DOWNLOAD PDF NATURALISTIC OBSERVATION OF THE PLAY BEHAVIOUR OF CHILDREN WITH AUTISM SPECTRUM DISORDERS

Chapter 1 : Observing Behavior Using A-B-C Data

promote more sophisticated levels of play in children with autism spectrum disorders. Results of the current study should definitely be shared with all adults who play a vital role in the child with autism' s development.

The general consensus in current research is that autism has a genetic predisposition. However, it is possible that this is offset by environmental or biological factors Aylott, Thus, there are several different ways in which an individual child might develop an autism spectrum disorder Aylott, The autism spectrum disorders are a cluster of different conditions that are sometimes associated with medical conditions American Psychiatric Association, Although there are many different ways in which an individual might develop autism, the autism spectrum is an umbrella term for many different symptoms and conditions. How do children with autism play? These children will not remain engaged with any toy or play object for long periods of time, unless it is one to which they have developed an attachment Siegel, Rarely will they develop an attachment to a particular toy; rather they prefer to play with other items they have found. Usually these items are just junk found around the house e. It is common for children with autism to choose play objects based on the sensory stimulation they provide i. For example, a blanket might be chosen for its softness and its silky edges. The sensorimotor pleasure the blanket brings will be the reason why the child with autism will form an "attachment" to it. For instance, the cap from a water bottle may be chosen because it can be spun like a top. In fact, when children with autism get upset, they may find this item more comforting than the presence of their primary caregivers Siegel, Children with autism will often remain in the sensorimotor play stage for longer than other children. This is probably due to a combination of slower development and an orientation that is more sensory in nature than that of typically-developing children Black et al. Dolls and stuffed animals are seldom chosen as playthings. It has been suggested by Siegel that this is because these toys are supposed to represent real animals and people and the child with autism may not be capable of taking the "perspective" of his or her toys. For instance, whereas typically-developing children will pretend their dolls are hungry or thirsty, it seems not to occur to children with autism to "feed" their dolls Siegel, Being able to take the perspectives of others is what is known in developmental research as "theory of mind" for reviews on theory of mind and autism see Baron-Cohen, In a recent review conducted by Charman , it was determined that some researchers believed that theory of mind is impaired in children with autism due to deficits in joint attention and pretend play. For the child with autism, interaction with a play object does not possess the qualities of usual play. It lacks the imagination evident in the play of typically-developing children. For instance, children with autism will line up their dolls but they will not interact with them or use them to tell a story Siegel, The play of a child with autism has a very repetitive and stereotyped quality, a phenomenon known as perseveration Hughes, Perseveration of a sensory nature appears to increase with retardation in the child with autism. Once engaged in a perseverative behaviour, it is extremely difficult to interrupt a child with autism Siegel, The repetitive quality of play in children with autism differs from the repetitive play of young people with typical development in that the repetitions are greater in number and they go on longer. They have almost a "broken-record" quality to them. For instance, whereas a typically- developing child might press a button in a book three or four times to hear the corresponding sound made by the animal pictured there, a child with autism might press the same button continuously for thirty minutes without paying any attention to anything else Siegel, Although these findings are interesting 22 and add to a growing body of literature on autism, they appear to be based on case studies, rather than naturalistic observations particularly those of Siegel, The present study is an attempt to address the dearth of play research in children with autism in naturalistic settings. Cognitive levels of play. What cognitive levels of play do children with autism typically exhibit? Answers to this question are often contradictory in nature. Contradiction is particularly evident when reviewing the literature on the cognitive levels of play engaged in by children with autism. For example, Lewis and Boucher found that children with autism did not differ from their peers with learning disabilities

and younger, typically-developing children in terms of their ability to produce ideas for functional and symbolic play. This research was supported by Rogers , who believed that all children with developmental delays, including those with autism, demonstrate a fairly typical progression in sensorimotor play. The difficulties that do exist appear to be in the areas of motor and gestural imitation. Rogers differed from the other researchers in that she believed children with autism experience more difficulty than their peers in symbolic play. She stated that children with autism spend more of their time in immature forms of play than peers of an equivalent verbal mental age Rogers, Conversely, Hughes stated that children with autism are less likely to engage in symbolic or exploratory play unless they are cued by an adult. In addition, Riguet and her colleagues detected a deficit for imitation in the participants with autism, as compared with children with Down Syndrome and typical development. There are two rivaling hypotheses as to the lack of symbolic play in children with autism. The symbolic deficit hypothesis describes people with autism as incapable of taking the perspectives of others see above section on theory of mind. Conversely, the conative hypothesis suggests a lack of motivation to represent and symbolize as the cause of the dearth of symbolic play. Proponents of this theory believe that the ability to symbolize exists in these children because they are able to do so when directly prompted to Hughes, It should also be noted that the environment may or may not affect the play behaviour of children with autism Black et al. For instance, within a confined space with no objects present, children with autism are more likely to engage in solitary repetitive behaviour than in a more open space with play objects available to them. Aggression and other negative behaviours also occur more frequently. When playing in a confined space with someone modeling appropriate behaviour and an organized game. They also engaged in more gross motor play when someone was present than when they were alone Black et al. Social levels of play. Children with autism engage in a minimal amount of social interactions. It seems as though they prefer to be alone. In fact, they may become upset when told to interact with others Winzer, Siegel suggested that the ability to relate well to others is what separates a diagnosis of PDD from a diagnosis of autism. Children with autism appear uninterested in or unable to relate to others. When children with autism and children with PDD do interact with others, it is often for self-serving purposes. It is as though it does not occur to them that others have needs and feelings as well Siegel, It is believed that this is because children with autism have trouble viewing situations from the perspectives of others i. If they do not understand what others want, they cannot engage in socially appropriate behaviour with them Baron- Cohen et al. Lord investigated the social behaviour of children with autism in play situations. Although the study was conducted in order to evaluate a specific intervention procedure, some information was gathered on how children with autism interact with. When participants with autism were placed in a different classroom with two unfamiliar typically-developing same-sex peers one older and one younger , it was found that the children with autism interacted with their typically-developing peers at very low rates. In addition, they played at a great distance i. It was very rare for the participant with autism to initiate interactions with the young person with typical development. Overall, children with autism either avoided peers altogether, responded inappropriately to their social invitations, played in an uninterested fashion or initiated play improperly Lord, Problems with current research. According to Hughes , there are a few reasons why a dearth of research exists regarding the play behaviours of children with developmental delays in general. First, much of the research is based on the behaviours of solitary participants in laboratory settings. This does not make it possible to observe social behaviours or play in a naturalistic setting. Second, it is difficult to make generalizations about one diagnostic group e. Third, many children suffer from more than one developmental delay, making it difficult to determine which disability is contributing to which play deficit. Finally, like typically-developing children, individual differences exist among children with special needs. This means that, although a group of children might all have the same disorder, they will still function at different levels. In the present study, I attempted to address some of these issues by determining what types of play behaviour children with autism engage in during free play at school. This was done to insure that an opportunity for social interaction existed. It was hoped that confounds, such as adjusting to a new environment and new playmates, would be avoided by taking this

