



**PARENT-CHILD RELATIONSHIP, SCHOOL ENVIRONMENT,  
PARENTAL STRESS AND PERCEIVED SOCIAL SKILLS IN CHILDREN  
WITH LEARNING DISABILITIES IN INCLUSIVE SCHOOLS IN ABUJA,  
NIGERIA**

**By**

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**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,  
in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

**April 2024**

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## DEDICATION

To God Almighty, my Maker, the Giver of every good and perfect gift, the Father of light, in whom there is no variableness nor shadow of turning.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment  
of the requirement for the degree of Doctor of Philosophy

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**Faculty : Human Ecology**

Learning disabilities are disorders that affect the ability to understand, use spoken or written language, do mathematical calculations, coordinate movements, or direct attention. Children with learning disabilities face unique social problems different from those children with other developmental disabilities. Children with learning disabilities deficient in social skills present substantial challenges for themselves, schools, teachers, parents, and peers. These challenges cut across disciplinary, educational and interpersonal domains which frequently caused them to experience a crisis at home, in school and in community environments. Home, the school and the community play crucial roles in the development of social skills of children with learning disabilities in every nation of the world. Grounded on the Bronfenbrenner's Bio-ecological Model of Human Development and Bowlby's Attachment Theory, this study examined the relationship between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities in Abuja, Nigeria.

The present quantitative study utilized a correlational research design. Data for this study were gathered from 314 parents of children with learning disabilities (aged 12 to 18 years) in inclusive basic schools across the six Area Councils of Abuja. A stratified sampling technique was used to select the respondents who answered the self-administered questionnaires. The data were analyzed using descriptive and inferential statistics.

Results showed moderate parent-child relationship, a fair level of the school environment and moderate parental stress. The findings of the study also revealed a significant relationship between the parent-child relationship, school environment and parental stress with perceived social skills of children with learning disabilities. The multiple regression analysis showed that the school environment was the most influential predictor of the perceived social skills of children with learning disabilities. As for the mediation analysis, parental stress was found to have a partial mediation effect on the relationship between parent-child relationship, school environment, and perceived social skills of children with learning disabilities.

This study implies the importance of a positive parent-child relationship, a conducive school environment and low parental stress in the development of social skills of children with learning disabilities. Some recommendations to promote the social skills of children with learning disabilities were emphasized, including those aimed at enhancing parent-child relationship, promoting a supportive school environment, reducing parental stress as well as the top to bottom government agencies' roles in conducting intervention programs to facilitate the development of social skills and well-being of children with learning disabilities

**Keyword:** Parent-Child Relationship, School Environment, Parental Stress, Perceived Social Skills, Learning Disabilities

**SDG:** GOAL 3: Good Health and Well Being, GOAL 4: Quality Education, GOAL 10: Reduced Inequality



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**HUBUNGAN IBU BAPA ANAK, PERSEKITARAN SEKOLAH, TEKANAN  
IBU BAPA DAN TANGGAPAN KEMAHIRAN SOSIAL DI KALANGAN  
KANAK-KANAK KURANG UPAYA PEMBELAJARAN DI SEKOLAH  
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Kurang upaya pembelajaran adalah satu bentuk kecelaruan yang menjejaskan keupayaan untuk memahami, menggunakan bahasa pertuturan atau penulisan, melakukan pengiraan matematik, menyelaraskan pergerakan atau mengarahkan perhatian. Kanak-kanak kurang upaya pembelajaran menghadapi masalah sosial yang unik berbeza daripada kanak-kanak kurang upaya perkembangan yang lain. Kanak-kanak kurang upaya pembelajaran yang lemah dalam kemahiran sosial memberikan cabaran besar kepada diri mereka sendiri, sekolah, guru, ibu bapa dan rakan sebaya. Cabaran-cabaran ini merentasi domain disiplin, pendidikan dan interpersonal yang sering menyebabkan mereka mengalami krisis di rumah, dalam persekitaran sekolah dan komuniti. Rumah, sekolah dan komuniti memainkan peranan penting dalam pembangunan kemahiran sosial kanak-kanak kurang upaya pembelajaran di setiap negara di dunia. Kajian yang berdasarkan Model Bio-ekologi Pembangunan Manusia oleh Bronfenbrenner dan Teori Perapatan oleh Bowlby ini mengkaji perkaitan antara

hubungan ibu bapa-anak, persekitaran sekolah, tekanan ibu bapa dengan tanggapan kemahiran sosial kanak-kanak kurang upaya pembelajaran di Abuja, Nigeria.

Kajian kuantitatif ini menggunakan reka bentuk penyelidikan korelasi. Data untuk kajian ini dikumpul daripada 314 ibu bapa kanak-kanak kurang upaya pembelajaran (berumur 12 hingga 18 tahun) di sekolah inklusif asas merentas enam Majlis Kawasan Abuja. Teknik persampelan rawak berlapis telah digunakan untuk memilih responden yang menjawab soal selidik yang ditadbir sendiri. Data dianalisis menggunakan statistik deskriptif dan inferens.

Hasil kajian menunjukkan hubungan ibu bapa anak yang sederhana, tahap persekitaran sekolah yang sederhana dan tekanan ibu bapa yang sederhana. Dapatan kajian juga menunjukkan hubungan yang signifikan antara hubungan ibu bapa anak, persekitaran sekolah, tekanan ibu bapa dengan tanggapan kemahiran sosial kanak-kanak kurang upaya pembelajaran. Analisis regresi berganda menunjukkan bahawa persekitaran sekolah adalah peramal paling berpengaruh bagi tanggapan kemahiran sosial kanak-kanak kurang upaya pembelajaran. Untuk ujian analisis pengantaraan, tekanan ibu bapa didapati mempunyai kesan pengantaraan separa terhadap hubungan antara hubungan ibu bapa anak, persekitaran sekolah dengan tanggapan kemahiran sosial kanak-kanak kurang upaya pembelajaran.

Kajian ini memberi implikasi tentang kepentingan hubungan antara ibu bapa anak yang positif, persekitaran sekolah yang kondusif dan tekanan ibu bapa yang rendah terhadap perkembangan kemahiran sosial kanak-kanak kurang upaya pembelajaran. Cadangan untuk menggalakkan kemahiran sosial kanak-kanak kurang upaya

pembelajaran telah diberi penekanan, termasuklah yang bertujuan untuk meningkatkan hubungan ibu bapaanak, menggalakkan persekitaran sekolah yang menyokong, mengurangkan tekanan ibu bapa dan juga peranan agensi kerajaan di peringkat atasan mahupun bawahan dalam menjalankan program intervensi bagi memudah cara perkembangan dan kesejahteraan kanak-kanak kurang upaya pembelajaran.

**Kata kunci:** Hubungan Ibu Bapa Anak, Persekitaran Sekolah, Tekanan Ibu Bapa, Tanggapan Kemahiran Sosial, Kurang Upaya Pembelajaran

**SDG:** MATLAMAT 3: Kesihatan Yang Baik dan Sejahtera, MATLAMAT 4: Pendidikan Berkualiti, MATLAMAT 10: Mengurangkan Ketidaksamarataan

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## TABLE OF CONTENTS

|                                                         | Page   |
|---------------------------------------------------------|--------|
| <b>ABSTRACT</b>                                         | i      |
| <b>ABSTRAK</b>                                          | iv     |
| <b>ACKNOWLEDGEMENTS</b>                                 | vii    |
| <b>APPROVAL</b>                                         | ix     |
| <b>DECLARATION</b>                                      | xi     |
| <b>LIST OF TABLES</b>                                   | xvi    |
| <b>LIST OF FIGURES</b>                                  | xvii   |
| <b>LIST OF ABBREVIATIONS</b>                            | xviii  |
| <br><b>CHAPTER</b>                                      |        |
| <br><b>1 INTRODUCTION</b>                               | <br>1  |
| 1.1 Background of Study                                 | 1      |
| 1.2 Problem Statement                                   | 9      |
| 1.3 Research Questions                                  | 14     |
| 1.4 General Objective                                   | 14     |
| 1.4.1 Specific Objectives                               | 14     |
| 1.5 Research Hypotheses                                 | 15     |
| 1.6 Significance of the Study                           | 15     |
| 1.7 Theoretical Background                              | 17     |
| 1.7.1 Bio-ecological Systems Model of Human Development | 18     |
| 1.7.2 Attachment Theory                                 | 23     |
| 1.7.3 Integration of Model / Theory                     | 25     |
| 1.8 Conceptual Framework                                | 27     |
| 1.9 Rationale for the Study                             | 29     |
| 1.10 Limitations of the Study                           | 30     |
| 1.11 Definitions of Terms                               | 32     |
| 1.11.1 Children                                         | 32     |
| 1.11.2 Learning Disabilities                            | 32     |
| 1.11.3 Inclusive Schools                                | 33     |
| 1.11.4 Parent-Child Relationship                        | 33     |
| 1.11.5 School Environment                               | 34     |
| 1.11.6 Parental Stress                                  | 35     |
| 1.11.7 Perceived Social Skill                           | 36     |
| 1.12 Chapter Summary                                    | 36     |
| <br><b>2 LITERATURE REVIEW</b>                          | <br>37 |
| 2.1 Introduction                                        | 37     |
| 2.2 Learning Disabilities                               | 37     |
| 2.3 Perceived Social Skills                             | 43     |
| 2.3.1 Good Role Modelling                               | 45     |
| 2.3.2 Role-Playing                                      | 46     |
| 2.3.3 Praises and Positive Reinforcement                | 46     |

|          |                                                                                              |     |
|----------|----------------------------------------------------------------------------------------------|-----|
| 2.3.4    | Learning Through Playing                                                                     | 46  |
| 2.3.5    | Emotion Regulation and Understanding                                                         | 47  |
| 2.4      | Perceived Social Skills and Children with Learning Disabilities                              | 48  |
| 2.5      | Parent-Child Relationship                                                                    | 55  |
| 2.5.1    | Secure Relationship                                                                          | 58  |
| 2.5.2    | Avoidant Relationship                                                                        | 58  |
| 2.5.3    | Ambivalent Relationship                                                                      | 58  |
| 2.5.4    | Disorganized Relationship                                                                    | 59  |
| 2.6      | Parent-Child Relationship and Perceived Social Skills of Children with Learning Disabilities | 60  |
| 2.7      | School Environment                                                                           | 71  |
| 2.8      | School Environment and Perceived Social Skills of Children with Learning Disabilities        | 73  |
| 2.9      | Parental Stress                                                                              | 82  |
| 2.10     | Parental Stress and Perceived Social Skills of Children with Learning Disabilities           | 85  |
| 2.11     | Parental Stress as the Mediator                                                              | 92  |
| 2.12     | Special and Inclusive Education System in Nigeria                                            | 94  |
| 2.13     | Theoretical Perspective                                                                      | 99  |
| 2.13.1   | Bioecological Model                                                                          | 99  |
| 2.13.2   | Attachment Theory                                                                            | 101 |
| 2.14     | Chapter Summary                                                                              | 106 |
| <b>3</b> | <b>METHODOLOGY</b>                                                                           | 107 |
| 3.1      | Introduction                                                                                 | 107 |
| 3.2      | Research Approach and Design                                                                 | 107 |
| 3.3      | Location of the study                                                                        | 108 |
| 3.3.1    | Abuja (Federal Capital territory, FCT)                                                       | 109 |
| 3.4      | Population of the study                                                                      | 110 |
| 3.5      | Sampling Technique and Sample Size                                                           | 111 |
| 3.6      | Sampling Procedure                                                                           | 114 |
| 3.7      | Measurement and Instrumentation                                                              | 118 |
| 3.7.1    | Parent-Child Relationship                                                                    | 118 |
| 3.7.2    | School Environment                                                                           | 121 |
| 3.7.3    | Parental Stress                                                                              | 122 |
| 3.7.4    | Perceived Social Skills of Children with Learning Disabilities                               | 124 |
| 3.7.5    | Demographic Information                                                                      | 126 |
| 3.7.6    | Data Collection                                                                              | 126 |
| 3.7.7    | Validity                                                                                     | 127 |
| 3.7.8    | Reliability Test                                                                             | 128 |
| 3.7.9    | Pilot Test                                                                                   | 129 |
| 3.7.10   | Data Preparation                                                                             | 130 |
| 3.7.11   | Exploratory Data Analysis (EDA)                                                              | 132 |
| 3.8      | Data Analysis                                                                                | 136 |
| 3.8.1    | Descriptive Analysis                                                                         | 136 |
| 3.8.2    | Inferential Analysis                                                                         | 136 |
| 3.9      | Chapter Summary                                                                              | 138 |

|          |                                                                                                                                                                                                     |            |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>4</b> | <b>RESULT AND DISCUSSION</b>                                                                                                                                                                        | <b>140</b> |
| 4.1      | Introduction                                                                                                                                                                                        | 140        |
| 4.2      | Descriptive Analysis                                                                                                                                                                                | 141        |
| 4.2.1    | Background Profile                                                                                                                                                                                  | 141        |
| 4.2.2    | Levels of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities (PSSCLD)                                | 146        |
| 4.3      | Correlation Analysis Findings                                                                                                                                                                       | 150        |
| 4.4      | Multiple Regression Analysis                                                                                                                                                                        | 153        |
| 4.4.1    | Factors that Uniquely Predict Perceived Social Skills of Children with Learning Disabilities in Inclusive Basic Schools in Abuja                                                                    | 154        |
| 4.5      | Mediation Analysis                                                                                                                                                                                  | 163        |
| 4.6      | Summary of Findings                                                                                                                                                                                 | 168        |
| 4.7      | Chapter Summary                                                                                                                                                                                     | 171        |
| <b>5</b> | <b>DISCUSSION, SUMMARY, IMPLICATIONS, SUGGESTIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH, AND CONCLUSION</b>                                                                                       | <b>172</b> |
| 5.1      | Discussion                                                                                                                                                                                          | 172        |
| 5.1.1    | Discussion on Levels of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities (PSSCLD)                  | 175        |
| 5.1.2    | Relationship Analysis of Findings between Parents-Child Relationship, School Environment, Parental Stress, and Perceived Social Skills of Children with Learning Disabilities                       | 177        |
| 5.1.3    | Analysis of Findings of Unique Predictor of Perceived Social Skills of Children with Learning Disabilities                                                                                          | 179        |
| 5.1.4    | Analysis of Findings of Mediating roles of Parental Stress (PS) Between Parent-Child Relationship (PCR), School Environment (SE) and Perceived Social Skills of Children with Learning Disabilities | 181        |
| 5.2      | Summary of Findings                                                                                                                                                                                 | 182        |
| 5.3      | Implications                                                                                                                                                                                        | 186        |
| 5.3.1    | Theoretical Implications                                                                                                                                                                            | 186        |
| 5.3.2    | Methodological Implications                                                                                                                                                                         | 188        |
| 5.3.3    | Practical Implications                                                                                                                                                                              | 189        |
| 5.4      | Suggestions from the Study                                                                                                                                                                          | 191        |
| 5.5      | Recommendations for Future Research                                                                                                                                                                 | 193        |
| 5.6      | Conclusion                                                                                                                                                                                          | 196        |
|          | <b>REFERENCES</b>                                                                                                                                                                                   | <b>198</b> |
|          | <b>APPENDICES</b>                                                                                                                                                                                   | <b>230</b> |
|          | <b>BIODATA OF STUDENT</b>                                                                                                                                                                           | <b>267</b> |
|          | <b>LIST OF PUBLICATIONS</b>                                                                                                                                                                         | <b>269</b> |

## LIST OF TABLES

| Table                                                                                                                                                                                                           | Page |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 3.1 Population of Inclusive Schools in Abuja and its corresponding sample size                                                                                                                                  | 111  |
| 3.2 Zone and Area Councils of Abuja                                                                                                                                                                             | 115  |
| 3.3 Reliability Coefficients for Pilot test and Final Test                                                                                                                                                      | 129  |
| 3.4 Collinearity Diagnostic Test                                                                                                                                                                                | 135  |
| 3.5 Correlation Matrix of independent variables with Perceived Social Skill                                                                                                                                     | 136  |
| 3.6 Summary of Objectives and Data Analysis Methods                                                                                                                                                             | 138  |
| 4.1 Demographic Information Distribution of Children with Learning Disabilities (N=314)                                                                                                                         | 141  |
| 4.2 Demographic Information Distribution of Parent of Children with Learning Disabilities (N=314)                                                                                                               | 142  |
| 4.3 Main Variables of the Study (N=314)                                                                                                                                                                         | 146  |
| 4.4 Summary of Pearson Moment Correlation Coefficients Matrix between Parent-Child Relationship, Parental Stress, School Environment and Perceived Social Skills of Children with Learning Disabilities (n=314) | 150  |
| 4.5 Correlates of Perceived Social Skills of Children with Learning Disabilities Variable                                                                                                                       | 154  |
| 4.6 Summary of Hierarchical Regression Analyses Predicting Perceived Social Skills of Children with Learning Disabilities in Inclusive Basic Schools in Abuja                                                   | 155  |
| 4.7 Summary Results of Multiple Regression on Perceived Social Skills of Children with Learning Disabilities                                                                                                    | 155  |
| 4.8 Standardized Direct and Standardized Indirect Effects of Regression Coefficient of Perceived Social Skills of Children with Learning Disabilities in the Hypothesized Path Model                            | 163  |
| 4.9 Standardized Direct and Standardized Indirect Effects of Regression Coefficient of School Environment and Perceived Social Skills of Children with Learning Disabilities in the Hypothesized Path Model     | 166  |
| 4.10 Summary of Findings                                                                                                                                                                                        | 169  |

## LIST OF FIGURES

| Figure                                                                                                                                                                                             | Page |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1.1      Bronfenbrenner’s Bio-Ecological System of Child Education and Development                                                                                                                 | 19   |
| 1.2      Bio-Ecological Model and Attachment Theory                                                                                                                                                | 25   |
| 1.3      Conceptual Framework for the study on parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities                   | 29   |
| 2.1      Aspects of Life affected by Social Skills                                                                                                                                                 | 51   |
| 3.1      Map of Abuja Showing the Six Area Councils                                                                                                                                                | 110  |
| 3.2      Stratified sampling frame for Sample Selection of inclusive Basic schools                                                                                                                 | 117  |
| 3.3      Data Collection Procedure                                                                                                                                                                 | 127  |
| 3.4      Mediating Model of Parental Stress in the Relationship between Parent – Child Relationship, school environment and Perceived Social Skills of Children with Learning Disabilities (SSCLD) | 137  |
| 4.1      Mediating Model of Parental Stress in the Relationship between Parent – Child Relationship and Perceived Social Skills of Children with Learning Disabilities                             | 165  |
| 4.2      Mediating Model of Parental Stress in the Relationship between School Environment and Perceived Social Skills of Children with Learning Disabilities                                      | 167  |

## LIST OF ABBREVIATIONS

|         |                                                                 |
|---------|-----------------------------------------------------------------|
| ADHD    | Attention Deficit Hyperactivity Disorder                        |
| ASD     | Autism Spectrum Disorder                                        |
| BC      | Bias Corrected                                                  |
| BCPSSCS | Baltimore City Public School System Climate Survey              |
| CI      | Confidence Interval                                             |
| CPRS    | Child Parent Relationship Scale                                 |
| CRPD    | Convention on the Rights of Persons with Disabilities           |
| DOB     | Date of Birth                                                   |
| DREAA   | Division of Research, Evaluation, Assessment and Accountability |
| DSM-IV  | Diagnostic and Statistical Manual of Mental Disorder            |
| DV      | Dependent Variable                                              |
| EDA     | Exploratory Data Analysis                                       |
| FCT     | Federal Capital Territory                                       |
| FCTUBEB | Federal Capital Territory Universal Basic Education Board       |
| HND     | Higher National Diploma                                         |
| ID      | Intellectual Disabilities                                       |
| IDEA    | Individual with Disability Education Act                        |
| IQ      | Intelligence Quotient                                           |
| IV      | Independent Variable                                            |
| LB      | Lower Bounds                                                    |
| LD      | Learning Disabilities                                           |
| MV      | Mediating Variable                                              |
| NCE     | National Certificate of Education                               |

|        |                                                                  |
|--------|------------------------------------------------------------------|
| NJCLD  | National Joint Committee on Learning Disabilities                |
| PCR    | Parent-Child Relationship                                        |
| PS     | Parental Stress                                                  |
| PSS    | Parental Stress Scale                                            |
| SE     | School Environment                                               |
| SEN    | Special Educational Needs                                        |
| SLD    | Specific Learning Disabilities                                   |
| SMS    | Short Message Service                                            |
| SPSS   | Statistical Package for Social Sciences                          |
| PSSCLD | Perceived Social Skills of Children with Learning Disabilities   |
| SSQ    | Social Skills Questionnaire                                      |
| TD     | Typically Developing                                             |
| UB     | Upper Bounds                                                     |
| UN     | United Nations                                                   |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UPM    | Universiti Putra Malaysia                                        |
| USA    | United States of America                                         |
| USDE   | United States Department of Education                            |
| USIDEA | United States Individual with Disabilities Education Act         |
| VIF    | Variance Inflated Factor                                         |
| WHO    | World Health Organization                                        |
| ZPD    | Zone of Proximal Development                                     |



## CHAPTER 1

### INTRODUCTION

In this chapter, the study's background is described, which is followed by a discussion of its concerns and challenges, general and specific objectives, research questions, and study hypotheses. The significance of the study, the theoretical and conceptual framework, the rationale for the study, the study's limitations, and the operational and conceptual definitions of the research variables are all presented in this chapter. The chapter was concluded with a summary.

