

**Communication and Behavioral Problem Interventions and the
Congruency Between the Popular Press and Research**

The Case of Children with Autism

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Abstract

This project is designed to identify communication and behavioral problem interventions for children with autism that have been demonstrated in research to be important or effective in improving these social skills. These factors are then be compared to two parenting guides from the popular press to evaluate the extent to which the material is in keeping with the evidence-based communication and behavioral problem interventions identified in the current research. The specific skills evaluated were selected from four meta-analyses selected from a database of 15 peer-reviewed articles. These articles were then used to objectively define the variables associated with the key factors identified from the meta-analyses. The findings from the research and the popular press parenting guides were then charted and frequency comparison was utilized to evaluate the degree to which the sources coincided. It concludes with a discussion of the application of the research to its use in parenting.

Project Summary

Purpose

The purpose of this study is to analyze the data presented in research on communication and behavioral problem interventions for children with autism, and compare it to the tips and helpful hints presented in parental guides found in local book stores.

Specific Aims or Objectives

The main objective of this study is to compare the level of congruency between research interventions for communication and behavioral problems for children with autism and parental guides found in local book stores. In the case of this study, the location is Knoxville, TN. These specific interventions will focus on the six main categories of speech production, parental affect, modeling, time-delayed procedures, challenging behaviors, and eye contact. These six categories are based upon the research findings for effective communication and behavioral interventions. They will then be compared to the skills and tips presented in two popular press parental guides. The aim is to identify any levels of congruence and/or variation between the research interventions and the targets of the parental guides.

Plans for Meeting the Objectives

A collection of fifteen studies on interventions for children with autism were

collected. From these fifteen research articles, four key meta-analyses were selected as the focus for identifying the key areas of intervention as communication and behavioral problems. The four meta-analyses were then used to outline key variables in improving communication and behavioral skills in children with autism. Additional studies were identified from the meta-analyses to determine ways to objectify the six key variables identified above. A comparison of the objectified variables to two popular press parenting guides was then used to evaluate the extent to which the material presented coincides with the scientific data. The objectified variables were listed in a table so that a frequency chart could be made based upon the reference of each variable in the two popular press texts. The proficiency of each popular press parenting guide's coverage of the intervention targets presented in the research will be evaluated based on statistical analysis of the frequency table.

Significance

Parents of children with autism often refer to texts they can easily acquire in order to assist them with discovering new parenting skills to help them raise their children. Some of these texts will be based upon research, but many may not. Parents should be able to easily access information which can assist them with improving the lives of their children that is up to date with the current research. It is the goal of this project to find areas in which these lay publications on clinical populations can be improved. Potential discrepancies between

scholarly research and the popular press may be addressed in future publications.

Introduction

Statement of Problem

There is often a gap between findings published in scholarly journals and those tips and skills presented for parents in parenting guides and self-help books. In the case of children with autism, research findings tend to surpass that which can be easily accessible to parents. Research findings have proven that communication and behavioral interventions are beneficial in reducing anti-social behaviors in autistic children. For parents who are able to gain this knowledge, the question still remains as to what exactly they should do. It is for this information that parents refer to popular press sources found in local book stores because they are easily accessible and relatively inexpensive. The sources parents use may not coincide with current research findings. The popular press sources may present information contradictory to current research findings or not present in research. If there is information presented in the popular press parenting guides which does correspond with the current research suggested interventions, the question still remains as to the extent to which the skills and tips presented correlate to proven effective interventions.

Literature Review

Previous research has shown that traditional operant behavioral procedures have effectively enhanced an autistic child's language development (Delprato, 2001). The use of normalized techniques such as stimulus control and motivation are a couple of the techniques discussed. When implemented by a researcher, or a teacher in a classroom setting, technique which focus on a naturalistic rather than structured environment lend themselves to promoting the autistic child's active participation (Delprato, 2001). In these environments the child's behavior is reinforced by confirmation by the instructor of a job well done, or by granting the child the object they requested. This fosters increased language skills. In addition to verbal confirmation of the child's performance, it is also beneficial to participate in sign language with the child. The signs used can be those outlined by the American Sign Language dictionary, or those which the child and the caretaker create. It has however been more beneficial to allow the child and caretaker to create the signs because this encourages spontaneous sign requests by the child (Delprato, 2001). The positive effects of various types of communication intervention programs may manifest in comprehension, language production, and social use of language in correct form, content, and use (Goldstein, 2002). Most intervention targets are designed to influence the autistic child's ability to use communication to control, understand, and participate in their social world (Goldstein, 2002). Communication intervention targets for children with autism focus on the incorporation of sign language,

training formats, learning environment, and the promotion of pro-social behaviors (Goldstein, 2002).