approach. This might mean that the typically-developing participants were more willing to help children with autism than those typically- developing children who did not participate. A naturalistic classroom setting might provide the participants with a more realistic situation, where they will encounter children both willing and unwilling to interact with them. The current study included this information. Only children with a diagnosis of autism spectrum disorder participated. If the participants had diagnoses of additional disorders, parents were asked to list them. Why do children with autism and typical development differ in terms of play behaviour? Several theories have been put forth. One possible explanation is that the opportunities for play granted to the child with autism by parents and teachers are not the same as those afforded the typically-developing child Hughes, Thus, children with autism may be kept closer to home, decreasing the quality and quantity of their spontaneous play Hughes, It also has been suggested that caregivers may not believe children with developmental delays are capable of play. These children may experience neglect or may be permitted only to play with others like themselves. However, these researchers do not take into account the cognitive difficulties the child with autism experiences. Children with autism may not be able to communicate their needs to their peers and may find interactions with other children frustrating. Thus, they may avoid the situation altogether Hughes, They may perceive the child with autism as odd or frightening and perhaps will not be motivated to play with him or her. Children with autism might enjoy play that typically-developing children think is strange or "babyish. Perhaps they are not challenged enough to play or perhaps they have been given tasks that are too difficult to accomplish, and they have lost the motivation to try. By noting this discrepancy, it is possible that 28 parents and educators will want to communicate more often on how best to meet the developmental needs of young people with autism. Summary The many different definitions, theoretical approaches and cognitive and social levels of play make it difficult to identify exactly what play is. For the purposes of the proposed study, play will be operationalized as an activity which is intrinsically motivated, freely chosen, pleasurable, nonliteral, and actively engaged in Rubin et al.

Chapter 2 : A Naturalistic Observation of the Play Behaviour of Children with Autism Spectrum Disorders

playinchildrenwithDownSyndrome,HillandMcCune-Nicholich()noteda positivecorrelation between level ofsymbolic play achievedand social responsivenessto theparticipant's motherand theresearcher.

Other aspects, such as atypical eating, are also common but are not essential for diagnosis. Noted autistic Temple Grandin described her inability to understand the social communication of neurotypicals , or people with normal neural development , as leaving her feeling "like an anthropologist on Mars". Autistic infants show less attention to social stimuli, smile and look at others less often, and respond less to their own name. Autistic toddlers differ more strikingly from social norms ; for example, they have less eye contact and turn-taking , and do not have the ability to use simple movements to express themselves, such as pointing at things. However, they do form attachments to their primary caregivers. Making and maintaining friendships often proves to be difficult for those with autism. For them, the quality of friendships, not the number of friends, predicts how lonely they feel. Functional friendships, such as those resulting in invitations to parties, may affect the quality of life more deeply. The limited data suggest that, in children with intellectual disability, autism is associated with aggression, destruction of property, and tantrums. In the second and third years, children with autism have less frequent and less diverse babbling, consonants, words, and word combinations; their gestures are less often integrated with words. Both autistic groups performed worse than controls at complex language tasks such as figurative language, comprehension and inference. As people are often sized up initially from their basic language skills, these studies suggest that people speaking to autistic individuals are more likely to overestimate what their audience comprehends. Repetitive movements, such as hand flapping, head rolling, or body rocking. Time-consuming behaviors intended to reduce anxiety that an individual feels compelled to perform repeatedly or according to rigid rules, such as placing objects in a specific order, checking things, or hand washing. Resistance to change; for example, insisting that the furniture not be moved or refusing to be interrupted. Unvarying pattern of daily activities, such as an unchanging menu or a dressing ritual. This is closely associated with sameness and an independent validation has suggested combining the two factors. Interests or fixations that are abnormal in theme or intensity of focus, such as preoccupation with a single television program, toy, or game. Behaviors such as eye-poking, skin-picking , hand-biting and head-banging. Autistic individuals may have symptoms that are independent of the diagnosis, but that can affect the individual or the family. Selectivity is the most common problem, although eating rituals and food refusal also occur; [53] this does not appear to result in malnutrition. Although some children with autism also have gastrointestinal symptoms , there is a lack of published rigorous data to support the theory that children with autism have more or different gastrointestinal symptoms than usual; [54] studies report conflicting results, and the relationship between gastrointestinal problems and ASD is unclear. However, they reported lower levels of closeness and intimacy than siblings of children with Down syndrome ; siblings of individuals with ASD have greater risk of negative well-being and poorer sibling relationships as adults. Typically, autism cannot be traced to a Mendelian single-gene mutation or to a single chromosome abnormality , and none of the genetic syndromes associated with ASDs have been shown to selectively cause ASD. Some such as the MMR vaccine have been completely disproven. This has led to unsupported theories blaming vaccine "overload" , a vaccine preservative , or the MMR vaccine for causing autism. How autism occurs is not well understood. Its mechanism can be divided into two areas: It is not known whether early overgrowth occurs in all children with autism. It seems to be most prominent in brain areas underlying the development of higher cognitive specialization. An excess of neurons that causes local overconnectivity in key brain regions. Children with autism have been found by researchers to have inflammation of both the peripheral and central immune systems as indicated by increased levels of pro-inflammatory cytokines and significant activation of microglia. The MNS operates when an animal performs an action or observes another animal perform the same action. In people with autism the two

networks are not negatively correlated in time, suggesting an imbalance in toggling between the two networks, possibly reflecting a disturbance of self-referential thought. Hypo-connectivity seems to dominate, especially for interhemispheric and cortico-cortical functional connectivity. The first category focuses on deficits in social cognition. An extension, the extreme male brain theory, hypothesizes that autism is an extreme case of the male brain, defined psychometrically as individuals in whom systemizing is better than empathizing. In his review, Kenworthy states that "the claim of executive dysfunction as a causal factor in autism is controversial", however, "it is clear that executive dysfunction plays a role in the social and cognitive deficits observed in individuals with autism". One strength of this theory is predicting special talents and peaks in performance in autistic people. These deficits are present in early childhood, typically before age three, and lead to clinically significant functional impairment. The disturbance must not be better accounted for by Rett syndrome , intellectual disability or global developmental delay. Two are commonly used in autism research: If warranted, diagnosis and evaluations are conducted with help from ASD specialists, observing and assessing cognitive, communication, family, and other factors using standardized tools, and taking into account any associated medical conditions. Girls are often diagnosed later than boys. The increasing popularity of drug treatment options and the expansion of benefits has given providers incentives to diagnose ASD, resulting in some overdiagnosis of children with uncertain symptoms. Conversely, the cost of screening and diagnosis and the challenge of obtaining payment can inhibit or delay diagnosis. In this article, autism refers to the classic autistic disorder; in clinical practice, though, autism, ASD, and PDD are often used interchangeably. Autism can also be divided into syndromal and non-syndromal autism; the syndromal autism is associated with severe or profound intellectual disability or a congenital syndrome with physical symptoms, such as tuberous sclerosis. The validity of this distinction remains controversial; it is possible that regressive autism is a specific subtype, [14] [41] [1] [] or that there is a continuum of behaviors between autism with and without regression. Delay in referral for such testing may delay early diagnosis and treatment and affect the long-term outcome". No gesturing pointing, waving, etc. No single words by 16 months. No two-word spontaneous, not just echolalic phrases by 24 months. Any loss of any language or social skills, at any age. The United States Preventive Services Task Force in found it was unclear if screening was beneficial or harmful among children in whom there is no concerns. In contrast, in the UK, children whose families or doctors recognize possible signs of autism are screened. It is not known which approach is more effective. Autism therapies A three-year-old with autism points to fish in an aquarium, as part of an experiment on the effect of intensive shared-attention training on language development. In general, higher IQs are correlated with greater responsiveness to treatment and improved treatment outcomes. Studies of interventions have methodological problems that prevent definitive conclusions about efficacy. Despite the recent development of parent training models, these interventions have demonstrated effectiveness in numerous studies, being evaluated as a probable efficacious mode of treatment.

