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**IMPROVING ACCESS TO APPLIED BEHAVIOR ANALYSIS INTERVENTION FOR CHILDREN  
WITH DEVELOPMENTAL DISABILITIES IN HARYANA**

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**Abstract**

Applied Behavior Analysis uses a daily living behavioral approach to help clients and their daily living behavioral challenges. This therapy has been proven to be a highly effective intervention for children with developmental disabilities, such as pervasive development disorders. It is widely practiced in the United Kingdom, United States, Canada, and many other developed countries; however, this intervention is not widely available in Haryana. This phenomenon requires our investigation because it raises question about the available supports and interventions for children with differently abled in Haryana. This research is to explore factors that influence the development of applied behavior analysis intervention in Haryana. The goal of this research is to come up with recommendations that target current obstacles for Haryana government, Applied Behavior Analysis organizations as well as special education institutions to adopt for improving the access to Applied Behavior Analysis therapy for children with developmental disabilities in Haryana.

***Keywords: Improving Access, Applied Behavior Analysis, Intervention, Children with Developmental Disabilities***

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### **Conceptual Framework**

While working as a rehabilitation psychologist and behavioral interventionist at several Applied Behavioral Analysis special school, hospital, and service centers, I saw that my clients with developmental disabilities showed tremendous improvements in their daily living behaviors after receiving their early Applied Behavioral Analysis interventions. Seeing these positive behavior changes in my clients, I began to wonder if the same therapy is also helping the children with developmental disabilities in Haryana. After brief investigation and several conversations with my principal investigator from work. I learned that applied behavioral analysis service agencies were available, and children with developmental disabilities rarely seek such therapy.

Through learning about the phenomenon, it raises my concerns about the support available in Haryana for children's with differently abled such as do the children receive the therapy they really need? Do they get adequate support? And why is applied behavioral analysis not common in Haryana? Both of my experience and knowledge about applied behavioral analysis interventions tell me that applied behavioral analysis is an essential and effective therapy for children with developmental disabilities. Children will gain benefits from this therapy, but why is there a limited access to such therapy in Haryana? This problem requires our investigation because these children deserve the therapy they need. The limited availability of applied behavioral analysis intervention in Haryana is problematic because it can impede these children to achieve a better quality of life.

### **Definition of Terms**

Applied Behavior Analysis (ABA) is a behavioral approach to improve individual's skills and quality of life by reinforcing their socially significant behaviors and decreasing problematic behaviors.

Pervasive Development Disorder (PDD) is a neurological developmental disorder. Individuals with PDD usually experience challenges in social, emotional Reciprocity is missing and communication skills. They also show repetitive behavior, stereotypical, mannerism and sometimes problematic behaviors.

### **Purpose of the Research**

The purpose of this research is to develop a brochure that provides recommendations for improving the access to applied behavioral analysis service for children with developmental disabilities in Haryana. The intended audience of this brochure is the Haryana government, especially the Ministry of Health and Welfare in Haryana, Applied Behavioral Analysis organizations and service providers, and special educational institutions. It is important to address the issue and recommendations to this audience because they have the resources and abilities to improve the current situation in Haryana.

The purpose of this research was to explore the factors that influence the development of Applied Behavioral Analysis therapy in Haryana. The goal of this research was to come up with recommendations that target current obstacles for the government in Haryana and Applied Behavioral Analysis related entities to adapt for increasing the access to Applied Behavioral Analysis therapy for children with developmental disabilities. The hypothesis of this research is to create a brochure that includes recommendations for the Haryana government, Applied Behavioral Analysis organizations and centers, and educational entities.

Applied Behavioral Analysis intervention is scientifically proven to be a beneficial and effective therapy for children with developmental disabilities. The seven characteristics of Applied Behavioral Analysis demonstrate that this intervention is highly reliable. Applied Behavioral Analysis only uses evidence-based methodologies to improve behavior's socially significant behaviors and decrease their problematic behaviors. It also ensures that behavior change is generalized across various settings and maintained for a long period of time. Due to the promising findings in literature about Applied Behavioral Analysis, demand for such therapy has been raised. However, its high cost and exclusion from insurance coverage's prevent a large number of families to seek help from this treatment.