#### 1.1 Background of Study

Disability affects one in seven people globally, according to a report from the World Health Organization (WHO) published in 2020. A wide range of impairments, activity restrictions, and participation restrictions in both children and adults have been referred to as "disabilities" in the past. According to estimations by WHO (2020), one billion people, or 15% of the world's population, live with a disability. From this estimated one billion population, children accounted for 93 million while adults accounted for 720 million. Disabilities can be congenital (prenatal & perinatal) or acquired (postnatal) (Daniel, 2021). Pediatric disabilities can be caused by a variety of factors, such as illnesses the mother contracted while she was pregnant, environmental factors like poisoning, alcohol or drug use while pregnant, or improper medication use, genetic mutations or genetic incompatibility issues (the Rhesus factor), premature birth, illnesses, serious infections, etc. (Daniel et al., 2021). According to Umeh and Adeola

(2016), disability is categorized into visual impairment, hearing impairment, physical impairment, communication impairment and intellectual impairment which component learning disabilities.

Learning Disabilities, according to American Psychiatric Association (2014) are a group of disorders in children who struggle in school with some specific basic skills over time. Children with learning disabilities constitute one of the more difficult developmental variants, resulting from compound abnormalities with discrepancies between potentials and actual achievements. It is a neurological disorder that affects how a person receives and processes information due to a difference in the way the person's brain is "wired," so to speak (Aminu, 2021). In more recent times, according to DSM - 5, the term "specific learning disabilities" (SLDs) has been used to refer to a persistent difficulties in reading, writing, arithmetic or mathematical reasoning skills during formal years of schooling (American Psychiatric Association, APA, 2014). Thus, learning disabilities may negatively impact children's social functioning.

In the United States, learning disabilities refer to a set of conditions inhibiting children's physical capabilities, learning-related abilities, and behavioral functioning (Centers for Disease Control and Prevention, 2019). The prevalence rate of learning disabilities in children in the United States is approximately 1 in 6 (Zablotsky et al., 2019), and, globally, 52.9 million children are reported as having learning disabilities (Hong et al., 2022). Of these children, 95% are from low-and middle-income countries. Children with learning disabilities experience difficulties in social understanding that leads to difficulty with social functioning (Smogorzewska et al., 2019) and are generally perceived as being antisocial or as displaying inappropriate behaviors during peer interactions (Hong et al., 2022).

They could have negative social interactions due to a lack of communication skills which adds more challenges in initiating and maintaining peer interactions (Smogorzewska et al., 2019). According to the Nigerian Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development, carved out of former Federal Ministry of Women Affairs and Social Development, there is currently no precise estimate of the number of people with disabilities. Also, a check with the Nigerian Federal Ministry of Education further confirmed that, accurate data on the incidence and prevalence of persons with special needs are not available (National Policy on Special Education, 2015), except for the baseline survey report on disabilities which was last conducted in 2011 by the then Federal Ministry of Women Affairs and Social Development. From this report, specific learning disabilities (SLDs), had the prevalence of about 27%.

Data from the 2018 Nigeria Demographic and Health Survey (Martinez & Vemuru, 2020) showed that 7% of household members over the age of five (and 9% of those aged 60 or older) are estimated to have some level of difficulty in at least one functional domain i.e., seeing, hearing, communication, cognition, walking, or self-care. In a similar vein, 1% either struggle mightily or are completely incapable of functioning in at least one domain. From the search efforts and contacts made to the relevant agencies of the government, there is no official identified number of children with specific learning disabilities in Nigeria. However, a report of a Nigeria non-governmental organization (Helping Hands Special School), as compiled by Okoye (2014) estimated LDs among children as six million. Children with LD experience unique challenges in developing social skills crucial to achieving their social goals. Although there are individual differences, children with LD may struggle to

communicate with others, understand gestures, and take other people's viewpoints. These differences may prevent them from initiating and sustaining social interactions and, in turn, from developing high levels of social competence (Hong et al., 2022). To support social skills development of children with learning disabilities, it is important to establish positive relationships within the family system as well as the teaching of social skills in inclusive learning environments (Mahoney et al., 2020).

A child's disability is a tripartite experience that involves interactions between the child who feels the dysfunction, the family that is affected by it, and the external environment where the disability is displayed (Daniel et al., 2021). Social skills deficiencies are common in children with learning disabilities, and the estimate of its prevalence ranges at 75% of the population of students with learning disabilities (Miguel et al., 2020). The focus of this study therefore, is on the perceived social skills development of children with learning disabilities (LD) who have limited capacity to relate and function correctly like other typically developing youngsters (Grigorenko et al., 2020).

The Dyslexia Foundation of Nigeria (2021) reported that there are over 32 million people struggling with one form of learning disability or the other, ranging from reading, writing, spelling, comprehension, concentration, mathematics and social competence. However, from the Researcher's understanding, not only does a majority of the nation's population remain unaware of what learning disability is, but even those tasked with teaching and policy making are not invested enough to facilitate leaping policy changes that will best protect children living with learning disabilities. Deficit in social skills among children with learning disabilities has posed a serious concern

to the home, the school, and the community at large. Based on the communication with the teachers on the field, it has been observed that social skills of children with learning disabilities have been neglected. These serve as red flags signaling social problems among children with learning disabilities without attention. Concerted steps must hence be taken to address the issue in order to improve the quality of life of children with learning disabilities which will subsequently improve their relationship with the home, the school and the community.

To effectively achieve this goal, Bronfenbrenner's Bioecological Model of Human Development (Bronfenbrenner, 1995), and Bowlby's Attachment Theory (Bowlby, 1969) were used to explain the development of social skills in children with learning disabilities through interactions between personal and contextual factors. The Bioecological Model of Human Development suggests that the primary engine of development is proximal processes, which explains the interactions between the individual and their environments that occur regularly and over an extended period of time (Bronfenbrenner & Morris, 2006). These sustained interactions either facilitate or ameliorate the individual's development. In addition, personal characteristics, also make significant contributions to whether the impact of environmental factors are minimized or maximized.

Having a disability is one of the key personal characteristics that evokes various responses from the individual's interpersonal and structural environments. As individual does not have control over this personal characteristic, it is important to provide sustained and enriching environments that positively actualize the individual's developmental and learning potentials. The personal characteristics are deemed to be

significantly influential in the complex interactions between the five ecological systems and subsequently one's developmental outcome. Furthermore, as Bowlby (1969) posits in his Attachment Theory, early care-giving experiences and availability of at least one trusted adult are important factors in order to ensure the survival of the child.

Bowlby theorized a universal predisposition to seek proximity to a caregiver (attachment figure) when distressed, tired, hungry or unwell. The theory developed to propose two key functions of this attachment relationship: provision of i) a 'safe haven' to soothe a child in times of distress, and ii) a 'secure base' from which to explore the environment. Close observation of parent-child interactions led to the development of an attachment classification system, which has evolved into one of the most substantial research paradigms in developmental psychology and beyond. One of the most significant variables that may affect students' capacity to acquire social skills is their attachment style. According to Bowlby, the kid exhibits three primary attachment styles: avoidant, anxious/ambivalent, and secure (Caplan et al., 2019). A child's ability to interact with others is directly impacted by the kind of relationship they have with their caretakers, especially their parents.

(Smith et al., 2019; Khoda et al., 2021).

A lack of social skills is linked to a variety of significant personal and social outcomes in individuals who have learning disabilities. For instance, compared to their peers who are usually developing, many children with learning disabilities have lower social skills and are less adept at using cognitive social behaviors (Gorgun & Savitri, 2019), which can lead to social isolation and eventual depression.

According to research by Caplan et al. (2019), a child's social skills are shaped by the parent-child relationships they have during their early years. If a child misses out on appropriate interaction and integration in their home environment during this crucial developmental stage, they may struggle to acquire the necessary social skills later in life. In the opinion of Miguel et al. (2020), social skills are defined as those social behaviors that enable people to successfully engage with others, recognize and react to social cues, apply appropriate responses in specific contexts, avoid interpersonal conflicts, and adjust to both simple and complex situations. A lack of these behaviors has a severe impact on many aspects of a child's life (Kuhn et al., 2021). It can cause social isolation, lower levels of acceptability from classmates and teachers, and serious social disadvantage and exclusion. (Gorgun & Savitri, 2019).

A successful transition to adulthood for young children with learning disabilities depends heavily on social skills, which have been shown to be a fundamental component of the family domain (Buckley et al., 2020). The relationship between a child and his family environment is perhaps the most influential in a child's life. Even as peer relationships become more important in adolescence (Barger et al., 2019), there is likely no other individual on whom the child is more reliant. Children are known to spend more time with their families than they do in school. Parental roles are positively and significantly linked to child adjustment across all major dimensions of child development related to educational and developmental outcomes (e.g., achievement, engagement, motivation, social, emotional, and delinquency), especially when the specific style of parental role is considered (Dettmers, et al., 2019). Children with LD are no exceptions in this regard. According to Barger et al. (2019), there is a clear-cut correlation between parent-child relationship and performance outcome of the children

upon a cordial relationship with their parents. In other words, a potent parent-child relationship is an encouragement to a high social skill output among children with learning disabilities, thus the role of the parents cannot be overemphasized. Children who experience considerable amount of bonding with their parents are more likely to enjoy positive impacts and significant improvements to their ability to relate better, exhibit high self-esteem and reasonable satisfaction (Jigyel et al., 2019).

School environment as a unit of the larger society has undoubted influence on the growth and the development of the child with specific learning disabilities (Li & Dhamotharan, 2021). Positive and competent school environment with physical resource and support will motivate students with specific learning disabilities to learn industriously and emphatically with a higher level of attainment of ability performance (Li & Dhamotharan, 2021). Furthermore, the physical, social, health and cultural build-up of the school environment will be a good ground for an encouraging child's ability outcomes thus a child with deficit in social skills in a safe and friendly school environment will have the tendency to perform maximally on social skills (Buckley et al., 2020).

Also, research studies have indicated that parents of children with learning disabilities experience a higher level of stress and greater negative care-giving consequences than those parents with typically developing children (Chalwe, 2022). Further findings revealed that the stress level experienced is determined by the parent's coping styles among other factors like low income, lack of knowledge of available services and programs, lack of social support, as well as erroneous diagnosis and prescriptions. The current study looked at the chosen variables in order to establish the road-map to the

development of social skills in children with learning disabilities considering the interactions between the home, the school, and the community.

## **1.2 Problem Statement**

Parents, educators, and psychologists have learned over time that children, adolescents, and adults with learning disabilities must deal with the challenges of daily social interactions in addition to the challenges of their academic lives (Daniel et al., 2021). Though children with learning disabilities are becoming more literate (World Bank and Global Partnership for Education Report, 2020), however, research has repeatedly shown that they are significantly behind their peers in terms of development and eventually experience social exclusion as they get older (Agbonkhese, 2020). Furthermore, children with learning disabilities who have well- developed social skills will experience smooth transition to adulthood and be better able to communicate more effectively and efficiently, which will help them build, maintain, and deepen relationships at home, in school and their community of residence (Bakhsh et al., 2021). Nigeria is no exception concerning the challenges faced by children with learning disabilities. However review of literature revealed paucity of studies as it relates to development of children with learning disabilities especially as regards to development of their social skills. Based on the communication with the teachers on the field, it has been observed that social skills of children with learning disabilities have been neglected. These serve as red flags for social problems among children with learning disabilities without attention.

Globally, research into social skills and learning disabilities according to Muktamath et al. (2021), has shown that children with learning disabilities share a variety of features: ranging from trouble in solving social problems, inappropriate behavior at social settings, awkward response to interview, inability to navigate complex social situations effectively, such as peer pressure or criticism and acceptance. Children with learning disabilities are more likely to be the subject of aggressive, non-supportive adult remarks. They are susceptible to changing circumstances with lower tolerance for disappointment and anger. Some of them could be faced with difficulty recognizing their own emotions and that of others, recognizing how to express their feelings and consider the feelings of others, knowing how to initiate and sustain interactions properly and understanding the experiences of other people (Margolis et al., 2019; Bakhsh, et al., 2021).

Consequently, these could have negative impacts on their psychological health, affective development, and life adjustments (Bakhsh et al., 2021; Buckley et al., 2020). More so, there is a higher probability of dropping out of school and even engaging in violent and criminal activities inimical to the home, the school and the society (Yi et al., 2022).

Social skills as an integral part of child development, when reasonably imbibed, will help the children with learning disabilities interact with the world around them through relationship development, verbal communication, and body language. The right set of social skills will make it easier for a child with learning disabilities to improve cognitive abilities and better mental health, make friends, share with their peers, and cooperate in their social environment (Vanco Education, 2022).

Despite the fact that development among this group of special children can be quite slow, researches have shown that, developing their social skill can enable them experience social inclusion. Thus to ensure development of social skills among children with learning disabilities, Parent-child relationship is identified as an essential factor in promoting child development (Bronfenbrenner, 1986; Van keer et al., 2020). For children with learning disabilities to excel in their developmental strides, a potent parent-child relationship is a fundamental requirement. The foundation for a child's personality development, life decisions, and total repertoire of behaviors are predicated on potent and intimate parent-child relationship (Bdour et al., 2019; Shvalb & Butenko, 2019). Since parent-child relationship is very nurturing and, it contributes significantly to the child's physical, mental, cognitive, linguistic, perceptual, social, and emotional health, a child with learning disabilities will experience good social skills development when the relationship with the parents is cordial and intimate; and also experience social skills deficit when the relationship is otherwise.

Furthermore, to develop social skills of children with learning disabilities, studies revealed that; the physical, financial, health and cultural stability of the school environment is a strong ground for promoting child capacity outcomes and a child with deficit social skills in a healthy and comfortable school setting should be able to fly (Daniel et al., 2021; Kasawneh, 2021). However, there is gross failure on the part of the government in providing an inclusive educational system where children with learning disabilities can learn in conventional schools. Most of the schools lack the facilities to accommodate children identified with learning disabilities. Thus, it is important to understand the impact of the school environment on the development of social skills of children with learning disabilities.

Caring for children with learning disabilities can be a herculean task for the parents. Parents may be exposed to a high risk of depression, physical health problems and a considerable low quality of life due to excessive care-giving and increased parental responsibilities (Yi et al., 2022; Daniel et al., 2021). Parental stress in the view of Ang and Spencer (2022) is positively correlated with the child's behavioural and developmental deficit. The more stressed the parents are, the more the problems of the child and the further stressed the parents. Parents of children with learning disabilities are more likely to struggle with despair, physical health issues, and a decline in quality of life. Less distressed parents tend to be more responsive, warm, rational, and moderate in the kinds of control they use with the children. From research point of view, when a healthy and appropriate environment is designed and developed to improve the various skills of children with learning disabilities, children will have a high level of skill in response to the dictates of their environment while parents will have low stress and consequently, less negative care-giving (Isa et al., 2017; Ang & Spencer, 2022). According to Daniel et al. (2021), the care for children with learning disabilities is extremely daunting, quite energy dissipating and sapping, pre-occupying, and challenging for the parents. Thus, even with inclusive school environment and good parent-child relationship, presence of parental stress daunts the effect of school environment and parent-child relationship on the development of the social skills of children with learning disabilities.

Review of relevant literature showed lack of studies on the mediating role of parental stress on the relationship between school environment, parent-child relationship and the development of social skills of children with learning disabilities.

It is against this backdrop that this study fills the research gap by analyzing the relationships between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities in Nigeria. These relationships were hypothesized to be mediated by parental stress with an ultimate purpose of informing the practitioners and the stakeholders alike the crucial need for the development of social skills of children with learning disabilities.

From the discussions above, it is indicative that the social problem involving children with learning disabilities is menacing. Therefore, research seeking to improve the social skills of children with learning disabilities should hence be prioritized in order to better their functioning and subsequently family, school and the community functioning. Hence, this study was designed to examine the interplay of relationships between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities from the lens of the parents.

The theoretical framework that guides this study is a combination of Bronfenbrenner's Bioecological Model of development and Bowlby's Attachment Theory. According to the Bioecological Model, an individual's development is contextual, in that it is dependent on five environmental systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

On the other hand, the Attachment Theory posits that the type of attachment a child has with his or her caregivers, particularly their parents, is as important as determining a direct impact on their social abilities functioning. Children who are well and positively attached to their parents would turn out to be well-adjusted socially while

children who are not positively attached to their parents would turn out otherwise. Together, both the Bioecological Model and the Attachment Theory suggest that the development of the social skills of children with learning disabilities is heavily influenced by the dictates of their environment, especially the home, the school and their community of residence hence the formulation of the following questions.

### **1.3 Research Questions**

1. What are the levels of parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities?
2. Is there any significant relationship between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities?
3. What are the significant unique predictors of perceived social skills of children with learning disabilities?
4. Does parental stress significantly mediate the relationship between parent-child relationship, school environment, and perceived social skills of children with learning disabilities?

### **1.4 General Objective**

The general objective of this study is to examine the relationship between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities in inclusive schools in Abuja, Nigeria.

#### **1.4.1 Specific Objectives**

1. To describe the levels of parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities.

2. To examine the significant relationship between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities.
3. To determine the significant unique predictors of perceived social skills of children with learning disabilities.
4. To examine the significant mediating effects of parental stress on the relationship between parent-child relationship, school environment and perceived social skills of children with learning disabilities.

## 1.5 Research Hypotheses

- H0<sub>1</sub>:** There is no significant relationship between parent-child relationship and perceived social skills of children with learning disabilities.
- H0<sub>2</sub>:** There is no significant relationship between school environment and perceived social skills of children with learning disabilities
- H0<sub>3</sub>:** There is no significant relationship between parental stress and perceived social skills of children with learning disabilities.
- H0<sub>4</sub>:** The regression coefficient for chosen variables (parent-child relationship, school environment, and parental stress) equals zero when regressed against perceived social skills of children with learning disabilities.
- H0<sub>5</sub>:** Parental stress does not significantly mediate the relationship between parent-child relationship and perceived social skills of children with learning disabilities.
- H0<sub>6</sub>:** Parental stress does not significantly mediate the relationship between school environment and perceived social skills of children with learning disabilities.

## 1.6 Significance of the Study

This study is significant since it will help to equip and empower parents and school considering the crucial and inalienable roles they play in the process of child development. For example, parents are seen as the child's first teacher right from the cradle while school is seen as the extension of the home and the formal educator of the

child. So, it is expected that through this study, the roles of the parents and the school in the development of the child's social skills shall be brought to the fore of promoting social competence.

This study was also designed to significantly contribute to the existing literature in the field of learning disabilities and developmental psychology practices, particularly factors influencing the social skills development among children with learning disabilities in Nigeria by incorporating the emanating information on the inter-activity of the study variables i. e. the mediation variable (parental stress), the independent variables (parent-child relationship, school environment), and the dependent variable (perceived social skills) of children with learning disabilities.

In order to encourage children with learning disabilities in Nigeria to develop their social skills, the study's findings will help to understand how parent-child-relationship, the school environment, and parental stress interact.

Furthermore future research will leverage on this study, as there is currently no existing studies that have simultaneously examined the mediation effects of the relationship between the study variables. In addition, findings from this study would support conclusion from prior studies about the importance of parents' roles in the development of the social skills of their children with learning disabilities. Thus, it would increase parents' consciousness and awareness.

It is also anticipated that the findings of this study will assist the various stakeholders, including policymakers, administrators, parents, and caregivers of children with

learning disabilities, in their efforts to push for legislation of social policies and development of family dynamics and community activities in order to create an enabling environment and give social support to encourage the development of social skills of children with learning disabilities with the view to making the social life of children with learning disabilities a rewarding experience.