Chapter 3 : A naturalistic observation of the play behaviour of children with autism spectrum disorders /

KidTalk: Naturalistic Communication Intervention Strategies for Teachers of Young Children Ann Kaiser, PhD Department of Special Education VanderbiltlUniversity Background. Naturalism was an outgrowth of literary realism, a prominent literary movement in midth-century France and elsewhere.

Differences are preschool values minus ADOS values. The P values are calculated using a Wilcoxon signed rank test. Collapsed global scores only include tests involving both modules. Discussion The main finding of this study was that preschool observation by an autism-experienced rater of children with suspected ASD, yielded almost the same amount and type of information, as highly structured ADOS assessment performed by two specially trained clinicians in a specialised clinic setting. Initiation of joint attention, suggested to be one of the key difficulties in young children with ASD [3 , 4], was the only domain where the ADOS at the clinic indicated more problems than preschool observation of the child in interaction with typically developing children. The findings, if confirmed by other researchers, suggest that preschool observation using the protocol included here which is not equivalent to that of the ADOS, albeit covering the same areas and performed by ASD experienced examiners could be used for rating observable autism symptoms. This could have important implications for field trials and epidemiological studies of autism, but also for autism diagnostic services, for example, in rural and sparsely populated areas. While preschool observation entails cost for travel for the examiner including time costs , ADOS observation at the clinic often consists of two specially trained experts resulting in financial costs for both clinic and family, as well as inconvenience for the parents involved. However, in other instances the clinic ADOS assessment could be a more efficient and effective assessment tool than preschool observation. Conclusions and recommendations in this respect would have to be made on an individual basis. Further, at the preschool visit one gets information about the child, that is not included in the clinic ADOS, for example, how the child can handle different situations in daily life. Some of this information may actually be even more important than the diagnosis of autism per se [15]. Given that every child with ASD is a unique individual, one needs to remain open for individualisation, even in clinics where there is an agreed core protocol for ASD assessment. Preschool teachers, often have a high level of knowledge about the child, and this is important to take advantage of in the ASD diagnostic process. It is crucial that teachers in preschool receive information and formal training about children with ASD. Limitations There was no comparison group, so we do not know how typically developing children would be scored at this type of ASD assessment. A larger study group would have been preferred, but the constraints of the AUDIE project did not allow inclusion of more cases. Further Research This study is focused on preschool children only. This means that we know nothing about what the result would be for older children. It would be valuable to perform similar studies in children with suspected ASD at older ages. It would also be important to perform a confirmatory study including a larger number of participants, not least so as to enable comparison of girls and boys. The ADOS severity metric [27] is a tool that could be useful for these comparisons. Supplementary Material Appendix 1: Pre-school observation Module 1. Pre-school observation Module 2. Click here for additional data file. Research in Developmental Disabilities. Play and developmental outcomes in infant siblings of children with autism. Journal of Autism and Developmental Disorders. Testing joint attention, imitation, and play as infancy precursors to language and theory of mind. Early social attention impairments in autism: Management of children with autism spectrum disorders. Evidence-based comprehensive treatments for early autism. Journal of Clinical Child and Adolescent Psychology. Outcome of comprehensive psycho-educational interventions for young children with autism. Clinical assessment and management of toddlers with suspected autism spectrum disorder: Pre-school children with suspected autism spectrum disorders: The autism diagnostic observation schedule-generic: The autism diagnostic observation schedule: Assessing children with autism, mental retardation, and typical development using the Playground Observation Checklist. Swedish Council on Health Technology Assessment. Psykiatrisk diagnos och

behandling. Autism spectrum disorders in the DSM-V: Child health care Services have a unique roleâ€”in identifying early symptoms of autism. Vineland Adaptive Behavior Scales. American Guideance Service; Eriksson M, Berglund E. The diagnostic interview for social and communication disorders: Journal of Child Psychology and Psychiatry. Practical Statistics for Medical Research. Chapman and Hall; The efficacy of intensive behavioral intervention for children with autism: Standardizing ADOS scores for a measure of severity in autism spectrum disorders.

Chapter 4 : Autism therapies - Wikipedia

Pediatricians have an important role not only in early recognition and evaluation of autism spectrum disorders but also in chronic management of these disorders. The primary goals of treatment are to maximize the child's ultimate functional independence and quality of life by minimizing the core.

Music and autism research support the benefits of music as a processing strength and the positive effects music therapy has in the treatment of individuals with autism. Coast Music Therapy has compiled the latest studies with the most persuasive results and regularly updates this list to reflect the most current research. Individuals with autism show equal or superior abilities in pitch processing , labeling of emotions in music, and musical preference when compared to typically developing peers. The most compelling evidence supporting the clinical benefits of music therapy lies in the areas of social-emotional responsiveness and communication, including increased compliance, reduced anxiety, increased speech output, decreased vocal stereotypy, receptive labeling, and increased interaction with peers. Preliminary findings also support the potential for music to assist in the learning of daily routines. Because movement is critical to many areas of functioning, researchers LaGasse and Hardy hypothesize that the well documented benefits of rhythm in motor rehabilitation could also be effective for individuals with autism. Joint engagement and the emergence of social communication of three young children with autism. A child-centered improvisational music therapy intervention model was implemented to promote engagement in three children with autism in a kindergarten classroom. Using a multiple baseline design, all children showed improvement in joint attention and actions of social engagement. Autism ; 19 1 , Using functional magnetic resonance imaging, this study investigated neural correlates of emotion recognition in music in high-functioning adults with ASD and neurotypical adults. Both groups engaged similar neural networks during processing of emotional music, and individuals with ASD rated emotional music comparable to the group of neurotypical individuals. Read the entire article for free through PubMed. Music therapy for people with autism spectrum disorder. The findings of this review provide evidence that music therapy may help children with ASD to improve their skills in primary outcome areas that constitute the core of the condition including social interaction, verbal communication, initiating behaviour, and social-emotional reciprocity. Music therapy may also help to enhance non-verbal communication skills within the therapy context. Furthermore, in secondary outcome areas, music therapy may contribute to increasing social adaptation skills in children with ASD and to promoting the quality of parent-child relationships. Effects of a music therapy group intervention on enhancing social skills in children with autism. All group sessions were designed to target social skills. Statistical results demonstrate initial support for the use of music therapy social groups to develop joint attention. The effect of musical attention control training MACT on attention skills of adolescents with neurodevelopmental delays: Fronto-temporal connectivity is preserved during sung but not spoken word listening, across the autism spectrum. Using a passive-listening functional magnetic resonance imaging paradigm with spoken words, sung words and piano tones, we found that 22 children with ASD, with varying levels of functioning, activated bilateral temporal brain networks during sung-word perception, similarly to an age and gender-matched control group. In contrast, spoken-word perception was right-lateralized in ASD and elicited reduced inferior frontal gyrus IFG activity which varied as a function of language ability. Results demonstrate the ability of song to overcome the structural deficit for speech across the autism spectrum and provide a mechanistic basis for efficacy of song-based interventions in ASD. The purpose of this paper is to illustrate the potential impact of auditory rhythmic cueing for motor functioning in individuals with autism and proposes a rationale for how rhythmic input can support cognitive, behavioral, social, and communication outcomes. Frontiers in Integrative Neuroscience ; 7: This article explains why music and movement therapies are a powerful clinical tool and reviews the results from brain imaging studies reporting on music therapy effects with autism. Family-centred music therapy to promote social engagement in young children with severe autism spectrum disorder: In this

