3-13-2024

Parental Satisfaction with Provider Communication and Interventions for their Autistic

DAVID ESCORCIA
Walden University

Walden University

College of Health Sciences and Public Policy

This is to certify that the doctoral dissertation by

David Escorcia

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Review Committee
Dr. Tolulope Osoba, Committee Chairperson, Health Services Faculty
Dr. Kristin Wiginton, Committee Member, Health Services Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2024

Abstract

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by

David Escorcia

MA, University of Phoenix, 2010

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Dissertation Submitted in Partial Fulfillment
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Doctor of Philosophy
Health

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February 2024

Abstract

Autism spectrum disorder (ASD) is a prevalent neurodevelopmental condition in childhood impacting children globally and involving entire families. It has far-reaching effects on the U.S. healthcare system, communities, and school systems. Recent reports from the CDC reveal that one in 44 children is diagnosed with ASD, emphasizing the need for professional interventions to support the development and well-being of autistic children. However, the existing literature is sparse when it comes to understanding how therapies provided by licensed practitioners are perceived as successful from the standpoint of parents. To address this gap, I undertook secondary data analysis of the National Survey of Children's Health dataset. The health belief model framework served as the foundation to explore how parents perceive communication between themselves and individual providers working with their autistic children, as well as the frustration experienced by parents. Logistic regression results showed that the independent variable of frustration accessing services was inversely related to parental satisfaction with healthcare provider communication. Implications for positive social change include utilizing study outcomes to refine provider approaches, promote cultural sensitivity, and enhance the healthcare reimbursement system to deliver professional and best practice interventions.

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Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that has gained increasing attention due to its growing prevalence among children worldwide. This disorder is characterized by challenges in communication, social interaction, and repetitive behaviors (Barrow, 2017). Current estimates suggest that one in 44 children is affected by ASD, signifying a significant public health concern (Centers for Disease Control and Prevention [CDC], 2022). As the prevalence of ASD continues to rise, so does the need for effective interventions and support systems, particularly those that involve parents in the caregiving process. These therapies aim not to cure autism but to empower children with the skills necessary for social interaction, academic performance, and daily functioning within their environments. The success of these intervention programs relies on the active involvement of parents, who serve as primary caregivers for children with ASD (National Institute of Mental Health, 2011).

Understanding the perceptions and experiences of parents concerning these intervention programs is important for tailoring interventions to better meet the unique needs of children with ASD and their families. Prior qualitative research has delved into various aspects of parents’ perspectives on interventions for children with ASD, exploring their beliefs, attitudes, and preferences regarding different approaches (Barrow, 2017; Garnett et al., 2022; Pickard et al., 2016; Seo et al., 2022). These studies have also investigated parents’ experiences with supplemental interventions, such as group telepractice communication programs (Garnett et al., 2022; Smith & Antolovich, 2000). However, a significant gap remains in understanding how parents perceive communication between healthcare providers who work to enhance their children's skills and the satisfaction or frustration they experience regarding the accessibility and effectiveness of available intervention programs. This study fills this gap by examining the relationship between communication between providers and parents concerning intervention programs. Specifically, I investigated the impact of communication between healthcare providers and parents on parents' degrees of satisfaction or frustration with changes in interventions for their children. By shedding light on this critical aspect of ASD intervention, this research contributes to improving communication between parents and clinicians. It also can inform the development of more effective family-centered interventions in future research and clinical practice. Moreover, this knowledge may influence healthcare policy initiatives, advocating for the incorporation of culturally sensitive elements in successful communication between healthcare providers and parents within the realm of ASD intervention programs.

Background of the Study

The prevalence of ASD has increased over the past two decades, affecting approximately one in 44 children (Barrow, 2017). The rising prevalence of ASD has spurred an increasing focus on intervention programs aimed at supporting individuals with ASD. A diverse array of intervention approaches, including special education, coaching, low-intensity therapy, and telehealth-based interventions, are employed to enhance communication, social interaction skills, and adaptive behaviors in children with ASD, frequently involving active parental participation, and these interventions are administered across various settings, encompassing private clinics, government-funded programs, and educational institutions (CDC, 2022; Garnett et al., 2022; Pickard et al., 2016; Seo et al., 2022). Other interventions include sensory integration processing, motor functioning improvement, speech therapy, occupational therapy, adaptive behavior analysis, developmental relationship-based therapies, and parent-mediated treatments (Hyman et al., 2020). These interventions share a common goal: the enhancement of communication, social interaction skills, and adaptive behaviors among children with ASD. Integral to the success of these interventions is the active engagement of parents (Barrow, 2017).

Understanding parents' perceptions of intervention programs is critical for customizing these interventions to meet the specific needs of children with ASD and their families. Prior research has explored various aspects of parents' perceptions, including beliefs, attitudes, preferences, and satisfaction with different intervention types, from online programs, coaching and telepractice approaches, as well as their experiences with supplemental interventions within intensive behavior analytic treatment (Barrow, 2017; Garnett et al., 2022; Pickard et al., 2016; Seo et al., 2022; Smith & Antolovich, 2000). However, there remains a significant gap in the exploration of parents' perceptions, specifically their satisfaction with effective communication with healthcare providers concerning the progress and development of their children with ASD. This dissertation aims to address the unexplored aspect of parents' satisfaction with effective communication with healthcare providers for children with ASD by investigating their perspectives on the quality of interactions and underscores the significance of healthcare professionals' specialized efforts to facilitate positive outcomes in this specific population. This study was focused on parents' perspectives on the quality and effectiveness of their interactions with healthcare providers who are actively engaged in enhancing the skills of children with ASD.

Problem Statement

The research problem is the need to explore parents' perceptions of intervention programs for children with autism ASD, specifically focusing on their satisfaction with effective communication with healthcare providers. There is an increasing prevalence of ASD, affecting one in 44 children (Barrow, 2017), and there is an expanding interest in developing intervention programs to support these individuals. Professional therapeutic interventions, such as applied behavior analysis (ABA), represent a significant financial investment in healthcare services, with ABA programs alone estimated to generate approximately $1.7 billion in annual revenue (LaRosa, 2018). As such, there is a relevance to the discipline of healthcare and psychology.

Despite the increasing prevalence of ASD and a growing interest in intervention programs, there remains a lack of research that delves into parents' perspectives and responses. While previous studies have explored various facets of parental perceptions, attitudes, beliefs, and satisfaction regarding diverse intervention methods, including online programs, coaching, low-intensity therapy, telehealth-based interventions, and supplementary interventions within intensive behavior analytic treatment (Garnett et al., 2022; Pickard et al., 2016; Seo et al., 2022), there remains a gap in understanding how parents perceive these various approaches and how effectively they facilitate communication. Current literature underscores the importance of examining parents' perspectives as they navigate the challenges posed by their children's behaviors and expectations of the approaches (Bennett, 2019). Parents possess insights that can guide the development of interventions tailored to the unique needs of their children and families, including considerations of their frustrations with healthcare providers in efforts to get services. This study addresses this meaningful gap in the current research by focusing on parental satisfaction with communication with healthcare providers. By building on and expanding these recent research findings, the study provides insights to the discipline and inform the development of more effective and family-centered interventions tailored to meet the unique needs of children with ASD and their families.

Purpose of the Study

The objective of this study was to examine the relationship between parental perceptions of communication with healthcare providers working with their autistic children, utilizing publicly accessible datasets. I aimed to investigate and quantify the relationships between various variables related to parental communication satisfaction with healthcare providers working with autistic children. Specifically, I sought to describe the nature of this communication, compare different levels of parental frustration in accessing services, correlate these frustration levels with parental satisfaction, and explore how parental involvement in children's skill development influences this dynamic. This research explored whether parental frustration levels were associated with their satisfaction regarding communication with healthcare providers. The study can provide insights from parents to inform the development of family-centered interventions tailored to enhance communication between parents and providers. By utilizing publicly available survey data from the NSCH website, this research provided a platform for parents, who play a crucial role in their children's lives, to express their perspectives on what constitutes satisfactory communication. These insights not only contribute to the existing literature on parental perceptions of intervention programs but also offer valuable guidance for future research and clinical practice, aiming to improve the effectiveness and family-centered nature of communication between healthcare providers and parents of autistic children.

Research Questions

RQ 1: Is there a relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication?

$H_0$1: There is no significant relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication.

H_a1: There is a significant relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication.

RQ 2: Is there a significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among healthcare providers?

$H_0$2: There is no significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among healthcare providers.

H_a2: There is a significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among providers.

RQ 3: Is there a relationship between parental communication satisfaction with providers (dependent), their involvement in children’s skill development (independent), and parental frustration in accessing services (independent)?

$H_0$3: There is no significant relationship between parental communication satisfaction with providers (dependent), their involvement in children’s skill development (independent), and parental frustration in accessing services (independent).

H_a3: There is a significant relationship between parental communication satisfaction with providers (dependent), their involvement in children’s skill development (independent), and parental frustration in accessing services (independent).

Theoretical Framework

For this study I used the health belief model (HBM), which gives six principles to understand how people make health decisions. The HBM has been widely used as a conceptual framework in health behavior research for several decades (Champion & Skinner, 2008; Janz & Becker, 1984). According to Champion and Skinner (2008), the HBM can be used to understand how individuals perceive their susceptibility to a particular health condition, the severity of that condition, the benefits of taking recommended actions, the barriers to taking those actions, and the cues to action that may influence their decision-making processes (Champion & Skinner, 2008). These six principles as applied to the study are (a) the risk susceptibility of having children with autism, (b) how severe parents perceive the autism diagnoses is in their children, (c) what they perceived health benefits are from the therapies for their children, (d) what the barriers for seeking professional help are, (e) the self-efficacy they perceive of the success from getting help, and (f) cues to action to decide treatments including considerations of cultural sensitivities (Boskey, 2022).