Given the importance of parental participation in improving learning outcomes from the home environment (Barger et al., 2019), this study allows for a deeper dive into the experiences of parents of children with learning disabilities. As a result, the findings of this study may provide new insight into what parents go through when they engage in learning activities at home with their children who have learning disabilities. Furthermore, this study provides valuable information which can be used to inform best practices for school-home interaction with the hope of improving learning outcomes for students with learning disabilities. As a result, the findings of this study may be useful to special education teachers, practitioners, psychologists and clinicians who work with exceptional students, as well as the larger community of parents and school employees who support learning outcomes of students with learning disabilities.

### **1.7 Theoretical Background**

Psychological theories were applied to conceptualize the discourse to better understand the perspectives of learning and developmental requirements of children with learning disabilities (Elise, 2021). These provide a theoretical foundation for the research as well as a framework for explaining the patterns of social skills of children with learning disabilities (Tudge et al., 2016). This current study was guided by the

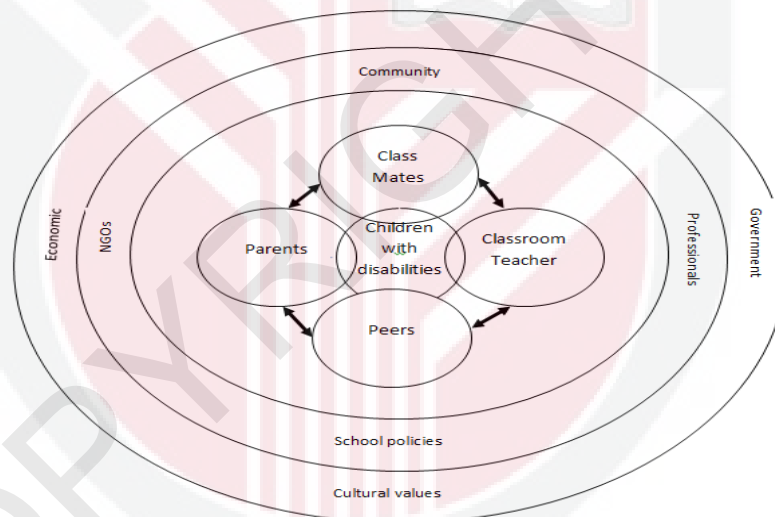
Bio-ecological systems model of development (Bronfenbrenner, 1995) which explains the importance of interaction between the individual and the environment towards development. Also, Bowlby's Attachment Theory (1973) was adopted to explain the child's social skills development in order to gain balance in the entire process of development through the child's attachment to the attachment figure, especially the parents. The Bio-ecological systems model and Attachment Theory were discussed in relation to the interaction between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities (as the study variables) in inclusive schools in Abuja, Nigeria.

#### **1.7.1 Bio-ecological Systems Model of Human Development**

Bio-ecological model of human development (Bronfenbrenner, 1995) is an offshoot of Bronfenbrenner's (1977) ecological systems theory. Bio-ecological model highlights the importance of a person's development within the environmental systems and how it affects one another bi-directionally. The bio-ecological approach places special emphasis on the biological, social, and physical elements of humans in relation to their surroundings. The interaction between people and their surroundings is thought to be continuous and constant. As it relates to human development, distinguishing between the categories of environment, person, proximal process, and time were given considerable attention in the work of Bronfenbrenner & Ceci (1994, 1995), (Bronfenbrenner, 1995, 1999; Bronfenbrenner & Evans, 2000). More specifically, Bronfenbrenner referred to proximal processes as "the engines of development" and emphasized their importance (Bronfenbrenner & Evans, 2000).

According to Bronfenbrenner (1995, 1999) and Bronfenbrenner and Morris (1998) bio-ecological system model views the child as existing within a complex frame of ecological context that promotes the ability development of the child. The ecosystem is adopted to explain the systemic influences on the development of the child and more so a child with disability within the development frame. The model has five interconnected systems which comprise microsystem, mesosystem, exosystem, macrosystem and chronosystem.

See the bio-ecological model as described in Figure 1.1:



**Figure 1.1: Bronfenbrenner's Bio-Ecological System of Child Education and Development**

(Source: Mantey, 2014)

Bronfenbrenner (1995) believes that development involves a complementary and dynamic relationship between the five systems and everyone in the process of development is caught up in the interactions between the systems. By the intricacies of bio-ecological system, the learner is seated at the centre of all the actions taken and done by the five systems. However, participation, achievement and value of the learner

are core of this framework. It requires the learner to participate and be actively and consistently engaged in all aspects of school and community programs (Evans, 2012). The microsystem comprises the immediate family environment where the child lives, for example, the parent, the siblings with interactions that affect the child. The mesosystem indicates the connections outside the child's family environment e.g. school, peers' influences. The exosystem is the community of residence of the child, which may not directly bear on the child but interacts with the microsystem, such as siblings' interactions, government policy etc. to exert influence on the child. The macrosystem considers cultural, social, political and legal contexts that wield influence on the child. The chronosystem is described as a developmental period that affects the interaction of the entire systems and in turn holds influence on the development of the child. All the interactions and the influences by the systems boil down to affect the performance of the child with learning disabilities. It is worth noting that all the systems are dynamic, interrelated and interwoven such that a change to one system is a change to the entire system.

According to the bio-ecological model of human development, relationship is a two-way interaction whereby both individuals and their environments constantly affect one another (Bergen, 2008). The model also demonstrated that a family's level of stress is greatly influenced by its surroundings, its members, and its stressors. The bio-ecological approach used in this study views parental stress as the result of continuous, active interaction (proximal process) between parents and their children with learning disabilities, which is influenced by both personal qualities and environmental circumstances. Whether a child has disabilities or not, the home and the school environments are crucial to their development, according to the bio-ecological model

(Bronfenbrenner, 1995). The interplay between the individual and his environment is highlighted by the model. The complementary interactions between the child and the environment have an impact on how the child develops (Bronfenbrenner & Ceci, 1994, 1995). A friendly and accommodating environment is supposed to be projected for a required outcome on the development spectrum.

Development was characterized by the bio-ecological model as the ongoing process and change in the bio-psychological qualities of people across time (Bronfenbrenner, 2001). This approach also emphasized how the growing child can alter the circumstances in which the proximal process is the main focus. The crucial component of development that clarifies how certain characteristics of the individual relate to an important outcome is called proximal process (Bronfenbrenner, 1994).

The interaction in the proximal process, such as the long-term relationship between parents and their children, must take place constantly over a significant amount of time in order to be effective, according to Bronfenbrenner and Morris (1998). Based on the features of the developing child and the environment in which the processes take place, there are systematic differences in the form, power, content, and direction of proximal processes that affect development. Because they do not develop normally like their classmates who are typically developing, children with learning disabilities may benefit from having more time to develop their social skills.

According to Bronfenbrenner. (1995) and Bowlby, (1973), appropriate development of educational goals and objectives, steady and suitable learning environment tailored to meet needs through collaborations between parents, professionals and other stakeholders, between home, school and community as well as periodic measurement

of outcomes to determine effectiveness and success will be highly required for the development of social skills in children with learning disabilities. Children with learning disabilities will fare well socially on the development spectrum when the architecture of the school environment considers their needs and the parents also play their significant roles of care-giving. Since the children with or without disabilities develop in a complex cultural and social world, there is the need for a balanced environment involving the family, the teachers, the peers as important social figures and constant change agents that will help to facilitate a better child outcome with consistent interaction over time.

Furthermore, based on the bio-ecological model of human development (Bronfenbrenner, 1995), parental stress being the mediating factor between the parent-child relationship, school environment and the perceived social skills of children with learning disabilities in this study is relational. It is believed to be determined by the transaction that takes place between the child and the environment. Since in the view of the model, transaction is relational, so also the child with learning disabilities suffers a measure of stress while going through the process of care and development from the parents which in turn slows down their rate of development. They suffer stress while trying to obtain care from already stressed parents. Therefore, in this current study, the parent-child relationship and the school environment are believed to exert major influences on the social skills ability of the child with learning disabilities. The thrust of this current study is aimed at the interplay of interactions between parent-child relationship, school environment and the perceived social skills of children with learning disabilities with parental stress as the mediator, derived from the model of bio-ecology of human development (Bronfenbrenner, 1995).

### 1.7.2 Attachment Theory

Remarkable outcomes have been revealed from the attachment theory-based study of parent-child relationships. According to Bowlby (1973), attachment is the initial affective link that a child develops with their primary caregiver. Bowlby proposed, based on object relations theory, that when an infant is stressed during the first year of life, it is in their best advantage to seek out proximity to the attachment figure. In terms of children, attachment theory highlights the significance of nurturing interactions for a child's regular growth. It also implies that a child's future social, cognitive, and emotional development is influenced by a supportive bond between parents and children (Antonucci et al., 2004). John Bowlby (1973) formulated attachment theory by drawing concepts from biology and psychoanalysis.

This theory holds that children's interactions with their primary caregivers—parents, for example—lead to the development of internal representations of relationships, which they then use to support other relationships. The parent-child relationship is another tenet of attachment theory, which holds that it shapes a child's psychological development throughout time. Because of the strong emotional and physical relationships that form between a child and his or her parents during infancy, parent-child relationships are marked by high degrees of bonding between children and their parents, particularly mothers. Anxiety and grief following the loss of the attachment figure might cause issues with the child's social and emotional development (Varga, 2011). Strong attachment bonds between parents and their children are essential for the development of appropriate social skills, the construction of conscious connections, and the good mental health of the future adult (Bowlby, 1973). According to Boutella

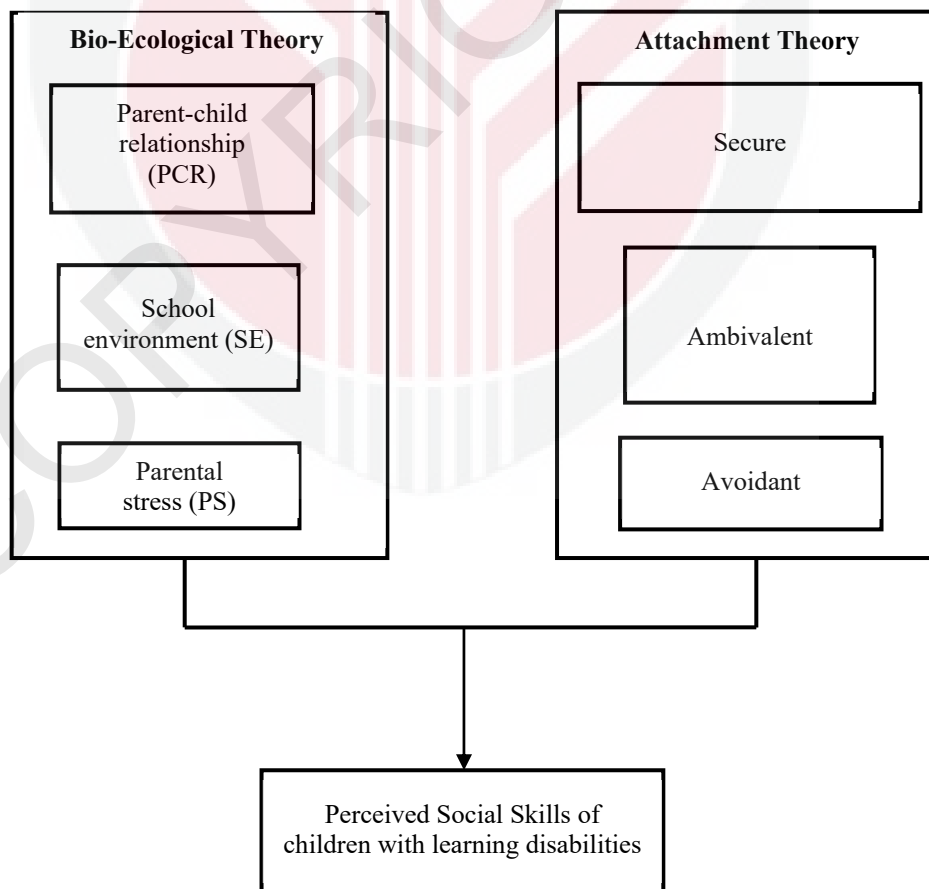
(2009), a parent's constant attention to their child's needs is thought to be the basis for a child's attachment development and the creation of internal working models of caring connections. The dependent variable (perceived social skills) of children with learning disabilities and the predictor variable (parent-child relationship) in this study were both addressed and explained by attachment theory. Learning disabilities influence several aspects of a child's life, including social skills; in such a way that many children and students with poor social skills can be socially isolated and eventually depressed (Baker-Ericzén et al., 2018).

Study has shown that social skills deficit negatively affects different dimensions of a child's life (Kuhn, et al., 2018). Meanwhile, three major attachment styles are known important factors influencing the social skills of children. Three major attachment styles include the secure, the anxious/ ambivalent, and the avoidant (Farhadi, et al., 2020). Attachment theory argues that the way the children are attached to their caregivers, specifically the parents, is profoundly associated with their social skills (Caplan, et al., 2019). For instance, according to Tajik Esmaili and Torbati (2021), there is a strong correlation between pupils' social skills and their attachment types. Additionally, Caplan et al. (2019) discovered that early child-caregiver relationships have an impact on a child's social skills. If a child receives inadequate care during this crucial developmental stage, he or she may struggle to experience intimacy and develop appropriate social skills as adults (Caplan, et al., 2019). This theory is deemed appropriate for this study as the relationship between the parent and the child with learning disabilities will significantly enhance the social skills of the child.

### 1.7.3 Integration of Model / Theory

In this study, Bio-ecological Model of Human Development (Bronfenbrenner, 1995), and Attachment Theory (Bowlby, 1973) were integrated to comprehensively explain the interactivity between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities (as the study variables) in inclusive schools in Abuja, Nigeria. The Bio-ecological Model of Human Development (Bronfenbrenner, 1995), and Attachment Theory (Bowlby, 1973) offer appropriate theoretical background upon which this study can rely.

The theoretical framework of this study is illustrated in Figure 1.2 below:



**Figure 1.2: Bio-Ecological Model and Attachment Theory**

The model and the theory integrated to form the framework for this study were derived from the Bio-ecological Model of Human Development (Bronfenbrenner, 1995), and Attachment Theory (Bowlby, 1973). Based on the bio-ecological Model (Bronfenbrenner, 1995), the family environment and the school environment are central to the development of the child, whether the child has disabilities or not. The model emphasizes on the interaction between the individual and his environment be it immediate or extended environment. Developmental progression is influenced by the complimentary interactions between the child and the environment (Bronfenbrenner & Ceci, 1994, 1995). For a required outcome on the spectrum of development, the environment must be projected in a fashion that is friendly and accommodating. The school environment which is the unit of the larger environment must be structured to meet the specific needs of the child. And while these needs are being addressed, the parents as part of the agents of development are to be well involved.

Within the framework of the relationship between the parents, and the development of the child, research has demonstrated that learning is an essential element and that infants and children develop increasingly complex internal working models of the world and of the important people in it through continuous interactions with their environment (Bowlby, 1969, 1973, 1980). Children make use of these internal working models that serve as representatives to assess circumstances and direct behavior. One such instance of this would be when a child develops a working model of a person who is likely to offer support when needed as a result of their interactions with their attachment figure (most times parents play a primary role in the process of learning and development). That how well the children are attached to their attachment figure and the much knowledge of their environment they have will influence the child's skills development and ability.

The attachment theory introduced by Bowlby (1973), contends that learning is a product of attachment and the extent to which children can learn is determined by the level of attachment to the parents or their primary caregivers (attachment figure). According to Bowlby (1973), a child with learning disabilities will be encouraged to build and acquire appropriate social skills when the home and the school guarantee sufficient attention and interaction with the child. Bio-ecological Model of Human Development (Bronfenbrenner, 1995), and Attachment Theory (Bowlby, 1973) have commonly argued from different perspectives that a healthy environment (home and school) constitutes the major relational vehicle through which the social skills of the child with learning disabilities is developed. Thus the present study investigated the relationship between parent-child relationship, school environment and perceived social skills of children with learning disabilities, from the lens of the parents, with parental stress as the mediator.

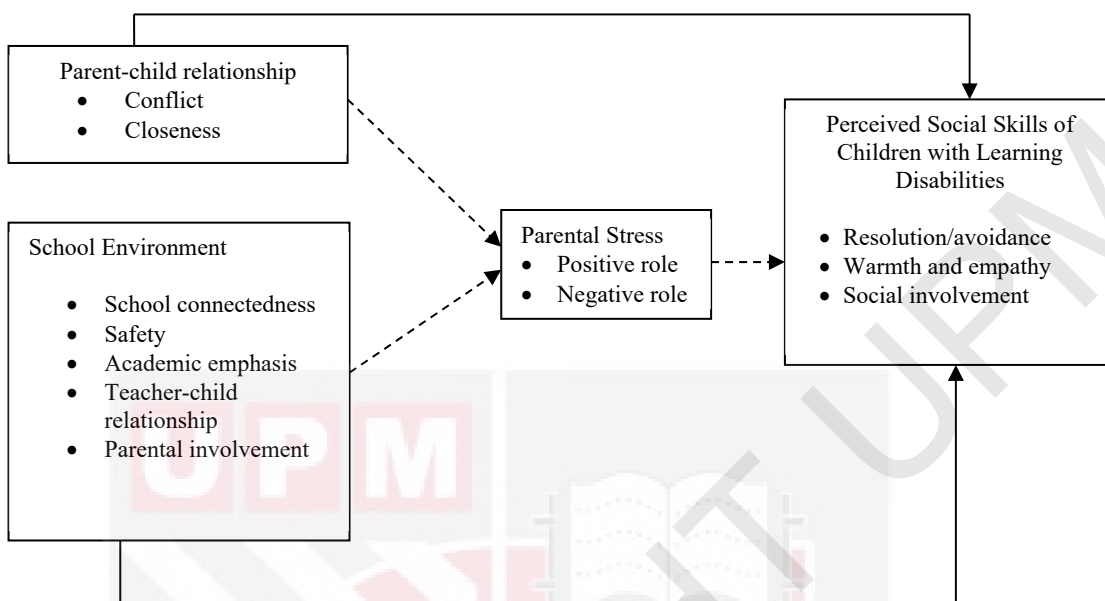
## **1.8 Conceptual Framework**

A research context provides an interpretation of how the study's variables relate to each other. This defines the variables that the researcher needs to investigate. Conceptual framework also displays the "map" of the researcher in conducting the investigation (Regoniel, 2015). Therefore, this study's conceptual framework reveals the relationships between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities. The framework for this study was focused on the integration of the bio-ecological model of human development (Bronfenbrenner, 1995), and Attachment Theory (Bowlby, 1973). Based on the assumptions of the model and the theory, this study proposed that (A) Children

with learning disabilities who get along well with their peers and teachers in school will exhibit more social competence than children with learning disabilities who don't get along well with their peers and teachers in school. **(B)** Children with learning disabilities who have more positive relationships with their parents are more likely to exhibit higher social competence than children without a positive relationship with their parents.

Children with learning disabilities whose parents experience reduced stress are more likely to exhibit more social competence than children whose parents experience elevated stress **(C)** Children who are well socially integrated in their environment and are on continuous spectrum of development are more likely to exhibit higher social competence than children who are not well socially integrated and who are not placed on continuous spectrum of development. The model and the theory are explicit by the variables involved in the study. In this research, the dependent variable is perceived social skills of children with learning disabilities. The independent variable is accompanied by two major independent variables, they are parent-child relationship and school environment while parental stress is the mediator.

This is demonstrated in figure 1.3 below.



**Figure 1.3: Conceptual Framework for the study on parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities**

## 1.9 Rationale for the Study

A person with social skills is able to engage with others in a variety of social situations with competence and appropriateness. The abilities needed for positive learning—such as problem-solving, reasoning, communication, emotional regulation, and interpersonal interaction—are naturally developed in children. By gathering information from parents and teachers, social skill development should take into consideration the multi-situational social requirements of the home and school contexts. Parents are able to share their children's social experience narratives and the skills that enable regular social interaction. The rationale of this study was therefore to explore social skill difficulties in children with learning disabilities, and establish a pathway from the lens of the parents through the interplay of parent-child relationship,

school environment, parental stress and perceived social skills of children with learning disabilities, so as to bring the child with learning disabilities to the front burner of social participation and functioning, since social competence plays an important role in children's participation in all life endeavour.