study, 23 children with autism between the ages of 36 and 60 months either received 16 weeks of parent-child music therapy in addition to their early intervention program, or their early intervention program without the addition of music therapy. Results utilizing the Vineland Social Emotional Early Childhood Scale indicated a significant effect on social interaction and the parent-child relationship in the group receiving music therapy. Parents of youth and young adults with autism were surveyed. Special skills such as in music, art, and mathematics were associated with individuals who had superior working memory and highly focused attention that was not associated with increased obsessesionality. Pilot study investigating the efficacy of tempo-specific rhythm interventions in music-based treatment addressing hyper-arousal, anxiety, system pacing, and redirection of fight-or-flight fear behaviors in children with autism spectrum disorder. This eight week pilot study with six children with ASD employed rhythm interventions at beats per minute and tracked heart-rate data for participants. Journal of Biomusical Engineering ; 2 Berger, D. An embodied approach to testing musical empathy in participants with an autism spectrum disorder. Results suggest that people with ASD have an understanding of the affective features of music although this physical understanding does not give them clear access to the emotional content of the music. Music and Medicine ; 4 1 , De Bruyn, L. Positive outcomes following participation in a music intervention for adolescents and young adults on the autism spectrum. Pre- and post-outcome measures for a pilot music program geared to students with ASD showed a significant increase in self-esteem, reduced self-reported anxiety, and more positive attitudes towards peers. Psychology of Music ; 40 2 , Hillier, A. Joint attention responses of children with autism spectrum disorder to simple versus complex music. Music that is simple with clear and predictable patterns was found most effective in eliciting responses to bids for joint attention in children with autism in the severe range of functioning. Journal of Music Therapy ; 49 4 , Neural systems for speech and song in autism. Findings indicate that in low functioning individuals with autism, functional systems that process speech and song were more effectively engaged for song than for speech and neural pathways associated with these functions were not distinguishable from controls. Brain ; Pt 3 , Lai, G. The utility of assessing musical preference before implementation of noncontingent music to reduce vocal stereotypy. This study emphasizes the potential importance of assessing musical preference prior to using music in the reduction of vocal stereotypy. Results found that music was effective to reduce stereotypy compared to a no-interaction condition and high-preference music was most successful. Journal of Applied Behavior Analysis ; 45 4 , Despite difficulties in the areas of socialization and communication, there is evidence to suggest many individuals with ASD show a strong and early preference for music and are able to understand simple and complex musical emotions. New brain studies in the area of musical abilities with ASD is also reviewed. Effects of three types of noncontingent auditory stimulation on vocal stereotypy in children with autism. Music, white noise, and recordings of vocal stereotypy were utilized on two children with autism who showed high rates of vocal stereotypy. For both participants, the music condition was most effective to reduce vocal stereotypy to near-zero levels and also resulted in the highest parent social validity rating and was selected as most preferred of the treatments. Pitch discrimination and melodic memory in children with autism spectrum disorder. Compared to age and IQ-matched typically developing children, participants with autism demonstrated elevated pitch discrimination ability as well as superior long-term memory for melody. Autism- Nov 13 [Epub ahead of print] Stanutz, S. Individuals with ASD did show activated regions known to be involved in emotion processing and reward but showed decreased brain activity in specific areas compared to the control group. Cerebral Cortex ; 21 12 , Caria, A. A total of 45 children aged with social skills deficits including autism participated in a group-based five session intervention program involving music therapy. Results indicated that significant improvements in social functioning were found in pre and post test ratings and behavioral observations. Journal of Music Therapy ; 48 4 , Gooding, L. Effects of music on vocal stereotypy in children with autism. Noncontingent access to music decreased immediate engagement in vocal stereotypy for 2 children with autism, but only produced marginal effects on subsequent engagement in the behavior after withdrawal. The use of auditory prompting systems for increasing independent performance of students with

autism in employment training. Self-operated tape recordings of music interspersed with prompts related to job self-evaluation and encouragement were utilized for two students with autism in an employment training program. Results indicated a potential positive relationship between the use of this auditory prompting system and the on-task behavior of the participants as well as a positive relationship between the decreased amounts of prompts used by support staff. Emotion perception in music in high-functioning adolescents with autism spectrum disorders. Adolescents with ASD rate the intensity of musical emotions similarly to typically-developing individuals and reported greater confidence in their responses when they had correctly recognized the emotions. History of music therapy treatment interventions for children with autism. This paper provides a systematic review of the history of music therapy research, treatment of children with autism, and reviews strengths and limitations of music therapy practice with children with autism from Music interventions for children with autism: There is preliminary evidence that children with autism may benefit from music interventions within naturalistic settings and further investigation into these types of interventions and the training required to implement them is required. While it appears that some individuals with autism may respond to elements of music, more research is needed to support the efficacy of specific applications of music stimuli. Journal of Autism and Developmental Disorders ; 41 Auditory-motor mapping training AMMT as an intervention to facilitate speech output in non-verbal children with autism: AMMT aims to promote speech production directly by trainings the association between sounds and articulatory actions using intonation and bimanual motor activities, capitalizing on the inherent musical strengths of children with autism. Six non-verbal children with autism had no intelligible words prior to treatment. After 40 individual sessions of AAMT over eight weeks, all children showed significant improvements in their ability to articulate words and phrases with generalization to items that were not practiced during therapy sessions. Results provide preliminary evidence for a molecular link between dopamine DRD4 receptor, music and autism, possibly via mechanisms involving the reward system and the appraisal of emotions. Neuro Endocrinology Letters ; 31 1 , Emanuele, E. Increasing social responsiveness in a child with autism. A comparison of music and non-music interventions. A single-subject alternating treatment design was utilized over 12 treatment sessions. Results indicated that the music intervention was more effective than the non-music intervention in increasing social responsiveness and no avoidant behaviors were observed during the music condition. It is suggested that the music condition was more motivating for the participant, resulting in more appropriate behaviors. Autism ; 14 4 , Finnigan, E. Pairing target verbal behavior with musical experiences establishes effective automatic reinforcement and can increase the frequency of communicative behaviors and social interactions in children with autism. Music Therapy Perspectives ; 28 Lim, A. Music training is as effective as speech training for improving acquisition of functional vocabulary words and speech production in children with ASD; low functioning participants in particular showed a greater improvement after the music training compared with speech training. Journal of Music Therapy ; 47 1 , Lim, A. Teaching young children with autism graphic symbols embedded within an interactive song. Three boys with ASD participated in a single subject multiple baseline design study and were taught to receptively label animal symbols. The use of the interactive song facilitated the receptive labeling task for all participants. Results were also maintained at follow-up although there was little generalization to other contexts. Neural pathways for language in autism:

Chapter 5 : Louis P Hagopian â€“ Research Output â€” Johns Hopkins University

Cognitive and social levels of play engaged in by four-to-eight-year-old children with autism spectrum disorders were examined in naturalistic classroom settings. In addition, play at home was compared with play at school via parent and educator interviews. Seventeen school-age children, their.

