

ABA

Search History: ABA and autism and children; Applied behavior analysis and autism spectrum disorders; Communication and autism and ABA

Databases : PsycINFO; PsycEXTRA; PsycARTICLES; PsycCRITIQUES; CINAHL Plus with Full Text; Pre-CINAHL; MEDLINE; ERIC

Systematic Literature Reviews:

Title: Social-skills treatments for children with autism spectrum disorders: An overview

Author(s): Matson, J.L., Matson, M.L., & Rivet, T.T.

Source: Behavior Modification, Vol 31(5), Sep 2007, 682-707

Keywords: social skills treatment; autism spectrum disorders; children

Abstract: Marked advances in the treatment of children with autism spectrum disorders (ASDs) has occurred in the past few decades, primarily using applied behavior analysis. However, reviews of trends in social skills treatment for children with ASDs have been scant, despite a robust and growing empirical literature on the topic. In this selective review of 79 treatment studies, the authors note that the research has been particularly marked by fragmented development, using a range of intervention approaches and definitions of the construct. Modeling and reinforcement treatments have been the most popular model from the outset, with most studies conducted in school settings by teachers or psychologists. Investigators have been particularly attentive to issues of generalization and follow-up. However, large-scale group studies and comparisons of different training strategies are almost nonexistent. These trends and their implications for future research aimed at filling gaps in the existing literature are discussed.

Title: Parent-mediated early intervention for young children with autism spectrum disorder

Authors: Diggle, T., McConachie, HR, & Randle, VRL

Source: Cochrane Database of Systematic Reviews, 2008, Issue 1

Abstract

Background: Recent estimates concerning the prevalence of autistic spectrum disorder are much higher than those reported 30 years ago, with at least 1 in 400 children affected. This group of children and families has important service needs. The involvement of parents in implementing intervention strategies designed to help their autistic children has long been accepted as helpful. The potential benefits are increased skills and reduced stress for parents as well as children.

Objectives: The objective of this review was to determine the extent to which parent-mediated early intervention has been shown to be effective in the treatment of children aged 1 year to 6 years 11 months with autistic spectrum disorder. In particular, it aimed to assess the effectiveness of such interventions in terms of the benefits for both children and their parents.

Search strategy: A range of psychological, educational and biomedical databases were searched. Bibliographies and reference lists of key articles were searched, field experts were contacted and key journals were hand searched.

Selection criteria: Only randomized or quasi-randomized studies were included. Study interventions had a significant focus on parent-implemented early intervention, compared to a group of children who received no treatment, a waiting list group or a different form of intervention. There was at least one objective, child related outcome measure.

Data collection and analysis: Appraisal of the methodological quality of included studies was carried out independently by two reviewers. Differences between the included studies in terms

of the type of intervention, the comparison groups used and the outcome measures were too great to allow for direct comparison.

Main results: The results of this review are based on data from two studies. Two significant results were found to favour parent training in one study: child language and maternal knowledge of autism. In the other, intensive intervention (involving parents, but primarily delivered by professionals) was associated with better child outcomes on direct measurement than were found for parent-mediated early intervention, but no differences were found in relation to measures of parent and teacher perceptions of skills and behaviours.

Authors' conclusions : This review has little to offer in the way of implications for practice: there were only two studies, the numbers of participants included were small, and the two studies could not be compared directly to one another. In terms of research, randomised controlled trials involving large samples need to be carried out, involving both short and long-term outcome information and full economic evaluations. Research in this area is hampered by barriers to randomisation, such as availability of equivalent services.

Individual Studies

Title: Brief report: Relative effectiveness of different home-based behavioral approaches to early teaching intervention.

Authors: Reed, P, Osborne, LA., & Corness, M

Source: Journal of Autism and Developmental Disorders, Vol 37(9), Oct 2007, 1815-1821.