In the context of the research questions on parents' perceptions and experiences of interactions programs for autism, the HBM provides insights into how parents' beliefs about the satisfaction with the intervention program decision-making processes. Crosstabulation of the SPSS reported the levels of decisions making from the parents as they respond to levels of frustration and satisfaction with the providers. For example, parents' perceived susceptibility to challenges and impact of autism on their children's may shape their perceptions as frustrating and not being satisfied communicating with the providers in the programs (Champion & Skinner, 2008). The severity of autism may influence parents to accept interventions and willingness to engage in the programs (Janz & Becker, 1984). The perceived benefits of intervention programs, such as improved communication skills, socialization, and behavioral management strategies for their children, may impact parents' attitudes and motivations towards participating in these programs (Champion & Skinner, 2008). Perceived barriers, such as cost, insurance, time commitment, and logistical challenges, may influence parents' willingness to engage in intervention programs (Champion & Skinner, 2008). Cues to action, such as recommendations from doctors, healthcare providers, support from other parents, or access to community resources, may also influence parents' decision to participate in intervention programs (Janz & Becker, 1984). Therefore, the HBM helped to gain a better understanding of how parents' perceptions and beliefs about their children's intervention programs may influence their experiences and decision-making processes. This may provide information for designing strategies to improve programs for autism (Champion & Skinner, 2008; Janz & Becker, 1984).

Nature of the Study

This study is a quantitative research designed to evaluate the responses of parents concerning intervention programs for autism, using the HBM as a theoretical framework. The HBM guided this investigation of parents' beliefs and perceptions about their children's autism and intervention programs, as well as their decision-making processes related to engaging in these programs. The quantitative approach is appropriate for this study as it allowed for the collection of data that can be analyzed statistically to determine the relationships between variables and test hypotheses (Champion & Skinner, 2008; Janz & Becker, 1984). The study involved the use of secondary data based on surveys used to collect data from a large sample of parents of children with autism who received interventions. The data were analyzed using appropriate statistical techniques to identify patterns, trends, and associations between variables, providing quantitative measures into parents' perceptions and experiences related to interventions for children with autism. This research design enabled me to obtain objective and measurable data, allowing for generalization of findings to a larger population and provided evidence-based recommendations for interventions and programs aimed at supporting parents of children with autism.

In this study, the independent variable is healthcare providers working to enhance children's skills. This refers to the efforts, strategies, and interventions implemented by healthcare providers to improve the developmental and adaptive skills of children with

ASD. These providers include but are not limited to speech therapists, occupational therapists, behavior analysts, and other professionals involved in ASD intervention. The first dependent variable is parental satisfaction with communication among providers. This measures the degree of contentment and positive evaluation of communication between all the healthcare providers, particularly regarding the child's progress and intervention plans. Dependent variable 2 is about the immediate and ongoing communications between the healthcare providers and the parents. The second independent variable is parental frustration in efforts to access services. This assesses the level of frustration experienced by parents while attempting to access services, therapies, or interventions for their children with ASD. This frustration may stem from various factors, such as administrative hurdles, wait times, or limited-service availability.

Definitions

Applied behavioral analysis (ABA): Teaches typical play behaviors and social skills using a rewards system (Rudy, 2018).

Autism: Children with communication, social, and emotional skill problems (CDC, 2022).

Cues to action: Internal/external triggers prompting health-promoting behaviors.

Health service professional: In this context, a "health service professional" refers to any trained and licensed healthcare provider specializing in ASD interventions, including but not limited to speech therapists, occupational therapists, behavior analysts, and developmental specialists.

Perceived barriers: Limitations that prevent engagement in health-promoting behaviors.

Perceived benefits: The value or efficacy of decreasing the risks of illness.

Perceived severity: Making mental calculations of the degree of illness.

Perceived susceptibility: The perception of being at risk for an illness.

Self-efficacy: Self-competence to perform health behaviors (Green & Murphy, 2014).

Socioeconomic status (SES): This term refers to the individual or family's social and economic standing within society, encompassing factors like income, education, occupation, and access to resources.

Speech therapy: Addresses a wide range of communication problems, and occupational therapy addresses interaction within the context through daily activities, in social, emotional, and physiological demands and effects (Rudy, 2018).

Assumptions

I assumed that the HBM is a valid and reliable theoretical framework for understanding parents' perceptions and experiences related to intervention programs for autism. I also assumed that the participants surveyed provided accurate and honest responses to the questionnaires or surveys, reflecting their true perceptions of responding. Another methodological assumption is that the sample of parents included in the study was representative of the larger population of parents of children with autism who have received intervention programs. Furthermore, it was assumed that the data collected from the questionnaires or surveys were accurately recorded and there are no significant biases or confounding factors that may influence the results of the study, such as social desirability bias or selection bias.

Scope and Delimitations

The study focuses on parents' perceptions and their responses related to intervention programs for autism, using the HBM as a theoretical framework. It is quantitative in nature, involving the collection and analysis of secondary data from public databases that are collected on questionnaires or surveys. The study scope was limited to understanding parents' perceptions of the benefits, barriers, cues to action, and self-efficacy related to interventions for autism, and the intent was to generalize the findings to a larger population of parents.

Regarding delimitations, the study did not include qualitative data or qualitative methods, such as interviews or observations, to gather in-depth insights into parents' perceptions and experiences. Neither did I investigate the effectiveness of these programs. Instead, I focused on parents' perceptions with communication between and among parents and healthcare providers.

Limitations

Among the limitations for this study were insufficient literature to support the research, interruption on the original qualitative study due to COVID-19, which caused the lack of recruiting participants and my poor health. In the last 3 years, I had to request three leaves of absence from the university to take care of my health and because I was not getting responses even though the recruiting flyers were posted in special schools. Learning to use SPSS software was another limitation. This required several Zoom sessions with a tutor faculty and scheduling the meeting was dependent on the availability of the tutor and my own time available to meet. Another limitation was the sample size, sample characteristics, and generalizability of the findings to a broader populations. The results may also be subject to biases, such as self-report biases or recall biases, inherent in the use of questionnaires or surveys for data collection. The study limits all possible factors that influenced parents' perceptions and experiences related to communication.

Significance of the Study

The study's significance lies in its potential to contribute to the understanding of parents' perceptions and experiences related to interventions or programs for autism, inform decision-making and policy development, identify areas for improvement, enhance family-centered care, and contribute to theoretical and conceptual frameworks in the field. My aim is to enable disenfranchised parents to have a voice to empower them to share their experiences of how effective they reported communication is with and among professional healthcare providers and to share the levels of frustration they experienced in seeing changes actualized. This could enhance current interventions and encourage new strategies that are culturally and family-centered for future therapies to be used by professional therapists.

Significance to Theory

Theories can help guide a study to organize the findings after analyzing the data. The HBM provides a formatting order for the inquiry process of perceived effectiveness or ineffectiveness of health behavior choices. The HBM led the construction of the research questions. The HBM posits six constructs which are health behavior forecasts, risk susceptibility, risk severity, benefits to action, barriers to action, self-efficacy, and cues to action (Salari & Filus, 2017). The use of the HBM as a theoretical framework in the study can contribute to the advancement of theoretical and conceptual frameworks in the field of health behavior and health education. This can expand the understanding of how parents perceive and experience intervention programs for autism and contribute to the refinement and application of the HBM in the context of autism interventions.

Significance to Social Change

The study's social change impact lies in its potential to empower parents, influence policy and practice, promote family-centered care, enhance social understanding and acceptance of autism, and advance knowledge and research in the field. The intent is to improve and affect the quality of therapies autistic children receive promoting social context and quality of life providing significant tools and sharing parents' experiences with peer parents of autistic children. This study also aims to contribute to advancing professional practices by providing meaningful input directly from the parents who observe the progress of their children receiving interventions (Lohman, 2010). Understanding parents' perceptions and responses can contribute to the development of more family-centered care approaches in intervention programs for autism. This can improve the overall quality of care and support for families of children with autism, leading to better outcomes for both children and their families.

Summary

Chapter 1 began with an overview of the study's background describing the variety of professional interventions children receive. The problem was also noted, which is that children need therapies delivered by licensed professionals, the therapies are high-cost healthcare services, and that these children cannot attend mainstream schools. The purpose of this study was to extend the voices of these parents to evaluate the therapeutic qualities, provide a peer review study, and to particularly promote awareness of these findings to therapy providers to affect actualized changes in their approaches. Chapter 1 also described the theoretical framework used to pair the results providing the structure of the parents responses. The research questions used the HBM as a theoretical framework of how individuals make their decisions for health seeking. Chapter 1 further described the nature of the study, the definitions, assumptions, scope and delimitations, the study's limitations, significance of theories used, and the study's significance to social change.

Chapter 2: Literature Review

ASD is a developmental disorder affecting communication, social interaction, and behavior. Early intensive intervention has been shown to be effective in improving outcomes for children diagnosed with ASD (Shi et al., 2021). Parents play a crucial role in the intervention process, and their perspectives and perceptions are important in shaping the interventions that are provided to their children. The literature review presents existing evidence on parents' perceptions of professional interventions their children with autism receive. The review includes parents' narratives from their perspectives of how well the providers communicates to include cultural sensitivity in their approaches. Researching the literature, I used multiple internet websites looking for articles and studies to support my research topic.

Literature Search and Strategy

The literature search mainly referenced Google Scholar and other academic websites using a variety of search phrases and questions such as *parents of autistic children* for which I found 85 articles on this topic, which helped me gather background information. For *perceptions of autism therapies,* I found 125 articles related to this topic. This topic search was too broad, and I narrowed to a few articles. Another search topic included, "what are the perceptions of parents of autistic children about providers rendering therapies?" I found six articles, but only one was close to my study. I found articles from providers perspectives but not from those of parents. The search topic, "are therapy providers including cultural sensitivities when treating children with autism?" produced two articles from scholar literature perspectives but not from those of parents.

For questions and topics relating to “how expensive are autistic therapies?,” “where do autism therapists render their services?,” and “what do parents do after the autism diagnosis?,” I found three articles about family dynamics.

The CDC was also extensively searched to find current and updated statistical information for topics such as “what is the prevalence of autism,” “what are the therapies available for the autistic population,” “what parents are saying about the therapies,” and “how autism therapies or services are funded?” This literature was relevant to support this study with background information around therapies and providers to move from broad to specific data. Another website heavily explored was the U.S. Department of Health and Human Services to find relevant information related to my study. The website provided additional information of the cost of these therapies nationally, in individual states, and locally by city. This information provided insight of how the healthcare system is managed to serve the autistic population and the requirements needed as recipients to receive the services and as providers rendering services. All literature had supporting data for a robust study background.