Problem behaviors are also a common concern for young children with developmental disabilities, and on average 13 to 30% of them engage in problem behaviors which warrant intervention (Horner, Carr, Strain, Todd, & Reed, 2002). These behaviors are identified as physical aggression, self-injury, property destruction, pica, tantrums, and other destructive behaviors (Horner et al, 2002). Children with autism are at an increased risk of developing problem behaviors, and as a result they are at an increased risk of exclusion from a variety of social settings. Unfortunately, once problem behaviors become an integral part of an autistic child's behavioral repertoire, the use of these behaviors is not likely to decrease without intervention (Horner et al, 2002). The study of intervention targets for children with autism is becoming more and more important. In recent years in the United States more than 15,000 3- to 5-year olds and 78,000 6- to 21-year olds were diagnosed with autism (Whipple, 2004). One specialized area of study for intervention methods for addressing behavioral problems is manipulating the environment in which the autistic child is learning and interacting with others. Past research has shown that development of musical abilities and preferences, and other auditory discrimination skills are beneficial in improving functioning in children and adolescents with autism (Whipple, 2004). This information has been presented and proven in research to be effective domains for intervention targets for children with autism; however, the question

remains as to whether parents of children with autism have easy access to this information.

Purpose

This study is intended to identify the congruence between research and parental guides in efforts to discover areas in which the research identified successful intervention targets for children with autism and popular press recommendations do not coincide.

Hypothesis

It is hypothesized that a number of the objectified variables identified in the research will not be well presented in the two popular parenting guides used in this study.

Research Design

This study is based on a descriptive experimental design. It is aimed at being used to identify problems with and to justify the parenting skills presented in current parental guides. It is mainly a case study of the lay literature available to parents in local book stores for parenting skills and tips for children with autism. In this case study the skills and tips presented in two parental guides are compared to the behaviors presented in research as affective intervention targets. The behaviors presented as positive intervention targets are charted in a table, and then a frequency of occurrence in the parental guides is used to determine the degree to which the research and lay literature coincide.

Methods

Subjects

The titles for the parental guides were selected from Boarders.com based on relevance to the topic and approximate length. The parental guide search was conducted using the terms of autism and parenting. The final two parental guides were chosen based upon the information presented in the summary. The sources used contained relatively the same types of information, were the same approximate length, and cost about the same amount of money.

The first parental guide chosen was What You Can Do Right Now to Help Your Children with Autism by Jonathan Levy. This parental guide outlines ten techniques which parents can use to interact with their child, and bring back “out of their own world” according to Levy. He provides not only detailed descriptions of what the parents should do, but also provides them with stories of application. The guide is intended to not only outline the skills presented, but demonstrate their use through the stories. The topics covered in this guide range from parental attitudes, how to respond to the autistic child, language development, and other techniques designed to improve communication between the child and the parents.

The second guide chosen was Homespun Remedies: Strategies in the Home and Community for Children with Autism Spectrum and Other Disorders by Dion E. Betts. This parental guide is structured to present skills and strategies for the parents to use not only in the home, but in the community as well. The

book categorizes the child's behavior into four domains, home, community, hygiene, and schools and organizations. This source also supplies its reader with stories of application and success from other parents of autistic children. It focuses mainly on providing the parent with the perspective of their autistic child in efforts to better help them understand their child's experiences. It also suggests that small gradual changes are more beneficial and productive in managing the child's negative behaviors.