Published online Sep Conceived and designed the experiments: Received Mar 18; Accepted Aug 8. This article has been cited by other articles in PMC. Abstract People appropriately adjust the distance between themselves and others during social interaction, and they may feel discomfort and move away when another person intrudes on their personal space. In the present study, we investigated personal space in children with persistent difficulties in the domain of social behavior, such as children with autism spectrum disorders ASD , and in children with typical development TD. The stop-distance paradigm was used to derive estimates of interpersonal distance, before and after a brief interaction with an unfamiliar adult confederate. Moreover, personal space shrunk after interaction with the confederate in TD children, but it failed to do so in ASD children. These findings reveal that autism deeply affects the regulation of personal space, influencing both its size and flexibility. Introduction Personal space is the area individuals maintain around themselves and into which intrusion by others may cause discomfort or even anxiety. People closely monitor and appropriately regulate their interpersonal space to obtain a comfortable distance of interaction with others [1 - 4]. When personal space is violated, the person may move away to reinstate the margin of safety. Thus, personal space is fundamentally a protective space, a zone of safety surrounding the body [5]. A number of studies have shown that the size of the personal space varies depending on social context. A person who is placed in a potentially threatening context will have an expanded personal pace; a person in friendly company will have a reduced personal space [4 , 6]. Moreover, the size of interpersonal space can change as a function of different factors, including gender [7], age [8], infantâ€”caregiver attachment [9 , 10] and familiarity between interacting parties [11 , 12]. Studies have also documented that psychiatric [13], neurological [14], and developmental disorders [15] can interfere with the regulation of personal space. More recently, Kennedy and coworkers [14] described the regulation of interpersonal distance in a patient SM with bilateral amygdala damage. In their experiment, the authors asked SM to indicate the position at which she felt most comfortable as an experimenter approached her, or she approached the experimenter. SM showed a substantially reduced personal space compared to comparison subjects. These findings revealed that bilateral damage to the amygdala results in no detectable personal space boundary and an abnormally small interpersonal distance preference, thereby suggesting that this brain structure is part of the neural substrate regulating the distance between individuals. Moreover, neuroimaging data from healthy subjects in this same study [14] showed a greater activation of the amygdala when participants knew that an experimenter was maintaining a close distance to them, compared to when they knew that an experimenter was maintaining a far distance. This conclusion is supported by the results of non-human primate studies, revealing that monkeys with bilateral amygdalar damage preferred to stay in closer proximity to other monkeys or people compared to monkeys without lesion [16 - 18]. Because personal space represents the space of interaction and communication with others, it is critical to study this space in subjects with everyday difficulties in social and emotional behavior, such as patients with autism spectrum disorders ASD. Autism is a neurodevelopmental disorder characterized by marked and enduring deficits of interpersonal interaction, including behavioral avoidance and unresponsiveness [19 - 23], and failure to spontaneously interact with people [24 , 25]. Moreover, it has been proposed that dysfunction of the amygdala may be responsible, at least in part, for the impairment of social and emotional functioning that is a core feature of autism [26 - 29]. However, relatively little is known about the way in which autistic individuals regulate the physical distance from other people during social interactions. In the present study, our primary aim was to provide a direct measure of the personal space of children with typical development TD and children with an impairment in social approach, such as autism

ASD. The second aim was to investigate the modulation of personal space by a brief social interaction with an unfamiliar other in these two populations of children. To this end, we measured personal space using a modified version of the stop-distance procedure [31 - 33]. This paradigm represents one of the most frequently used measure of personal space regulation, allowing reliable estimates of preferred interpersonal distance under varied conditions and repeated measures for reviews, see [8 , 33]. In our experiment, personal space was measured as the distance at which children felt most comfortable as an unfamiliar adult confederate approached them or they approached the confederate. Each participant was tested twice, i. Prior research has suggested that an excessively functioning amygdala may account for abnormal fears and enhanced anxiety in autistic children, leading to impaired social interactions and avoidant behaviors in these patients [34 - 39]. Accordingly, we hypothesized that ASD children, due to increased fear and hyperarousal following personal space violations, would fail to reliably and flexibly regulate personal space, thereby maintaining a farther and rigid distance from others. As a consequence, we predicted that interpersonal distance would be larger in ASDs than in TD children and it should be modulated by a brief social interaction in TD but not in ASDs children. Methods Ethics statement The study involved children with autism spectrum disorders and children with typical development in a behavioral experiment. The experiment was conducted according to the ethical guidelines of the Declaration of Helsinki. Participants Fifteen male children with autism spectrum disorders ASD participated in the study. They will hereby be designated as the group of individuals with ASD. All had received a formal diagnosis of an ASD by an independent clinician, according to the standard Diagnostic and Statistical Manual of Mental Disorders-IV criteria [40] and all were high functioning. ASD children had all fluent language abilities. They had no other diagnosed neurological e. TD children were recruited in local schools and were free of current or past psychiatric or neurological illness as determined by history.

Chapter 6 : Autism - Wikipedia

Thirty children with autism were observed during their everyday school activities in order to examine patterns of spontaneous communication. The forms, functions, and targets of their communication were recorded by trained observers. The prototypical communicative event consisted of a child.

Autism spectrum disorder ASD is recognized as a neurodevelopmental disorder that is characterized by qualitative impairments in three areas: Autism was first described by Dr. Based on multiple case studies, Kanner introduced the label "early infantile autism. Recent research indicates that. In relation to other childhood disorders, ASDs are more common than childhood cancer, diabetes and Down syndrome Filipek et al. The focus of the present study was to teach a daily living skill to children with ASD. In particular, the study focussed on teaching basic monetary skills that are foundational to the learning of age appropriate monetary skills. The earlier children are diagnosed, the greater the opportunity for working upon and improving recognized impairments. Intensive behaviour intervention IBI , based on the principles and procedures of Applied Behaviour Analysis, can aid in reducing problem behaviours, and help children to make significant improvements in all areas of adaptive functioning Green, Specifically, the fianding is targeted at providing IBI to children with autism, as well as programming for transition to public schools. The Ontario government has extended funded treatment of IBI to children with autism fi-om the initial cut-off of 6 years old to providing services across the lifespan Ministry, A groundbreaking study by Lovaas demonstrated tremendous improvements for children with autism using IBI. He conducted a non-randomized study involving 38 participants 19 in the experimental group and 19 in the control group ranging in age fi-om 32 to 40 months, who received treatment for at least 2 years in the home, school and community. The treatment focused on teaching various skills including language skills, social skills, life skills, as well as decreasing stereotypic or aggressive behaviours. Lastly, the remaining two children in the experimental group were classified as having a severe intellectual disability and were placed in special classes for children with autism and intellectual disabilities. McEachin, Smith and Lovaas conducted a follow-up to the original Lovaas study. Eight of the nine participants fi-om the experimental group who achieved the "recovered" outcome at age 7 were indistinguishable at 13 years of age from typical children with regard to IQ and adaptive fixnctioning. Over the past 20 years, replications of the Lovaas study have been conducted with children with autism e. One randomized control study i. However, Eikeseth et al. For all children, treatment was conducted in a school setting. Hours of treatment specified in both the behavioural intervention and the eclectic treatment were equivalent, and therefore, eliminate treatment intensity as a possible confound. Consequently, the behavioural intervention was found to be more effective with regard to increasing IQ scores, language comprehension, expressive language, and adaptive behaviour, compared to scores of participants receiving the eclectic treatment. However, an acknowledged limitation was that children in the study had higher IQ scores at intake as the IQ requirement was greater than 50, and the average IQ was This suggests that the sample may not have represented a typical sample of children with autism. Overall, this study demonstrates the benefits of behavioural intervention for school- age children with autism. Based on scientifically established principles, behavioural treatment packages are aimed at reducing maladaptive behaviour and increasing adaptive behaviour Green, These treatments are highly individualized and address the particular challenges experienced by the child. According to various authors Green et al. Typically, children may experience significant gains e. However, Matson, Benavidez, Compton, Paclawskyi, and Baglio emphasized the vital need for developing and empirically testing interventions that are specifically designed to help foster independence and adaptive behaviours for children with autism. They define adaptive behaviours as including skills in self-care and daily living skills, and acknowledge that children with autism are often challenged in these areas. Despite the acknowledged challenges, there is a scarcity of research concerning how to improve day-to-day adaptive fiinctioning of children with autism Gillian, ; Liss et al. In an attempt to add to this