#### **1.10 Limitations of the Study**

There are certain restrictions on the current research investigation. First and foremost, the researcher noticed a dearth of studies of this type that looked at the interaction between the dependent variable (perceived social skills of children with learning disabilities) and independent variables (parent-child relationship, school environment, and parental stress). The focus of this study was on the relationship of the parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities in inclusive schools in Abuja, Nigeria. In contrast, there are other variables that could be discussed from the perspective of a child with learning disabilities' capacity for social skills but which were not taken into account or captured within the framework of the current research. These may include peer relationships, gender differences, teachers' attitude, curriculum growth and development, as well as the siblings of children with learning disabilities among others which may be considered for investigation in the future, thereby lending an expansion to the current study.

Secondly, the study sample only consisted of parents of children with learning disabilities who are active students in the inclusive public basic education schools in the Federal Capital Territory, Abuja, Nigeria. Parents of children with learning

disabilities who had dropped out of school or studying in the private schools were excluded. Thus, they may be exempted from the generalization of the result of this study. Further, since the parents of children with learning disabilities from other states may have different experiences, characteristics, culture and perspectives, the generalization of the result of the current study may equally not include them.

Thirdly, the data accuracy was beyond the researcher's control since the questionnaires were self-reported. The respondents may, or may not, have responded seriously and sincerely to the questionnaires. Due to fear of labeling and social stigma, respondents can also under-report their views and perceptions. However, respondents' confidentiality was assured to encourage fair responses.

Another limitation of this study is the instrument, which has a Likert scale with the response options "3 = Neutral/Not Sure/Undecided." This scale has an impact on the degree of agreement's continuity characteristics, so it is irrelevant if the mean score were to be calculated from the data.

Finally, the current analysis used a quantitative approach where the survey tool was used in one time to collect data information through a particular sample group at one particular point. Quantitative approach cannot assess the impact of growth over time.

## **1.11 Definitions of Terms**

### **1.11.1 Children**

#### **Conceptual Definition**

Any person under the age of 18 in Nigeria (Child's Right Acts, 2003).

#### **Operational Definition**

Children with learning disabilities aged 12 to 18 years studying in inclusive basic schools across the six Area Councils of Abuja.

### **1.11.2 Learning Disabilities**

#### **Conceptual definition**

Learning disabilities is a 'generic term' that refers to a heterogeneous group of disorders manifested by significant difficulty in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic and are presumed to be due to central nervous system dysfunction which may occur across the life span of the affected individual (NJCLD, 2016).

#### **Operational Definition**

Learning disabilities refers to disabilities which comprise of learning and developing oral language, reading, writing, mathematics, social skills, memory and motor skills

medically diagnosed among children with disabilities aged 12 to 18 years studying in inclusive basic schools across the six Area Councils of Abuja.

### **1.11.3 Inclusive Schools**

#### **Conceptual Definition**

The structured school environment where each individual's needs are taken into account and that all learners participate and achieve together with special focus on learners who may be at risk of marginalization, exclusion or underachievement. It acknowledges that all children can learn and that every child has unique characteristics, interests, abilities, and learning needs (UNESCO, 2023).

#### **Operational Definition**

Refers to the selected inclusive basic schools across the six Area Councils of Abuja, Nigeria which provide education for children with and without learning disabilities.

### **1.11.4 Parent-Child Relationship**

#### **Conceptual Definition**

Parent-child relationship refers to an intimate and unique interaction that guarantees the foundation for the child's personality development, life choices and overall behaviour repertoire, physically, mentally, emotionally and socially (Parent NI, 2018).

## **Operational Definition**

Parent-child relationship refers to the parental perception of the quality of their parent-child relationship with their children with LD. It was measured using the adapted Child-Parent Relationship Scale (CPRS) by Pianta (1992). The CPRS comprises of 15 items, rated on 5-point Likert scales. The score is computed as the total sum of the responding items which indicates the closeness and conflict in relationship. The conflict sub-scale comprising eight items, measures the degree to which a parent feels that his or her relationship with a child is characterized by negativity. The seven-item closeness sub-scale assesses the extent to which a parent feels that the relationship is characterized by warmth, affection and open communication. Higher total score indicates positive parent-child relationship

### **1.11.5 School Environment**

#### **Conceptual Definition**

School environment includes physical and administrative structures, curriculum and materials, peers as well as teachers' efficacy and competencies (Abegglen & Hassels, 2018).

#### **Operational Definition**

School Environment in this study, was measured using the adapted Baltimore City Public School System Climate Survey (BCPSSCS) by Division of Research, Evaluation, Assessment and Accountability (DREAA). The BCPSSCS comprised of 17 items, that determine school connectedness, safety, academic emphasis, teacher-

children relationship and parental involvement. Higher total score indicates positive school environment.

#### **1.11.6 Parental Stress**

##### **Conceptual Definition**

Parental stress in this study describes the emotional challenges and the troubles parents go through while giving care to children with learning disabilities. These include undue energy dissipation, obnoxious expenditures, worry, anxiety, grief, shame and guilt, blames, resentment from neighbours and extended family members, marital discords, etc. (Logsdon, 2018).

##### **Operational Definition**

Parental Stress in this study was measured using the Parental Stress Scale (PSS) by Berry and Jones (1995). The PSS comprises 18 items that determine parent's feelings about their parenting roles, exploring both positive aspects (e. g. emotional benefits, personal development), and negative aspects of parenthood (e. g. demands on resources, feelings of stress). The PSS is intended for assessment of parental stress for both mothers and fathers of children with and without clinical problems across a wide age range. Higher total score indicates high parental stress.

### **1.11.7 Perceived Social Skill**

#### **Conceptual Definition**

Perceived Social skill is the capacity to use a variety of social behaviors, such as tone of voice, hand gestures, facial expressions, body posture, cooperating with others, and effectively handling potentially tense circumstance (Kelly, 2018).

#### **Operational Definition**

In this study, parents rate how their child display 30 social skills based on the Social Skill Questionnaire (SSQ) by Spence (1995). The SSQ comprises of 30 items that determine the three factors of conflict resolution/avoidance, expression of warmth and empathy and social involvement. Higher total score indicates that parents perceived social skill of their children is high (Spence,1995).

### **1.12 Chapter Summary**

The background of the study, which gives an account of the image of a child with learning disabilities, was discussed at the beginning of this chapter. The background further described the child with specific learning disabilities that are deficient in social skills. The problem statement, research objectives, research questions, research hypotheses, and significance of the study, theoretical and conceptual frameworks, rationale for the study and the limitations of the study were then included. Definition of terms concluded the chapter.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The purpose of this study was to examine the relationships among parent-child relationships, school environment, parental stress, and perceived social skills of children with learning disabilities in Inclusive schools in Abuja, Nigeria. The chapter begins with the conceptualizations of the main variables of interest presented along with extant research on their relationships with each other. These findings provide the foundation upon which the hypotheses of this study were formulated, followed by the system of special and inclusive education in Nigeria and also an overview of the two theoretical perspectives that form the basis of the present research. The chapter closed with a summary.

#### **2.2 Learning Disabilities**

A specific learning disability is defined by the Individuals with Disabilities Education Act (IDEA) as a disorder in one or more of the basic psychological processes involved in understanding or using language, whether spoken or written, that manifests itself in the inability to listen, think, speak, read, write, spell, or perform mathematical calculations. Perceptual impairments, brain damage, mild brain dysfunction, dyslexia, and developing aphasia are all included in this category. It clearly establishes that specific learning disabilities are not primarily the result of visual, hearing, motor

disabilities, mental retardation, emotional disturbance, or of environmental, cultural, or economic disadvantage (DOE, 1995).

Learning disabilities are a type of neuro-developmental disease that are not due to issues with hearing, vision, social or economic circumstances, cultural or linguistic disparities, a lack of motivation, or inadequate or unsatisfactory education. The ability of the brain to receive and/or process spoken and non-verbal information accurately and effectively is influenced by the interaction of genetic, epigenetic, and environmental factors with a biological basis. Learning disabilities have significant psychological, educational, and social effects on a child's life as a "differentiation" that appears within the first school year (Papanastasiou,2019)

Because children with learning disabilities do not appear to have any form of disability and because their challenges are not readily apparent, learning disabilities are sometimes referred to as hidden disabilities. Because of this, it is common for children with learning disabilities to be misunderstood and accused of not paying attention, being sluggish, or being clumsy, which leads to low self-esteem, confidence, and drive. In light of this, we can say that a child has a learning disability when there is a substantial gap between their projected intellectual capacity and their actual performance that cannot be explained in terms of their intellectual potential. These children may struggle with speaking, listening, reading, understanding, spelling, arithmetic calculations, writing, and concepts all at once. Average, and occasionally above average, intelligence exists in children with learning disabilities. The misconceptions that have persisted about learning disabilities and many other developmental disabilities, insufficient information from parents and teachers, and the

refusal of many parents to accept their child's difficulty have led to a distortion of the true picture that presents a child with learning disabilities and have reinforced misconceptions, such as that the specific children are arctic or have low intelligence (Alvarez, 2019). At this point, it's crucial to emphasize that learning disabilities, like all other developmental disabilities, have nothing to do with a child's IQ, gender, or ethnicity, and they affect a person for the rest of life.

Guilt, fear, frustration, social exclusion, despair, and lack of confidence are common problems faced by children with learning disabilities. According to Bauminger-Zviely et al. (2019) and Schmidt & Vereenoghe (2021), for a primary child, these situations have detrimental psychological effects and can lead to the formation of poor self-esteem and a negative self-image. These children usually don't feel internally fulfilled when they perform poorly, therefore they don't feel any acknowledgment for it, which makes them lack the necessary drive to learn. When hyperactivity and learning disabilities combine, there is a negative evaluation of the behavior and performance of the children with learning disabilities. Undoubtedly, children's capacity to learn and develop their personality is negatively impacted by such a procedure.

Without a doubt, this process hinders a child's capacity to learn and grow as a person (Chatzipanteli et al., 2022). In light of the humiliating academic failure, which leads to low self-esteem and social isolation, students with learning disabilities experience bullying at school at a rate that is double to ten times higher than average (40%), according to a recent study on "BULLYING - SCHOOL EDUCATION: Psycho-social, Educational Consequences and their Response" by the University of Macedonia at the Aristotle University of Thessaloniki.

Children with learning disabilities frequently display school denial or school anxiety as a result of all these causes (Aasa & Annalakshmi, 2021). This is the children's apprehension about starting school and their intense dissatisfaction at having their parents apart. Children exhibit a steadfast refusal to continue attending school and frequently display psychosomatic symptoms as nausea, chest pain, stomachaches, etc. The majority of these symptoms go away when the child is not required to attend school, such as during weekends and vacations. The fact that there is typically no evident justification for this rejection should be recognized. However, a number of psychological issues might cause youngsters to frequently miss school. (Obare, 2019; Omiegbe, 2023).

Learning disabilities can be addressed and the challenges faced by a child with learning disabilities are minimized with early diagnosis and early intervention. An essential component of the assessment and therapeutic intervention for learning disabilities is the examination of co-morbidity and the psycho-social consequences. (McDonald-Harker et al., 2021). In order to address learning issues and all of the effects they have on a child's life, proper parenting, teacher training, and their willingness to work with professionals are essential. After formal schooling is over, an individual's psychological functioning may still be impacted by their persisting learning deficit. In affluent nations, there is a general interest in policies and remediation programs for Developmental Disorders, however it has been observed that emotional anguish suffered by pupils with learning disabilities typically goes untreated. (Deepthi, et al., 2022; Bruefach & Reynolds, 2022; Alshatti & Tazi, 2021). Along with a lack of desire and low self-esteem, this disregard for emotional disturbances in learning disabilities may add to the risk factors for the emergence of internalizing symptoms in adolescence.

Therefore, it is critical to comprehend whether varying levels of self-reported psychological factors, including general cognitive resources, self-esteem, perceived quality of life, social support, and decision-making strategies, may have an effect on internalizing symptoms in Developmental Disorders during adolescence.

Across the world, children face issues related to personal, social, psychological, academic, and professional lives (Nyirenda, 2022). Children with learning disabilities, however, deal with particular issues such as limited independence, difficulties adjusting to differences between themselves and their peers, and limitations on involvement in regular everyday activities. Children with learning disabilities confront additional psychological and physical challenges related to their diagnosis because they must manage stresses unique to their disability in addition to the demands of usual development (Obare, 2019). Inside and outside of the classroom, children with learning disabilities (LDs) deal with a variety of social, academic, and behavioral difficulties.

A thorough understanding of LDs is necessary in order to appreciate the scope of these problems. Specific learning disabilities are defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as challenges with acquiring and applying knowledge in one or more academic domains that emerge in school-age children. These include issues with reading, math, or writing expression, and they frequently lead to performance that is below what is reasonable for the child's age (American Psychiatric Association, 2013a). Even though learning disabilities (LDs) are usually first observed in the classroom, their effects go beyond school walls. They cover a wide range of facets of life and start in early childhood, a critical period in which many

developmental goals are met. The growth of many of the developmental abilities that children are expected to master can be severely hampered by the existence of LDs, which can have an impact on future performance and achievement. For many children with LDs, for instance, learning to read and write is one of the most important scholastic milestones that is impeded, which causes issues in many areas of their lives (Obare & Winga, 2021). Furthermore, inability to complete conventional developmental tasks can lead to poor self-appraisals and stressful experiences, both of which can have major, long-lasting repercussions, according to Obare (2019).

Understanding the nature of LDs' effects on psychological well-being is crucial to comprehending the issues they raise. It is believed that psychological well-being is essential to total disability adaptation. The difficulties experienced by children with learning disabilities (LDs) start early and can pose serious obstacles to their psychological development. According to Ehrstaedt et al. (2020), psychological well-being includes social competence, self-acceptance, autonomy, healthy and pleasant interactions with others, mastery of tasks in the environment, personal progress, and purpose. Moreover, psychological well-being comprises having a general sense of life satisfaction, feeling in control, and feeling supported (Eichstaedt et al., 2020). Also crucial to psychological functioning in a variety of contexts are authenticity, competence, and developing a deep sense of self-awareness (Chang et al., 2020).

Anxiety, depression symptoms, and negative self-perceptions are common among students with learning disabilities, which contributes to their poor psychological well-being. This might be brought on by their academic struggles, their diagnosis of learning disabilities, their poor social skills, or other LD-specific characteristics. The majority of experts and psychologists have identified dyslexia, dysgraphia, and

dyscalculia as the three primary types of learning disabilities. Social skills are one of the many areas of a person's life that are impacted by learning disabilities; as a result, a large number of students and children who struggle with social skills experience social isolation and depression (Bakhsh et al., 2021), therefore, this current study is aimed to establish the relationship between parent-child relationship, school environment, parental stress and social skills of children with learning disabilities in inclusive schools in Abuja, Nigeria.

### **2.3 Perceived Social Skills**

Social skill is a person's ability to engage with others in ways that generate favorable reactions and help them avoid negative reactions (Elliot & Gresham, 1993; Jacob et al., 2021). Coordination, assertiveness, accountability, and self-control are some examples of social skills (dos santos et al., 2021). It follows that having social skills will help you understand and analyze information in a sociocultural setting (do Santos et al., 2021; Jacob et al., 2021). The company one keeps has a big impact on how they develop as people. It is impossible to overstate the role that influence plays in the development of the appropriate social skills needed for successful interactions. This is due to the fact that people are the compendium of ideas, beliefs, and mental processes gleaned from a variety of experiences and sources. Social skills refer to a person's capacity to communicate effectively with others in a certain social setting.

The ability to engage and communicate with others through gestures, body language, and outward looks is referred to as social skills. However, some people struggle to display suitable behaviors (do santos et al., 2021; Kaya & Kaval, 2022). As a result,

they find it difficult to communicate with those around them and form meaningful relationships (Kaya & Kaval, 2022). Lack of social skills creates difficulties that could eventually result in depression, social anxiety, loneliness, and alcoholism (Jacob et al., 2021). Poor social skills are mostly caused by children with learning disabilities' fear of standing out and becoming the target of jokes, bullying, and, in the worst cases, rejection. Research efforts have observed that children with learning disabilities can be socially deficient in some basic social skills like communication, problem solving, interpersonal skills and accountability (Jacob et al., 2021).

Research evidence indicates that children with learning disabilities (LDs) have deficiencies in social skills related to their self-perception, how others view them as socially competent, how successful they are in social situations, and how they behave (Bakhshani, 2022). Deficits in social skills are significant because they have detrimental impacts on both the social and achievement domains (Tomás et al., 2020). Children who have specific learning disabilities typically do not have the necessary social skills to fully engage in their peers' social lives (Bakhshani, 2022; Bruefach & Reynolds, 2022). Children with learning disabilities (LDs) struggle with social information processing and offer subpar answers to social issues. (Kamper-Demarco et al., 2020). Assuming that social skills deficits underlie social anxiety, social skills training will be a popular therapeutic approach. Since social skills training is currently seen as an experimental intervention, it is important to take anxiety into account when designing assessments and interventions for students with learning disabilities. Because children with LDs have traditionally solely received support for their LD, their emotional needs have largely been disregarded in prior research (Furneaux-Blick, 2019). Few studies have employed this strategy and given a protocol for children with

LDs, despite some research demonstrating the relationship between social skills and social anxiety (Yazdi-Ugav, 2020).

Vanco Education (2022) states that parents, caregivers, and educators can support children's skill development in a variety of ways. To ensure that children understand what is expected of them in a social setting, the adults in their lives must teach them consistently. Social skills are essential for a child's growth even though there are many other skills they should learn. It's important to remember to role play, teach emotion control, provide positive reinforcement, set an example for the child, and let them learn via play when teaching them social skills. Every age group requires a distinct set of social skills to support growth and ensure that all children have a bright future.

### **2.3.1 Good Role Modelling**

One of the best methods to help children learn social skills is to model appropriate behavior for them. In social situations, practice good manners by using phrases like "please" and "thank you." To help your youngster see and emulate appropriate behavior, treat other people with respect. Make sure to urge the child to use courteous language to express gratitude for good behavior. Additionally, discuss with the child the value of cooperation and teamwork. Discuss the significance of the task you are doing with your child. It is much easier if everyone cleans up the toys, or you can make a friend pleased by lending a helping hand.

### **2.3.2 Role-Playing**

Role-playing is another powerful tool for promoting social skill development. Provide yourself with chances to apply such abilities. You can pretend to be at a restaurant and practice asking for what they would like to eat. A child can learn about maintaining personal space and keeping their hands to themselves by practicing arms-length distance. To make sure that the children are improving their listening abilities, ask them what they remembered after you told them a story. Maintain eye contact when narrating a tale. Once you've gone over the situation with them, you may talk about how they felt to make sure they understand why it's necessary.

### **2.3.3 Praises and Positive Reinforcement**

One of the best ways to maintain a child's motivation to use social skills is through positive reinforcement. When expressing gratitude, be straightforward and use expressions like "Thank you for putting away your toys as I asked." They are obeying the rules, as evidenced by these succinct and straightforward messages of support. Reward a child's listening and operating abilities if they struggle to follow instructions. This can be achieved by providing your child instant praise for listening to instructions and following them once you ask them to do something. Continue doing this until they start to cooperate more.

### **2.3.4 Learning Through Playing**

Children learn by imitating language and conduct, as well as by listening to others. But they also take pleasure in using play to learn. Play can be used in many different ways

to support the development of social skills. An excellent environment for children to practice social skills and engage with other children is a kindergarten or daycare. They will encounter difficulties here that call for them to share, take charge, put others' needs first, and solve problems. A child can develop and learn in this environment in a variety of ways. It is especially beneficial since it takes place outside of the house and gives children the opportunity to socialize with others who are not members of their immediate family. This puts them in a challenging new environment to utilize their skills and absorb skills from other children. Special programs can also help fine-tune a child's social development and engagement in the right environment with support and encouragement.

### **2.3.5 Emotion Regulation and Understanding**

Teaching a child the importance of emotions is an effective approach to social skill development. This entails assisting them in comprehending both their own and other people's feelings. You can use faces that convey a particular emotion as flashcards. You can ask the child to display a face that symbolizes a certain feeling. Additionally, ask the child to describe the emotion and how you might help it by having a conversation with them. Some children find it challenging to control their emotions, and they will require assistance when they are experiencing strong emotions. Furthermore, the child will learn valuable social skills like empathy by being able to comprehend the feelings of others.