Materials used

The criteria for inclusion as identifiers of key intervention targets in this research analysis were

1. Contained a general overview of all techniques discussed among the fifteen source studies
2. Study most have been conducted after or including the year 2000
3. Study presented a charted analysis of the key variables discussed within the study
4. Study must address communication and or behavioral problem interventions

The key sources of intervention targets for this study are four meta-analyses. Each meta-analysis was evaluated in efforts to attain the major factors in improving communication and reducing behavioral problems for children with autism. Analysis of these four sources revealed six main categories identified as key domains for communication and behavioral problem intervention. The main

sources of effective communication intervention targets were the meta-analyses conducted by Delprato (2001) and Goldstein (2002). They outlined that in order to improve communication between the autistic child and the parents; the parents must focus on actual speech production and utilize various types of language. Goldstein (2002) specifically focused on the use of sign language and speech. The main sources for effective behavioral problem modification were Goldstein (2002), Whipple (2004) and Horner et al (2002). The sources by Goldstein (2002) and Whipple (2004) identified reinforcement procedures, modeling techniques, and eye contact as the key factors for reducing the occurrence of problem behaviors in children with autism. The study conducted by Horner et al (2002) was used to define which behaviors classified as problem behaviors.

Procedure

The variables selected for this study were chosen from four meta-analyses. Each meta-analysis contained a chart which listed the various intervention targets addressed by the research included in that particular meta-analysis. This table was then used to identify the key variables by counting the number of occurrences in each table. The factors identified the most from each meta-analysis were then charted listing the frequency and meta-analysis of origin. These findings are displayed in Table I. The key factors identified were speech production, parental affect, modeling, time-delayed procedures, challenging behaviors, and eye contact.

These key factors were then defined according to specific objectified variables. The variables used to objectify each key intervention target were attained from the other studies researched and the definitions provide within the meta-analyses themselves. The charted variables were then used to chart the skills and tips presented in the parenting guides. The number of times a skill was presented in the parental guide was noted on the chart and a frequency comparison was used to evaluate the extent to which the popular press source coincided with the current research findings. The percentage of congruence was calculated by dividing the number of times a category was address by the total number of tips and skills presented. The results of the frequency comparison can be found in Table II.

Data Analysis and Limitations

Table I contains frequency analysis of the variables identified as key factors for communication and behavioral problem interventions. Table II contains the frequency analysis of the objectified variables identified from the research to the skills and tips presented in the popular press parental guides written by Levy and Betts. Objectified variables were not identified for challenging behaviors and problem behaviors because these are descriptions of the child's behavior. These behaviors are addressed as a result of the other variables outline in the table. The table also does not include the number of tips and skills presented which did not coincide with the research. These will be addressed in the discussion

The key limitation of this study is that it only addressed two lay literature parental guides. The parental guides themselves were inclusive of the topics addressed in the findings of current research, but also addressed topics which had not been addressed by research. It is possible that future research in the area of improving anti-social behaviors in children with autism could address programs which could be instituted in schools and in communities as a whole, since these were also points of interest discussed in the parental guides.

Table I Meta-analysis Variables		
Meta-analysis Source	Variable Analyzed	Number of Studies Focused on Variable
Delprato (2001)	Speech Production	2
Delprato (2001)	Parental Affect	2
Goldstein (2002)	Sign language only, speech only, and total communication	2
Goldstein (2002)	Speech alone versus sign alone versus alternating versus simultaneous	2
Goldstein (2002)	Differential reinforcement	2
Goldstein (2002)	Modeling	5
Goldstein (2002)	Time-delay procedure	3
Whipple (2004)	Challenging behaviors	2
Whipple (2004)	Eye contact	3
Whipple (2004)	Background music	5
Horner et al (2002)	Problem Behaviors	37

Table II Frequency analysis

Variable	Intervention skill	What You Can Do Right Now to Help Your Child with Autism	Homespun Remedies: Strategies in the Home and Community for Children with Autism Spectrum and Other Disorders
Speech Production	Assisting with pronunciation	3	2
	Reading with the child	5	1
	Encorporation of new words	1	0
Percentage		17.64%	6.67%
Sign Language	American Sign Language	2	1
	Self-created sign language	3	0
Percentage		9.80%	2.22%
Speech Alone	Use of verbal skills only	8	3
Percentage		15.69%	6.67%
Combination	Speech and sign language use	1	0
Percentage		1.96%	0%
Parental Affect	Monitor Attitude	5	7
	Take time-outs	1	1
Percentage		11.76%	17.78%
Differential Reinforcement	Token economy	2	1
	Prize jar	3	0
Percentage		9.80%	2.22%
Modeling	Demonstrating a behavior first	10	15
	Outline desired behaviors	3	5
Percentage		25.50%	44.44%
Time-Delay Procedures	Demonstrating a behavior, waiting and asking child to produce	0	3
	Delaying Reinforcement	0	2
Percentage		0%	11.11%
Eye Contact	Establishing eye contact with child	3	0
Percentage		5.88%	0%
Music	Background music	1	0
	Use of musical instrument	0	0
Percentage		1.96%	0%
Total		51	45