Theoretical Foundation

The Health Belief Model

The framework I used for this study is the HBM, which was first designed by medical providers for public health services in the early 1950s. This model was conceived in response to the observed reluctance of individuals to embrace disease preventives or engage in screening tests for various health conditions, including tuberculosis, cervical cancer, dental disease, rheumatic fever, polio, and influenza

(Rosenstock, 1974). In the context of this study, the HBM served as a valuable framework for understanding how parents of children diagnosed with ASD perceive and make decisions regarding the therapies their children receive and how they report frustration getting services for their children.

Key Components of the Health Belief Model in the Context of the Study

Within the HBM, the first posited level pertains to individuals' perceptions of their susceptibility to a particular health condition. In this study, parents assess their children's susceptibility to ASD, which influences their decisions regarding therapy interventions. The perceived severity of a health condition is the second level of the HBM. In the context of this research, parents evaluate the seriousness of ASD and its potential impact on their children's lives. This perception of severity informs their attitudes toward therapy interventions. The HBM also encompasses the perceived benefits of health-related actions. In this study, parents perceive the therapy interventions as beneficial for their children, particularly in terms of enhancing their skills and overall well-being.

Another critical aspect of the HBM is the identification of perceived barriers that individuals encounter when making health-related decisions. In the context of this study, parents' frustrations and negative opinions about therapy interventions and healthcare providers are identified as barriers that influence their choices. Cues to action refer to external events or triggers that prompt individuals to take health-related actions. In the context of this research, external factors, and events in the lives of parents and their children play a role in influencing decisions regarding therapy interventions. The final level of the HBM is self-efficacy, which reflects individuals' confidence in their ability to make positive and beneficial health decisions. In this study, it relates to parents' confidence in making informed decisions about therapy interventions for their children with ASD.

How Theory Applied to Study

As mentioned, this model was used to help me understand where the parents are in the six posits making health decisions about the therapies their children with autism receive. The HBM describes how individuals make sense and make decisions according to their perceptions about how susceptible they are for their children diagnosed with autism. Some parents reported being very satisfied with the communication among the providers while others reported being somewhat dissatisfied with the communication among providers working with their children to increase skills. The next level of the model is the perceived severity of autism. This follows the perceived benefit levels. In this study parents see the therapies as beneficial for their children. The perceived barriers helped identify the negative opinions or frustrations these parents have about the therapies and the providers during the data collection. The cues to action are the external events which the individuals make changes according to health conditions. The last level of the model is self-efficacy. This is the level when individuals feel confident to make and accept health decisions that are positive and beneficial for them (Salari, & Filus, 2017).

By applying the HBM as a conceptual framework, I aimed to gain deeper insights into how parents report satisfaction and dissatisfaction with the communication with and among the healthcare providers working with their children with autism. The HBM provides information of parents reporting the level of frustration they have in efforts to get services for their autistic children. The HBM helped focus on how parents perceive and make decisions regarding the therapy interventions and how they relate to the enhancement of the increase in skills and well-being of their children with autism.

Literature Review Related to Key Variables and Concepts

The perspectives of parents of children with ASD have been recognized as important in the context of early intervention but have often received limited attention in the literature (Twomey & Shevlin, 2017; Webster et al., 2004). Some studies have explored parents' knowledge of what works for their children with ASD, highlighting the valuable insights parents can provide (Dharan, 2015). Parents receiving a new diagnosis of autism in their children can be a positive thing as an opportunity for strengthening relationships between parents, the children, and the families (Abdullah, 2021; Rice, 2021). However, parents after learning their children are diagnosed with autism sometimes become confused and blame the condition on themselves; the parents do not have a complete or clear understanding of the autism condition, or they do not know what their options are (Mire et al., 2015). They need to make sense of the diagnosis before making decisions about the treatments that will follow (Mire et al., 2015).

Need for interventions for children with autism must be designed to directly support parents in four main overlapping areas: creating a family system programs specifically for their needs, creating an instructional programs for their children, having inclusive interventional programs for families, and having positive behavior supports that rewards the parents and their children with autism (National Academics of Science, 2018). There is a need for collaboration between teachers and parents of children, addressing inconsistencies between the teacher's approaches at school and parents' approaches at home (Gazi et al., 2016). Programs that train parents to help their children with autism can be helpful, but parents' intervention implementations need to be consistent with the structure of the training programs (Shoumitro et al., 2020). Parents of children with autism have a vital and proactive role by keeping children healthy and promoting physical activity habits, but some children resist these activities (Arnell et al., 2020). This requires support and collaboration efforts among the different actors involved.

Intervention improvement is important for treatment for mental health intervention for children with autism indicating limited parental knowledge about autism and the need to address knowledge gaps, perceptions differing regarding parental participation in treatments, and influences on parent-therapist interactions, including the value of respecting cultural differences and the importance of personal connections (Chlebowski et al., 2018). Other research has shown that most parents have found tele-assessment to be comfortable, and many reported likings the parent-led nature of these approaches (Corona et al., 2020).

Goedeke, Landon, Shepherd, and Taylor (2019) explored the effects of perceived levels of support on parents' care-related stress of autism symptoms. Results indicate that parents perceived partners and families as providing greater support than friends and professionals. Perceived family support did not appear to influence parents' perceptions of their children’s symptoms, although partner support moderated the relationship between symptoms and care-related stress. Professional support was attributed to a decrease in care-related stress levels. Finally, some sources of support were associated with perceived effectiveness of stress reduction in relation to specific interventions. Conclusions: partners and family may need education and better communication to provide a support role to parents. It is very important for professionals’ communications to support parents more in their caregiving roles.

Jashar et. al., (2019) examined parent satisfaction with a neurodevelopmental evaluation for toddlers at risk for autism. The Post-Evaluation Satisfaction Questionnaire, which collected quantitative and qualitative information, was used. Total scores showed no significant difference by diagnosis, autism severity, children’s cognitive or adaptive delay, family race/ethnicity, maternal education, family annual income, or parental stress. Examination of 24 individual items showed a race/ethnicity difference for only one item. Minority parents’ scores indicated that their needs were being met less. Qualitative data stressed the importance of fully explaining the diagnoses/recommendations and providing clear feedback.

Leadbitter, Macdonald, Taylor, and Buckle (2020) conducted a randomized controlled trial to find improvements in parent–children communications and family quality of life, and to reduce children’s autism symptom severities. This study examined parental perceptions of effectiveness from their participation in pediatric autism communication therapies. Semi-structured interviews were conducted with 18 parents for one year after completion of the therapies. Parents reported positive changes in their interactions and relationships with their children and saw improvements in their children’s communication skills. Some also highlighted realizations of emotional challenges associated with taking part in the post-diagnostic therapies.

Millau, Rivard, and Mello (2018) studied families from immigrant backgrounds who have children with autism and tend to experience greater difficulties in accessing, using, and complying with intervention services for their children. This disparity may be due to cultural differences affecting how families perceive autism, the symptoms, and their treatment priorities. The study documented the perceptions of immigrant families. Forty-five parents from Latin America, Africa, Western and Eastern Europe, the Caribbean, East Asia, and the Middle East living in Canada who participated in a semi-structured interview. The most frequently mentioned causes of autism were environmental factors such as vaccines and diet. Some participants did not know the cause of their children’s autism. Priorities for intervention varied. Mothers tended to prioritize speech therapy and fathers favored support in school. These findings highlight the need to implement informational programs to communicate to these families.

Pearson and Meadan (2018) identified children with autism during the first two years to determine needs for early intervention. However, the probability of early diagnoses is less likely in African American children. This qualitative study explored, using semi-structured interviews, the perceived factors that facilitate and impede early diagnosis and access to services among African American parents of children with autism. The authors identified 15 themes related to diagnoses, services, and recommendations (e.g., parent knowledge of autism, as a facilitator to diagnosis, "aggressive advocacy" as a barrier to accessing services, and parent education as a recommendation for addressing identified barriers). The themes identified include parent advocacy and partnerships with professionals. Themes for parent training related to knowledge of autism, parent advocacy, and partnerships with professionals were also discussed.

Yingling, Hock, Cohen, and McCaslin (2017) examined parent perceived challenges to treatment utilization, predictors of increased challenges to treatment utilization, and parent recommendations for increasing utilization programs. They examined the contributions of parent demographic characteristics, parent social support, and child challenging behaviors to discover challenges to utilization. They found the most frequent challenges included the children's school schedules and the children being overloaded with other treatment demands. Greater child challenging behaviors were associated with a greater degree of perceived challenges, and social support was associated with less perceived challenges. Further discussion is needed for child and family characteristics that may increase the risk for experiencing challenges to utilization of services. The findings have implications for policy, programming, and future research .

Zuckerman et. al., (2018) developed a scale in Spanish and English to discover what Latino parents of children with autism perceive are the causing factors for the stigmas of autism. The researchers wanted to find out the level of satisfaction these parents have with care for their children despite stigmas they encountered. They found that stigmas were mostly associated with unmet care needs and not as much because of how much time was spent in therapies or the kinds of therapies received. They recommended that service providers need to communicate and consider these perceptions to reduce the factors that increase stigmas of autism.

Perspectives Relating to Interventions

The literature on early intervention and parents' perspectives in the context of autism spectrum disorder (ASD) has received significant attention in recent years. Researchers have emphasized the importance of early support for children with ASD to improve their outcomes and lead flourishing lives (Bent, Pellicano, Iacono, & Hudry, 2022). Parent training interventions have been recommended after an ASD diagnosis to enhance parents' psychological well-being (Cutress & Muncer, 2014). The National Autistic Society's EarlyBird Plus program has been highlighted as one such intervention in the literature (Cutress & Muncer, 2014; Palmer, Cáceres, Tarver, & Howlin, 2020). The feasibility of parent support programs such as EarlyBird has also been studied, with evidence supporting their effectiveness (Palmer et. al., 2020). However, access and availability of these programs for parents have been a topic of discussion, and factors influencing access to such interventions have been explored in the literature (Birkin, Anderson, Seymour, & McMillan, 2008). In addition to interventions, manualized parent education programs for preschoolers with ASD have also been developed to meet the real need for such training (Brereton & Tonge, 2005).

