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Article

Parental Challenges and Skill Development in Children with Autism During the COVID-19 Pandemic

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Abstract: This study investigates the relationship between parental profiles including age, gender, marital status, highest educational attainment, and monthly income and the adaptive, functional academic, and communication skills of children with autism. Utilizing Chi-square tests for statistical analysis, the results reveal no significant associations between these parental characteristics and the various developmental skills assessed. Specifically, the study demonstrates that despite the presence of learned adaptive skills in self-feeding, children with autism generally exhibit areas for improvement in functional academic skills and communication. These findings suggest that parental demographics do not significantly impact the developmental outcomes in children with autism. The research highlights the complexity of autism and the need to consider broader educational, therapeutic, and environmental interventions to support these children's development more effectively.

Keywords: Skills performance, adaptive skills, functional academic & communication skills, parental profile

Introduction

The COVID-19 pandemic introduced significant challenges globally, disrupting daily routines, mental health, and social dynamics (Agba et al., 2020). Among the affected groups, parents of children with autism spectrum disorder (ASD) faced unique difficulties (Chu et al., 2020). Autism, a neurodevelopmental disorder marked by challenges in social interaction, communication, and repetitive behaviors, demands consistent support and specialized interventions (Salleh et al., 2022). The abrupt halt of services and routines due to lockdowns and social distancing created substantial obstacles for these families (White et al., 2021). The pandemic disrupted the education, therapy, and social interactions essential for children with ASD's development (Bellomo et al., 2020; Colizzi et al., 2020). Increased stress among parents of children

with ASD highlights the urgent need for targeted support during crises (Amorim et al., 2020; Espinosa et al., 2020).

Skill development in children with autism is closely linked to structured environments and regular therapeutic support, which were severely disrupted during the pandemic (Eshraghi et al., 2020). Schools, therapy centers, and support groups moved to remote or limited services, requiring parents to manage their children's needs with insufficient resources (Neece et al., 2020). This transition impacted the skill development of children with autism and placed a significant emotional and logistical burden on their caregivers (Phelps & Sperry, 2020). The pandemic forced parents to act as educators and therapists without proper training, demanding substantial time, energy, and resources (Alhuzimi, 2021). Balancing these responsibilities with work increased stress and burnout among parents (Stankovic et al., 2021; Manning et al., 2021).

Despite these challenges, many families exhibited remarkable resilience and adaptability. Parents implemented creative solutions to maintain routines and structure, such as establishing home classrooms and therapy spaces (Asbury et al., 2020). Communities and support groups transitioned to virtual platforms, enabling parents to share experiences and strategies (Latzer et al., 2021). However, these adaptations, while beneficial, could not fully replace professional support and structured environments (Baweja et al., 2021). The long-term effects of the pandemic on skill development in children with autism remain unclear. The interruption of early intervention and continuous support may have lasting impacts, necessitating future planning for interventions and support systems to mitigate negative outcomes (Pellicano et al., 2021). The pandemic imposed a significant burden on parents, requiring them to manage their children's educational and therapeutic needs at home without formal training (Alhuzimi, 2021). This responsibility demanded considerable time, energy, and resources, often conflicting with parents' work commitments and increasing their stress and burnout (Stankovic et al., 2021; Manning et al., 2021). The lack of respite or external support intensified these challenges, creating a cycle of exhaustion and frustration. Addressing these issues requires acknowledging the parents' pivotal role and providing them with necessary support and resources (Zhao et al., 2021).

Significant research gaps exist regarding the detailed profiles of parents of children with autism and how factors such as age, gender, marital status, education level, and income influence their perceptions of their children's skill performance. There is limited data on adaptive skills, functional academic skills, and socialization and communication skills in children with autism based on parental reports. Exploring the relationship between parents' demographic profiles and their perceptions of their children's abilities is crucial for developing targeted support and interventions.

To address the identified gaps, future research at the Argao Central Elementary School- Special Education class, should focus on a comprehensive study involving a diverse sample of parents of children with autism. This research should systematically examine how demographic factors such as age, gender, marital status, educational attainment, and combined monthly income impact parents' perceptions of their children's skill performance in areas like adaptive skills, functional academic skills, and communication skills. Additionally, the research should explore the potential correlations between parents' profiles and their perceptions to inform tailored support strategies. This direction will provide valuable data to develop targeted interventions and policies that address the specific needs of families with children with autism, especially in the context of disruptions like the COVID-19 pandemic.