Keywords: home based behavioral approaches; early teaching intervention; autistic spectrum disorders; autistic severity; intellectual & educational & adaptive behavioral functioning

Abstract: The effectiveness of home-based early behavioral interventions for children (2:6-4:0 years old) with autistic spectrum disorders was studied over 9-10 months. Measures of autistic severity, intellectual, educational, and adaptive behavioral functioning were taken. There was no evidence of recovery from autism. High-intensity behavioral approaches (mean 30 h/week) produced greater gains than low-intensity programs (mean 12 h/week). Lovaas- and complete application of behavior analysis to schools approach-type interventions produced largest gains [similar to gains produced by longer-term clinic-based applied behavior analysis (ABA) programs]. Within the high-intensity groups, increased temporal input on the program was not associated with increased gains in the children. The results from clinic-based ABA trials were partially replicated on a home-based sample, using children with greater autistic and intellectual impairments.

Title: Development of a parent training program for children with pervasive developmental disorders.

Authors: Johnson, CR., Handen, BL., Butter, E, Wagner, A, Mulick, J, Sukhodolsky, DG., Williams, S, Swiezy, NA., Arnold, L. Eugene, A, Michael G., Scahill, L, Stigler, KA., McDougale, CJ., Vitiello, B, & Smith, T.

Source: Behavioral Interventions, Vol 22(3), Jul 2007, 201-221.

Keywords: parent training program development; pervasive developmental disorders

Abstract: Parent delivered interventions based on applied behavior analysis (ABA) for children with Pervasive Developmental Disorders (PDDs) have been evaluated using primarily single-subject design methodology or small case series. While the results of these evaluations are encouraging, an important next step is to standardize the interventions to allow for replication across sites, in studies with large samples and measures of long-term, clinically meaningful outcomes such as improvements in children's functioning and their relationships with parents.

Accordingly, the Research Units on Pediatric Psychopharmacology and Psychosocial Interventions (RUPP Autism Network) assembled a detailed manual for a structured behavioral parent training (PT) program, developed treatment fidelity and training procedures, and conducted a pilot, feasibility study. The PT program is part of a large scale, multisite study intended to determine the efficacy of combined pharmacological treatment and behavioral intervention to improve behavior and adaptive functioning in children with PDD. This paper discusses the rationale for this project. A companion paper provides the results of our feasibility study on the PT program.

Title: Applied behaviour analysis: Does intervention intensity relate to family stressors and maternal well-being?

Authors: Schwichtenberg, A., & Poehlmann, J.,

Source: Journal of Intellectual Disability Research, Vol 51(8), Aug 2007, 598-605.

Keywords: applied behavior analysis; autism; depression; family stressors; intervention intensity; maternal well-being; family needs

Abstract: Interventions based on applied behaviour analysis (ABA) are commonly commended for children with an autism spectrum disorder (ASD); however, few studies address how this intervention model impacts families. The intense requirements that ABA programmes place on children and families are often cited as a critique of the programme, although little evidence is available to support this claim. Using Pearlin's (1999) stress process model, this study assessed: (1) whether mothers of children participating in a home-based ABA programme reported elevated depressive symptoms; and (2) whether ABA intensity related to unmet family needs and maternal feelings of depression, personal strain and mastery. Method: Forty-one mothers of children diagnosed with an ASD participated in this study by completing questionnaires about their child's ASD behaviours, unmet family needs, and maternal feelings of depression, personal strain and mastery. Additionally, mothers provided information about their child's intervention programme and their own level of involvement in the programme. At the time of data collection, all families had been running a home-based ABA programme for at least 6 months. Results: Single-sample t-tests and multiple regression analyses were used to test the proposed hypotheses. Mothers of children participating in a home-based ABA programme reported more depressive symptoms than mothers of children with other developmental disabilities. Comparisons revealed comparable depressive symptoms between the mothers of the present sample and those in other ASD samples. When considering weekly ABA intensity, mothers reported fewer depressive symptoms when their child was older and when their child participated in more ABA therapy hours. Conversely, mothers who were more involved in their child's ABA programme reported more personal strain. Conclusions: The findings of this study supported the hypothesis that families participating in ABA experienced elevated depressive symptoms, much like any family raising a child with an ASD, suggesting a potential area for family-level intervention. Additionally, ABA intensity related to maternal depression and personal strain, and therefore deserves continued attention. Future studies should attempt to replicate these findings with a larger and more representative sample and seek to identify mechanisms through which ABA intensity may influence maternal and family well-being.