Webster et. al., (2004) conducted a study to explore parental perspectives of early intensive intervention for children with ASD. The authors found that parents reported positive outcomes for their children, including improvements in communication skills, social interaction, and behavior. Parents also reported satisfaction with the intensity and duration of the interventions, as well as the training and support provided to them. However, some parents expressed concerns about the financial burden and the availability of services, indicating that access to early intensive interventions may be a challenge for some families.

Barrow, (2017) conducted a phenomenological study to explore the lived experiences of parents of young children with autism who were receiving special education services. The author found that parents reported a range of emotions, including stress, anxiety, and uncertainty about their children's futures. Parents also reported challenges in navigating the special education system, communicating with school personnel, and advocating for their children's needs. However, parents also reported positive experiences, such as the support and assistance provided by special education professionals, and the progress and achievements of their children. Seo et. al., (2022) conducted a study to investigate parents' perceptions of coaching and low-intensity therapy for young children with ASD. The authors found that parents reported positive perceptions of coaching and low-intensity therapy, including increased knowledge and skills in managing their children's behaviors, improved parent-child interactions, and increased confidence in their parenting abilities. Parents also reported satisfaction with the flexibility and individualization of the interventions, and the positive impact on their children's development. However, some parents expressed concerns about the time commitment and the ongoing support.

Pickard et al. (2016) conducted a mixed-method evaluation of a telehealth-based parent-mediated intervention for children with ASD. The authors found that parents reported high levels of satisfaction with the telehealth interventions, convenience, accessibility, and flexibility. Parents reported improvements in their children's communication and social skills, as well as their own parenting skills. However, some parents reported technical difficulties and challenges in implementing the interventions at home, indicating the need for ongoing support and training.

Garnett et al., (2022) conducted a study to explore parent perceptions of a group telepractice communication intervention for children with ASD. The authors found that parents reported positive perceptions of the group telepractice intervention, increased communication skills, social interaction, and confidence in their children's abilities. Parents reported satisfaction with the support and guidance provided by the interventionists, and the opportunity to connect with other parents in similar situations. However, some parents expressed concerns about the limitations of telepractice, such as the lack of in-person interactions and challenges in managing their children's behaviors during the sessions. Smith and Antolovich, (2000) conducted a study to explore parental perceptions of supplemental interventions received by young children with autism in intensive behavior analytic treatment. The authors found that parents reported positive perceptions of supplemental interventions, including improvements in their children's communication skills, social interaction, and adaptive behaviors. Parents also reported increased knowledge and skills in managing their children's behaviors, and satisfaction with the support and guidance provided by the interventionists. However, some parents expressed concerns about the time commitment and the need for ongoing support, as well as the financial burden of accessing supplemental interventions.

Summary of Synthesis

Relationship Between Healthcare Providers' Efforts to Enhance Children's Skills and Parental Satisfaction with Provider Communication

Previous research indicates that there could be a positive relationship between the efforts of healthcare providers to enhance the skills of children, particularly in the context of Autism Spectrum Disorder (ASD) interventions, and the level of parental satisfaction with the communication provided by these providers. Several studies have suggested that interventions targeting children's communication, social interaction skills, and adaptive behaviors, when effectively implemented, tend to lead to increased parental satisfaction with the quality of communication they receive from healthcare providers. Effective and clear communication from providers regarding the progress and development of children with ASD was found to be a likely factor in enhancing overall parental satisfaction communicating with providers.

Existing literature indicates a likely positive association between healthcare providers' endeavors to enhance the skills of children, particularly within the context of Autism Spectrum Disorder (ASD) interventions and heightened parental satisfaction with provider communication. Research findings suggest that interventions targeting the improvement of children's communication, social interaction skills, and adaptive behaviors, when effectively implemented, contribute to increased parental contentment with communication from healthcare providers. Notably, the quality of communication between healthcare providers and parents regarding the progress and development of children with ASD could play a pivotal role in enhancing overall parental satisfaction.

Parental Frustration in Efforts to Access Services and Its Influence on Parental Satisfaction with Communication Among Healthcare Providers

Existing research highlights the potential impact of parental frustration in efforts to access services, such as diagnostic assessments, therapies, and support programs for children with ASD, on parental satisfaction with communication among healthcare providers. Delays, difficulties in navigating the healthcare system, or encountering barriers in accessing services were associated with lower parental satisfaction with their interactions with healthcare providers. This underscores the importance of investigating ways to address parental frustration and improving the accessibility of services as critical factors in optimizing parental satisfaction with communication during ASD interventions.

The research has indicated that parental frustration while attempting to access services, such as diagnostic assessments, therapeutic interventions, and support programs for children with ASD, significantly impacts parental satisfaction with communication among healthcare providers. Various studies underscore the challenges parents face, including delays, difficulties in navigating the healthcare system, and encountering barriers when seeking services, which, in turn, correlate with reduced satisfaction in their interactions with providers. Addressing parental frustration and improving the accessibility of services emerge as pivotal factors for optimizing parental satisfaction levels during the course of ASD interventions.

Relationship Between Parental Communication Satisfaction with Providers, Their Involvement in Children's Skill Development, and Parental Frustration in Accessing Services

Prior studies suggested a complex interplay between these variables. Parents who reported higher levels of communication satisfaction with healthcare providers tended to be more actively involved in their children's skill development. Conversely, parents who faced greater frustration in accessing services often reported lower communication satisfaction and were less engaged in skill development activities for their children with ASD. These findings suggest the need to address parental experiences comprehensively, including communication satisfaction and service accessibility, as crucial for optimizing the outcomes of ASD interventions.

The evidence has unveiled a multifaceted relationship between the variables of interest. Parents who reported higher levels of satisfaction with communication from healthcare providers were more likely to actively engage in their children's skill development. Conversely, parents who encountered greater frustration while attempting to access services often reported lower levels of communication satisfaction, which, in turn, correlated with reduced involvement in skill development activities. These findings emphasize the necessity of comprehensively investigating parental experiences and potential solutions to issues identified, encompassing communication satisfaction and service accessibility, to maximize the effectiveness of ASD interventions.

Summary

Chapter two reviews the literature from a variety of sources including government websites, the databases of the Centers for Disease Control and Prevention (CDC), Google scholar and the Walden University Online Library. Chapter two also reviews the theoretical foundation in detail, the philosophical stance, and the conceptual framework applied in this study. Full details about the theoretical foundation are described in chapter four giving samples of parents' responses to the research questions. Tables are used to provide clear visual descriptions of the findings and data interpretations.

The literature indicates that autism is a healthcare problem that affects families, communities, and the nation, and that the economic costs to provide professional interventions are significantly high. The correlation of the financial spending for these interventions and understanding how effective some parents believe them to be is still greatly unclear (Grahame, et al., 2021). Parental perspectives on early intensive interventions for children with ASD are crucial in shaping the interventions provided and understanding the outcomes of such interventions. Overall, parents report positive perceptions of early intensive interventions, including improvements. However, further research is warranted to explore access to interventions, feasibility of programs, and the unique insights of how parents communicate with healthcare providers in the context of early interventions for children with ASD. This study attempts to offer the results of the communications between parents and providers, working to provide improved access to and successful results in the skills of these children. The association of parents' frustrations with accessibility and effectiveness of interventions and communicating these concerns with attending practitioners is also addressed.

Chapter 3: Research Method

This study identified the perceptions of relationships between parents and healthcare providers working to increase their children's skills and parents' satisfaction with communication among the healthcare providers to affect improved interventions. This study also helps show the association between parents' frustrations to get services being influenced by the satisfaction with communication among children's doctors and schools, childcare provider, or special education. The information found aims to target future research and best practice development to be more effective including family-centered interventions for individuals with ASD.

Research Design and Rationale

This study used a quantitative research design. The data were obtained from public online datasets from the NSCH. This dataset supplies information on the satisfaction of parents concerning communication between them and the healthcare providers attending their autistic children. Data analysis involved descriptive statistics, frequency distribution, and logistic regression to explore the relationships between the variables from the most recent datasets relating to the past 3 years.

Methodology

Sample Population

The population consists of parents of children with ASD who have participated in the NSCH surveys. The sample is parents who have completed the survey questions related to the providers and the programs for their ASD children in the last 3 years (2020–2022). The process includes elimination of missing cases, duplications, and those left as “no response to the survey.” I narrowed from 93,670 cases to 641 with four variables related to my study.

Data Collection

The data collection process involved obtaining access to the publicly available datasets and extracting relevant data for analysis purposes. The data was already anonymized to protect the privacy of the participants. The dataset was pre-processed to ensure consistency and accuracy in the variables used in this study. There are several publicly available datasets that can be used to analyze the relationship between parents concerning communications with the healthcare providers working to increase skills of their children. They can also be used to analyze the association between parents’ frustration to get services for their children and the degree of communication among the healthcare providers.

For this study, the NSCH was used. The NSCH is typically conducted by the U.S. National Center for Health Statistics, part of the CDC. The specific factors captured in the NSCH vary from year to year, as the survey is updated and revised periodically to reflect changes in research priorities and public health needs. The NSCH questionnaire may include factors such as parental beliefs, cultural background, support system, financial factors, parental stress levels, parental attitudes, education level, occupation, socioeconomic status, access to healthcare, health insurance coverage, children’s health status, disability status, and other relevant factors that could potentially influence parents’ participation regarding programs for their autistic children. This dataset also provides information on the physical, behavioral, and emotional health of children in the United

States, including children with special healthcare needs. The NSCH integrates with the National Survey of Children with Special Health Care Needs (NS-CSHCN), a dataset which provides information on the healthcare experiences of families with children with special healthcare needs. The dataset includes information on the use of healthcare services, access to care, and family-centered care (Zuckerman et. al., 2015). The dataset is available at https://www.childhealthdata.org/learn-about-the-ns-cshcn/NS-CSHCN

Data Analysis

The data were analyzed using SPSS for descriptive statistics, frequency distribution, and logistic regression. Descriptive statistics was used to summarize the data, while frequency distribution was used to analyze the distribution of the variables. The logistic regression was used to analyze the dependent and independent variables. For all three research questions, the perceptions of parents concerning the frustration with getting these services and the healthcare provider working to increase skills for their children are the independent variables. Communication with and among the healthcare providers associated with the level of parents' satisfaction are the dependent variables, measured on an ordinal scale from "very satisfied" to "less than very satisfied." The parents also rated the providers on a scale from "never" to "always" in terms of healthcare providers working to enhance children's skills. Pearson Chi-Square test was used for Research Questions 1 and 2, and logistic regression was used for Research Question 3. Duplicates and missing values were removed.

