**Research Article**

**Forming Compensatory Mechanisms in Autism Spectrum Disorder: A Case Study on Hope, Acceptance, and Improved Outcomes**

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**Abstract**

Family has an instrumental role in the outcomes for autism spectrum disorder diagnosed children. Family may participate in accommodation to compensate for the child’s behaviors. Some compensation may be met with negative sequelae. I report the lifespan of an 11-year-old boy with symptoms of autism spectrum disorder and how this child’s family encouraged behavioral compensatory mechanisms with improved outcomes. The family reported hope and acceptance in their child’s diagnosis and how it helped their child achieve high functioning behavior.

**Keywords:** Acceptance; Autism spectrum disorder; Hope; Behavioral compensatory mechanisms

**Introduction**

Diagnostic criteria for Autism Spectrum Disorder (ASD) include continuing deficits in social communication or interaction and restricted/repetitive patterns of behavior or interests [1]. Spectrum disorders are not only difficult for the child as the disorder presents itself and may limit the child’s functional ability, but it is also difficult for the family unit to navigate care of the child. The family has an instrumental role in the outcomes for ASD diagnosed children within the family unit. It is common for families to modify family unit behavior (accommodation) to compensate for children with spectrum disorders to decrease any negative consequences associated with the disorder; unfortunately, compensation is not always met with positive outcomes [2]. Behaviors can escalate or worsen with increased family accommodation.

Family accommodations tend to occur with increased severity of child’s behaviors. In addition, increased family accommodations may not allow the child to develop adaptive behavior and communication skills. Decreasing accommodations, where appropriate, was linked to positive outcomes with a decrease in children’s symptoms [2].

Pivotal response treatment, derived from applied behavioral analysis, is one proven method to treat children with ASD. The purpose of this method is to aid in communication and social skills in those with ASD. Pivotal response treatment targets specific areas to increase motivation, self-initiation, and self-management in the child [3].

Parental acceptance and hope may contribute to positive outcomes. As Jan-Olav Henriksen writes in Studia Theologica [4], “hope transforms us, and hope is about transformation.” Hope can be difficult to measure with chronic illness. It is reported that coping strategies influence one’s quality of life and how one lives with a chronic illness [5,6]. Researchers in a cross-sectional qualitative study measuring hope in cancer patients revealed hope and acceptance may be tied to religious beliefs and increased hope may improve outcomes [7].

The case study reported here is a child with symptoms of ASD. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) places the child at ASD severity of Level 2 for social communication and restrictive/repetitive behaviors [1]. Some symptoms included repetitive behaviors, hypo-reactivity to sensory input, ritualistic patterned behavior, transition difficulties, fixated interests, poorly integrated non-verbal behavior, minimal eye contact, and lack of facial expressions. The case outlines developmental characteristics exhibited and exemplifies the parental influence on this child’s outcomes.

**Case Report**

**Birth**

Sean\* was born at 40 weeks and 2 days via induction, lasting 12 hours. He was 9 lbs 11 ounces and 21.5” long. He joined his mother and father household with 3 older siblings. Mother had an unremarkable and healthy pregnancy without illness, viruses, nor infections. She was O+ blood type and was Group B Strep negative. She was induced for post-term and swelling; but, she was without headaches and had normal blood pressure. Sean’s apgar scores were 9/10. Sean immediately bonded with mother and breastfed well. Two days after birth, Sean became increasingly jaundiced and laboratory findings revealed B+ blood type. He was placed under bilirubin lights for 24 hours at the mother’s bedside. He was discharged 24 hours later with the mother. Jaundice continued to decrease, as did the bilirubin levels. He acclimated well to his home environment.

**Infancy**

Sean continued to grow as expected and meet developmental markers. Sean was in complete care of his family and did not attend daycare in early infancy. He received a, somewhat, extended or delayed immunization schedule. Sean received the combination immunization DTaP/HIB/IPV and Hepatitis B at 2 months. He received DTaP and IPV at 4.5 months. He received DTaP, HIB, and IPV at 8 months. He began Mother’s Day out for 2 days a week at 8 months. Crawling began at 10 months and movement continued to progress within defined parameters. Sean sucked his thumb for comfort as well as using a small blanket. Sean experienced distress if the small blanket was not available. There was no known trauma or stress during infancy.

**Toddler**

Sean was described as “happy, but cautious”. Sean had little eye contact during this time. Sean’s gross motor movement was delayed, compared to his sibling’s development. He took few steps at 14 months old with full walking without assistance at 16 months. Sean’s verbal skills were above average. Tantrums were also evident at this time. Sean’s communication and understanding continued to increase. Sean’s strong personality was, also, evident. He would refuse to sit in high-chairs and only sit in chairs consistent to how his siblings were sitting. He ate holding forks and spoons properly and his fine-motor skills were above his developmental age. Verbal skills continued and with the influence of other language speaking nannies, began mixing other language into speech. Sean was described as “very independent” and had tantrums by screaming, self-isolating, and refusing to talk to anyone. Mother reported the tantrums severe and lasting longer than siblings at comparable age. Mother reported them distressing as there was no consoling Sean during the tantrums. At 2 ½ years old, he refused to wear diapers, only wearing pull-ups, refused to allow anyone help him dress, began elongating words, and would put himself to bed. Parents noticed he did not like to be held or “cuddled with” compared to siblings at comparable age. Instead, he continued to self-soothe with thumb and “blankie” which he referred to as “his baby.” Extreme distress and uncontrollable screaming would occur if the “baby” was not found. Full-potty training did not occur until 3 ½ years old. Parents recall early in on potty training, he would lower his pants wherever he was and without regard to or aware of situation or surroundings. There was no known trauma or stress during the toddler stage.