Title: A Language Programme to Increase the Verbal Production of a Child Dually Diagnosed with Down Syndrome and Autism

Author(s): Kroeger, K. A.; Nelson, W. M., III

Source: Journal of Intellectual Disability Research, v50 n2 p101-108 Feb 2006. 8 pp.

Descriptors: Teaching Methods, Autism, Down Syndrome, Delayed Speech, Language Acquisition, Verbal Communication, Elementary Education

Abstract: The incidence of children dually diagnosed with Down syndrome and autism is estimated to be as high as 11%. There is a paucity of research investigating linguistic treatment interventions for such children. This single-subject experiment examined a programme designed to increase the language production and verbal behaviour of a 9-year-old dually diagnosed boy who had been receiving a 15-h/week home-based applied behaviour analysis (ABA) programme. Methods: Training principles were derived from previously empirically validated research in discrete trial learning and natural environment teaching, as well as modified incidental teaching procedures. The crux of the language programme involved withholding reinforcement until a spoken request was made. Results: Language production noticeably increased for each target area after the introduction of the language programme and was maintained at a 9-month follow-up session. Conclusions: A combined treatment approach incorporating direct instruction, natural environment teaching and incidental teaching can be effective in increasing and maintaining responsive and spontaneous speech in a child with Down syndrome diagnosed with autism. Replication studies are needed with such multiple dually diagnosed children to further evaluate the effectiveness and generalizability of this combined language programme.

Title: An exploratory evaluation of two early intervention programmes for young children with autism.

Authors: Farrell, P, Trigonaki, N, & Webster, D

Source: Educational and Child Psychology, Vol 22(4), 2005. pp. 29-40.

Keywords: early intervention programmes; young children; autism; program evaluation

Abstract: This article discusses the impact of two contrasting early intervention programmes for a small number of young children with autism that were funded by Lancashire LEA. One of these, referred to as ABA/Lovaas (nine children), was based on the application of applied behavioural analysis techniques mainly in the home setting by therapists appointed by the parents and supported by a supervisor. The other programme, the Lancashire Under Fives Autism Project (LUFAP) - eight children - was developed by a team of teachers, therapists and educational psychologists in Lancashire and was delivered in mainstream preschool settings with the support of a Special Support Assistant (SSA), a visiting teacher and a speech and language therapist. In general terms the findings suggest that all key stakeholders - parents, teachers, therapists and EPs, were positive about the impact of both programmes. The parents felt supported and were pleased with the progress that their children were making. Mainstream teachers, especially those linked to the LUFAP programme, were positive about having a child with autism in their school and valued the support of the SSA and visiting teacher. Some of the parents in the ABA/Lovaas group had formed an informal support group and this proved to be mutually beneficial. Data from a reduced sample indicated that all the children made progress as measured on the Vineland and the Bayley scales although the rate of progress made by those on the LUFAP programme was more encouraging than those on the ABA/Lovaas programmes although this may be attributable to initial group differences.

Title: The significance of applied behavior analysis in the treatment of individuals with autism spectrum disorders (ASD).

Authors: Luiselli, JK., & Hurley, AD

Source: Mental Health Aspects of Developmental Disabilities, Vol 8(4), Oct-Nov-Dec 2005. pp. 128-130.

Keywords: applied behavior analysis; autism spectrum disorders; human behavior; social communication; treatment

Abstract: Applied Behavior Analysis (ABA) is an approach to understanding and changing human behavior based on the principles of learning from experimental psychology. Presently, these approaches have shown great value for children and adults within the Autism spectrum. For preschoolers, much needed training in language and social communication can be conducted effectively using a discrete trial approach. Behavioral difficulties can be addressed using ABA approaches, and the most successful emphasize positive methods as well as antecedent analysis and prevention. Resources for locating ABA professionals are given.

Title: Parent education and home-based behaviour analytic intervention: An examination of parents' perceptions of outcome.

Author(s): Dillenburger, K, Keenan, M, Gallagher, S, & McElhinney, M

Source: Journal of Intellectual & Developmental Disability, Vol 29(2), Jun 2004, 119-130.