Methodology

This descriptive research aimed to investigate the association between parents' challenges and their children's skill performance in teaching children with autism. Utilizing a quantitative approach, the study gathered comprehensive data to explore this relationship. The researcher employed a structured checklist to assess the skills performance of children with autism. Quantitative data were collected through questionnaires distributed to parents, capturing numeric information on various skill levels of their children. These responses were then analyzed descriptively to identify trends and insights, providing a detailed understanding of the impact of parental challenges on their children's skill development. The study was conducted at Argao Central Elementary School-Special Education class, targeting parents of primary-level students aged 5 to 13 years who had been diagnosed with autism. Focusing on this specific group, the research sought to understand the unique challenges these parents faced during the pandemic and how these challenges influenced their children's skill performance. The study's methodology ensured the collection of robust and reliable data, offering valuable insights into the association between parental challenges and the effectiveness of home-based educational and intervention strategies.

Results and Discussion

Table 1 provides a breakdown of the age and gender distribution of the parents participating in the study. The total sample consists of 10 parents, with a notable majority being female, accounting for 70% (7 out of 10) of the respondents, while males make up the remaining 30% (3 out of 10). The age distribution reveals that half of the respondents, 50% (5 out of 10), are females aged between 41 and 45 years.

Table 1. Age and Gender of Parents

Age (in years)	Male f	%	Female f	%	Total f	%
46 and above	3	30.00	--	--	3	30.00
41 – 45	--	--	5	50.00	5	50.00
36 – 40	--	--	2	20.00	2	20.00
Total	3	30.00	7	70.00	10	100.00

Additionally, 20% (2 out of 10) of the respondents are females aged between 36 and 40 years. Interestingly, all male respondents are in the age group of 46 and above, making up 30% of the total sample. This distribution highlights that most of the participants are middle-aged females, with a significant representation of older males. The data suggests a gender imbalance among the parents, with a higher proportion of females actively participating in the study.

Table 2. Marital Status

Status	f	%
Married	7	70.00
Separated	3	30.00
Total	10	100.00

Table 2 presents the marital status of the parents participating in the study. The data indicates that the majority of respondents, 70% (7 out of 10), are married. Meanwhile, 30% (3 out of 10) of the respondents are separated. This distribution shows that most of the children with autism in the study are being raised in traditional family structures. However, there is a notable proportion of families where parents are separated, which may present additional challenges in providing consistent support and intervention for their children.

Table 3. Highest Educational Attainment

Educational Attainment	f	%
College Graduate	5	50.00
College Level	1	10.00
High School Graduate	2	20.00
High School Level	2	20.00
Total	10	100.00

This dataset represents the educational attainment of a sample group comprising 10 parents' respondent. A significant 50% of the participants are college graduates, indicating a high level of completed tertiary education within this group. The remaining 50% is distributed across lower educational levels: 10% have some college experience but no degree, and 40% have completed high school, with half of these not progressing beyond the high school level. The distribution highlights a

stark contrast between those who have achieved higher education and those who have not, suggesting potential differences in access to or the value placed on higher education within this group. This could point to various socio-economic factors influencing educational outcomes among the participants.

Table 5. Combined Monthly Income of the Parent Respondents

Income Cluster	Definition	Range of Monthly Family Incomes (for a Family size of 5 members)	f	%
Poor	less than the official poverty threshold	Less than PHP 9, 520	3	30.00
Lower Income	Between the poverty line and twice the poverty line	Between PHP 9, 520 to PHP 19, 040	6	60.00
Lower Middle Income	Between two- and four-times the poverty line	Between PHP 19, 040 to PHP 38, 080	1	10.00

In analyzing the combined monthly income of parent respondents from families consisting of five members, the data reveals a significant income disparity among the clusters. The majority of the respondents, 60%, fall into the 'Lower Income' category, with monthly family incomes ranging between PHP 9,520 and PHP 19,040. This suggests that a substantial portion of the families hover just above the official poverty threshold but remain within twice that limit. On the other hand, 30% of the respondents are classified as 'Poor,' earning less than PHP 9,520 each month, which is under the official poverty threshold. This highlights a considerable segment of the population experiencing significant financial challenges. In contrast, only 10% of the families are in the 'Lower Middle Income' bracket, with incomes between PHP 19,040 and PHP 38,080, indicating that fewer families reach this relatively more comfortable income range.