## **2.4 Perceived Social Skills and Children with Learning Disabilities**

The study of learning disabilities has expanded to include adjacent disciplines including psychiatry, neurology, psychological counseling, and the area of persons with special needs. Learning disabilities are a form of disability that first gained prominence in the middle 1960s and the early 1990s (Khasawneh, 2021). According to DSM-V, Specific learning disabilities is considered as deficits in one or more of the basic developmental processes of perception, conceptualization, socialization, language, attention, and impulse control in children (APA, 2000; Gorgun & Melekoglu, 2019). Obviously, these assertions and definitions are consistent with the United States Individuals with Disabilities Education Act (USIDEA, 2016), which presents learning disabilities as a cognitive processing deficit that cause an individual to struggle in academic and social domains (Zulkipli et al., 2020).

However, learning disabilities may differ by individuals, and there is no single academic or cognitive deficit that affects everyone (Capozza, 2020; Mahan, 2021). Students with specific learning disabilities (SLDs) have a variety of characteristics, which include, increased academic anxiety (Baranova & Marova, 2022), decreased behavioural control and impulsivity (Narvaez Olmeda et al., 2021; Venkatesan & Lokesh, 2019), and unique learning patterns, which often necessitate academic modifications and supports (Capozza, 2020; Mahan, 2021). Age-appropriate social skills are frequently lacking in children with certain learning disabilities, which interferes with their social functioning (Ishartiwi et al., 2023; Viktorin, 2022). Children with learning disabilities are fundamentally challenged in one important area of development called social skill (Vanderbilt TRIAD, 2010). One of the main

characteristics of people with learning disabilities that has a detrimental impact on their academic performance and general well-being is difficulty forming or maintaining connections.

In order to engage with others, learners must comprehend both written and implied norms. Without the necessary social skills, they will not understand these rules and will not know how to behave in a range of social circumstances. People who are socially adept find it simpler to communicate their satisfaction or dissatisfaction, defend their individual rights, ask for assistance when they need it, and reject unfavorable expectations (Hagarty & Morgan, 2020; Jacob et al., 2021). Although reading and language deficits, which are related to academic achievement, are the most frequently acknowledged deficiencies of children with learning difficulties (Grigorenko et al., 2020; Miciak & Fletcher, 2020), there are other inadequacies as well. Nonverbal deficiencies do exist, nevertheless, particularly in the domains of rhythm and music, as well as in the understanding of facial expressions and spatial perception. Individuals with learning disabilities also frequently experience hyperactivity, attention problems, and maladaptive behavior (Gusmao et al., 2019; Mayes et al., 2019).

More than just academics are impacted by learning disabilities. It comes from reading to relationships, which in the end lead to difficulties. It is critical for children with learning disabilities to acquire strong social skills since getting along with other people and fitting in at school are equally important. People with LD may not be as perceptive in their social environment, may occasionally misinterpret others' social cues, and may not be as quick to pick up on experiences or social signs as their friends. Students with

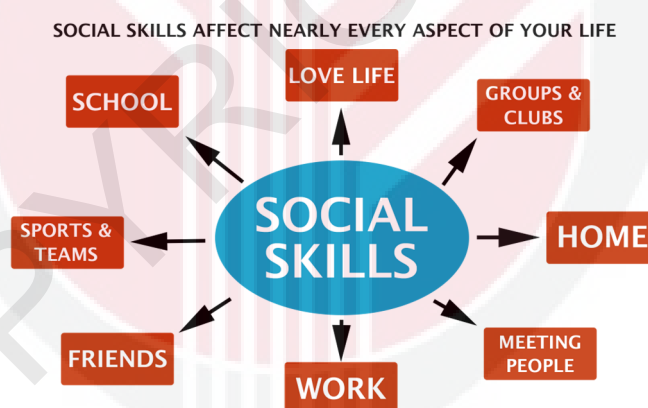
LD may show social competence deficiencies that are either performance-based or skill-based. In other words, the students may not have the skill in their repertoire or may have the skill but not do it at a standard that is acceptable. Numerous researchers have utilized diverse definitions of the term "social skills." Many people use the term "social skills deficits" to refer to the many social and behavioral issues seen in children with learning disabilities.

According to research, social skills are often lacking in children with learning disabilities. Haager and Vaughn (1995) estimated that between 35% and 75% of the population of students with learning disabilities experience social and behavioral issues. Basic communication is one of the social skills that children with learning disabilities are lacking (Drigas et al., 2022). They noticed that one factor that can lead to social challenges in children with learning disabilities is their verbal behavior. The respondents' social interactions and communications were simultaneously categorized by two observers using an observational technique into seven categories: rejection, requests for information or resources, self-image, helping/cooperation/giving, egocentric/self-comments, and response.

Children with learning disabilities verbalize negative remarks more frequently and engage in and receive noticeably more negative feedback. They frequently don't respond to peers as well as comparative participants. It was discovered through the use of a sociometric scale that children with learning disabilities were seen as less popular than their counterparts without learning disabilities. The authors hypothesized that their poor verbal communication patterns may be to blame for this (Argyle, 2019; Special Education guide, 2020). The social skill area of interpersonal skills is poorly

mastered by children with learning disabilities. Sharing, joining in on activities, requesting permission, and waiting turns are all examples of interpersonal skills.

A lack of social skills may make it difficult for certain people to ask clear and precise questions. The inability to ask a straightforward inquiry makes it difficult to get information and start a conversation. Those who find it difficult to ask inquiries will come off as uninterested and possibly even rude. Because they promote concise and controlled responses, closed questions may be preferred by those with poor social skills. Adults with poor social skills may find it difficult to comprehend appropriate behavior in many social settings and contexts (Moon & Ke, 2021; Special Education guide, 2020).



**Figure 2.1: Aspects of Life affected by Social Skills**  
(Source: The Social Winner)

Children prefer to participate in activities with their peers their own age as they progress through elementary and middle school (Viktorin, 2022). Through hands-on learning, children can build a set of social skills necessary for social integration (Ishartiwi et al., 2023). Toddlers initially pick up social skills by imitating the social behaviors of their classmates. Children continue to develop their social abilities as they

participate in a variety of interactions that encourage positive social behaviors (Hagarty & Morgan, 2020). Children become more aware of their bad social practices when they receive constructive criticism from other children.

Additionally, children who don't learn and practice social skills with other children are seen as socially awkward by their peers and run the risk of social isolation (Leifler et al., 2022). It is considerably more challenging to practice critical thinking abilities that can aid in social growth because of this solitude. Children with mild to moderate intellectual disabilities (ID) and learning disabilities (LD) may lack the social skills needed to participate fully in their peers' social life. To encourage social development, these children are frequently mainstreamed in educational environments.

According to study, involvement in extracurricular activities seems to have a positive effect on teenage development. Less is understood, though, about the benefits of exercise engagement for children with ID and LD. According to Brooks (2013), extracurricular activities were found to be especially beneficial for children with ID in a study that involved 7 to 12-year-old kids with ID (n=42) and LD (n=53) to determine the impact of frequency and type of extracurricular activity on their social competence in comparison to their typically developing peers (TD; n=24). Although the study came to the conclusion that more research on the level of involvement is required to better understand the unique characteristics of activities that will promote social development.

Asking for assistance, apologizing to others, making decisions, and accepting consequences are all parts of problem-solving. Some people may find it difficult to

pinpoint the underlying reasons for issues, making it difficult for them to comprehend viable fixes or tactics. People who have trouble solving difficulties may be clinically introverted or morbidly shy. They can prefer to stay away from issues because they find them uncomfortable. People who have trouble solving difficulties are prone to suffer with dispute resolution. While some adults have trouble accepting defeat in a competition, some children find it difficult to respond to taunting in a mature way. (Special Education guide, 2020; Hitchcock et al., 2020). Problem solving strategy is one area that children with learning disabilities are basically lacking. Studies have shown that children with learning disabilities present significant difficulties resolving issues both in social skills and in learning programs (Ferreira et al., 2020; Gupta, 2023). And most often, they are in denial of faults at failings, ownership of actions and basic responsibilities (Sanford, 2020).

According to a study in learning disabilities and social skills, Filippello et al. (2019) discovered that, it is difficult for children with learning disabilities to form acceptable relationships, particularly to advise coping techniques for dealing with interpersonal disputes. The choice of resolution to a fictitious argument was examined between children with LD and their typically developing classmates in the study. 14 children with LD (nine boys and five girls, ages 8 to 10) and 14 typically developing children, who were matched for age, gender, and socioeconomic level, participated in this study using the social story technique. According to research, children with learning disabilities have a harder time managing problems that come up in their connections with peers both inside and outside of school. However, children with learning disabilities might manage their interpersonal problems better with adults at home and at school. This suggests that children with learning disabilities can have fewer friends,

be unpopular with their peers, and experience rejection all the time. Some people are utterly terrified of being chastised in front of others. They could find it difficult to take responsibility for issues or respond to criticism. Some people innately link maturity and dependability with accountability. A person who makes a commitment and then breaks it may have a good reason, but their blatant lack of accountability may be a sign of their immaturity and unreliability.

Accountability is also a crucial component of conflict management because admitting responsibility for an action is a great approach to display a conciliation and cooperative mindset. (Hopkins, 2023; Special Education guide, 2020).

In the opinion of Atkinson-Jones and Hewitt (2019) modelling, role-playing and performance feedback are some of the efforts children with learning disabilities can employ to be accountable and taking responsibilities for their actions towards improving their specific social skills deficit. The development of social skills was considered a baseline in a study by Jacob et al. (2021) on the effects of peer tutoring, storytelling, and gender on the social skills of students with minor intellectual disabilities. The study's justification was a social constructivist view of learning based on Social Development Theory. 34 adolescents with intellectual disabilities were included in the methodology sample, and they were randomized into one of three groups: storytelling, peer tutoring, or control. They were chosen from three Metropolis schools in the South-West region of Nigeria, Ibadan. Only the experimental peer tutoring and storytelling groups met for a total of thirty sessions over ten weeks.

Analysis of covariance was used in the inquiry. The analysis of the data revealed that there was a statistically significant difference between the three groups' pre- and post-test scores. Participants' social skills were significantly impacted by their gender as well as by the interplay between therapy and gender. The results of this study suggest that children with mild intellectual disabilities should be taught social skills through peer tutoring, storytelling, and the use of technology. The study also recommends using storytelling and peer tutoring to teach social skills to individuals with mild intellectual disabilities as well as using visual aids to improve their reading skills.

## **2.5 Parent-Child Relationship**

According to O'Toole et al. (2021), parent-child relationship is an intervention in the child's day-to-day life that fosters better social and academic skills directed at optimum achievement and the realization of the desired results. Smith et al. (2019) sees parents playing dual roles of making home an extension of the school and making school an extension of the home. For children with or without disabilities to excel in their developmental programs, a potent parent-child relationship is a fundamental key. The foundation for a child's personality development, life decisions, and total repertoire of behaviors is said to be provided by the parent-child relationship, which is described as an intimate and exclusive encounter (Bdour et al., 2019; Shvalb & Butenko, 2019).

Additionally, parent-child relationship is very nurturing (Bdour et al., 2019), and it contributes significantly to the child's social, physical, mental, cognitive, linguistic, perceptual, and emotional health. The nature of the relationship between a parent and

the child affects the emotional development, intellectual success, and social development of children (Essler et al., 2021). Parental disposition to care-giving is predicated on three principles of interactive relationship which include motivational belief, family understanding and perception of the invitation to care-giving and family life style (Brydges & Mkandawire, 2020). Furthermore, according to Jeon et al. (2020), parents are expected to collaborate with other agencies and organizations within a community in supporting the learning and development of their children with active commitment. Competent parent-child relationship is a continuous process with an enduring commitment across a child's life as it may be required from birth to young adulthood (Gross et al., 2022). It is a reinforcement to effective learning in dual settings of home and school.

The importance of parent-child relationship, the barriers and the benefits are expressively explicated in the child's process of development. Improvements in a child's attitude, conduct, academic performance across all development areas, and social adjustment are all possible outcomes of parents' involvement in their child's learning and development (Mukherjee, 2022). In the view of Kwateng et al. (2022), the most frequent barrier to parental involvement is the parents' pessimistic attitude on assisting the child, particularly the child with learning disabilities. Many parents have 'I don't care attitude' towards their children with learning disabilities. It's claimed that positive parenting helps children deal with non-social issues. Emotional equilibrium, early cognitive growth, and thought maturity all depend on positive parenting; in contrast, harsh, unfriendly parenting causes depression and other social and cultural issues (Lanjekar et al., 2022).

Lanjekar et al.2022 further observed that due to harsh and non-supportive parenting, children are less able to focus in academic years and socially in their day to day interactions. Also due to warm and supportive parenting, a child's emotions, can be regulated thus, they become less frustrated and angry. By implication parental effort has a significant beneficial impact on accomplishment that is larger than the impact of school resources and is not accounted for by family background characteristics. Increased school resources seem to cause parents to exert less effort, which raises the possibility of "crowding out" of school resources. However, high magnitude of parental efforts as a requirement for a higher level of achievement is highly emphasized.

Parent-child relationship is viewed from the perspective of bio-ecological developmental systems based on the five components of microsystem (parents and siblings); the mesosystem (peers and school); the exosystem (community connections), macrosystem, (cultural identity) and chronosystem (wholistic systemic interaction) as basic influences on the development of the child.

According to Dana (2021), there are four major types of parent-child relationships which are; secure, avoidant, ambivalence, and disorganized. There are also four different types of parenting styles; authoritarian, authoritative, permissive and neglectful. Parent-child relationship can be biological or adopted. Biological parents and children share genetic material, while adoptive parent and children usually do not. Adoptive parent-child relationship is most often based on legal agreements that translates to a permanent parent-child relationship.

### **2.5.1 Secure Relationship**

This is the strongest sort of attachment. The child in this category believes that his parent or other caregiver is dependable. He is confident that the individual will be available if he needs assistance. He knows what's coming. With other children his age, the confident child typically gets along well. He might sob if his mother goes. If a kind adult is present to reassure him, he will typically calm down. He typically beams with joy when parents come to pick him up from daycare. He could find it difficult to leave the babysitting, though.

### **2.5.2 Avoidant Relationship**

This is one category of attachment that is not secure. Avoidant kids learn to take care of themselves because they realize that relying on their parents won't give them the sense of security they need. Avoidant kids could come off as being overly autonomous. They don't seek for assistance very often, but they are quickly irritated. They could find it challenging to play with kids their age. They might occasionally be violent. Although many kids bite, hit, push, and scream, avoidant kids do these activities more frequently than other kids. Avoidant kids typically don't develop close bonds with the caregivers in their daycare. When their parents leave, they don't moan, and when their parents come back, they typically don't say hello.

### **2.5.3 Ambivalent Relationship**

In addition to being unsure of everything, ambivalence is another sign that a child is insecurely attached to his parents. Ambivalent children have come to understand that

sometimes their needs are met and other times they aren't. They pick up on and again use the behavior that previously caught their parents' attention. They are constantly searching for that occasionally experienced sense of security. Ambivalent children can be quite needy. They often come across as too emotional and act younger than they actually are. Preschoolers or young elementary students may act like babies or use baby talk when they desire an adult's attention. Children who are ambivalent frequently cry, become angry quickly, and enjoy being the center of attention. They get upset if people aren't paying attention to them and have a hard time doing things on their own. Children that are ambivalent tend to cling to everyone for brief moments. They cry for a long time at the beginning of the day because they find it very difficult to let go of their parents.

#### **2.5.4 Disorganized Relationship**

Children that are disorganized don't know what to anticipate from their parents. Organized attachments are present in children whose relationships fall into other types. This indicates that even if it's not the ideal method, they have all figured out how to get what they need. This occurs as a result of a child learning to anticipate his parent's reaction, whether it be favorable or unfavorable. They also discover that their parents will act in specific ways if they do certain things. Children with disorganization tend to act in strange ways. These children can occasionally speak very quickly and be difficult to understand. Young children may appear to freeze in their tracks at random for no apparent reason. The majority of disorganized children struggle to empathize with other children.

According to Zvara et al. (2019), a supportive environment is necessary for a child to grow up, and emotional regulation in children begins to take shape in their first year of life and picks up speed in the following years. The emotional control during the preschool years predicts the ways in which children will act both now and later when they are in school. Parents who struggle to control their own emotions in front of their children may hinder their children's ability to form close friendships. It has been seen that attentive parenting affects timid, scared males. In contrast, compassionate parenting has no effect on girls who lack self-control or fear. Zeigler-Hill and Shackelford, (2020) reported that, the approach of using parenting styles to teach children with learning disabilities must be mutual between the mother and the father, predicated on mutual, cooperative and responsible styles geared towards meeting the child's needs.

## **2.6 Parent-Child Relationship and Perceived Social Skills of Children with Learning Disabilities**

Relationships between parents and children can be compared to complex, dynamic, and unique dyadic systems that are more than the sum of their parts. Salavera et al. (2022) in a study carried out on exploring the effect of parental styles on social skills: The mediating role of affects. Parental methods of instruction have a big impact on a person's personal development, according to the authors. These four personality types—authoritative, democratic, permissive, and neglectful—can be linked to social cognition and affect on an individual basis. The study reported here examined the relationship between parental styles, affects, and social skills as well as the part affects play in the relationship between parental style and social skills. It included 456 participants (151 men; 33.11%), with an average age of 22.01 years (s.d. = 2.80). The

findings imply a close relationship between the constructs being investigated. Democratic parenting is the most popular approach.

According to gender, men were more frequently assigned authoritative styles, and women more lenient ones. There were no discernible gender differences in the adoption of neglectful and democratic parenting approaches. Men scored higher on emotional support and women higher on negative impact when it came to emotional support. The idea that democratic parenting methods are the most effective for socializing children is called into question because those who had parents who were permissive and democratic scored higher on all measures pertaining to affect and social skills. When the results of the affect and social skills scales were compared to parenting styles, it became clear that children raised in democratic households typically scored higher on the social skills scale and had medium affect scores compared to children raised in other types of households.

Ultimately, it was discovered that parenting practices directly impact social skills, which often get better when affects act as a mediator between these two categories. These findings imply a close relationship between parental practices and social skills and mood. Furthermore, they opine that affects function as a mediating factor in the relationship between social skills and parenting styles. However, a vast array of studies on parental behavior reflect the idea that parents, in particular, are the primary influences on how their children develop (Kranzler et al., 2020). There is a growing evidence that children who behave well (e.g., cooperatively and pro-socially) are more likely to elicit favorable parental responses, while those who behave negatively (e.g., disruptively) frequently experience negative responses from their parents (Briegel et al., 2019; Lahtinen et al., 2023).

According to Lanjekar et al. (2022) parenting, parent-child relationships, parenting style, effortful parenting, parenting concept, cognitive development of children, and parent cognition were all covered in a review study on the impact of parenting and the parent-child relationship on a child's cognitive development. Parenting styles, child development, and maturation are the key foci of this research. The first year of life is when children's cognitive development begins, and it then advances steadily. In difficult and diverse circumstances, children need positive parenting. Being a parent instills confidence in a child to tackle important and difficult issues.

The child's maturity and cognitive growth depend on sensitive parenting and caregiving. It has been noted that the media has a critical role in enhancing parenting strategies. Children raised by strict, violent, and invasive parents have both internalizing and externalizing symptoms. The evidence indicates that adolescents are more likely to experience depression and social maladjustment. The primary cause of the growth in pediatric depression is the parents' lack of collaboration and support. Offspring of cooperative and supportive mothers and fathers are less likely to have depression and social disorders. While children who experience family and social stress are more likely to have melancholy, children who experience bad parenting are more likely to experience social anxiety. They face stress, peer pressure, and issues with social and familial relationships as a result of high levels of hostile parenting and low levels of positive parenting. For children's cognitive development, effortful control parenting is another great concept. Emotional and behavioral control is a function of parenting. Early childhood, early adulthood, and old age are all fraught with issues. In order to be a good parent, one must understand the notion of parenting, the value of parenting and meeting the needs of children, the elements of parenting, and the outcomes of parenting.

Furthermore, in a study by Briegel (2019), parent-child interactions form and shape parent-child relationship, and these experiences can have a significant impact on the child's development in terms of their emotional, social, physical, and cognitive dimensions. However, little is known about how parents view their children's contributions, both positive and bad, to their dyadic parent-child relationship. In order to evaluate these crucial facets of the parent-child relationship, Briegel set out to develop and validate a reasonably priced parent-report tool. For the validation study, 1712 children aged 2 to 10 years ( $M_{age} = 6.6$ ), 1642 mothers ( $M_{age} = 37.1$ ), and 1068 fathers ( $M_{age} = 40.4$ ) completed the novel Child Relationship Behavior Inventory instrument (CRBI).