Research Questions

RQ 1: Is there a relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication?

$H_0$1: There is no significant relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication.

H_a1: There is a significant relationship between healthcare providers working to enhance children's skills and parental satisfaction with provider communication.

RQ 2: Is there a significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among healthcare providers?

$H_0$2: There is no significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among healthcare providers.

H_a2: There is a significant difference in parental frustration in efforts to access services and its influence on parental satisfaction with communication among healthcare providers.

RQ 3: Is there a relationship between parental communication satisfaction with providers (dependent), their involvement in children's skill development (independent), and parental frustration in accessing services (independent)?

$H_0$3: There is no significant relationship between parental communication satisfaction with providers (dependent), their involvement in children's skill development (independent), and parental frustration in accessing services (independent).

H_a3: There is a significant relationship between parental communication satisfaction with providers (dependent), their involvement in children's skill development (independent), and parental frustration in accessing services (independent).

Threats to Validity

Internal Validity

Selection Bias

If the sample of parents participating in the study is not representative of the broader population of parents of autistic children, the findings may not be generalizable. For example, if the study only includes parents who have no access to intervention programs or those who are not willing to participate, it may not capture the satisfaction with communicating among healthcare providers because other parents do not have access to programs or choose not to participate. This would lead to selection bias.

Social Desirability Bias

Parents may provide socially desirable responses when reporting their perceptions, experiences, and beliefs about intervention programs for their autistic children. They may feel pressure to report positive views about the effectiveness of intervention programs or the accessibility of programs, which could result in bias in the data. This bias may affect the internal validity of the study if it leads to inaccurate reporting of actual perceptions and experiences.

Recall Bias

Parents may have had difficulty accurately recalling their perceptions and experiences related to intervention programs for their autistic children, leading to recall bias. For example, they may have had difficulty recalling specific details about their past experiences with intervention programs, which could affect the accuracy of their responses and the validity of the findings.

Confounding Variables

There may be other factors that influence parents' perceptions and experiences regarding intervention programs for their autistic children, which are not accounted for in the study. These confounding variables, such as sociodemographic factors, cultural background, and other contextual factors, may affect the validity of the study findings by introducing potential confounding effects that could impact the observed relationships between variables.

Measurement Bias

The use of Likert scale responses to measure parents' satisfaction with communication among the healthcare providers and the frustration experienced getting services that influence satisfaction with the communication with the healthcare providers. It may have introduced measurement bias if the scale does not accurately capture the nuances of parents' satisfaction with the communication among healthcare providers. Interpreting the Likert scale responses may also vary among individuals, leading to measurement bias. Additionally, the questionnaire items used to capture factors influencing parents' satisfaction with the communication among healthcare providers may not fully capture the complexity and diversity of factors that could influence their views, leading to measurement limitations and potential biases in the findings.

External Validity

The study findings may not be generalizable to a broader population of parents of autistic children if the sample used in the study is not representative of the target population. For example, if the study includes only parents who have access to intervention programs or those who are willing to participate, it may not accurately represent the experiences and perceptions of parents who do not have access to such programs or choose not to participate. The findings of the study may also not be applicable to other contexts or settings, such as different geographic locations, cultural backgrounds, or time periods. The factors that influence parents' satisfaction with the intervention programs may vary in different contexts, which could limit the external validity of the study findings.

Other issues that may impacted the external validity and applicability of the study findings to real-world settings beyond the scope of the study include the use of Likert scale responses and questionnaire items to measure perceptions, experiences, and factors may introduce measurement limitations that could impact the external validity of the findings. The measurement instruments used in the study may not fully capture the complexity and diversity of factors that could influence parents' views, leading to potential measurement bias and limitations in generalizing the findings. The study may not fully capture the real-world experiences of parents regarding intervention programs for their autistic children, which could impact the ecological validity of the findings. Factors such as parental beliefs, cultural background, and support systems may interact with the intervention programs in complex ways that are not fully reflected in the study design or data collection, which could limit the external validity of the findings. The findings of the study may only be valid for a specific time period, as factors influencing parents' perceptions of intervention programs may change over time. For example, changes in societal attitudes, policies, or availability of resources for intervention could impact parents' views, the findings of the study may not remain valid over an extended period.

Ethical Considerations

The study adhered to ethical guidelines such as confidentiality of participants' personal information. The study obtained the approval from Walden University IRB before conducting the study (approval no. 04-17-20-0500154). As I used a secondary dataset, I ensured that the data obtained from the NSCH were used in a valid and reliable manner, including conducting appropriate data cleaning, checking for data quality, and addressing any limitations or biases in the dataset. I ensured that the original data collection process followed appropriate informed consent procedures if needed and adhere to the privacy and confidentiality regulations and guidelines set out by Walden University and the NSCH to protect the privacy and rights of the participants.

Summary

This chapter outlined the population sample, methods, and analysis plans for the study. The data analysis plan for all research questions involved the use of both descriptive statistics (e.g., mean, standard deviation, frequency distribution) and inferential statistics (e.g., chi-square test) to examine the relationships between the variables of interest. I considered these potential threats to study validity in the research design, data collection, and data analysis phases to ensure the validity and reliability of the findings. I adhered to relevant laws, regulations, and ethical guidelines to protect participants' rights, privacy, and data integrity. The study contributes to the existing literature on the perception and experiences of parents regarding intervention programs for their autistic children. The findings may help inform policymakers and healthcare professionals to improve programs to better meet needs of children with autism health improvements. This includes the importance of communicating with parents and providers to measure the level of satisfaction with these interventions. Providers need to recognize that they must communicate and collaborate with each other to produce interventions that lessen the level of frustrations parents have accessing and navigating the healthcare system.

Chapter 4: Results

This study was conducted to investigate how parents of autistic children perceive their satisfaction with communication with and among healthcare providers, aligning with the research questions. The results address the gap in the literature regarding parental perspectives on professional therapies, specifically focusing on communication satisfaction and its relationship to healthcare providers' efforts to enhance children's skills (RQ 1). Furthermore, I explored whether there is a significant difference in parental frustration with accessing and using services as influenced by their satisfaction with communication among healthcare providers to result in improved services (RQ 2). Additionally, I examined the relationships between parental communication satisfaction with providers, their involvement in children's skill developments, and parental frustration in accessing and using services (RQ 3). Utilizing data from the NSCH) website, this research can serve as a resource for parents seeking services for their autistic children, bridging the existing knowledge gap. It also contributes to positive social change by improving provider approaches, fostering cultural sensitivity, and enhancing the healthcare reimbursement system for delivering professional and best practice approaches.

Setting of the Research

The design of this study is quantitative research. The research setting is the online publicly available datasets from the NSCH. These datasets provide information of the perceptions and experiences of parents concerning intervention programs of communication and frustration with healthcare providers. The population consisted of parents of children diagnosed with autism spectrum disorder who participated in the NSCH surveys. This is limited to parents who have completed the survey questions related to the providers and the intervention programs for their children in the last 4 years (2020–2022).

The data are anonymized to protect the privacy of the participants. It also does not include personal demographic information such as age, sex, or socioeconomic status. The dataset is pre-processed to ensure consistency and accuracy in the variables used in the study. I could have used several other public datasets; however, I chose the NSCH.

Data Collection

The data collection involved downloading publicly available online datasets and extracting relevant cases for the analysis. The data are already anonymized to protect the privacy of the participants. No personal demographic descriptions of the participants are included. The dataset is pre-processed to ensure consistency and accuracy of the variables used in the study. The data collection for this study came from the NSCH. The NSCH items may include factors such as parental beliefs, cultural backgrounds, support systems, parental stress levels, parental attitudes, education levels, occupations, access to healthcare, health insurance coverages, children’s health status, disability status, and other relevant factors that could potentially influence parents’ perceptions and experiences regarding intervention programs for their autistic children. These factors are important to the responses to my research questions.

Data Analysis

The data were analyzed using the SPSS to find the descriptive statistics, binary logistic regressions, inferential statistics, and frequency distributions. Descriptive statistics were used to summarize the data for finding the means and standard deviations of the responses. The logistic regressions confirmed the percentage of accuracy of correctly predicting the results of the relationships between the dependent and independent variables to be significant. Inferential statistics tested the research question hypotheses using chi-square tests. The frequency distributions show the number of instances in which variables take each of their possible values.

For RQ 1, the dependent variable, parents' satisfaction with the communication with healthcare providers, was analyzed with SPSS descriptive statistics. This provided percentages of the parents' responses using the scale of 1 = *very satisfied*, 2 = *somewhat satisfied*, = *somewhat dissatisfied* or *very dissatisfied*, and responses of "yes," "no," or "do not know." For the independent variable, healthcare providers working to gain children's skills, the same previous response scales of the dependent variable was used.

For RQ 2, the dependent variable, parents' satisfaction with communication with providers, was analyzed with SPSS descriptive statistics. This is a breakdown of percentages of the parents' responses using the scale of 1 = *never*, 2. = *sometimes*, 3 = *usually*, and 4 = always frustrated in efforts to get services. the responses of "very satisfied" and "less than very satisfied" were used for parents' satisfaction with the communication between themselves and the providers. Table 1 shows the percentage breakdowns of the participants' responses to the public dataset surveys.