literature, the present study will focus on teaching a life skill i. Money skills have significant importance in our everyday lives and allow us to be fimctional members of society. For example, money skills enable an individual to purchase groceries independently and participate in recreational activities that require a monetary exchange. Using stimulus equivalence may prove to be a good addition to existing techniques used to teach skills in IBI programs. In , Murray Sidman demonstrated that the stimulus equivalence paradigm is a powerfiil tool that establishes classes of stimuli without direct training of all relations. An equivalence class consists of at least three members e. Each of these properties will first be defined, and then illustrated, of the printed word shoe A , a picture of a shoe B , and a three-dimensional shoe C. In order to demonstrate reflexivity, an individual must match the stimuli that are identical e. A symmetric relation is demonstrated when conditional relations are bidirectional Sidman et al. Simply speaking, a participant is first trained to match the printed word shoe Al to the picture of a shoe Bl , when the picture of the shoe is presented as a sample. In order to demonstrate symmetry, the participant then must match the picture of the shoe B to the printed word shoe A the reverse of the trained relation. Finally, transitivity is demonstrated through the combination of two learned conditional relations with at least one relation at chance level during pretesting. The first relation involves matching the sample of the printed word shoe Al to the comparison of the picture of the shoe Bl. The second relation involves matching the sample of the picture of the shoe B to the comparison of the actual shoe C. For the purpose of the present study, our findings will be discussed in terms of stimulus equivalence technology as proposed by Sidman In , Sidman conducted his first study of stimulus equivalence. He attempted to teach reading skills to a year-old boy with an intellectual disability. Prior to training, the participant was able to match 20 spoken words to 20 pictures, as well as name the pictures. Using a match- to-sample training procedure, the participant was taught to match 20 spoken words, as samples, to 20 spoken words, as comparisons, as well as match pictures to the same spoken words. Without ftirther training, the boy demonstrated emergent relations to match printed words to pictures and vice versa, therefore demonstrating transitivity and equivalence. The participant demonstrated reading comprehension, that is he could match the printed words with their corresponding pictures, and he could read the printed words aloud. In total, 60 new relations were demonstrated, without direct training. Stimulus equivalence has the potential to rapidly teach skills to a variety of populations. By enlarging each class by one member, a disproportionate increase in the maximum number of derived relations is produced. This suggests that stimulus equivalence is an economical and efficient tool. The generative nature of stimulus equivalence can be useful in teaching skills such as money skills as many different combinations are often required. A large number of studies on stimulus equivalence have been conducted with typically developing individuals. For example, college and undergraduate students have learned various matching skills such as matching arbitrarily assigned sets of stimuli with equivalence technology e. In addition, nonhuman participants such as parrots and sea lions have demonstrated the emergence of equivalence relations e. Studies with persons with developmental disabilities. Stimulus equivalence studies, with individuals with developmental disabilities, have gradually shifted fi"om teaching abstract symbols arbitrary and unrelated symbols e. More specifically, a wide range of functional skills have been taught using stimulus equivalence such as: Description of other studies to teach functional skills, including monetary skills. A monetary study was conducted teaching coin combinations using errorless teaching methods, including a delayed cue procedure. Using a four-choice match-to-sample procedure, McDonagh et al. Prior to training, the participant was able to match a nickel to the printed price 50; however, she was unable to match the printed price 50 to five pennies. After teaching the participant to match the printed price 50 to 5 pennies, the performance of matching a nickel to five pennies emerged. Following this logic, additional stimuli were added, including a dime, two sets of five pennies and the printed price Without direct training, the relation of the two sets of five pennies to two nickels emerged. In total, two relations were demonstrated at baseline, six were directly taught, and 46 relations emerged without direct teaching. In a similar study by Stoddard et al. Two-choice match-to-sample MTS training, with procedures such as extra-stimulus prompting and responding by exclusion, was used to teach participants to match written prices

to coins and coins to coin combinations e. A constructed-response MTS 10 procedure was also used, which is a closer approximation to the way coins are selected in a more naturalistic environment. Overall, monetary equivalences were formed and the participants were increasingly capable of demonstrating new performances without explicit training. In fact, eight and nine member stimulus classes were demonstrated without explicit training. In addition to using stimulus equivalence to teach monetary skills, this procedure can be used in a variety of contexts to teach many different types of applied relations. In a study conducted by Carr et al. The experiment involved three participants ages 15, 19 and 21 who were able to match dictated words "shirt", "dog", "cake" to visual stimuli pictures of the dictated words before training. Using three-choice match-to-sample training with within stimulus prompting, the participants were taught to match printed letters S, D, C to their corresponding pictures shirt, dog, cake , and were then taught to match abstract symbols to the same pictures. Without fiirther training, the participants demonstrated positive tests of equivalence. Similar to the Carr et al. Using a three-choice match-to-sample procedure with within-stimulus prompting, five adults with intellectual disabilities were first taught to match words e. Next, they were taught to match pictures e. Two of the five participants learned to perform the tasks that demonstrated the relations necessary to test for stimulus equivalence, and then demonstrated positive equivalence test outcomes. These tasks include a simple imitation task and 5 two-choice motor, visual, and auditory discriminations. Based on this preliminary study, the authors suggested that individuals may need to have auditory-visual nonidentity matching in their repertoires in order to learn the conditional relations necessary to test for stimulus equivalence. Research on Stimulus Equivalence with Children with Autism In recent years, some studies have focused on teaching equivalence classes to children with autism Garcia Garcia et al. Thus far, only two studies have attempted to teach money skills using this technology Garcia Garcia et al. Although neither of these studies was available in English, one was translated. Yamazaki taught one child with autism, and two typically developing children to identify two different coins i. They were taught to match coins and printed prices, and to match coins to the dictated value. The child with autism was able to identify numerical prices and match prices to coins and coins to prices. However, equivalence relations were not achieved. Symmetry was demonstrated; however transitivity and equivalence were not. A study by LeBlanc and colleagues taught geography skills to 2 participants who were 6 and 1 3 years of age. Using a three-choice match-to-sample training procedure, the participants were taught to match printed state names i.

