neocortex) that are significantly impacted by ecological therapy are the occipital lobes which process visual information and the frontal lobes which process language.

Conclusion

It would be wise for the Autism Society of America, as well as other major research centers, to invest in research efforts that further look into the effects of ecopsychology on autistic patients. It is quite possible that, because it is difficult to treat autism through just one type of therapy, that the combination of psychosocial, biological, and ecological therapies holds much promise for the autistic individual. By relying on ecopsychology as a method of treatment for autistic spectrum disorder, psychotherapists as well as parents can accomplish a decrease in symptoms such as aggression, hyperactivity, and obsessiveness, improved auditory and visual perception, and smoother social adjustment in autistic children.

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