Keywords: applied behaviour analysis; program evaluation; home based behavior; autistic spectrum disorder; autistic children; parental perceptions; treatment outcomes; evidence-based conclusions

Abstract: There is convincing evidence that applied behaviour analysis (ABA) offers a highly effective form of intervention for children with autistic spectrum disorder (ASD). There is less evidence, however, about how parents perceive and evaluate ABA programmes. In this paper an examination of parents' perceptions of outcome is reported. Twenty-two questionnaires were completed by two groups of parents. The first group had just completed an introductory course in ABA and were in the early stages of implementing ABA programmes with their children. The second group had been involved in ABA education for more than 2 years. Overall, both groups of parents reported a positive impact of ABA on the lives of their children, their family life, and themselves. The long-term group reported that they had achieved complex goals with their children, whilst the short-term group reported an immediate positive impact on child and family functioning and parental self-esteem. Conclusions are drawn in the context of evidence-based practice.

Title: The 'discrete trials' of applied behavior analysis for children with autism: Outcome-related factors in the case law.

Authors: Choutka, CM, Doloughty, PT., & Zirkel, PA.

Source: The Journal of Special Education, Vol 38(2), Sum 2004, 95-103.

Keywords: applied behavior analysis; autism; disabled individuals; educational program; court decisions; child behavior

Abstract: This study provides an analysis of case law concerning applied behavior analysis (ABA) for students with autism to determine outcome-related factors. The authors classified the 68 pertinent hearing/review officer and court decisions published in EHLR (Education for Handicapped Law Report) and IDELR (Individuals with Disabilities Education Law Report) into 2 groups representing the central issues of contention between parents and districts--program selection (e.g., instructional approach) and program implementation (e.g., its location, duration, or frequency). For both groups, the outcomes, in terms of who won, did not favor either parents or districts. The three factors predominantly associated with wins by either party for both groups of decisions were testimony of witnesses, documentation of progress, and Individualized Education Program elements.

Title: Parent Education and Home-Based Behaviour Analytic Intervention: An Examination of Parents' Perceptions of Outcome

Authors: Dillenburger, K; Keenan, M; Gallagher, S; & McElhinney, M.

Source: Journal of Intellectual and Developmental Disability, v29 n2 p119-130, Jun 2004

Descriptors: Parents, Parent Attitudes, Parent Education, Autism, Children, Behavior Modification, Foreign Countries, Program Effectiveness

Abstract: There is convincing evidence that applied behaviour analysis (ABA) offers a highly effective form of intervention for children with autistic spectrum disorder (ASD). There is less evidence, however, about how parents perceive and evaluate ABA programmes. In this paper an examination of parents' perceptions of outcome is reported. Twenty-two questionnaires were completed by two groups of parents. The first group had just completed an introductory course in ABA and were in the early stages of implementing ABA programmes with their children. The second group had been involved in ABA education for more than 2 years. Overall, both groups of parents reported a positive impact of ABA on the lives of their children, their family life, and themselves. The long-term group reported that they had achieved complex goals with their children, whilst the short-term group reported an immediate positive impact on child and family functioning and parental self-esteem. Conclusions are drawn in the context of evidence-based practice.

Title: Research into early intervention for children with autism and related disorders: Methodological and design issues.

Authors: Charman, T, & Howlin, P

Source: Autism, Vol 7(2), Jun 2003, 217-225.

Keywords: autism; developmental disorders; early intervention; treatment effectiveness; treatment compliance; parent training

Abstract: The article focuses on early intervention for children with autism and related disorders. A meta-analysis of early intervention studies for children with developmental language disorders indicated significant effect for children with expressive and receptive disorders. Families and professionals working with children are confronted by numerous claims and counter-claims for one therapy after another, but lack of data on treatment effectiveness means that there are few if any interventions with a sound evidence base. The remit of the workshop was to explore issues that have hindered progress in this area to date, and to make recommendations for improving UK based intervention research. Workshop participants comprised individuals with expertise in relevant fields: early intervention in autism and language disorders, long-term follow-up studies, and statistics. The problems and confounds of treatment fidelity issues in home-based intensive behavioural (ABA) programmes were considered. Furthermore, the major problems include: compliance with therapy; difficulties in accurately measuring the extent of therapeutic input, especially in naturalistic, and parent-training interventions; and the need for independent monitoring of therapy. Blind ratings may not be possible but care is needed to ensure lack of systematic bias.