Table 1

Likert Scales for Research Questions 1 and 2

Research question and variable	Scale			
RQ 1 Dependent Variable: Parents Satisfaction with communication with healthcare providers.		**Yes**	No	Don't know
	Very satisfied	**66.7%**	49.4%	49.0%
	Somewhat satisfied	28.5%	13.2%	38.8%
	Somewhat dissatisfied or very dissatisfied	5.9%	10.0%	13.0%
	Totals from 641	513	79	49
RQ1 Independent Variable: Healthcare providers working to increase child's skills				
	Very satisfied	**84.4%**	49.4%	49.0%
	Somewhat satisfied	76.8%	31.6%	38.8%
	Somewhat dissatisfied or very dissatisfied	54.3%	19.0%	12.2%
	Totals from 641	513	79	49
RQ 2 Dependent Variable: Parents Satisfaction with communication among healthcare providers.		**Very satisfied**	Less than very satisfied	Total from 641
	Never	**60.6%**	25.8%	321
	Sometimes	34.7%	51.0%	254
	Usually	3.6%	16.5%	48
	Always	1.1%	6.7%	18
RQ 2 Independent Variable: Parents frustrated in efforts to get services for their children.				
	Never	**84.4%**	15.6%	321
	Sometimes	61.0%	39.0%	254
	Usually	33.3%	66.7%	48
	Always	27.8%	72.2%	18

Results

Having acquired the data from the NSCH website (https://www.childhealthdata.org/learn-about-the-nsch/NSCH), a total of 93,669 survey responses were obtained from parents who participated in the surveys, completing a comprehensive questionnaire consisting of 568 health-related items. These items, each with identifying codes, were reviewed resulting in the selection of four pertinent variables aligned with the research questions. The selected variables include: (a) healthcare providers' engagement in enhancing children's skills (coded as GAINSKILLS), (b) parental satisfaction with communication among healthcare providers (coded as DrCommR_21), (c) parental frustration levels in their endeavors to secure services for their children (coded as C4Q04), and (d) parental satisfaction with communication with providers (coded as SatOthComm_21). The research questions guiding this investigation are as follows:

- RQ 1: Does a statistically significant relationship exist between healthcare providers' efforts to improve children's skills (GAINSKILLS) and parental satisfaction with provider communication (DrCommR_21)?
- RQ 2: Is there a statistically significant difference in parental frustration levels with accessing services (C4Q04) that impacts their satisfaction with communication among healthcare providers (SatComm_21)?
- RQ 3: Is there a statistically significant relationship between parental communication satisfaction with providers (SatOthComm_21) while they are

involved in fostering children’s skill development (GAINSKILLS) and parental frustrations in obtaining services for their children (C4Q04)?

The subsequent pages will present tables displaying the SPSS results of the analyzed data, accompanied by narratives elucidating the significance of the relevant values pertinent to this study.

Table 2 shows that RQ 1 has a mean of 1.28 and standard deviation of 0.594 (rounded to 0.6) for the independent variable. The deviation from the mean indicates that the difference between the respondents to the same questions is less than one. Therefore, RQ 1 strongly disagrees with the null hypothesis and rejects the statement that there is no relationship between healthcare providers working to increase children’s skills and parents’ satisfaction with communicating with the providers. For the dependent variable in RQ 1, the mean is 1.44 and the standard deviation 0.625 (rounded to 0.6), which is a similar standard deviation value to the previous independent variable, indicating that there is a statistically significant relationship between the variables and therefore rejecting the null hypothesis and accepting the alternative hypothesis. Comparing the independent and dependent variables in RQ 1, the difference between the two is below the minimum of one deviation, indicating that the null hypothesis is rejected for RQ 1 altogether.

For RQ 2, the mean for the independent variable is 1.63 with a standard deviation of 0.743 (.7), which is a difference between responses of less than one. This low difference therefore rejects the null hypothesis. For the dependent variable in RQ 2, the mean is 1.30 and the standard deviation is 0.460 (rounded to .5) which is under the minimum deviation, indicating a significant relationship between the variables and rejecting the null hypothesis. Comparing the independent and dependent variables in RQ 2, the difference between the two, it is again below one deviation from the mean making a strong statistical relationship between the variables and therefore rejecting the null hypothesis for RQ 2.

Table 2

Descriptive Statistics that Characterize the Sample

	N	Minimum	Maximum	Mean	SD
RQ 1					
IV: Providers working with Child to Gain Skills.	641	1	3	1.28	.594
DV: Parents Satisfaction with communication with healthcare providers	641	1	3	1.44	.625
Valid N (listwise)	641				
RQ 2					
DV: Parents Satisfaction with communication among healthcare providers.	641	1	2	1.30	
IV: Parents Frustrated in Efforts to Get Service	641	1	4	1.63	
Valid N (listwise)	641				

As shown in Table 3, RQ1 shows the frequency of how many parents responded to the independent variable of healthcare providers working with children to gain skills. The number of parents responding “yes” was 513 which is 80% of 641 cases. For the dependent variable of RQ1, which is “Parents’ satisfaction with communications with children’s healthcare providers,” a higher frequency of parents responded that they were “very satisfied” with the communication with providers working to increase their children’s skills. The RQ2 independent variable frequency, which is “Parents’ frustration in efforts to get services" shows 50.1% or 321 parents responded that they have "never been frustrated" with the providers. For the dependent variable of RQ2, the frequency of parents' satisfaction with communication among providers was 69.7% or 447 parents who said they were "very satisfied." The high percentages and the high numbers of parents responding to the surveys indicated the validity between the variables in both RQs as being satisfied with the communication with and among the healthcare providers working with their autistic children. At the same time the parents reported being less frustrated in efforts to get services for their children.

Table 3

Frequencies and Percentages

		Frequency	Percent
Research Question 1			
Healthcare providers working to increase children's skills	Yes	513	80.0
	No	79	12.3
	Don't know	49	7.6
	Total	641	100.0
Parents' satisfaction with communication with healthcare providers	Very satisfied	405	63.2
	Somewhat satisfied	190	29.6
	Somewhat dissatisfied or very dissatisfied	46	7.2
	Total	641	100.0
Research Question 2			
Parents frustrated in efforts to get services for their children	Never	321	50.1
	Sometimes	254	39.6
	Usually	48	7.5
	Always	18	2.8
	Total	641	100.0
Parents satisfaction with communication among healthcare providers	Very satisfied	447	69.7
	Less than very satisfied	194	30.3
	Total	641	100.0

Inferential statistics uses the Pearson Chi-Square Test to measure a standard of the p-value of $p < 0.05$ to measure the validity of a null hypothesis and the statistical significance between the variables. RQ1 has values of X2(4 degrees of freedom) = 27.567, resulting in $p < 0.001$. According to this test since the p-value for RQ1 is <.001 (which is below $p<0.05$), the null hypothesis is rejected because $0.001<0.05$. For RQ2, the values are (X2(3) = 87.009, resulting in a $p < 0.001$. Here the p-value is also below the standard of p being <0.05, rejecting the null hypothesis as well. This confirms that there is a significant statistical relationship between the dependent and independent variables in both questions.

Table 4

Inferential Statistics

	Value	df	Asymptotic Significance (2-sided) variables
Research question 1			
Pearson Chi-Square	27.567[a]	4	<.001
Likelihood Ratio	23.104	4	<.001
Linear-by-Linear Association	17.340	1	<.001
N of Valid Cases	641		
Research question 2			
Pearson Chi-Square	87.009[a]	3	<.001
Likelihood Ratio	86.227 3		<.001
Linear-by-Linear Association	85.009 1		<.001
N of Valid Cases	641		

This symmetric measure shows the strength of the relationship or association between the variables using Cramer’s V value between 0 - 1 where zero indicates no association and one, perfect association between the nominal variables. The Cramer’s value for RQ1 is .147. This number is less than 1 but not zero, representing a moderate strength of the relationship between the two variables. The value is .15 (rounded) between the dependent and independent variables in RQ1. The symmetric measure shows the strength of the relationship or association between the variables using Cramer's V value. The Cramer's value for RQ2 is .369 (.4 rounded) which is <1 indicating a stronger statistical association between the two dependent and independent variables.

The crosstabulation tables SPSS report shows how correlations change from one group of variables to another to understand the categorical data analysis. It helps finding patterns, trends, and probabilities within mutually exclusive groups. This report is important to pivot to the HBM theoretical framework categories related to grouping parents' perceptions about health behaviors. Each group response is matched with the HBM: 1. the risk susceptibility, 2. how severe parents perceive the need for services, 3. the perceived health benefits from the interventions, 4. the barriers for getting help, 5. the self-efficacy of the success from getting help, and 6. cues to action to decide interventions that includes their cultural values (Boskey, 2022).

In Table 5, RQ1 the crosstabulation between the independent and dependent variables was used to find the perceptions based on parents' responses to the survey questionnaire and how they can be applied to the HBM. For RQ1, the actual count of parents saying "yes" to being "very satisfied" was 342 compared to the statistically expected count of 324 out of 513 parents. This indicates that the group of parents responding "yes" are "very satisfied", and perceived that the providers interventions satisfied them. The HBM matches the parents perspectives of benefits from the interventions. Parents responding "no" to being "very satisfied" were 39, which is below the expected count of 50 from a total of 79 parents. The “don’t know” responses were 24 parents and the SPSS expected count was 31 from the total of 49 parents. The RQ1 crosstabulation indicates a strong relationship between providers working with children to gain skills (independent) and parents’ satisfaction with communication with providers (dependent) as being satisfied. This conclusion is based on the number of “yes” responses and being “very satisfied”. This means that the number of parents reporting “yes” were 342 which is greater than the expected number of 324 from the total count of 513 respondents which is 66.7% approval of the providers in gaining skills for their children and 84.4% satisfaction with the communication with the providers.