Discussion

It was hypothesized that many of the objectified variables identified from the research would be mentioned in the two parenting guides, but that they would not be presented. This is because the parenting guides would also propose many other skills and tips which have not been shown in research to be beneficial as interventions for communication and behavioral problems. It was believed that of the total number of skills presented, there would be a low frequency of congruence to the intervention targets supported by the research. After conducting the analysis with the frequency chart, it was shown that in general the popular press parental guides and self-help books do coincide with the current research. Each of the six main categories of key intervention targets were addressed when the factors from both books are combined.

The interventions supported by research can be applied to parenting styles in a variety of methods. Parents of children with autism have expressed desires to find easy things to do which can improve their communication with their child, and aid in reducing problem behaviors. Speech production skills presented in the research range from reading with the child, helping the child pronounce new words, and utilizing sign language. Each of these activities can be easily implemented by parents. The intervention targets of reading with the child, and help with pronunciation are skills currently used by parents of any child, however it is more helpful to the parent of an autistic child to know to focus on these skills. This is because they will focus more time and care and attention developing

these skills actively, as opposed to the passive method a parent of a non-autistic child might use.

Parental affect focuses on the parents' attitude toward the child. The attitudes and feelings of the parents of an autistic child are directly reflected in the child's behavior. As a result when the parent displays characteristics of being angry or frustrated the child is more likely to behave in a negative way. If a parent knows this information, they are better able to monitor the attitudes they portray around their child, and consequently reduce the number of anti-social behaviors displayed.

Modeling has been a key factor in behavior modification for a variety of cases. In the case of children with autism it can particularly be used to demonstrate constructive ways for the child to display their emotions. The child often learns how to react to situations based upon the parents' reactions. If this has not occurred, the child will most likely act out in destructive ways such as hitting, biting, or yelling, along with tantrums and other disruptive behaviors. These are a few examples of ways in which the current research findings on communication and behavioral problem interventions can be implemented by parents.

The parental guide What You Can Do Right Now to Help Your Children with Autism by Jonathan Levy was the most inclusive of the six key factors. This source addressed five of the six key issues. The main issues not addressed by Levy were time-delayed procedures. These procedures denote a delay between

the reinforcement for a particular behavior, or a delay between the demonstrated behavior of a group and the child's participation in that activity. The procedures are designed so that a desired behavior can be modeled by a group or the parent, and the child is requested or encouraged to recreate the behavior at a later time. These procedures also utilize a delayed reward system for the child. Although these procedures have been shown to be fairly beneficial in studies, it was not encouraged in this parental guide because it contradicted some of the skills presented. The literature focuses on activities, skills, and tips that parents can utilize at the moment an event occurs, or before an event occurs, as a result time-delayed skills are not encouraged.

It should however also be noted that the one popular press source, Homespun Remedies: Strategies in the Home and Community for Children with Autism Spectrum and Other Disorders by Dion E. Betts, addressed topics and presented skills not addressed in the research. This source also addressed the topics of daily care for the child, integration into a school setting, and community outreach sources available to the parents. As a result of focusing on a wider array of topics and skills for parental use, this source did not address a high percentage of the six key intervention targets. The first half of the literature was designed to primarily address the topics of this study, and this was reflected in the data. Only about fifty percent of the objectified variables were addressed in this parental guide.

Both of the parental guides outlined by Levy and Betts addressed the main issues of this study. They were both able to present the skills and tips supported by research, and they presented them in a manner which is easily understandable and easy to implement for parents. Once research has been conducted and published, it should be accessible to anyone who needs it. In the field of parenting, research findings will most often be addressed in the parental guides and self help books they can access in book stores. It is because of this that this study was conducted. It was the main interest of this study to find evidence that parents have access to current research findings in the sources which they find easily attainable and easy to utilize.

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