Title: Applied behavior analysis: its application in the treatment of autism and related disorders in young children.

Author(s): Harris SL; & Delmolino L

Source: Infants & Young Children: An Interdisciplinary Journal of Special Care Practices, Jan2002; 14(3): 11-7

Abstract: The techniques of applied behavior analysis (ABA) are effective in altering the developmental trajectory of some very young children with autism. This research suggests that early, intensive treatment using the methods of ABA enables a significant number of children to enter the educational mainstream and achieve normal intellectual functioning. Both home-based and center- or school-based models have been used to deliver these services. Although discrete trial instruction is one of the most potent tools of early ABA teaching, a number of

variations on this theme--the initial teaching of mands (requests), the use of an enriched environment with many items attractive to the child, and a focus on teaching the child to be highly skilled (fluent) in a behavior--all have the potential to be valuable teaching approaches.

Title: Applied Behavior Analysis: Its Application in the Treatment of Autism and Related Disorders in Young Children.

Authors: Harris, SL.; & Delmolino, L

Source: Infants and Young Children, v14 n3 p11-17 Jan 2002.

Descriptors: Autism, Children, Classroom Techniques, Contingency Management, Delivery Systems, Elementary Education, Home Programs, Positive Reinforcement, Primary Education, Teaching Methods; Identifiers: Applied Behavior Analysis

Abstract: This article reviews the research on the benefits of applied behavior analysis (ABA) for the education of children with autism up to 5 or 6 years of age. The most common models for service delivery are presented (home- based and center- or school-based) and a few recent treatment innovations are discussed.

Title: ABA and students with autism spectrum disorders; Issues and considerations for effective practice.

Author(s): Simpson, RL.

Source: Focus on Autism and Other Developmental Disabilities, Vol 16(2), Sum 2001, 68-71

Keywords: applied behavior analysis; autism spectrum disorders; education; issues

Abstract: Applied behavior analysis (ABA) is recognized as an essential and scientifically valid method of educating and managing children and youth with autism spectrum disorders. At the same time, ABA is at the center of a number of strident debates regarding methodological preferences for educating students with autism-related disabilities. This article discusses issues related to the ABA debate: implementation forms, outcome expectations, exclusive vs selective use of ABA, time-related considerations, and personnel requirements for effective ABA implementation, evaluation, and communication.

Title: Application of ABA principles to general communication instruction.

Authors: Ogletree, BT., & Oren, T

Source: Focus on Autism and Other Developmental Disabilities, Vol 16(2), Sum 2001, 102-109.

Keywords: applied behavior analysis; autism; communication impairment; speech-language pathology; communication instruction

Abstract: Reviews applied behavior analysis (ABA)-related treatment options for communication impairment in autism. Effective communication instruction has drawn heavily from ABA. Although intervention practices have evolved over time, technologies developed through the adherence to ABA principles and techniques continue to flourish. This article examines ABA-based communication instruction for persons with autism by providing an historical context for ABA as an instructional methodology and a context for the use of ABA in speech-language pathology.

Title: Applied Behaviour Analysis. It Works, It's Positive; Now What's the Problem?

Author(s): Kerr, KP.; Mulhern, F.; & McDowell, C.

Source: Early Child Development and Care, v163 p125-31 Aug 2000.

Descriptors: Autism, Educational Theories, Foreign Countries, Outcomes of Treatment, Program Descriptions, Psychology, Therapy, Young Children Identifiers: Access to Services, Applied Behavior Analysis, Barriers to Information, Ireland

Abstract: Describes key findings concerning the effectiveness of applied behavior analysis (ABA) for children with autism. Discusses obstacles present in Ireland to treating children with autism using ABA techniques. Describes the work of Parents' Education as Autism Therapists and the Irish Children's Autism Network for Developmental Opportunities to provide parents with information on ABA.