Table 5

Crosstabulation of Independent and Dependent Variables for RQ 1

			Dependent variable: Parents satisfaction with communication with healthcare providers			
Independent Variable			Very satisfied	Somewhat satisfied	Somewhat dissatisfied or very dissatisfied	Total
Providers working with Children to Gain Skills.	Yes	Count	342	146	25	513
		Expected Count	324.1	152.1	36.8	513.0
		% within Providers working with Children to Gain Skills.	66.7%	28.5%	4.9%	100.0%
		% within Parents satisfaction with communication among healthcare providers	84.4%	76.8%	54.3%	80.0%
		% of Total	53.4%	22.8%	3.9%	80.0%
	No	Count	39	25	15	79
		Expected Count	49.9	23.4	5.7	79.0
		% within Providers working with Children to Gain Skills.	49.4%	31.6%	19.0%	100.0%
		% within Parents satisfaction with communication among healthcare providers.	9.6%	13.2%	32.6%	12.3%
		% of Total	6.1%	3.9%	2.3%	12.3%
	Don’t Know	Count	24	19	6	49
		Expected Count	31.0	14.5	3.5	49.0
		% within Providers working with Children to Gain Skills.	49.0%	38.8%	12.2%	100.0%
		% within Parents satisfaction with communication among healthcare providers	5.9%	10.0%	13.0%	7.6%
		% of Total	3.7%	3.0%	0.9%	7.6%
Total		Count	405	190	46	641
		Expected Count	405.0	190.0	46.0	641.0
		% within Providers working with Children to Gain Skills.	63.2%	29.6%	7.2%	100.0%
		% within Satisfaction with communication among healthcare providers	100.0%	100.0%	100.0%	100.0%
		% of Total	63.2%	29.6%	7.2%	100.0%

The crosstabulation in Table 6 for RQ 2 indicates a strong association between parents being frustrated in efforts to get services for their children (independent variable) and parents' satisfaction with communication among children's providers (dependent variable). The result of the survey is 271 parents responding that they are "never frustrated" and "very satisfied" with communication among the providers. The expected SPSS statistical count is 224 which is much less that the actual 271 count from the toral of 321. Parents responses of being "sometimes frustrated" were 155 and SPSS expected count was 177 from the total count of 254. Parents reported being "usually frustrated" was 16 from an expected count of 34. The "always frustrated" count was five and the expected count 13 parents out of a total of 18 parents responding to this survey question.

Table 6

Crosstabulation of Independent and Dependent Variables for RQ 2

			Dependent variable: Parents Satisfaction with communication among healthcare providers.		
			Very satisfied	Less than very satisfied	Total
Independent variable: Parents frustrated in Efforts to Get Services	Never	Count	271	50	321
		Expected Count	223.8	97.0	321.0
		% within Parents frustrated in Efforts to Get Services	84.4%	15.6%	100.0%
		% within Parents satisfaction with communication among healthcare providers.	60.6%	25.8%	50.1%
		% of Total	42.3%	7.8%	50.1%
	Sometimes	Count	155	99	254
		Expected Count	177.1	76.9	254.0
		% within Parents frustrated in Efforts to Get Services	61.0%	39.0%	100.0%
		% within Parents satisfaction with communication among healthcare providers.	34.7%	51.0%	39.6%
		% of Total	24.2%	15.4%	39.6%
	Usually	Count	16	32	48
		Expected Count	33.5	14.5	48.0
		% within Parents frustrated in Efforts to Get Services.	33.3%	66.7%	100.0%
		% within Parents satisfaction with communication among healthcare providers.	3.6%	16.5%	7.5%
		% of Total	2.5%	5.0%	7.5%
	Always	Count	5	13	18
		Expected Count	12.6	5.4	18.0
		% within Parents frustrated in Efforts to Get Services.	27.8%	72.2%	100.0%
		% with Parents satisfaction with communication among healthcare providers.	1.1%	6.7%	2.8%
		% of Total	0.8%	2.0%	2.8%
Total		Count	447	194	641
		Expected Count	447.0	194.0	641.0
		% within Parents frustrated in Efforts to Get Services	69.7%	30.3%	100.0%
		% with Parents satisfaction with communication among healthcare providers.	100.0%	100.0%	100.0%
		% of Total	69.7%	30.3%	100.0%

The binary logistic regression for the three variables in RQ 3 includes one dependent variable (parents' satisfaction with communication among providers) and two independent variables (providers working with children to gain skills and frustrated parents in efforts to get services). The total number of 641 cases is 100% of the regression classification. I used the Nagelkerke R Square, which is referred to as Pseudo R Square and is more relevant to my study. It is a method of calculating and explaining the variation with lower values than a multiple regression. The model shows 18.7% (.187) of the variation in the dependent variable of parents' communication satisfaction among the healthcare providers variable as it is explained by the two independent variables (Parents frustrated in efforts to get services and Providers working with children to gain skills). The Hosmer-Lemeshow Test was used to determine how well the logistic regression fits. This Hosmer-Lemeshow test shows a significance value 0.985 which is greater than 0.05, so it is not significant. This means that the model is not a poor fit but is strong.

The assumption used for the logistic regression for research question three was that there are two independent continuous nominal variables with three-point scales, 1. "Never", 2. "Sometimes", and 3. "Usually" and additional responses of "Yes", "No", and "Do not know". Logistic regression was used in RQ 3 to assert the effect of parents being frustrated in efforts to get services and providers working with children to gain skills, and the parents being satisfied with the communication among healthcare providers. The logistic regression model was statistically significant between the two independent variables with a Chi-Square test X2 (4) of 27.567, the value resulting is .000 making the p-value less than 0.05 ($p < 0.05$), so these results reject the null hypnosis.

The conclusion for RQ 1 is that there is a statistically significant relationship between healthcare providers working to increase children's skills and the parents' satisfaction with communication with healthcare providers. The same results for RQ2 are that there is a statistically significant difference between parents frustrated in efforts to get services for their children and parents' satisfaction with communication among healthcare providers. The communication satisfaction difference between RQ1 and RQ2 is that the first question relates directly to the communication between the healthcare providers and the parents. The second question refers to the communication among healthcare providers, and parent's frustration levels with how that communication results in parents' satisfaction with receiving services. Of the total of 641 parents, 84.% said they were "never frustrated" with the communication among the providers. Additionally, 61.0% of the parents said that they are "sometimes" frustrated with communication among the healthcare providers, 33.3% of parents said they were "usually frustrated", and 27.8% said that they were "always frustrated". So, the levels of parents being frustrated with the communication they see among/between their children's providers was lower which influenced the satisfaction of getting services for their children.

RQ 3 includes the two independent variables in the equation table with the significance values which connect to the rows of parents frustrated to get services for their children. The finding of the p-value is 0.00 for the row, meaning the parents are "never frustrated". In the row of "sometimes frustrated" the p-value is .009. Both responses are below 0.05 making a significant relationship. The "usually" frustrated p-value is .664, making this value not significant. For the dependent variable, “parents’ satisfaction with communication among healthcare providers,” 92.6% of the parents said they were “very satisfied” with 73.3% correctly predicted in the SPSS classification table.

The logistic regression for RQ 3 showed that the correct predicted percentage is 73.3% of the dependent variable of “Parents’ satisfaction with communication among healthcare providers,” which is statistically significant correlated. The sensitivity regression shows the percentage of cases that had the observed characteristics of “very satisfied” at 93.6%, which were statistically close to being correctly predicted by the SPSS model and making it a significant true positive. It was also very closely correctly predicted statistically as not having the observed characteristics making it a significantly true negative with 28.9% accuracy. The positive predictive value is the percentage of correctly predicted cases with the observed characteristic compared to the total number of cases predicted and having the characteristic. The percentage of the predicted value of 75% as being “very satisfied” were statistically correct. The significance is a negative predictive value of correctly predicted cases without the observed characteristic compared to the total number of cases predicted as not having the characteristic. The percentage is 63% of all cases statistically predicted being “less than satisfied” were also significantly correctly predicted. Therefore, for parents who were never frustrated in efforts to get services, if their levels of frustration increased by one unit, then their satisfaction with communication with all providers would decrease by 206 units. Conversely, if the frustration went down their satisfaction with communication went up. Similarly, for parents who were “sometimes” frustrated, if their level of frustration increased by one unit their satisfaction with communication with all providers would decrease by 1.4 units. This would indicate a deeper level of dissatisfaction with communication among providers if they were “never frustrated” with getting services as opposed to those parents who were “sometimes” frustrated with getting services.

Table 7 shows the predicted probability of the dependent variable having a significant relationship when the independent is kept constant. This means when the parents’ frustration increased their satisfaction level decreased.

Table 7

SPSS Logistic Regression for RQ 3

Variables in the Equation								95% CI for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Frustrated In Efforts to Get Services.			74.710	3	.000			
	Frustrated In Efforts to Get Services (1): Never	2.656	.551	23.250	1	.000	.070	.024	.207
	Frustrated In Efforts to Get Services (2): Sometimes	1.428	.544	6.884	1	.009	.240	.083	.697
	Frustrated In Efforts to Get Services (3): Usually	.266	.611	.189	1	.664	.767	.231	2.539
	Providers working with Children to Gain Skills.			4.680	2	.096			
	Providers working with Children to Gain Skills.(1): Yes	.419	.272	2.380	1	.123	1.520	.893	2.588
	Providers working with Children to Gain Skills (2): No	.559	.329	2.879	1	.090	1.749	.917	3.336
	Constant	.869	.530	2.689	1	.101	2.385		

Summary

Chapter 4 reports the results of the statistical relationship between the independent and dependent variables. The chapter briefly describes the setting of the research which is the website of the National Survey of Children Health (NSCH) using the population of parents responding to the surveys about their children with autism. The data collection was extracted information from the website of items or cases relevant to this study. The data analysis was conducted using the SPSS statistical tool to obtain the descriptive statistics, binary logistic regression, inferential statistics, and frequency distribution. Tables are presented to statistically summarize findings of the independent and dependent variables in the three research questions.

Descriptive statistics summarized the means and standard deviations to measure the relation of the variables where the standard deviation in this case is close to the mean. The binary logistic regression confirms that there is significant relationship between the dependent and independent variables values that were correctly predicted. Inferential statistics tested the research question hypothesis using the Chi-Square tests. The frequency distributions showed the number of instances in which the variable values occurred in the dataset for each possible value observed.

A crosstabulation table was obtained using SPSS to identify the responses from the parents participating in the surveys. This was important so I could pivot and apply the Health Belief Model (HBM) to determine the degree of perceptions of the susceptibility and levels of healthcare decision-making categories that these parents viewed the healthcare interventions they received as being necessary, accessible, and helpful for their children. The chapter concluded with statistical validity checks of the significance of the relationships among the variables in the research questions, and of the predictions generated by the SPSS software.