The data presented in Table 5 focuses on the adaptive self-feeding skills of children with autism, evaluated across a variety of specific behaviors. The findings suggest that these children have generally "Learned" these skills, as indicated by an aggregated mean score of 2.75 and a consistently low aggregated standard deviation of 0.36. This consistency points to a uniform learning level across different skills within the group studied. Most of the behaviors evaluated, such as expressing the need to eat or drink through various means, attaching verbal labels to pictures depicting meal times, and using hand signals, have scores between 2.60 and 2.80, demonstrating a solid acquisition of these foundational skills.

Table 5. Level of Adaptive Skills of Children with Autism: Self- Feeding skills

S/N	Statements	WM	sd	Verbal Interpretation
1	Expresses the need to eat/drink through nonverbal and/ verbal means	2.80	0.42	Learned
2	Points to/attach verbal labels to pictures depicting regular meal times	2.70	0.67	Learned
3	Uses gestures for signs (hand signals) when in need of food ("eat" sign) and water ("drink" sign) in combination with their appropriate verbal language	2.60	0.52	Learned
4	Expresses desires/need to eat through modeling	2.70	0.48	Learned
5	Swallows and chews different kinds of food	3.00	0.00	Learned
6	Swallows' liquid like soup through modeling	3.00	0.00	Learned
7	Chews and swallows different textured foods: *food with consistency (mashed potatoes, vegetables, and fruits) *soft foods (soft cheese, banana, scrambled eggs) *well-formed foods (chicken, meat) *Crunchy foods (nuts, popcorn, crackers)	2.90	0.32	Learned
8	Talks about different kinds of food during snack time using pictures	1.90	0.99	Learned
9	Tastes actual foods in small amounts, from soup to crunchy, on different occasions	3.00	0.00	Learned
10	Chews and swallows' food properly through modeling	3.00	0.00	Learned
11	Picks up food with fingers or scoops with a spoon	2.60	0.52	Learned
	Aggregated Mean	2.75		Learned
	Aggregated Standard Deviation		0.36	

Notably, skills such as swallowing and chewing different kinds of food, as well as more complex behaviors like swallowing liquids and handling different textures of food, received the highest scores of 3.00, showing complete proficiency. However, one outlier in the dataset is the skill of talking about different kinds of food during snack time using pictures, which scored significantly lower at 1.90. This might indicate a specific area where these children face challenges compared to other feeding-related skills. The higher standard deviation in this item (0.99) suggests more variability in this skill among the children assessed, possibly pointing to a need for targeted interventions to enhance verbal communication about food. Overall, while the children show a good level of learned skills in most areas of self-feeding, the variability in their ability to verbally communicate about food highlights an area for potential improvement. These insights can help in tailoring educational and therapeutic approaches to better support children with autism in developing comprehensive self-feeding skills.

The data presented in Table 6 outlines the level of functional academic skills of children with autism, specifically focusing on their ability to read various categories of sight words. The first statement indicates that children are "Not Learned" in reading functional sight words for foods

and safety signs, with a mean score of 1.50 and a standard deviation of 0.53.

Table 6. Level of Functional Academic Skills of Children with Autism

S/N	Statements	WM	sd	Verbal Interpretation
1	Read functional sight words for foods and safety sign	1.50	0.53	Not Learned
2	Read sight words for daily living activities and community access	1.80	0.79	Needs Improvement
3	Read sight words for things at home and school	1.40	0.52	Needs Improvement
4	Read his/ her name, age, address, and other personal information about his self	1.70	0.67	Needs Improvement
Aggregated Mean		1.60		Needs
Aggregated Standard Deviation			0.63	Improvement

In contrast, the next three statements show that children "Needs Improvement" in reading sight words related to daily living activities and community access (mean = 1.80, SD = 0.79), sight words for things at home and school (mean = 1.40, SD = 0.52), and personal information such as name, age, and address (mean = 1.70, SD = 0.67). The aggregated mean score across these skills is 1.60, with an aggregated standard deviation of 0.63, indicating an overall need for improvement in functional reading skills among these children. The relatively low mean scores and moderate standard deviations suggest that while there is some variation in individual abilities, there is a general trend of insufficient skill development in these critical areas.