**Preschool (3-5)**

Sean continued to develop on track. He was considered a “Picky Eater” but with a healthy appetite. Six weeks before turning 4, the family welcomed another child, a baby boy. Sean adjusted to the new addition without regression. He began pre-k 4 without difficulty. Considered a calm child by his teachers, and even though he got along well with others and participated in class, he would maintain more solitary activities. Academically on track with other children his age, he was considered reserved and cautious compared to other children. Parents recall little eye contact continuing and decreased social cues with increasing flat affect. For example, when a sibling got seriously injured, he had no response, reaction, or emotion to the situation. Extreme distress would continue if there were changes in routine. Sean continued self-isolation during tantrums and would engage in self-physical harm, banging head and trashing arms, during the tantrums. Sean continued to self-soothe during bedtime with thumb and “baby”. Parents recall fixation of objects and repetitive behaviors beginning around this time. Sean would line up all objects and toys. Sean’s speech became incoherent and riddle like. Persons outside the family unit had difficulty understanding Sean. Kindergarten teacher reported monthly urinary accidents. Parent/teacher conference revealed what was defined as a possible personality temperament difference between the teacher and Sean. Sean continued to insist on sameness and remained inflexible to changes in routine. Sean continued with rigid thinking patterns, often incoherent speech, fixated interests and hypo-reactivity to sensory input. Parents report daily stuttering, but unable to pinpoint when started. There was no known trauma or stress during the preschool stage.

**School-age (6-11)**

Sean was able to progress grade levels with peers. Parents worked with teachers to give him “Warnings” of change in school subjects. At age 6, the parents began to focus helping Sean in developing compensatory behaviors. If a sibling got hurt, parents would point out to Sean the sibling got hurt and prompt Sean to ask, “are you okay?” and would direct him to retrieve ice or Band-Aids. When Sean’s speech was incoherent, parents or siblings would ask him to slow down and think about what he wanted to say. Sibling teasing was not tolerated. Parents would encourage hugging from parents and siblings. Parents made an increased effort to acclimate Sean to social surroundings and to respond appropriately by modeling communication.

**Hope and Acceptance**

The parents were not unified in the beginning regarding Sean. The mother exhibited great denial in the early years when the father referenced what Sean’s behaviors indicated. Although the mother recalls submitting to prayer, especially in the toddler years during severe tantrums, she would not achieve acceptance of his condition until the age of six. The mother had a great support system of friends, family, and church community. She recalled that after experiencing overwhelming hope and acceptance, Sean’s behavior improved. The mother was unable to define her hope and acceptance, but attributes it to her spiritual faith.

**Summary of Autism-related Features and Intervention Methods**

Sean exhibited impaired and atypical responses to social interactions. He displayed marked deficits in nonverbal social communication skills and minor deficits in verbal communication skills. Sean displayed inflexibility of behavior with difficulty coping with any change with tantrums and self-harm. In addition, he displayed repetitive behaviors, such as, but not limited to, self-soothing, or fixation on objects. These behaviors impaired functioning.

Intervention methods used by parents were patience, prayer, and family support. Behavior modeling, clear boundaries with redirection of behaviors, and clear sibling interaction expectations were utilized. Family interventions and behavioral compensatory mechanisms regarding Sean’s behaviors were clearly communicated with teachers. Because Sean was responding to family interventions and compensating, no other external therapies where needed.

**Current State**

At the publication of this case study, Sean was 11 years old and has completed 5th grade. Over the last 5 years, the parents have reported a decrease in tantrums, a decrease in stuttering (occurring several times a month and decreased from daily occurrence), increased eye contact (occasionally needing prompting) and increased social and communication skills (has several friends). Sean continues with fixated interests and hypo-reactivity to sensory input. Parents continue encouragement of behavioral compensation and place boundaries for acceptable versus unacceptable behavior. School performance includes excelling in mathematics and having difficulty in subjects requiring heavy reading, synthesizing material, or creative writing. With work and discussion, increased creativity in his own storytelling has occurred. The family continues acceptance of Sean’s ASD and continue to have hope and faith.

**Discussion**

The family was intentional in attempting to help their child develop compensatory behavioral modifications. They were unaware they were utilizing established and recommended methods for those with ASD and contributed to giving Sean what they would have felt needed if in similar situation as a child. Acceptance and hope were central coping themes for the parents. Because Sean is high functioning and progressing, the parents continue their open communication and natural approach to assisting Sean. Socioeconomic status and family education was purposefully omitted to not limit readers to compartmentalizing behavioral compensatory mechanisms availability to persons of one socioeconomic or education status.

**Conclusion**

This case study thoroughly describes one family’s struggle, perseverance, patience, and love for their child with ASD. Further research and longitudinal reports are needed of parent coping and understanding of family unit accommodations with development of compensatory behaviors in children with spectrum disorders. Further research on the contribution of the concept of hope and acceptance in the family with children diagnosed with ASD is needed to understand its impact on family functioning on positive outcomes on children behavior. Further reports can shed light on how families and children can achieve highest functioning ability in children with ASD.

**Recommendations**

This case study may be an impetus to encourage families with children diagnosed with ASD to assist them with behavioral compensatory mechanisms to have the highest individual functioning ability. Individualized methods should be encouraged and explored. The National Institutes of Health (NIH) invests $186 million on ASD research and support efforts for ASD and their families [8] and recommended to be utilized when designing efforts to assist children and families. In addition, technological advances, such as gaming platforms, can assist therapists and families when assessing the child and implementing interventions [9,10]. Encouragement of support resources for the family may impact outcomes.

**Author Note**

This case study is reported from the Author’s private practice with no affiliation to current position of work. Client name change has occurred to protect identity. No conflicts of interest to disclose.

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