Chapter 5: Discussion, Conclusions, and Recommendations

This study was designed to discover if relationships exist between independent and dependent variables in three research questions. The related variables were studied quantitatively using statistical SPSS software to present the levels of parents' satisfaction with communication with healthcare providers and their frustration in getting services for their children and achieving effective changes in interventions as a result of communication among healthcare providers. The study also verified whether a significant relationship exists between the variables.

Interpretation of the Findings

A Dialogue with the Literature

This study is needed because the literature is minimal in describing how parents perceive the communication between themselves and healthcare providers as significant stakeholders. This study confirms there is a positive statistical relationship between parents' satisfaction with communication between their healthcare providers working with their autistic children and a decreased level of frustration in the efforts of getting services. Most literature provides information and qualitative data from other stakeholders such as the providers' views, the healthcare institutions' views, and government information. For example, Yingling et al. (2017) discussed how parents perceive challenges in getting treatment for their children such as parents' demographic characteristics, parents' social support, and the behaviors of their children. Thus, there is a need for communicating with families having difficulty in risk-taking, a susceptibility category in the HBM. Some parents do not look for interventions to treat autism within their families. This study adds to existing literature by directly showing some variables that parents perceive as barriers limiting engagement in health promoting decisions. This is also a category reference to the HBM.

The literature also supports the current study in quantifying perceptions of satisfaction and frustration communicating with the providers, which is important for showing parents' perceptions of access and improvements in getting services (Chlebowski et al., 2018). This study indicates that communication with and among healthcare providers is critical relating with parents of children with ASD. Based on previous literature, it is much harder for parents to find adequate interventions for their children if they do not understand the condition extent (Mire et al., 2015). Parents may perceive this as being at risk of the condition susceptibility. Parents may also need cues to action (HBM) to trigger decisions to promote healthy behaviors (Shoumitro et al., 2020). My study further identified how parents perceive communication issues as being important and effective factors in understanding their children's conditions and what they may need to know to do at home. From the institution's view, it is recommended that children need to be identified for autism during the first 2 years of their lives (Pearson & Meadan, 2018). However, some parents may not perceive the condition as needing early intervention and wait to see if the condition improved. In my study, parents perceived that their children do need the services.

Further, families with children with autism must be supported in specific areas for family communications, instructional programs, inclusive interactional family programs, and positive behavior support systems that reward the parents and children (National

Academics of Science, 2018). There is a need for collaboration between teachers and parents, ad there are limitations in communicating and problem-solving inconsistencies between parents' and teachers' approaches. This may be perceived by the parents as self-efficacy and competence they can achieve the goals without help.

Theory Throughout

The theoretical framework used for this study is the HBM. This framework uses six principles to understand how people make sense of their health and how they make decisions for selecting solutions for their health needs. The first principle is how susceptible they perceive their children with autism to be to these health conditions. Using this concept of susceptibility, I can interpret that the parents' responses to RQ 1 may reflect their perceptions that the susceptibility of their children having autism exists For example, the percentage of parents' responses that they are "very satisfied with healthcare providers working with their children to gain skills" is 80% (513 said "yes") and 63.2% (405 said they were "very satisfied") for RQ 1. For the perception of severity of autism in their children, I can interpret from RQ 1 that the parents' responses with being "somewhat satisfied" with communication with the healthcare providers was 29.6% (only 190 parents), which is minimal. Parents' perceptions of barriers are indicated in RQ1 by their responses that they were "somewhat dissatisfied or very dissatisfied" with communication with healthcare providers which was 7.2% (46 parents), which is also very minimal. Parents' perceptions of barriers was indicated in RQ 1 by "don't know" responses of whether they know if the providers are working with their children to gain skills, which was 7.6% of the respondents (49 said they don't know).

Comparing the HBM to this study's results using the crosstabulation report for the RQ 2, I interpreted a perceived susceptibility from the parents recognizing that their children have autism and needing help. This is reflected in their responses of being "very satisfied" with the communication among healthcare providers, which was 69.7% (447 parents) of the total 641 respondents. Similarly, for the majority of parents' levels of frustration their responses of "never" frustrated was 50.1% (321 parents) of the 641 total respondents. The perceived benefits from healthcare interventions for their autistic children is reflected in the parents' responses of being "very satisfied" with the communication among providers which was 69.7% (447 respondents). Responses of "sometimes" frustrated in efforts to get services for their children were 39.6% (254 parents) of the total 641. This indicates a positive relationship within the variables.

The perceived severity of the autism condition and receiving interventions, the parents' responses "less than very satisfied" with the communication among providers was 30.3% (194 parents). The responses of parents being "usually" frustrated was 7.5% (48 parents). The perceived barriers from communication concerns are reflected in the responses of parents "always" frustrated in efforts to get services for their children, with 2.8% (18 parents).

The HBM in areas of parents' beliefs of benefiting from interventions and feelings of self-efficacy are reflected in satisfaction with the communication between the providers and themselves. The parents responding "no" or "do not know" reflects barriers communication between providers and themselves. Their responses were "yes," "no," and "do not know" to categories of "very satisfied," "somewhat satisfied," and "somewhat dissatisfied or very dissatisfied" for all four variables. The HBM thus helped to interpret the communication between the providers' and themselves.

Limitations

The use of secondary datasets was extensive and finding cases reflecting my research questions were minimal. I reviewed all 568 cases from the datasets of all 93,669 participating parents. I looked for topics or cases that reflected the dependent and independent variables that are meaningful to my study finding four topics with 641 parent responses relating and connecting my research plans. Using the codebook page by page, I identified four codes that responded to the RQs 1, 2, and 3. The first code I used for the nominal independent variable saying that doctors (healthcare providers) worked with children to gain skills to manage health. For the nominal dependent variable, I used parents' satisfaction with providers' communication. For RQ 2, I used the ordinal code and independent variable "parents frustrated in efforts to get services for their children." The last topic was the independent variable and ordinal to associate "parents' satisfaction with communication among healthcare providers" and the level of "parents' frustrations in efforts to get services for their children." RQ 2 gauged the frustrations and communications between parents and the providers. This is a limitation because it did not give examples of parents' overall frustrations but only provided responses of "never" frustrated, "sometimes," "usually," or parents "always" frustrated.

Another limitation was relying on using the SPSS tool and getting multiple tutoring sessions me. This was the first time I became aware of the software and learning how to use it to make the statistical reports from variables I selected in addition to the pressure of working on my dissertation from scratch. The entire process of completing my dissertation was learning new things, requiring critical thinking, time, and dedication.

Despite these limitations, this study provided an understanding of how parents rate communication between themselves and among healthcare providers working with children to gain skills. The results also review the levels of frustration parents perceive in efforts to get services for their children. The study provides quantitative insights regarding parents' perceptions of communication effectiveness and their ability to receive interventions based on their responses to very personal and sensitive surveys that involved their children with autism and the providers working to improve skills. These surveys were sent out to all parents in the United States during the Corona Virus pandemic who had children with health conditions. These surveys lack personal demographic information or whether the parents are responding to present healthcare providers' communications and frustrations or to those that occurred sometime in the past.

Recommendations for Future Research

A recommendation for future research in these same topics would be mixed methods of qualitative and quantitative surveys with interviewing the parents. Communication is personal and is a problem throughout the healthcare system and within people in general. Any future research should separate the satisfaction communication and how parents rate the providers as indicated by improvements in their autistic children's skills. Existing literature lacks this type of research specific information of children's improvements from the parents' perspectives. The cases in my study did not indicate the children’s progress but instead it surveyed the communication satisfaction between parents and the providers. My study mainly concentrated on the level of satisfaction with the communication between healthcare providers working with children to increase skills and the level of frustration the parents reported in their efforts to seek services for their children. Findings in my study provided positive relationships between the three research questions. This can stimulate more research in this matter to promote statistical information to a fast-growing population of families living with autism.

Implications

This study suggests that the nature of this research is important to include the perceptions parents have of children with disabilities and that it is not a linear effect but rather changing and an ongoing one. The results of this quantitative study greatly contribute to positive improvements in providers’ and parents’ communications about interventions of children with autism. The healthcare industry that renders professional interventions to these children with autism is expensive and the need is rapidly growing. Most of the interventions are paid for with public money and have few specific requirements other than the providers needing to be licensed professionals with a university degree. The relevance of this study is that it recognizes that the public as well as the professional institutions such as universities can benefit from these research findings by adjusting their curriculums. Scholarly institutions should emphasize the importance of communication of their graduate professionals when communicating with their patients. Teaching these providers should include tailoring to parents to use more sensitivity when delivering best practices to their patients and with their colleagues in the healthcare system to affect improvements in their interventions.

The laws that regulate funding for this area of healthcare might benefit from this study as it reports positively that communication with and among parent stakeholders and providers is seen as being mostly very effective. This is relevant as maintaining or increasing funding may be based on these parents' satisfaction reports as main stakeholders having direct contact with the healthcare providers working with their children. The research can also contribute to existing healthcare policies affecting them to improve and to make meaningful changes. Additionally, this research may enlighten peer parents of the quality of interventions that emphasizes the importance of communication between and among parents and providers serving as a resource for other parents seeking help from the autism intervention industry.

Conclusion

This study begins to address how parents of autistic children deal with the healthcare system delivering services. There is a gap between parents' and healthcare providers' communications. Individual providers, individual parents, laws that regulate intervention practices, and curriculum in academic instruction of future professionals are crucial in providing effective communication interventions. Children with disabilities and special education children have an outgoing need for professional interventions. Communication with and among parents and providers is extremely important to keep revising for the welfare of these children with autism. Providers' actions do not always have the interests of children as the profession can be lucrative for financial gains.

The literature is insufficient regarding how the therapies rendered by licensed providers working with children are measured and evaluated as being successful or effective. My study found statistically positive parent perceptions regarding how communication between providers and themselves are. The research questions suggested that parents were satisfied with communication with and among providers. The logistic regression generated by SPSS confirmed 73.3% positive relationship of parents' satisfaction communicating with and among healthcare providers working to increase skills in their children and 84.4% reported fewer frustration in efforts of getting services. These results suggest that interventions are providing effective and essential approaches by the healthcare providers. These findings may contribute to peer reviews, universities teaching this profession, and implementing improved policies and procedures to further support these interventions that are much needed by children with autism and their families to be functional in society.

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