Table 7. Level of Socialization and Communication Skills of Children with Autism

S/N	Statements	WM	sd	Verbal Interpretation
1	Greets familiar adults with prompting	2.50	0.53	Needs Improvement
2	Tells own first and last name	2.50	0.71	Learned
3	Knows ages (e.g., tells/holds up fingers)	2.00	0.67	Needs Improvement
4	Answers correctly when asked if he or she is a boy or girl	2.70	0.67	Needs Improvement
5	express needs, wants, emotions	2.90	0.48	Needs Improvement
6	make choices	2.80	0.32	Needs Improvement
7	Interacts with family members positively with/without prompting	2.30	0.42	Needs Improvement
8	Initiate a conversation	2.20	0.48	Not Learned
9	Kisses the hands of parents and adults	2.00	0.63	Needs Improvement
10	Expresses words with feelings (e.g., I love you, Papa/Mama)	2.20	0.63	Needs Improvement
11	Greets family members with prompting	2.60	0.52	Needs Improvement
12	Asks permission when going to a certain place	2.00	0.47	Not Learned
13	Listens to parents/adults' suggestions	2.20	0.42	Needs Improvement
14	Follow simple instructions	2.30	0.82	Learned
Aggregated Mean and Sd		2.41	0.56	Needs Improvement

The data in Table 7 evaluates the level of socialization and communication skills of children with autism, providing insights into

various aspects of their interactions and expressions. The overall aggregated mean score is 2.41 with a standard deviation of 0.56, which translates to a general verbal interpretation of "Needs Improvement." Specifically, children need improvement in greeting familiar adults with prompting (mean = 2.50, SD = 0.53), knowing their ages (mean = 2.00, SD = 0.67), answering correctly about their gender (mean = 2.70, SD = 0.67), expressing needs, wants, and emotions (mean = 2.90, SD = 0.48), making choices (mean = 2.80, SD = 0.32), interacting positively with family members (mean = 2.30, SD = 0.42), kissing hands of parents and adults (mean = 2.00, SD = 0.63), expressing words with feelings (mean = 2.20, SD = 0.63), greeting family members with prompting (mean = 2.60, SD = 0.52), asking permission (mean = 2.00, SD = 0.47), listening to suggestions (mean = 2.20, SD = 0.42), and initiating conversations (mean = 2.20, SD = 0.48). Two skills were categorized as "Learned": telling their first and last name (mean = 2.50, SD = 0.71) and following simple instructions (mean = 2.30, SD = 0.82). However, these learned skills are few, indicating that while some progress is made in specific areas, the overall trend reflects a significant need for improvement across most socialization and communication skills. The moderate standard deviations suggest a degree of variability in these skills among children, indicating that while some children may perform better in certain areas, the general need for improvement remains prevalent.

Table 8. Relationship Between the Parents' Profile and the Adaptive Skills of Children with Autism

Parents' Profile	df	r^2 -value	p-value	Decision	Remarks
Age	1	1.667	.197	Do not Reject Ho	Not Significant
Gender	1	.476	.490	Do not Reject Ho	Not Significant
Marital Status	1	.476	.490	Do not Reject Ho	Not Significant
Highest Educational Attainment	3	5.200	.158	Do not Reject Ho	Not Significant
Monthly Income	2	.533	.766	Do not Reject Ho	Not Significant

The findings from Table 8 show an analysis of the relationship between the profiles of parents and the adaptive skills of children with autism. The data reveal no statistically significant associations between the adaptive skills of these children and various parental characteristics, including age, gender, marital status, highest educational attainment, and monthly income. Specifically, the Chi-square value for parental age is 1.667 with a p-value of .197, suggesting that age does not significantly affect the adaptive skills of children with autism. Similarly, the variables of parental gender and marital status both yield a Chi-square

value of .476 and a p-value of .490, indicating no significant impact on adaptive skills. Additionally, the highest educational attainment of parents, with a Chi-square value of 5.200 and a p-value of .158, and the monthly income with a Chi-square value of .533 and a p-value of .766, also show no significant correlations with the adaptive skills of the children. These results lead to the consistent decision across all tested variables not to reject the null hypothesis, confirming that these aspects of the parents' profiles do not have a significant influence on the adaptive skills of children with autism in the sampled population.