According to statistical findings, the CRBI is a trustworthy and accurate measure. Fathers noticed fewer issues with dysfunctional relationship conduct than mothers, but mothers reported more positive child behaviors toward them. According to their parents, girls exhibited more wholesome and fewer unfavorable relationship habits than boys. While negative relationship behavior significantly decreased with increasing child age, positive relationship behavior did not correspond with the child's age. Analyzing both positive and negative child interaction behaviors may be helpful to understand the importance of these numerous aspects for the growth of the parent-child relationship. The study provided a balanced view of how children are perceived to act in parent-child relationships with the inclusion of both competent and problematic child behaviors in the context of parent-child relationships.

Similarly, a growing body of research supports the effectiveness of mindful parenting as a suitable intervention technique to foster parenting skills and lower the risk of

parental stress. Kakhki et al. (2022) examined the effects of mindful parenting training on parent-child relationships, parenting stress, and cognitive emotion regulation in mothers of preschool-aged children. In this study, twenty mothers who scored highly on the Parenting Stress Index (PSI) were randomized at random to receive either Mindful Parenting Training (MPT) (n = 20) or a sham control group (n = 20). At the pretest, post-test, and eight-week follow-up, questionnaires were given. There was a noticeable decrease in parental stress.

The MPT group had larger effect sizes in the parent-child relationship and adaptive cognitive regulation methods as compared to the sham control group. Furthermore, there was a significant decline in parent-child relationship disputes and maladaptive cognitive emotion management techniques. For two months following the intervention, all alterations persisted. The findings offer compelling proof that mindful parenting training is an effective intervention for mothers who are referred to mental health services due to stress related to parenting, issues with parent-child relationships, and the use of maladaptive cognitive-emotion control techniques. Nevertheless, the majority of the advancements have only benefitted parents whose children have special needs, and the impact of mindful parenting interventions on non-clinical groups is not well-established.

In the child's developmental architecture and growth processes, parenting behavior plays a crucial role. Parent-child relationships are essential for promoting brain development, claim (Dobbinset al., (2022)). Based on earlier research efforts, the dependence of children on their parents is an extended learning experience or "apprenticeship" that promotes human connection and, in the end, develops

advantageous cognitive flexibility that enables children to adjust to their surroundings and situations (Novak & Morgan, 2019). The parent is a child's favorite and most inspiring toy (Hoogland, 2023). The child experiences contingency learning when parents react to their child's play and exploration, which helps to develop a sense of self-competence and autonomy since the child recognizes that he or she has the power to change the world. Hoogland (2023) also argues that as parents are the ones who know their children the most, they are the greatest people to guide and structure their learning.

Parent-child relationship is the essential factor in promoting child development (Bronfenbrenner, 1986; Van keer et al., 2020). According to research, parent-child relationships are a necessary factor in children's development, particularly for children with disabilities or children who are susceptible to developmental difficulties (Platje et al., 2019). Parent-child relationship also strengthens the relationship between language and emotional expressiveness and emotional regulation of children. (Gedal Douglas et al., 2021). Among developmental researchers generally, the motive behind studying interaction emanates from the desire to understand how such interactions affect a child's development. There has been consistent empirical evidence that children with disabilities do not experience similar developmental trajectories with typical developing children (Frazier et al., 2021; Jambon et al., 2019). Children with learning disabilities often offer fewer readable signals, are less attentive, react in less consistent ways, are less spontaneous, and are less involved in taking initiatives during encounters with their caregivers (Fäldt et al., 2020; Hansen et al., 2021). However, findings are unclear as to the specific attributes of parental relationship that increase positive developmental outcomes of children with learning disabilities.

Parents' responsive behaviors (e.g., sensitivity to the child's requests, interests, intentions, and actions) combined with the child's interactive engagement (attention and initiation) are crucial dynamics in parent-child interaction with children who have significant cognitive and motor developmental delays (Van keer et al., 2020). A longitudinal study conducted during the early stages of infancy aimed to comprehend the (in)variability and potential reciprocal influences of parent-child relationship. In a 15-minute unstructured play scenario, 35 parent-child pairs (children aged 6-59 months) were videotaped over the course of two years in Flanders (Belgium) or the Netherlands. The observations that were recorded on film were rated using the Child and Maternal Behavior Rating Scales.

Findings revealed a strong correlation between parents' responsive behaviour and child interactive engagement. This implies that maternal responsiveness is a crucial factor in the development of children with disabilities. Parents' responsiveness also tends to bring out responsiveness in children with disabilities; for instance (Bentenuto et al., 2020) found that smiles and sometimes in combination with eye contact are some examples of the typical receptive languages in parent child-relationship among children with autism. A systematic review examining the relationship between parent and physical behaviors of children with disabilities found that parental support and participation in physical activities intervention were significantly and positively associated with physical activities of children with disabilities (Ku & Rhodes, 2020).

In a study of six Dominican countries (Dede Yildirim & Roopnarine, 2017) found a significant difference in cognitive and social engagement with children among mothers and fathers with mothers more likely to engage with their children than fathers.

These differences were found to influence the ability of children to follow directions, act autonomously and get along well with others. Various parental factors inhibit the social skills development of children with learning disabilities. For instance, stigma affects not only those who have the stigmatizing attributes, but also those who are primary care givers of the bearer of the disabilities such as family members and close friends.

In a meta-analysis of studies, on stigma experienced by parents caring for children with Autism, other factors that may inhibit social skills development of children with disabilities are parenting styles. According to studies, authoritative parenting by fathers was positively correlated with children's social behavior, while authoritative parenting by mothers was inversely correlated with children's social behavior (Roopnarine et al., 2019). This implies that the parental attributes required to aid the development of children's social skills varies between fathers and mothers.

Some scholars have noted that overprotective parenting style is negatively associated with social skills development of children (Garcia & Serra, 2019). One reason for this is that it inhibits the development of reciprocity which entails the creation of a relationship that is mutually binding, reciprocal, and responsive between parents and children. Some of the ways to assist parents deal with social skills of their children with disabilities is through targeted interventions. According to Van keer et al. (2020) Children's communication, responsibility, and collaboration with parents can significantly improve parent-child relationship and enable stress reduction. The decrease in parental stress and the rise in empathy and engagement were both directly related to this increase. Parents' intentional training also directly influences children's

language skills (Van Keer et al., 2020). Findings from Van Keer and colleagues also support the assumptions of the dynamic skill theory that language skills development directly influences the development of self-regulatory skills.

Furthermore, learning motivation and academic self-efficacy, which are the two chain mediating roles premised on Social Cognitive Theory, were found to be directly correlated with adolescents' learning engagement (Academic and Social) in a study on learning engagements (Academic and Social) for children by the parents conducted by Shao and Kang (2022). Additionally, learning engagement among adolescents was indirectly predicted by the parent-child relationship through academic self-efficacy and learning motivation, respectively, and sequentially. More significantly, it was discovered that the indirect effects—which comprise the indirect impacts of academic self-efficacy, learning motivation, and both—were substantially greater than the direct effect. The largest indirect effect was that of academic self-efficacy and learning motivation out of the three. The participants in the study were 250 students, selected *via* random sampling in a public middle school, in Eastern China, who all filled the structured self-report questionnaires. The data were analyzed with structural equation modeling (SEM) in SPSS 24.0 and AMOS 24.0

Children's development, intelligence, superb perception, and social skills have all been cited as being strongly influenced by parent-child relationships and responsive parenting. According to findings from preclinical and human studies, effective parenting is crucial for promoting brain development (Dobbinset al., 2022; Tereno, et al., 2019). This suggests that children with and without learning disabilities have superior developmental outcomes and social skills when parents sensitively read and

respond to the cues by increasing contingency learning (Novak & Morgan, 2019). Even with the added hurdles, parenting a child with learning disabilities as a developmental disability is more similar to parenting a child who is growing normally.

According to Child Trends Data Bank (CTDB, 2013), research studies confirmed that children whose parents are well participatory in their developmental attainments are liable to have less behavioral problems and better ability outcome, and such children are more likely to be better perceptually disposed than students whose parents are nonchalant in their developmental progress. Parent-child relationship allows parents to monitor growth activities in and out of school, and to coordinate their efforts so as to encourage acceptable behavior and ensure that the child completes given tasks at the given time. Children of highly concerned parents tend to attract greater attention to themselves, and they are more likely to identify at earlier stage, problems that might inhibit their development outcomes (U S Department of Education [USDE], 2003).

Furthermore, research has found it that regular monitoring of the child's growth behaviors will likely help the child to earn higher grades and test scores, pass courses, develop better social skills, enrol in advanced classes, graduate, attend college and find work while the reverse is the case with the parents who failed to be abreast of their functional responsibilities of encouraging, instructing, guiding and correcting their children appropriately (Kuckertz et al., 2021). Additionally, results from earlier and more recent studies have demonstrated that good parenting practices are associated with better academic output, greater test scores, and more positive attitudes toward learning when they are used to guide decision-making in the context of bio-ecological systems. The model's explanation of how parents view their children's schools can be a

transforming process built on a variety of experiences and resources to describe how they interact with schools and classroom activities to advance the objectives of social competency (Adatuu & Gyader, 2019).

The term "bio-ecology" refers to the emphasis on creating a family atmosphere which meets the developmental and the growing needs of the child. The idea of parent-child relationships encourages people to engage in events, taking into account their relationships with others, the event's history, and any intra-family resources that could be available to assist participation. The parent-child relationship is usually the most important relationship in childhood and it serves as the foundation for all subsequent interactions. Children frequently look to their parents for affection, comfort, direction, and guidance (Steele & Mckinney, 2019). Children's relationships change as they grow up. According to Singh (2022), if their relationship doesn't successfully adapt to their new situation, it could seriously hinder their ability to explore their career options, find romantic partners, and have a healthy perspective on the world. The family is the natural and essential social unit of society, deserving of protection from both society and the state, and the Convention on the Rights of Persons with Disabilities (CRPD) contains a legal framework that recognizes the important roles that families play in promoting the rights of people with disabilities.

Additionally, it adds that individuals with disabilities and their family members should have access to the essential protection and help so that families can support the proper development and equal and full enjoyment of people with disabilities (Iwuamadi & Mang, 2021). To this end, emphasis is placed on the fact that families and community groups are important to playing an active role in advocating legislation and eliminating

constitutional barriers to the development process of children with learning disabilities, as well as promoting changes in policy and legislation for their holistic development and education. The platform for policies, structures and specific opportunities for the honest engagement of parents with their children, family members and communities should be created to give rise to a culture of collaboration and synergy among family members on a round table that makes them feel comfortable in their different roles and tasks and that allows effective participation.

By so doing, overall interest of the child is addressed and the inherent barriers to the optimal development of the child with disabilities is drastically reduced if not completely eliminated. These studies make it abundantly clear that the parent-child relationship serves as a reliable foundation for the education and growth of the entire child, and especially that of the child who has learning disabilities. The current study's goal is to confirm the link between social skills and parent-child relationships for children who have learning disabilities in inclusive basic schools in Abuja, Nigeria.

## **2.7 School Environment**

The term "school environment" describes the nature and character of educational establishments which includes consideration of the rules, objectives, values, interpersonal relationships, instructional strategies, and organizational structure, inclusive of the physical setting (Novara et al., 2020). The school's vision is defined, lived, and contributed to by students, families, and teachers in order to provide a welcoming and inclusive learning environment for every student (Li & Dhamotharan, 2021). There are several definitions and significant elements to the concept of the

school environment (Daily et al., 2019). The character and quality of school life that are based on the experiences of students, parents, and school staff members are also termed as the school environment (Daily et al., 2019). A positive school atmosphere that enables students to feel socially, emotionally, and physically safe is influenced by standards, goals, principles, interpersonal relationships, instructional techniques, and organizational structures of the school (Daily et al., 2019; Tarabini et al., 2019).

Similarly, Del Toro and Wang (2021) believe that school structure can either significantly facilitate learning or have a detrimental impact on the standard of the school environment. According to research by Daily et al. (2019), schools with positive school climates are likely to have better student academic achievement because they "promote cooperative learning, group cohesiveness, respect, and mutual trust." A positive school climate is directly related to students' achievement in a variety of areas, including academic performance (Daily et al., 2019; Thomas, 2020; Tomazewski et al., 2023), student misconduct and behavioral concerns, adjustment issues, and social and emotional attitudes (Larson et al. 2020). Schools with unfavorable frameworks were consistently associated with poor student outcomes, including a higher disciplinary index, lower student achievement, social, emotional, and behavioral difficulties, and teacher dissatisfaction (Del Toro & Wang, 2021; Kuperminc et al., 2019; La Salle-Finley, 2023).

A bad school environments can increase victimization and aggressiveness among children while decreasing the chance that those who are harmed will seek assistance. Low student connectivity, a lack of dependable and loving relationships between students and teachers, and a lack of student support are some of these characteristics (Zhao et al., 2021). However, because they may find it difficult to establish and

maintain relationships, because they often feel rejected by their peers and teachers, and because they often fail to properly request the academic, social, emotional, or behavioral supports they may need, students with disabilities may have more negative perceptions of the school system than peers without disabilities.

## **2.8 School Environment and Perceived Social Skills of Children with Learning Disabilities**

The school environment, according to Lombardi et al. (2021), reflects norms, objectives, values, interpersonal interactions, instructional strategies, and organizational structures. A student's participation in school activities is supported by a positive school environment (Lombardi et al., 2019). The school atmosphere has a big impact on students' involvement with learning and is crucial for their positive life experiences (Skinner et al., 2019). Although the school environment is thought to be a significant element in encouraging participation in school activities, Lombardi et al. (2019) further said that its influence is effective with the moderating effect of the students' experience of well-being. Additionally, education is regarded as one of the most significant contexts for young people's development and can be a major source for acquiring the abilities and skills necessary for a student to successfully adapt (Taverna, et al., 2021). Furthermore, schools are uniquely positioned to promote the well-being of young people as well as the school communities from a broader point of view, according to Sarti et al. (2019), who also asserts that schools provide accessible and relatively stable sites to undertake interventions to promote well-being (Lombardi et al., 2021). Since schools play a major role in a student's physical and mental health, there must be a whole-school commitment to fostering well-being and creating a nurturing atmosphere.

In an exploratory investigation, Lombardi et al. (2021) found that students' reading and writing abilities affect their social standing, learning, and overall well-being. The study compared students with a diagnosis of specific learning disabilities (SLD-group), students exhibiting learning disabilities without a diagnosis (LD-group), and students without learning disabilities (control group) to evaluate the impact of a specific learning disability diagnosis on the well-being of secondary school students. To uncover learning issues, students underwent neuro-psychological screening tests. They were then further evaluated using psychological and school-well-being questionnaires. According to the results, students in the LD group believe they have a lower sense of autonomy and mastery than their peers, as well as a lower level of interest and participation in everyday activities. This finding indicates that the LD group experienced a lower level of well-being than the SLD and control groups. Pupils in the SLD group, on the other hand, do not differ from pupils in the control group in any way, with the exception of the SLD group's higher scores on the measure of parents' support and involvement in the school system. This research emphasizes the value of a diagnosis since it appears to operate as a safeguard for the student's academic and psychological well-being.

Notably, factors that contribute to early school dropout include academic performance and environmental influence, both of which have an impact on the capacity of students with learning disabilities to finish secondary education (Benassi et al., 2020). Students who often fail in school may become discouraged, which may lead to low expectations for their performance and a detrimental effect on their future attempts. When learning disabilities are not met by an inclusive education and when struggling students are expected to compare themselves to their peers without learning disabilities in terms of

personal, familial, and academic expectations, low achievement at school can negatively impact these students' self-images. These ideas may exacerbate the dejection and dissatisfaction that have previously been noted in a number of studies involving students who have certain learning disabilities (Filippello et al., 2019). Apart from the work of the researcher, a bigger sample size would have made it possible to evaluate relationships between the various variables using more sophisticated statistical methods in order to confirm the impacts of moderation and mediation.

Similarly, Lombardi et al. (2019) looked into what supports students' experiences of well-being and encourages their engagement in the classroom. Positive Education asserts that there is a direct correlation between students' wellbeing and the school environment. Furthermore, it was discovered that students' perceptions of the quality of their school environment had an impact on their participation in academic activities. According to the Student Well-Being Model, 153 students ( $M = 67$ ) enrolled in the 10th grade were given tests and questionnaires to evaluate their individual assets (literacy skills, personality traits), emerging appraisals (school climate, well-being experience), and emerging actions (school engagement).

Path analysis revealed that since the impact of the school environment is mediated by experiences with well-being, the optimal model does not incorporate either the direct effects of individual assets or the school environment on participation. The findings showed that while the school environment has been shown to be a significant component to take into account when trying to increase student involvement in classroom activities, its influence is only truly beneficial when it can also change the students' overall experience of well-being.

Furthermore, the model's lack of evidence that individual assets have a major impact implies that, independent of learning, social skills, or personality qualities, enhancing the school environment also supports students' experiences of well-being and, indirectly, school engagement. This study promotes collaborating with educational institutions to develop positive education initiatives that uphold and foster a school climate and culture that is oriented toward the academic and social well-being of the student body.

Moreover, an increasing amount of scholarly works suggests children with Specific Learning Disabilities (SLD) could have both internalizing and externalizing issues. Less is known, though, regarding the variables that could affect this symptomatology. For example, a few studies looked into how much internalizing and externalizing symptomatology could be predicted by poor school well-being. Benassi et al.'s (2020) study aims to investigate school well-being in children with special needs from a multi-dimensional perspective, examining the association between psycho-pathological symptoms and school well-being issues from the perspective of both the children and their mothers.

Overall, 72 children between the ages of 8 and 10—20 with SLD, 52 normally developing (TD) children, and their mothers completed the School Well-Being Questionnaire. The Child Behavior Checklist was completed by the mothers as well. Mothers of SLD children reported QBS worse learning performances and worse interactions between the family and the teacher compared to the TD group. In the SLD group, there were stronger correlations between QBS scores and internalizing/externalizing symptoms, or difficulties with learning and emotional issues at school.

These results underscore the significance of a supportive school environment in enhancing the psychological development of children with SLD and raise the possibility that issues related to school well-being may have a deleterious effect on their general psychological health.

Furthermore, a study was conducted to find out about the experiences and involvement of parents of children with disabilities in physical education. This study employed a hermeneutic phenomenological qualitative methodology. Parents of children in special needs schools, such as those with learning disabilities, participated in the study. Five people were chosen as a sample using the purposeful sampling technique: three males and two females. Seidman's interviewing criteria, which were applied in a prior study, served as the basis for the tool's adaptation (Seidman, 1998). The results showed that parents actively participated in their children's learning in a range of contexts, at home, at school, and in the community. They were involved through maintaining open lines of communication and engaging in activities both inside and outside of the classroom. Parent-teacher collaboration, according to parents, improves pupils' learning and growth. All parents understood the benefits of inclusion and physical activity. These results highlighted how crucial it is to support home-school collaboration for the development of special needs students (Widyawan et al., 2020).

A number of studies have shown that interacting with children with LD's regular classmates in the mainstream school setting helps improve their social skills (Drüsedau et al., 2023; Kalgotra, 2019). A survey of 692 regular students and students with intellectual disability (ID) in 38 junior classes in Switzerland found that students with ID were socially accepted and had friends. It follows that students with ID don't

necessarily require a lot of social skills to blend in with their peers. Although students with ID demonstrated lower social skills than their counterparts, no causal relationship between social skills and social engagement among students with ID was found (Avramidis et al., 2022). When children interacted with their regular classmates in extracurricular activities, they displayed comparable positive effects. When children with ID (IQ 40-70 and  $n = 40$ ) interacted with their typical classmates in extracurricular activities, they had similar positive effects (Brooks et al., 2015). However, according to Finnerty et al (2019), putting children with ID in general education classes alone does not ensure their success in social interaction.

Avramidis (2022) further observed that social participation helps children with learning disabilities approach their academic results positively, which can be attributed to the development of educational support in ordinary schools and the required follow-up, allowing them to attain their unique educational objectives. Students with learning disabilities, though having fewer friendships, felt equally welcome among their peers.

Additionally, Mallanhouse et al. (2020) found that difficulties in high school increase as communicational demands increase and the likelihood of rejection for children with learning disabilities rises. Mallanhouse et al. (2020) further opined that students' social behavior, rather than the stigma associated with the label "special educational needs," is what contributes to low social inclusion. Accordingly, educators and researchers must focus on enhancing the social abilities of children with learning disabilities. Since they have a variety of social skills deficiencies, they are to be provided with social support within the school environment.