Chapter 7 : Music and Autism Research - Coast Music Therapy

Autism, Observation of his behavior, autistic boy Life Autism a suggested video will automatically play next. Challenging Behaviors in Children with Autism Spectrum Disorders - Duration.

List of schools for people on the autistic spectrum Educational interventions attempt to help children not only to learn academic subjects and gain traditional readiness skills, but also to improve functional communication and spontaneity, enhance social skills such as joint attention , gain cognitive skills such as symbolic play, reduce disruptive behavior, and generalize learned skills by applying them to new situations. Several model programs have been developed, which in practice often overlap and share many features, including: Several educational intervention methods are available, as discussed below. They can take place at home, at school, or at a center devoted to autism treatment; they can be done by parents, teachers, speech and language therapists , and occupational therapists. Applied behavior analysis Applied behavior analysis ABA is the applied research field of the science of behavior analysis , and it underpins a wide range of techniques used to treat autism and many other behaviors and diagnoses, [40] including those who are patients in rehab or who need to have their behavior changed. ABA-based interventions focus on teaching tasks one-on-one using the behaviorist principles of stimulus, response and reward, [41] and on reliable measurement and objective evaluation of observed behavior. In functional assessment, a common technique, a teacher formulates a clear description of a problem behavior, identifies antecedents, consequences, and other environmental factors that influence and maintain the behavior, develops hypotheses about what occasions and maintains the behavior, and collects observations to support the hypotheses. Pivotal response training[edit] Main article: The child determines activities and objects that will be used in a PRT exchange. Intended attempts at the target behavior are rewarded with a natural reinforcer: The practice is controversial [53] and has not been popular or used elsewhere since the s. Speech therapy and Picture exchange communication system The inability to communicate, verbally or non-verbally, is a core deficit in autism. Children with autism are often engaged in repetitive activity or other behaviors because they cannot convey their intent any other way. They do not know how to communicate their ideas to caregivers or others. Helping a child with autism learn to communicate their needs and ideas is absolutely core to any intervention. Communication can either be verbal or non-verbal. Children with autism require intensive intervention to learn how to communicate their intent. Communication interventions fall into two major categories. First, many autistic children do not speak, or have little speech, or have difficulties in effective use of language. AAC methods do not appear to impede speech and may result in modest gains. A wide range of intervention approaches is available, including modeling and reinforcement, adult and peer mediation strategies, peer tutoring, social games and stories, self-management, pivotal response therapy , video modeling , direct instruction, visual cuing, Circle of Friends and social-skills groups. It was designed to help families, educators and therapists work cooperatively together to maximize progress in supporting the child. The acronym refers to the focus on: SC â€" social communication â€" the development of functional communication and emotional expression. ER â€" emotional regulation â€" the development of well-regulated emotions and ability to cope with stress. Computer-assisted therapy for reasoning about communicative actions[edit] Many remediation strategies have not taken into account that people with autism suffer from difficulties in learning social rules from examples. Computer-assisted autism therapy has been proposed to teach not simply via examples but to teach the rule along with it. Learning starts from the basic concepts of knowledge and intention and proceeds to more complex communicative actions such as explaining, agreeing, and pretending. Relationship based, developmental models[edit] Relationship based models give importance to the relationships that help children reach and master early developmental milestones. These are often missed or not mastered in children with ASD. Examples of these early milestones are engagement and interest in the world, intimacy with a caregiver, intentionality of action. Relationship Development Intervention[edit] Main article: Relationship Development Intervention Relationship

development intervention [64] is a family-based treatment program for children with autism spectrum disorder ASD. This program is based on the belief that the development of dynamic intelligence the ability to think flexibly, take different perspectives, cope with change and process information simultaneously is key to improving the quality of life of children with autism. This section contains content that is written like an advertisement. Please help improve it by removing promotional content and inappropriate external links , and by adding encyclopedic content written from a neutral point of view. June Main article: This approach is based on the idea that the core deficits in autism are individual differences in the sensory system , motor planning problems, difficulties in communication and relation to others, and the inability to connect ones desire to intentional action and communication. Regulation and Interest in the World: Being calm and feeling well enough to attend to a caregiver and surroundings. Interest in another person and in the world, developing a special bond with preferred caregivers. Distinguishing inanimate objects from people. Two way intentional communication: Simple back and forth interactions between child and caregiver. Smiles, tickles, anticipatory play. Using gestures, interaction, babble to indicate needs, wants, pleasure, upset. Get a caregiver to help with a problem. Using pre-language skills to show intention. Using words, pictures, symbols to communicate an intention, idea. Communicate ideas and thoughts, not just wants and needs. This stage is the foundation of logic, reasoning, emotional thinking and a sense of reality. Please improve this section by adding secondary or tertiary sources. December Main article: The program is operating in nearly agencies worldwide including 25 states and in 5 countries outside of the U. Australia, Canada, England, Ireland and Switzerland. Son-Rise Son-Rise is a home-based program that emphasizes on implementing a color- and sensory-free playroom. Before implementing the home-based program, an institute trains the parents how to accept their child without judgment through a series of dialogue sessions. Proponents claim that children will become non-autistic after parents accept them for who they are and engage them in play. The program was started by the parents of Raun Kaufman , who is claimed to have gone from being autistic to normal via the treatment in the early s. A controlled trial found that children treated with a TEACCH-based home program improved significantly more than a control group. There were positive effects in social and maladaptive behavior, but these required further replication due to the methodological limitations of the pool of studies analysed. Sensory processing disorder Unusual responses to sensory stimuli are more common and prominent in children with autism, although there is not good evidence that sensory symptoms differentiate autism from other developmental disorders. Other treatments have been studied, with small positive outcomes, but few conclusions can be drawn due to methodological problems with the studies. These treatments include prism lenses, physical exercise, auditory integration training , and sensory stimulation or inhibition techniques such as "deep pressure"â€”firm touch pressure applied either manually or via an apparatus such as a hug machine or a pressure garment. Occupational therapists sometimes prescribe sensory treatments for children with Autism however in general there has been little or no scientific evidence of effectiveness. A meta-analysis found that animal-assisted therapy is associated with a moderate improvement in autism spectrum symptoms. In its most traditional form, the output of EEG electrodes is fed into a computer that controls a game-like audiovisual display. Neurofeedback has been evaluated with positive results for ASD, but studies have lacked random assignment to controls. It has been used for decades to treat children with several unrelated neurologic disorders, including autism. The method, taught at The Institutes for the Achievement of Human Potential , is based on oversimplified theories and is not supported by carefully designed research studies. The treatment is repeated several times a week, and can continue for years. It is intended as treatment for autistic children who harm themselves; most of these children cannot speak. Similar envelopment techniques have been used for centuries, such as to calm violent patients in Germany in the 19th century; its modern use in France began in the s, based on psychoanalytic theories such as the theory of the refrigerator mother. Packing is currently used in hundreds of French clinics. There is no scientific evidence for the effectiveness of packing, and some concern about risk of adverse health effects. Priming is done by allowing the students to see the assignment or material before they are shown in class. Prompt delivery consists of giving prompts to the autistic children in