On the other hand, children in Haryana are still battling to access Applied Behavioral Analysis therapy. In recent decades, the Haryana Government recognized the advantages that early intervention can provide to children with special needs and their families; therefore, it has been promoting early intervention in the country. The government has set up assessment centers, clinics and subsidizing program for these children, but Applied Behavioral Analysis therapy is not included in the programs. As a result, only a few available Applied Behavioral Analysis private services providers in Haryana have become the only resources that provided such therapy. With this limited access to Applied Behavioral Analysis therapy, most children with disabilities in Haryana cannot getting treated by this highly effective therapy, which may impede them to reach a better quality of life. Therefore, it is essential for us to delve into this problem and generate recommendations for increase the access to Applied Behavioral Analysis intervention in Haryana.

### **Significance of the Research**

As in the Canada, there is rapid growth of population with Pervasive Development Disorder diagnosis in Haryana (Ministry of Health and Welfare, 2012). It was 4221 Children with Pervasive Development Disorder in 2000, and the number has increased to 12422 in 2016. There are 1210 children with developmentally delayed disorder reported to early intervention services in 2016. 4642 children at the age of 16 or under have Pervasive Development Disorder, which is more than half of the total population of children with Pervasive Development Disorder in Haryana (Ministry of Health and Welfare, 2016). Therefore, there is a rising demand for effective therapy for children with developmental disabilities since applied behavioral analysis has been proven to be a highly effective treatment; it is important to figure out the factors that prevent the growth of applied behavioral analysis intervention in Haryana.

### **Review of the Literature**

Applied Behavior Analysis intervention is widely practiced in the Canada, United States, and United Kingdom to treat children with developmental disorders. It has been proven by an extensive body of literature to be a highly effective therapy for improving social and adaptive skills as well as decreasing problematic behaviors of individuals. However, this intervention is rare in Haryana, and not many people are seeking help from this therapy. In this chapter we explore literature that provided empirical evidence to several different themes.

**Applied Behavior Analysis** is the behavior science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change. (Cooper, Heron & Heward, 2007, P.20)

Baer, Wolf, and Risley (1968) published the first journal that defined Applied Behavior Analysis. In their study, they found seven characteristics of Applied Behavior Analysis; applied, behavioral, analytic, technological, conceptually systematic, effective, and generality. These seven

dimensions demonstrate that ABA comes from the principles of behaviorism, and its procedure must be clear enough that allows others to replicate it. Applied Behavior Analysis focuses on the functional relationship of behavior and its environment. It only uses evidence based methods to systematically alter the environment of the behavior for reinforcing socially significant behaviors or eliminating problematic behaviors, such as self-harm behaviors. Applied Behavior Analysis help the individual to achieve a significant outcome, and the behavior change will still occur if the behavior is in a different context (Cooper, Heron & Heward, 2007, P.20). In addition to its usefulness in treating children with special needs, it is also frequently used to improve learners' skills in educational contexts or to increase the performance of the workers in workplaces (Martinez-Diaz & Wine, 2013).

Applied Behavioral Analysis has been proven to be a highly effective intervention for person with developmental disabilities (Cernius, 2016; Hansel, 2013). Dr. Lvar Lovaas was a behavioral psychologist and pioneer in utilizing Applied Behavioral Analysis technique to alliterate problematic behaviors and improve social and communication skills of children with Pervasive Development Disorder (PDD) (Lovaas, 1997). In his influential study, Lovaas (1997) found that nearly half of the subjects with Pervasive Development Disorder (PDD) achieved their normal Functioning level after receiving extensive Applied Behavioral Analysis therapies, and 92% of the subjects showed noticeable improvements in their behaviors. Dr. Lovaas findings brought hopes to many parents of developmental delayed children, leading a high demand for Applied Behavioral Analysis intervention from parents of children's with differently abled in the Canada and United States.

The successful outcome of Lovaa's (1997) study raised much demand for this treatment among families of children with developmental disabilities. Due to its laborintensive nature as well as the requirement of extensive therapy hour for each client, the expensive cost of Applied Behavioral Analysis therapy could be a financial burden for a lot of families. (Beyer & Feinberg, 2015). The cost of Applied Behavioral Analysis treatment for each child currently ranges from \$30,000 to \$100,000 per a year (Cernius, 2016). Therefore, many families cannot afford or had to rely on life health insurance to lighten the cost for them. However most of the life health insurance companies did not cover this therapy because they claimed Applied Behavioral Analysis is experimental and not medically necessary (Feinberg & Beyer, 2000).