Table 9. Relationship Between the Parents' Profile and the Functional Academic Skills of Children with Autism

Parents' Profile	df	r^2 -value	p-value	Decision	Remarks
Age	1	1.667	.197	Do not Reject Ho	Not Significant
Gender	1	.476	.490	Do not Reject Ho	Not Significant
Marital Status	1	.476	.490	Do not Reject Ho	Not Significant
Highest Educational Attainment	3	5.200	.158	Do not Reject Ho	Not Significant
Monthly Income	2	.533	.766	Do not Reject Ho	Not Significant

The analysis presented in Table 9 assesses the relationship between various parental profiles and the functional academic skills of children with autism. The results indicate that there are no statistically significant relationships between the parental factors assessed and the functional academic skills of the children. For the age of the parents, the Chi-square value is 1.667 with a p-value of .197, suggesting no significant impact on the children's functional academic skills. Similarly, the gender and marital status of the parents both show a Chi-square value of .476 and a p-value of .490, which again indicates no significant effect on the children's academic skills. Further, when analyzing the highest educational attainment of parents, the Chi-square value is 5.200 with a p-value of .158. This too does not show a significant correlation with the children's academic skills. Lastly, the monthly income of the parents, with a Chi-square value of .533 and a p-value of .766, also does not exhibit any significant relationship with the functional academic skills of children with autism. In summary, the study concludes that none of the parental profiles examined age, gender, marital status, highest educational attainment, and monthly income significantly influence the functional academic skills of children with autism, leading to the non-rejection of the null hypothesis across all factors.

Table 10. Relationship Between the Parents' Profile and the Communication Skills of Children with Autism

Parents' Profile	df	r2 -value	p-value	Decision	Remarks
Age	1	3.403	.065	Do not Not Reject Significant Ho	
Gender	1	.079	.778	Do not Reject Ho	Not Significant
Marital Status	1	.079	.778	Do not Reject Ho	Not Significant
Highest Educational 3 Attainment		5.000	.172	Do not Reject Ho	Not Significant
Monthly Income	1	.278	.598	Do not Reject Ho	Not Significant

Table 10 explores the relationship between the profiles of parents and the communication skills of children with autism, using Chi-square tests for statistical analysis. The results across various parental demographics show no statistically significant association with the children's functional academic skills. Specifically, the analysis on the age of the parents yields a Chi-square value of 3.403 with a p-value of .065, suggesting that while the p-value approaches significance, it does not fall below the commonly used threshold of .05; therefore, the hypothesis that parental age impacts communication skills is not supported. Gender and marital status of the parents both recorded a Chi-square value of .079 and a p-value of .778, indicating no significant effect on the children's communication skills. Additionally, highest educational attainment, represented by a Chi-square value of 5.000 and a p-value of .172, along with monthly income, with a Chi-square value of .278 and a p-value of .598, also do not show significant correlations. Consequently, the null hypothesis is not rejected in each of these cases, affirming that these factors in the parents' profiles do not significantly influence the communication abilities of children with autism in this study.

Conclusion

Across the adaptive, functional academic, and communication skills of these children, no statistically significant correlations were found with parental age, gender, marital status, highest educational attainment, and monthly income. These results consistently led to decisions not to reject the null hypotheses, indicating that these parental characteristics do not significantly influence the developmental skills assessed. In the specific skill assessments, children showed learned levels in self-feeding skills, although they faced challenges in functional academic skills and communication, with many areas needing improvement. Despite the intuitive assumption that parental factors might influence

developmental outcomes, the statistical analysis suggests that, at least within the confines of this study, these factors are not determinative of the levels of adaptive, academic, or communication skills of children with autism. This finding underscores the complexity of autism as a developmental disorder and highlights the potential need to look beyond familial demographics to environmental, educational, and therapeutic interventions to support these children's development.

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