order to elicit a response to the academic material. Picture schedules are used to outline the progression of a class and are visual cues to allow autistic children to know when changes in the activity are coming up. This method has proven to be very useful in helping the students follow the activities. Peer tutoring and cooperative learning are ways in which an autistic student and a nonhandicapped student are paired together in the learning process. Of all disabilities affecting the population, autism ranks third lowest in acceptance into a postsecondary education institution. Furthermore, those with autism that come from low income families tend to have lower success in postsecondary schooling. Disadvantages[edit] Oftentimes, schools simply lack the resources to create an optimal classroom setting for those in need of special education. In some cases, the extra cost required to educate a child with autism nearly doubles the average cost to educate the average public school student. In the United States, many school districts are requiring schools to meet the needs of disabled students, regardless of the number of children with disabilities there are in the school. The shortage has caused some states to give temporary special education licenses to teachers with the caveat that they receive a license within a few years. The development of these policies showed increased guidelines for special education and requirements; such as requiring states to fund special education, equality of opportunities, help with transitions after secondary schooling, requiring extra qualifications for special education teachers, and creating a more specific class setting for those with disabilities. This law was very important for Mexico education, however, there have been issues in implementing it due to a lack of resources. This report cites multiple conventions, statements, declarations, and other reports such as: One main point that the report emphasizes is the necessity for education to be a human right. This report focused on looking at how the many countries involved, with a focus on Africa, have handled policy regarding persons with disabilities. In this discussion, the author also focuses on the importance of education for persons with disabilities as well as policies that could help improve the education system such as a move towards a more inclusive approach. Brains in richer, more-stimulating environments, have increased numbers of synapses , and the dendrite arbors upon which they reside are more complex. This effect happens particularly during neurodevelopment , but also to a lesser degree in adulthood. With extra synapses there is also increased synapse activity and so increased size and number of glial energy-support cells. Capillary vasculation also is greater to provide the neurons and glial cells with extra energy. The neuropil neurons, glial cells, capillaries, combined together expands making the cortex thicker. There may also exist at least in rodents more neurons. Research on humans suggests that lack of stimulation deprivationâ€”such as in old-style orphanages delays and impairs cognitive development.

Chapter 8 : Personal Space Regulation in Childhood Autism Spectrum Disorders

True/False: The DSM-5 uses the term Autism Spectrum Disorders (ASD) to replace the sub-groups such as asperger syndrome.

Parent asks Joe to stop playing on the computer. Parent tells Joe to leave the computer again. Parent tells Joe to leave the computer. Joe again refuses to leave. Parent starts counting to 10 as a warning to get off the computer. Joe does not move from the computer station. Parent finishes counting to 10 and again warns him to get off the computer. Joe stays at the computer and refuses to leave. Parent threatens that Joe lose computer privileges in the future. Parent threatens that the Joe will lose computer privileges in the future. Joe ignores and continues working on the computer. The parent count to 10 again and again threatens future computer use. The parent counts to 10 again and again threatens future computer use Joe ignores and continues computer use. The parent becomes angry and leaves the room. While it is important to look at both the antecedents and the form of the behavior, the focus of this article is on the consequence portion of the data collection. Examine the consequence portion of the data collection form when identifying those responses that both increase and decrease problem behavior. For example, if attention seems to increase problem behavior, then it may be important to teach the individual to get attention in a more appropriate fashion or to use attention for positive behaviors. If escape from a difficult task seems to be a consistent theme in the consequence section, then it may be important to either change the task or to teach the child to ask for help. And we may choose to use downtime as a reinforcer. Our responses should always focus on strengthening desired behavior, promoting the use of the replacement behavior, and decreasing the occurrence of the problem behavior Sugai, et. An important aspect of this prospect is understanding those responses or consequences that maintain, and either enhance or decrease behavior over time. Assessment is the key to developing an effective program and tracking the progress of individuals. Yet there are barriers in collecting the data such as time, remembering in a crisis situation, and being consistent. We can overcome these barriers by planning ahead, matching collection strategies to the setting, and simplifying the data collection chart. Notice the responses have already been established on the form. These are the responses that are typically identified as motivating behavior. While this system may be more efficient, you will note that much of the richness of the narrative is missing.

Chapter 9 : List Of Naturalistic Plays | 10 Best Shows

National Professional Development Center on Autism Spectrum Disorders, Waisman Center, University of Wisconsin. Naturalistic intervention is a collection of practices including environmental arrangement.

George Mason University - Online Applied Behavior Analysis Graduate Certificate What makes naturalistic teaching such a breakthrough is that it offers kids on the spectrum an opportunity to learn socially appropriate behaviors within the context of the social environments they find themselves in everyday â€" school, the playground, the lunchroom, at home, at the grocery storeâ€¦ What is Naturalistic Teaching? While naturalistic teaching is rooted in many of the same principles as ABA, it focuses more on the unique experiences of the individual child. This allows therapists to focus on very specific target behaviors associated with the things that contribute to those behaviors. Chances are it would never come up, or even if it did, the therapy would essentially be stuck in the abstract by trying to mimic the situation in the wrong environment and at the wrong time of day. One of the ideas behind enforcing desired behavior in the natural environment of home, school, or out and about in the community, is that the therapist can engage the child while they are playing and going through daily routines. This means that kids get to be kids and go about their daily interactions, learning new skills as they go rather than being isolated in a therapy session for a couple of hours a week â€" something some kids with ASD may come to dread. Sessions are loosely structured around a target behavior, like taking turns or communicating feelings instead of succumbing to emotional outbursts, and therapists remain flexible when it comes to what might be interesting to the child in that moment or what might be motivating their behavior. The therapist simply takes this opportunity to help the child communicate this desire, encourages the child to include them in the game, and addresses the need to take turns. In this way, the therapist simply uses the toys and activities the child has already selected as reinforcement, making the skills applicable and functional to the environment around them. Naturalistic Teaching Methods According to the National Professional Development Center on Autism Spectrum Disorders, there are some 27 evidence-based practices identified for naturalistic intervention and teaching methods. This method is often used with kids who have some language abilities already. A therapist prompts a child to say something about a toy or some item they might be playing with or a game or activity they might be playing. In this instance, the child will have already shown interest in something by choosing a toy or game for themselves. The therapist only tries to encourage conversation from there by using anything from gestures or sign language, to pictures or spoken words. The therapist might take away the toy or end the game for a short time as a way to prompt a response. The idea is to address the cause of behaviors rather than just the individual behaviors themselves. Of course, the end result is to bring about change in problem behaviors like aggression or self-injury, or poor conversational skills, but without making those problem behaviors the actual focus of the therapy. Pivotal response training allows for greater variation in the types of tasks a child might complete and focuses a great deal on rewarding any attempt the child makes to self-regulate behavior. Natural Language Paradigm Natural language paradigm is ideal for youngsters who are mostly non-verbal. Here, the therapist and the child might sit face to face and the therapist will offer the child a choice of three toys, games, or activities. The child gets to pick an item. The therapist then models the correct play and how to say words that identify or describe the item the child selected. The child is given the chance to play with the item and then the item is removed. The therapist then prompts the child to repeat the word and the item is returned. A classic reward system that gives the child a real reason to make an effort to communicate. However, some critics worry that the skills that individuals gain from conventional ABA in the office or clinical setting itself can be difficult to translate into the everyday world. Using the traditional methods of ABA alongside naturalistic teaching creates more opportunities for generalized learning, where children can apply their newly acquired skills to their daily routines. Naturalistic teaching methods also afford therapeutic opportunities throughout the day and will help children with ASD make great strides in their adaptive growth.