According to Hagarty et al. (2020), social deficits in people with ID become more obvious during high school because social communication is more important at this stage and participation in class depends on making friends. Additionally, research on how people with different talents interact with organizational structure (D'Amato & Perfect, 2020) was discovered to be strongly connected with school effectiveness. The environment, safety (physical and socioemotional), teaching and learning, and organizational patterns are the four fundamental aspects of school environment, according to González (2023). According to the bio-ecological model, a positive school atmosphere has a significant and long-lasting impact on students' overall ability development and performance as well as teachers' well-being (Bronfenbrenner, 1995).

For children with learning disabilities, a safe school environment that constantly promotes collaboration will make it much easier for them to take the risks that are demonstrated in all learning activities. Further studies have revealed that children with learning disabilities can learn and develop successfully in a cooperative learning environment with a positive social attitude that boosts their performance and self-esteem (Ferri et al et al., 2020). Additional research in the area of learning and school environment has revealed a connection between the school atmosphere and problem-solving abilities (Khalidet al., 2020), and interventions in the educational system could stop children from misbehaving, which seems to be more common among those who lack social skills (Zenda, 2021).

According to certain studies, the advantages of a positive school environment include optimal performance and satisfaction (Mamta & Ahmad, 2020). The majority of factors that contribute to a positive school climate have an impact on a range of student outcomes and in schools with different characteristics (like the socioeconomic status

of the neighborhood and the student body), but they might be particularly crucial in schools with specific needs, like those that have students with special learning needs (Ghani & Alzouebi, 2019). The effective use of school resources and the design of activities in response to the requirements of the students, for example, would be supported by a good working relationship between the school administration, teachers, and teachers and other staff members (Oliveira et al., 2022). A successful response to the educational needs of the children depends on the ability of the teachers to coordinate requests, exchange information about the pupils, and submit requests to the administration. In a similar vein, in schools with various features, a positive teacher-parent relationship and parental participation in school activities have been proven to support children's achievement and well-being (Rodriguez, 2020).

However, parents become a very useful resource for instructors when working with children who have learning disabilities and lack social skills. For instance, parents can share information about their children's characteristics and cultural background, resources, needs, and prior experiences with teachers by participating in school activities and keeping in touch on a regular basis, thereby enhancing teachers' competence and knowledge regarding their relationship experience (Ferri et al., 2020). According to UNESCO's 2009 report, an inclusive curriculum will aid in creating a positive school environment that welcomes all students into a sufficient number of fruitful learning opportunities. That the cognitive, emotional, social, and creative development of the child would be addressed by an inclusive curriculum. It is founded on the four tenets of 21st-century education: learning to know, to do, to be, and to live together. It is an effective means of bridging cultural, religious, gender, and other divides as well as cultivating tolerance and advancing human rights.

Gender, a range of learning needs, cultural identity, and linguistic background are all taken into account in an inclusive curriculum. A flexible, inclusive curriculum that can be customized to meet various requirements will ensure that every learner receives an education of a generally recognized minimum standard of excellence. It requires removing derogatory notions from textbooks as well as—and this is possibly more crucial—from teachers' attitudes and expectations. Holings (2021) argues that inclusion is anticipated to be and will be successful if the investigation of practice and principles will center on well-intended trajectories that provide for appropriate tools, skills, and support that enhance the capabilities of the mainstreamed schools that are responsible for managing the involved diversities.

Last but not least, a strong link between the school and community services is essential for the efficient functioning of a school, whether it is a special or standard school environment (Epstein & Sheldon, 2019). For instance, a relationship between the school and the community could provide children with chances for organized activities or civic involvement while also informing parents and teachers about the neighborhood's resources. (Epstein& Sheldon, 2019). More specifically, the school serves as a platform to structure education appropriately in accordance with community needs. Given that they would have access to specific services or community resources to enhance their learning strategies and outcomes, this might be a vital tool for teachers in providing the right accommodations for children with learning disabilities (Mun et al., 2021).

Based on the aforementioned dynamics and the high rates of academic, behavioral, social, and emotional challenges that children with learning disabilities typically face,

it is imperative to consider school climate while boosting students' well-being in the classroom. According to the existing literature that has been reviewed, a supportive learning environment that is designed to reasonably accommodate all students will ostensibly achieve the fundamentals in facilitating the child's required development from the education that is provided taking into account the pertinent elements put in place. However, it is anticipated that the results of this study will identify the ideal learning environment for a child that has learning disabilities, one that is relevant to their needs and suitable for the development of their social skills.

## **2.9 Parental Stress**

Parental stress as a persistent emotional condition is a feeling of distress that occurs when the demands of the child-rearing cycle are viewed as greater than personal and social resources (Emamet al., 2023) which could have many negative consequences for both parents and their children's functioning (Fallahchai & Fallahi, 2022). The raising of a child with learning disabilities puts enormous stress on the parents (Hon, 2019; Waizbard-Bartov et al., 2019). Compared to parents of children without learning disabilities, parents of children with learning disabilities have been found to suffer unfavorable and elevated stress because of the extra care that must be provided for their children. This is further attributed to the changing and varying demands they are faced with in terms of their specific needs while raising their children with learning disabilities (Çetin et al., 2022; Isa et al., 2017).

According to Lew et al. (2019), stress is described as feedback from one's inability to cope with the changing dictates of the environment which eventually results to

negative consequences like frustration, burn-out, dereliction of responsibility etc. Parental stress is defined as negative psychological responses to the demands and strains of parenting roles. It has an immediate effect on the mother's emotional health, the relationship between parents and children, and the child's emotional and social development (Hu et al., 2019). In the view of Jenaro et al. (2020), When parents are raising a child with learning disabilities, they often receive negative and overwhelming feedback due to their limited ability to handle the unique demands placed on them. This can have detrimental effects on the child. The parents experience guilt when they have to provide the extra care that a child with learning disabilities requires, which can lead to psychological suffering and dysfunction in the family. As a developmental disorder that requires specific attention throughout daily life, learning disabilities can cause persistent stress for families.

Most of the time, parents are caught in the middle, burdened with guilt over not being able to provide the necessary care for their other children who do not have disabilities because of the overwhelming amount of care that is expected of them when raising a child who has learning disabilities. Sources of stress brought on by providing care for a child with learning disabilities include the child's increased unfavorable direct effects. Nonetheless, a few things worth mentioning are the lack of social support from friends, extended family, and the larger community, which causes the family to become socially isolated; experience needless, negative close contact with the school; inadequate and unrealistic service provision; labeling in order to provide services; and parents' unrealistic expectations. etc.

In addition, Letovancova and Slana (2022) claim that parental stress makes parents less loving and accountable for their children. A decrease in parenting skills can result in a range of detrimental effects on children, including social disengagement, aggressive and disruptive behavior, low self-esteem, and rejection sentiments. Conversely, parents who are less upset tend to be warmer, more reasonable, responsive, and use a modest amount of control over their children. High self-esteem, academic success, effective social skills, and the capacity to strike a balance between deferring to parents and developing autonomy are among the traits of children linked to these parenting styles (Hardman & Michaels, 2023). A family's level of stress is largely influenced by the people, circumstances, and stresses that they face.

One particular kind of stress that arises from the demands of parenting is known as parental stress. This stress may then be related to other types of stress that are experienced inside the family, such as stress brought on by social or economic issues. (Sandoval-Obando et al., 2021). Sandoval-Obando et al. (2021) observes that parental stress can be normative which is common to daily life such as daily hassles, non-normative which could be unpredictable, sudden or dramatic or chronic parental stress which is typical of occurrence over an extended period of time.

However, parental coping is one of the unique strategies that parents might employ to deal with a stressful occurrence, according to Sandoval-Obando et al. (2021). As they see it, coping strategies which can be either healthy or unhealthy involve taking proactive steps to deal with stress, such as gathering resources, picking up new skills, and asking for assistance; changing one's perspective by rephrasing or viewing the situation in a different way; and controlling one's emotions through substance abuse

or social support. Parental adaptability, or the capacity of parents or other family members to bounce back from stress and disaster, is something that Sandoval-Obando et al. (2021) further highlight. Reduction or elimination of stress can lead to recovery due to the ability of the family to adapt to the new situation.

#### **2.10 Parental Stress and Perceived Social Skills of Children with Learning Disabilities**

The bio-ecological model of human development entails a number of interconnected subsystems that orbit around and mutually impact the developing child (Bronfenbrenner, 1995, 1999). The family is at the epicenter of influence within the subsystems. Always, a child's learning and development are greatly influenced by their environment at home and in their family (Ang & Spencer, 2022). The paradigm contends that because the family is so important to a child's growth, the child also has an impact on the lives of those closest to him or her. Consequently, a child with a disability has certain unique repercussions on his or her family (Kausar et al., 2019; Ali et al., 2023; Haque et al., 2022) which makes everyone a player in the field of development. Parental stress in the view of Ashley and Gaf (2021) is positively correlated with the child's behavioural and developmental deficit. The more stress the parents have, the more the problems of the child.

However, when an environment that is designed to help children with learning disabilities develop their wide range of skills is implemented, the children's performance will be high and their parents' stress levels will be low (Ampalagan et al., 2021). Parenting a child with learning disabilities can be difficult and cause a high degree of stress (Goedeke et al., 2019). Burke et al. (2021) believe that parents of

children with learning disabilities experience more parenting stress than parents of children who are typically developing. According to research, increased advocacy activity (Goldman & Burke, 2019; Burke, et al. 2021), decreased family cohesion (Burke et al., 2021), and strained family-school partnerships can all contribute to the stress that comes with parenting a child with learning disabilities (Zeng et al., 2023).

According to a body of research, families of children with visible disabilities—including intellectual, sensory, physical, social, and other developmental problems—experience higher child-related stress than those of children without disabilities (Brown et al., 2020). These disabilities are more visible than learning disabilities which made the stress of care and development much more family centred. According to IDEA (1977), learning disabilities is intrinsic and elicit obvious discrepancy between the potentials of the child and the achievements. While Lerner et al. (2022) state that learning disabilities are characterized by a variety of personal challenges that compound one another, such as issues with attention, cognition, and social skills. This may indicate that the parents had unrealistic expectations for their children. The appearance of a child with learning disabilities is always greeted with shock and disappointment by the parents due to deviation from the predicted norms (Ali et al., 2023).

In a cross-sectional quantitative survey study, Mbatha and Mokwena (2023) investigated parental stress in a rural community when raising a child with developmental disabilities. South Africa's Kwa-Zulu Natal province was the study's location. A sociodemographic questionnaire and the Parenting Stress Index-Short Form (PSI-SF) were given to 335 mothers and caregivers of children with

developmental disabilities from ages 1 to 12. With a mean age of 33.9 ( $\pm 7.8$ ) years, the sample was made up of 270 (80.6%) mothers and 65 (19.4%) caregivers, ranging in age from 19 to 65. While all parents who raise children endure acceptable amounts of stress, parents of children with developmental disabilities face significantly higher levels of stress.

Parental stress is further exacerbated by sociodemographic factors for parents in rural communities, where there are numerous disadvantages. The majority of the children's diagnoses included learning disabilities, autism, ADHD, cerebral palsy, epilepsy, delayed developmental milestones, cognitive impairment, sensory impairments, and epilepsy. Most individuals (52.2%) reported having very high levels of stress that are clinically significant ( $\geq 85^{\text{th}}$ ile). Four factors—the advanced age of mothers and caregivers; caring for a child with numerous disorders; the child not being enrolled in school; and frequent hospital visits—were found to be individually and significantly predictive of high levels of parental stress. According to the study, mothers and other caregivers of children with developmental disabilities experience high levels of parental stress.

Parental stress was independently correlated with limited school access, but meeting the needs for direct intervention programs and support for mothers and other caregivers of children with developmental disabilities will inevitably improve the parenting skills of those mothers and caregivers. Additionally, Haque et al. (2022) suggested that mothers and caregivers with lower levels of education experience more parenting stress, and that higher parenting stress is correlated with a child's age and a diagnosis of a neurodevelopmental disorder before the child turns two.

According to Dunst (2022), diagnosis of learning disabilities precipitates marital discords and family disintegration, thus unanticipated, and places a demand on the family to accommodate the diagnosis and the development of the child. This was corroborated in the study conducted by (Brown et al., 2020) with the observation that learning disabilities is a great source of stress on parents, ignites family malfunctioning when it is revealed in school.

Every indication affirms that families of children with learning disabilities experienced a variety of consequences. They included tension within the family, differences in parenting styles, hostility from distant relatives, trouble connecting with the school, and conflicting influences on siblings. Brown et al. (2020) further revealed the impact that learning disabilities can have on the entire family structure in the process of caregiving, education and development. Learning disabilities is further heightened in children due to the overwhelming impact of stress and discouragement on the family components which prevents the family from giving the required involving effort to their education and development.

Using a quantitative approach and focusing primarily on the burden that a child with learning disabilities is regarded to place on the family, Sahu et al. (2019) highlighted the unfavorable aspects of family dynamics, and observed that parent of children with learning disabilities are saddled with undue emotions generated by guilt derived from a feeling of biologically inducing a disability in their own child which makes them not being able to give adequate care to their other children without disabilities. It was also observed that parental pressure and stress became ongoing as a daily occurrence. A mother states 'It is a huge marital pressure, huge, saddled with anxiety and tension' it

was also observed that parents were engaged in blame games, negative interactions with the school, suffered unsupported reactions from the extended family members and grappled with incompetent assessment (Satici, 2020).

In a meta-analysis of studies on stigma experienced by parents caring for children with Autism, Salleh et al. (2020) found that parents are exposed to various types of stigma, embarrassment, avoidance, rude comments and overtly hostile staring by others. These inevitably increase the stress of parents who have children with disabilities. Parental stress is more prevalent among parents of children with developmental delays compared to children with typical development. Van keer et al. (2020) found a direct effect of parental stress and children's language and social skills. However, suggest that these relationships may be by-directional wherein a decrease in children's social and language skills may increase parental stress.

Evidence of this bidirectional relationship is in Moscatoet al. (2021) who found that children's social skills mediated the effects of certain parental behaviours, such as responsiveness, autonomy, and stability, as well as parental involvement, on peer involvement, peer interaction, and perceived social reinforcement from peers. Parenting a child with learning disabilities is daunting according to Christi et al. (2022). They examined that parent of children with learning disabilities are usually and peculiarly bugged with a myriad of challenges that boils down to undue quest for attention due to additional needs, stressful care style, etc. which is energy sapping (Louie et al. 2019). This was buttressed by Anand and Khan (2020) affirming an increased parental responsibility as a result of learning disabilities. They observed that parents of children with learning disabilities have a greater chance of experiencing

depression, problems with physical health and a greater decrease in one's quality of life.

Smith (2022) reported the stress parents go through while attempting to nurture a child with learning disabilities. He found that parents were unaware of the programs, services, and policies that were intended to help the children who had learning disabilities. Smith (2022) also noted that because of the children's disabilities, stereotypes and prejudices exist about them, which has a negative effect on the parents' psyche and emotions. Parents, being what they are, would, nevertheless, go above and beyond to guarantee that their children have access to proper care, which always necessitates more work (Burke et al., 2021).

In a different study, Fathy et al. (2023) examined the impact of a psycho-social program on the emotional discomfort of caregivers and the perceived social skills of their children with learning-disabilities. A convenience sample of fifty caregivers with a child diagnosed according to (DSM-V) with learning disabilities was included in the study. A quasi-experimental design (pre and post-test) was used in the study, which was conducted at the pediatric outpatient clinic of the Psychiatric Mental Health Hospital in Benha City, Qalubia Governorate. Four tools that were used to collect data from the sample include Structured interview questionnaire to collect data about socio demographic and clinical characteristics, Structured interview questionnaire to access data concerning caregiver's knowledge & practice regarding learning disabilities, Depression, Anxiety and Stress Scale (DASS) to measures the caregivers emotional distress, and Social Skills Rating System (SSRS) for the assessment of social skills, behavioral problems of children as perceived by their caregivers.

The findings indicate a strong correlation between the Psycho-Social program, improved caregiver practice and knowledge, emotional distress, and perceived social skills. Credence will be given, therefore, to a more thorough study with bigger sample sizes that examines the physical and emotional needs of parents as well as their capacity for coping when providing care for children with learning disabilities. A neurological condition known as learning disabilities impairs a child's brain's capacity to take in, process, store, and respond to information. Parents of children with learning disabilities nearly always run the risk of experiencing stress because of the significant amount of attention required for the upbringing and development of these children (Auriemma et al., 2022).

It has been observed that the amplified special requirements of children with learning disabilities cause their parents and caregivers to endure higher but aggravated stress. This was corroborated by Isah et al. (2017) in a study on perceived stress and coping strategies among Malay caregivers of children with learning disabilities. One of the objectives of the study was to investigate the levels of reported stress among caregivers of children with learning disabilities in Malaysia as well as the associated child and caregiver characteristics. The study enrolled about 190 caregiver participants who had signed up with community-based rehabilitation facilities in the state of Kelantan in Peninsula Malaysia. With an age range of 18 to 69, a mean of 44.67, and a standard deviation of 9.73, biological parents made up 93.2% of the research population. The outcome of using multiple linear regression showed that a higher degree of stress was anticipated.

However, a significant number of studies have suggested that stress experienced by parents of children with learning disabilities and typically developing children is similar (Ismail et al., 2017). This is the question that the current study will attempt to answer as it examines the parent-child relationship, the school environment, parental stress, and the social skills of children with learning disabilities in Abuja, Nigeria.

### **2.11 Parental Stress as the Mediator**

Following Baron and Keny (1986), mediation includes parental stress as a third variable to regulate the impact of the school environment and parent-child relationship on the perceived social skills of children with learning disabilities upon entry into the model. A mediator is an intervening or process variable, according to Kenny and Judd (2014). A mediational model is a causal model that assumes the cause of the result rather than the reverse. Full or partial mediation is possible. If X influences Y in a way that is fully explained by the researcher, then testing for additional indirect effects is not necessary. This is known as full mediation. It is obvious that additional indirect effects could—and most likely ought to—be investigated and evaluated empirically in the case of partial mediation. (Rucker et al., 2011).

The outcome and the output of the family have a lot to say about a child with learning disabilities. It is pertinent to know that effective responses to the child's special needs require an understanding of the effect of the disability of the child on the family system (Auriemma et al. 2022). From the perspective of the family system, the way the family members relate with themselves is very important and central to the issues of concern i. e. generated by the disability and associated behaviors and reactions (Popovska et al., 2022).

Within the concept of family system, it is assumed that the interactions among the family members are either helpful, protective, or on the contrary preventive of responses whenever the child's needs or functioning are perceived to be threatening to the well-being of the members within the system. The bio-ecological studies so far on learning and environment affirm that a good family and a good home environment are important factors to the development of the child (Grigorenko et al., 2020). The mediation effect of family stress is supported by the model of bio-ecology (Bronfenbrenner, 1995; Matin et al., 2021).

In this model, the family climate surrounding the child is central to the holistic development of the child. Five interconnected components make up the model: the microsystem (parents and siblings); the mesosystem (peers and school); the ecosystems (community connections); the macrosystem (cultural identity); and the chronosystem (wholistic systemic interaction), all of which have some basic mediating effects on the education and development of the child in his community. The bio-ecology model explains that the child is placed at the centre of the interaction process that goes on within his family and between his family and his general environment. In households where the child lacks social skills, it has been noted that stress and anxiety on the parent and family are increased. This is manifested through anxiety, emotional difficulties, behavioral responses, and occasional depression (Schronert-Reichl, 2019).

Conversely, Oliver (1990) supports the mediation effects of family reaction on the relationship between family environment and the child's ability outcome. Oliver agrees that disability is the outcome of a complex relationship between the child's impairment and the personal cum external factors such as the circumstances in which

the child lives. However, empirical research on the mediating effects of parental stress on the social skills of children with learning disabilities is severely lacking, particularly in Nigeria; as a result, the goal of this study is to investigate the mediating effects of parental stress on the relationship between parent-child relationships, the school environment, and social skills of children with learning disabilities in Nigeria in order to fill in the gaps in the sparse body of literature already available.

## **2.12 Special and Inclusive Education System in Nigeria**

One of the most critical challenges in education in recent decades has been the concept of inclusion, which is away from the traditional special education system and refers to students' full involvement in the shared educational environment (Messiou, et al., 2023). Inclusion refers to the ongoing efforts to eliminate any social discrimination against students, particularly students with special educational needs (SEN) such as learning disabilities, and more specifically, it focuses on educational choices and instructional methods that aim to remove any barriers to students' participation in any learning and development activities entrenched in special education programs (Drusedau et al., 2023).