### **Research Design**

The research began with recognizing the design. Through my rehabilitation experience as a behavioral therapist. I observed the efficacy of Applied Behavioral Analysis intervention for children with developmental disabilities, and its growth in Jodhpur (Rajasthan). I noticed an increasing trend of Applied Behavioral Analysis service centers as well as greater demand for such therapy. Nonetheless, this trend is less available in Haryana. This drew my attention to the development of Applied Behavioral Analysis treatment and the available intervention for developmentally delayed children in Haryana. The research design was to delve more deeply into the problem. In order to get information at this depth, I conducted interview with people who work in the Applied Behavioral Analysis industry in Haryana. The interviewees are founders of two different Applied Behavioral Analysis programs in Haryana. Both provided valuable information about obstacles and factors that impacted the growth of applied behavioral analysis intervention in Haryana. Their research design analyses did not only help me to obtain a clear picture about the reasons why applied behavioral analysis intervention was not pervasive in Haryana, but also offered me ideas for developing recommendations for the problem.

## **Conclusions**

Due to the growing diagnoses of children with developmental disabilities, therapy and teaching strategies for increasing wellness of these individuals have been an important focus in the treatment and educational fields. Applied Behavioral Analysis intervention has been broadly researched and proved to be a highly effective therapy for children with developmental disabilities. This intervention is widely practiced in the Canada, United States, and the demand for such therapy is still improving. However, Applied Behavioral Analysis intervention is not common in Haryana. The Haryana government has been actively promoting special education as well as early intervention for children with special needs because it has recognized the significance of both approaches; however, Applied Behavioral Analysis intervention is not included in the promotion. This has raised concern about the adequacy of support provided for children with disabilities in Haryana.

This research investigated the issue through conducting a literature review as well as interviews with Applied Behavioral Analysis professionals in Haryana. The literature review provided a foundational knowledge about Applied Behavioral Analysis intervention as well as the development of welfare policies for helping children with special needs in Haryana. The interviews provided in-depth information about the lack of Applied Behavioral Analysis intervention in Haryana and gave recommendations for improving the problem. Lastly, recommendations were integrated into a brochure for the government, Applied Behavioral Analysis organizations and service providers, and educational institutions in Haryana.

It is critical for us to take action to help these children because we all have the responsibility to provide a supportive and effective environment for people with disability. In Critical Race Theory (CRT), disability is socially constructed (David L. Hosking, 2008). This means our environment determines our ability. When these children cannot access the intervention they need, they are categorized into the disability group. To help them to become able-bodied we need to work together to eliminate the factors attributed to the limited availability of Applied Behavioral Analysis service in Haryana. For example, Applied Behavioral Analysis organizations and educational institutions need to design better curricula for training therapists and behavior analysts to improve the quality of the therapy. This would help to reduce misconceptions and increase demand for the intervention. When the demand increases, the government hopefully will begin to see the need for such therapy in Haryana.

## **Recommendations**

The brochure of children with disabilities is the starting point of the journey. It functions as a special child guide book for organizations and the government to understand and realize the problem. It also provides recommendations for what they should do to reach their aim. It emphasizes that every audience has the responsibility to improve the special child situation; therefore, Applied Behavioral Analysis organizations or NGO for children with disabilities and parents of these children should collaborate for enhancing access to applied Behavioral Analysis intervention in Haryana.

The first step is to distribute the special child brochure to all aforementioned audiences. The second step is to hold meetings with special child parents, applied behavioral analysis organizations and centers, and other NGO for children with disabilities. The purpose of the meeting would be to discuss plans for enforcing the government and educational institutions to take actions on the proposal. This can be done through firstly promoting and special teaching the society about this PWD issue and secondly appealing people to join the advocacy. In order to

educate the public, we can broadcast the PWD problem and the significant of applied behavioral analysis intervention on TV, radio station, web pages, and social media platforms such as What's App, and Face book. In future research, researchers can also interview therapists who have received their special education in Haryana; this would help in understanding their special needs and developing the best possible solution for strengthening their school experience. Lastly, there is a limited amount of special literature on applied behavioral analysis intervention in Haryana. It would be beneficial if some future research could focus on the effectiveness of such therapy on Haryana state children with disabilities because factors such as culture and race may attribute to the reason why applied behavioral analysis therapy is less available in Haryana.

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