In his 2023 paper, *Inclusive Education for Students with Special Education Needs (SEN)*, Fazil explore some important obstacles to its implementation. The inclusion of all children with SEN in mainstream schools is the goal of inclusive education, but there are numerous obstacles that must be overcome for their education to be worthwhile. Since they are expected to have the most special educational needs in "inclusive" schools, the author's main focus is on the inclusion of students with

intellectual disabilities. It presents a paradigm that emphasizes the substitution of age/grade placement, as is the current practice, with experience and maturity supporting learning in people with intellectual disabilities, and offers the outline of a curriculum that may be adapted from the mainstream one currently in use. Of course, field testing of the proposed model is required.

Students with intellectual developmental disabilities (IDD) may have difficulties with concepts, social interactions, and daily living, which may necessitate support when these students are included in mainstream settings, according to Heiman and Avissar (2022). Interviews with six parents of IDD students enrolled in inclusive classes, five inclusive class teachers, one teaching assistant, and two school principals were conducted in order to examine the facilitators and impediments to IDD students' inclusion in Israel's regular schools. Analysis of the interview transcripts indicated what the parents and faculty of the included students thought about them. The relationship between the school staff and the parents and family participation was deemed to be of utmost importance by the school personnel. Parents perceived the chance to learn in an inclusive classroom as a chance for their children to progress academically and socially. All of the participants cited the social component as being essential for including students with IDD.

Increasing the social inclusion of young people with intellectual disabilities: Louw et al. (2020) carried out an exploratory study on comprehensive evaluation of primary empirical research. The review gives an overview of unique empirical studies on social inclusion of young adults with intellectual disabilities conducted between January 2013 and January 2019 in a condensed manner. In order to collect information from

24 worldwide publications specializing in research on intellectual impairment which reviewed both quantitative and qualitative studies, the study employed three internet databases: Science Direct, PubMed, and PsycINFO.

The study's conclusions showed that structured and coordinated social inclusion interventions were thought to better possibilities to interact with others and develop social skills. Additionally, it has been observed that assessing results in the two core quality-of-life areas of interpersonal connections and community involvement helps young adults with intellectual impairments succeed in their efforts to integrate into society. By performing rigorous empirical research, the authors advise a thorough examination of the potential effects of facilitators that support young adults with intellectual disabilities in their social lives.

The United Nations (UN) convention advises the social coexistence of children with LD in regular classes since, in accordance with an international scientific bibliography, children with SEN, such as those with LD, can socially integrate at school by conversing with their usual peers (United Nations, 2006). Early connection with classmates helps individuals with LD build their social and adaptive abilities (Brooks et al., 2015). Relationships between students with LD and their schoolmates also seem to be very significant (Arvidson et al., 2022). Students with LD may experience changes in their self-worth, spiritual development, academic achievement, and behavior during this period depending on the type and degree of relationships they have with their peers (Josol et al., 2022).

On the other side, inclusion's social advantages aren't always felt. Studies indicate that enrolling adolescents with LD in a conventional school may not always be sufficient because of their limited social skills, needing interventions from other agents of development, particularly the parents (Lindner et al., 2019; Avramidis et al., 2022). Nigeria is one of many nations that have altered its educational strategies by including children with SEN, such as learning disabilities (LD), into regular classes with non-SEN pupils. However, there have been obstacles to Nigeria's efforts to improve its inclusive education system away from the traditional special education system. The obstacles surround the following areas:

**Policy Framework:** The 2013 National Policy on Education of Nigeria places a strong emphasis on the value of inclusive education. It highlights the government's commitment to provide all students, including those with impairments, equal opportunity to learn. The policy encourages the inclusion of children with disabilities in the mainstream education settings whenever and wherever practical. However, the implementation is being short circuited by the drivers of the policy perhaps for reasons of poor understanding of the entailment of the model or for reasons of insufficient budgetary provisions.

**Legislative Framework:** Nigeria has legislative frameworks including the Discrimination Against Persons with Disabilities (Prohibition) Act, which forbids discrimination against people with disabilities and requires access to education, in addition to the National Policy on Education but poor implementation structure.

Infrastructural challenges: Many Nigerian schools lack the facilities required to accommodate students with disabilities. This covers elevators, disabled friendly restrooms, and special classrooms. In the aspect of teacher training, teachers require more thorough instruction in order to meet the demands of pupils of all backgrounds. To close this gap, specialized training programs and workshops are being created. With the training of teachers by the Nigerian government in collaboration with National and International NGOs to emphasize inclusive teaching practices, instructors will be better able to accommodate children with disabilities in the regular classroom settings.

Also, Students with disabilities frequently lack access to suitable educational resources and assistive technologies, which hinders their ability to study. Furthermore, they are faced with Stigma, discrimination and exclusion which can result from social stigma and false beliefs about impairments. Changing attitudes and increasing awareness are continual problems.

Promotion of Inclusive Education and Advocacy for People with Disabilities: A number of advocacy organizations, including Inclusive Friends Association and Joint National Association of Persons with Disabilities (JONAPWD), are working hard to promote inclusive education and fight for the rights of people with disabilities but encouragement and support are needed from the government of the day to drive their efforts to a logical end.

International collaborations: To enhance its inclusive education system, Nigeria needs the collaborations with institutions like UNICEF, UNESCO, and the World Bank.

These collaborations frequently involve sharing of information, technical support, and counterpart funding.

Progress in implementing inclusive education has been uneven throughout Nigerian areas, it is crucial to emphasize. While some institutions of learning have made tremendous progress, some others are still faced with formidable obstacles. However Nigeria has worked to create a more equitable educational system through policy modifications, but teacher development, international collaborations, infrastructure, funding, and public awareness and views are still issues. At the moment, the inclusive education practiced in Nigeria is not full but partial.

## **2.13 Theoretical Perspective**

### **2.13.1 Bioecological Model**

Originally known as the Ecological Systems Theory with four ecological systems, Bronfenbrenner had since revised his theory to include a fifth ecological system and an emphasis is on the influence of the entire system in the development of an individual. The five environmental systems around the developing individual include a range from the closest to the individual (microsystem) to the furthest (exosystem then macrosystem), the interaction between microsystems (mesosystem) and the course of time (chronosystem). These systems exert important influences on an individual's lifespan development. Based on the revised Bioecological Model (Bronfenbrenner & Morris, 2006), one's development is contextual and thus should be studied from an ecological perspective, but the role of the developing individual should be prioritized.

As expounded in the Process-Person-Context-Time (PPCT) of the Model, the 'process' of connection between certain aspects of a 'context' or the 'person' throughout the course of 'time' should be clarified in an effort to investigate a particular developmental outcome (Bronfenbrenner & Morris, 2006). In other words, it is suggested that prolonged reciprocal interactions between an active human being and the elements in its immediate environment – called 'proximal processes' – play a very crucial role in development. Urie Bronfenbrenner's bio-ecological model of development offers a framework for comprehending how various elements interact and affect a child's development. The connection of this Model to parent-child relationship, the school environment, parental stress, and the social skills of children with learning disabilities in inclusive education is thus examined.

**Microsystem:** The child's immediate environment is where they have direct contact. The parent-child relationship, the school environment, and the peers are all parts of the microsystem in inclusive education. Strong relationships between parents and children can offer the child emotional support and encouragement, which can have a favorable effect on their development. For academic and social development, a supportive learning environment in the classroom that takes into account disability is essential. The development of social skills is significantly influenced by interactions with peers in the school environment.

**Mesosystem:** The interactions between the microsystem's parts are covered at this level. Parent and school staff cooperation and communication must be effective. Children with learning disabilities may fare better when their parents are aware and involved in their school engagements.

Exosystem: Indirect factors that affect the child's development are included in this layer. An exosystem factor that can have an impact on the child is parental stress. High levels of parental stress may make it more difficult for parents to support and get involved in their children's education. Schools must be aware of this and provide parents with resources and support in order to lessen their stress.

Macrosystem: This includes broader societal and cultural impacts. A society's policies on inclusive education and attitudes toward disabled children can have a big impact on how those children feel about school. Children with learning disabilities can benefit from inclusive practices when there is a supporting macrosystem in place.

Chronosystem: This dimension acknowledges that growth happens gradually. It takes into account how each of the aforementioned aspects develops and changes as the child gets older. For instance, a child's interactions with teachers, peers, and the curriculum may change as they advance through the grades, having an effect on their social skills and educational experience. More importantly, the bio-ecological model of development emphasizes how complexly different components interact when it comes to inclusive education for children with learning disabilities. When parents, teachers, and the general public work together effectively, a caring atmosphere can be created that improves these children's social skills and overall development.

### **2.13.2 Attachment Theory**

The development of John Bowlby's (1973, 1978) and others' attachment theory has greatly advanced the understanding of young children's developmental milestones.

The fundamental idea behind attachment is a two-way control system that involves the child and their major attachment figure, typically their mother, and is meant to attain and maintain specific goals. The main objective of the child is to seek out the presence of an attachment figure when feelings of insecurity, such as alarm, distress, or anxiety, are present. This is the main goal of an attachment behavior, which is to provide protection and security for the child. Leveraging on ethology as a foundation, Bowlby (1973) proposed that connection to a particular caregiver defends the defenseless young child, thereby boosting the chances of survival. Bowlby continued by saying that a child has a biological and genetic propensity for attachment, however it is not predetermined to whom they will become attached. Bowlby further asserted that a certain level of cognitive development must take place before an attachment can form and that a child cannot create an attachment without having several contacts with the attachment figure. According to Bowlby, the availability and responsiveness of an attachment figure, as well as the relative safety or risk of a situation, are not entirely re-evaluated in every new circumstance. Children develop increasingly complicated internal working models of the world and of the important people in it through frequent interaction with their environment (Bowlby 1973, 1978).

The child assesses situations and directs its behavior using these representative internal working models. An illustration of this would be when a young child, through interactions with his or her attachment figure, develops a working model of a person who will probably provide support when needed. The concept of an internal working model bears a strong resemblance to Piaget's 1954 theory of representation. A child must constantly acquire and restructure incoming knowledge about the environment in order for an internal working model to be functional.

Thompson, Simpson, and Berlin (2022) claim that when a child develops language, they are better able to collaborate with an attachment figure to design and carry out plans, which leads to greater social skills. The child's internal working model becomes more sophisticated and complex as their affective-cognitive abilities develop. The child gains an enhanced capacity to evaluate information received from the attachment figure and the surrounding environment (family and school). Drawing from a laboratory assessment known as the "Strange Situation" created by Ainsworth and her colleagues, which comprises a typical eight-episode series in which children are dropped off in a strange playroom and allowed to explore toys and engage with an unfamiliar adult in the mother's presence or absence, Ainsworth, Bell, and Stayton (1971, 1972) were able to identify three distinct patterns of attachment behaviors.

When the mother returned, a smaller group of children deliberately avoided her; these children were called "avoidantly attached." Children who were irate and uncooperative upon their mother's return exhibited the final pattern of behavior that surfaced during these evaluations; this group was classified as "resistant/ambivalent." According to Ainsworth et al. (1978), 'avoidant' and 'resistant/ambivalent' children have attachments that hinder them from functioning at their best, and these children's distress over the loss of their attachment figure will take precedence over their inclination to investigate their surroundings. The majority of children should be positively integrated into mainstream schools, according to current global trends in education (Siason et al., 2022).

Recent educational law in the United States and Great Britain has placed a strong emphasis on the requirement of supporting teachers, parents, and individual students

in the classroom. As a result, greater attention is being paid to developing programs and tactics that support identifying and outlining the requirements of children with learning disabilities who struggle in educational settings. Thus, everyone working in the fields of education and psychology is interested in finding the best ways to enhance the therapeutic educational programs that are now in place and to create practical new preventative and intervention strategies. It is crucial that schools have well-thought-out program planning that incorporates parent input and contributions to ensure that children with learning disabilities are seen from all angles, even though schools differ in their specific approaches, resource availability, and employment of educational psychologists to address the needs of a special population with learning disabilities.

Within the interdisciplinary field of developmental psychology, attachment theory provides a sound theoretical framework that is easily grasped by people with a variety of backgrounds. Classification of attachment and adaptation to school Secure children. Secure attachment, according to Zhu et al. (2023), ensures that most children can handle the adjustment to school without experiencing excessive anxiety. These children seem adaptable and strong, and they have excellent relationships with their peers, teachers, and caregivers. They are presumed to have internalized an attachment figure's working model, to anticipate positive, needs-driven reactions, and to be able to wait for attention. They seem to bounce back from seeming rejection really quickly and don't seem to become too upset or frightened easily.

Zhu and other researchers proposed that interactions within the peer group exhibit the same degree of flexibility. Children who are secure are more likely to be seen collaborating with their classmates and solving problems on their own, which likely

improves their social skills. They went on to say that confident children typically exhibit vibrant curiosity and a responsive interest in learning, and they also appear to be able to handle the demands of a novel and unfamiliar setting. Sroufe's (2021) study on newborn care-giver attachment and adaptation patterns in the preschool context offers an intriguing application of the previously discussed research by Ainsworth et al. (1978). Over the course of several years, Sroufe watched how both anxious and secure attachment connections continued into the preschool years to identify specific patterns of adaptability within the preschool setting. Sroufe went on to suggest that the children who were securely attached displayed traits like resilience, adaptability, curiosity, and self-assurance.

Educational psychologists and educators are particularly interested in stable attachment in middle children, with an emphasis on their relationship to cognitive development and function, according to Bateson (2023) in her book *Middle Childhood and Child Outcomes in Attachment*. Bateson proposed three main stages in a child's relationship with its primary attachment figure between birth and school age, based on attachment theory. In each of these stages, the structure of the relationship is designed to compensate for the child's deficiencies in specific social and behavioral domains. It is anticipated that as these abilities grow, the child's relationship with the attachment figure will alter, leading to greater integration of attachment behaviors and improved social skill development.

## 2.14 Chapter Summary

The major goal of this research study is to determine the connections between parent-child relationship, the school environment, parental stress, and the perceived social skills of children with learning disabilities in Abuja, Nigeria inclusive schools, which served as the discussion's focal point. The chapter revealed a discussion on the relationship between the parent and the child, the role of parental stress as a mediator and also put the pertinent literature—critical to the education and development of children with learning disabilities who lack social skills—into perspective. These children are enrolled in inclusive education programs, where they can receive an education and grow.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter gives an overview of the methodology used in this research study, it discusses the research design, the location and the population of the study, sample size and sampling procedure, measurement and instrumentation plan. The chapter also emphasizes data collection procedure and data analysis.

#### **3.2 Research Approach and Design**

A quantitative research approach was adopted to the present study because it allows analysis of high volume of data that incorporates the views of more subjects (Given, 2008). In line with the objectives, the current study employed the use of relationship design (Decarlo, 2021). Consequent upon this study, the design provides for the investigation of more than two variables at the same time (Gogtay & Thatte, 2017) and also enables data collection from a representative of a population and onward generalization of the findings (Barbie, 2012; Cherry, 2018). This design further implies that the conduct of the study becomes economical when more than two variables are investigated at the same time which is beneficial to this study, and also the researcher is absolved of the stress and expenses of repeating the study after a while within the same geographical location. In addition, relationship design is between two variables, if a change in the level of one variable causes a change in the other variable; it is

possible for two variables to be related with each other without one of them causing the observed behaviour in the other. When this is the cause, it is usually because there is a third (possibly unknown) factors (Decarlo, 2021).

### **3.3 Location of the study**

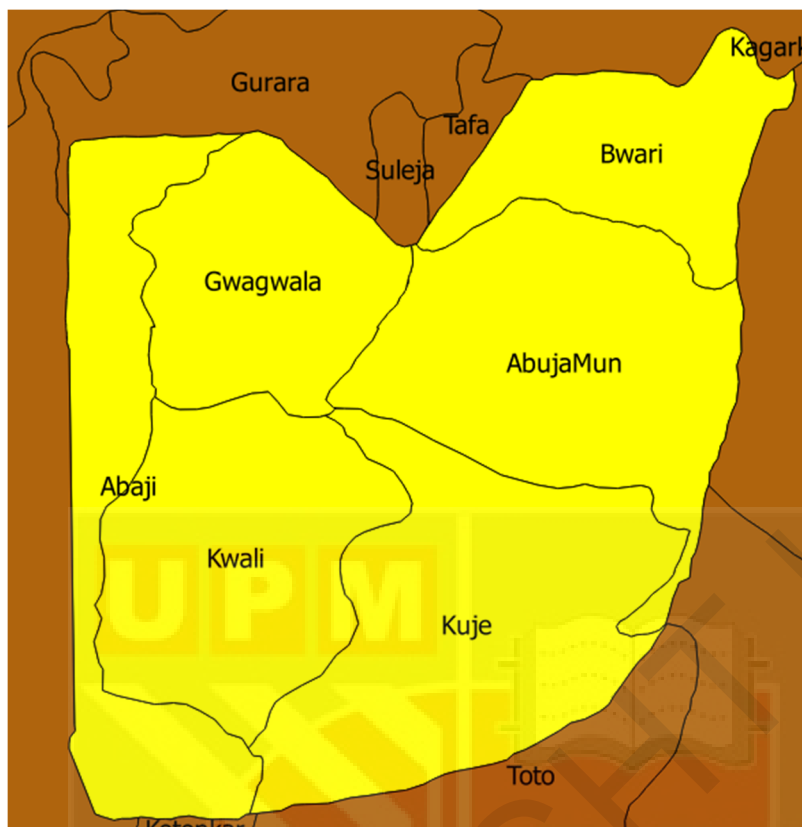
This section briefly explains the location of the study area; Abuja, the Federal Capital Territory of Nigeria, and the reasons for choosing the area for the study. In terms of the choice of the research site, Abuja consists of urban and rural population as a developing Federal Capital Territory. Indeed, Abuja has attracted to itself all the nation's ethnic groups and a large volume of children with learning disabilities from these ethnic groups. Also, Abuja was chosen due to its status as the policy formulation Centre for the Country. It is expected that policies that may emanate from the findings of this study may be an inspiration for the conduct of this kind of research where necessary across the federating states. Unlike other federating states and territories, research activities especially in the area of learning disabilities and social skills have not been conducted in Abuja from the search so far conducted.

Furthermore, prior researches have been centred on the education of children with learning disabilities in special schools in Abuja. However, with the introduction of inclusion for persons with disabilities by UNESCO (1994) which enables those with and without disabilities to operate and learn together under the same school environment, this study was initiated to cover inclusive schools. And since the inclusive program is premised on a platform of interaction by bringing together those with disabilities and those without disabilities under the same school environment, the

researcher decided to explore the area of social skills of children with learning disabilities in order to ascertain their social competence and how well they fair in an inclusive school setting. The program is called inclusive education while the school is called inclusive school. These considerations, coupled with reasons of feasibility and time constraints motivated the decision for Abuja, the Federal Capital Territory to be chosen as the research site for this study.

### **3.3.1 Abuja (Federal Capital territory, FCT)**

Abuja was centrally established in 1976. It shares its formation from four states of Nasarawa, Niger, Kaduna and Kogi respectively. It has an estimated population of about 2 million, five hundred thousand. It has rapidly grown and consists of all the ethnic groups in Nigeria. It is the administrative hub and political nerve centre of the country. It officially became the capital territory, December, 1991. Abuja is located in the north of the confluence of the River Niger and River Benue and it borders Niger state to the west and North, Kaduna state to the northeast, Nasarawa state to the east and south and Kogi state to the southwest.



**Figure 3.1: Map of Abuja Showing the Six Area Councils**

### **3.4 Population of the study**

The target population in a study is the total set of individuals with specific characteristics required by the researcher (Gravetter & Forzano, 2016). The population of this study were 2007 parents of children with learning disabilities from 20 Inclusive Basic Schools across the entire six Area Councils of the Federal Capital Territory (FCT) Abuja, Nigeria. Abuja Municipal Area Council had eight inclusive basic schools with the population of 513 parents of children with learning disabilities: Kwali Area Council had three inclusive basic schools with a population of 219 parents of children with learning disabilities, Abaji Area Council had two inclusive basic schools with population of 195 parents of children with learning disabilities, Gwagwalada Area Council had two Inclusive basic schools with population of 603 parents of children

with learning disabilities, Bwari Area Council had two inclusive basic schools with population of 282 parents of children with learning disabilities, and Kuje Area Council had three inclusive basic schools with a population of 195 parents of children with learning disabilities. This enrolment statistics was obtained from the Federal Capital Territory Education Secretariat and Universal Basic Education Board (FCTUBEB) in the year 2020 (see Table 3.1). Some of these children with learning disabilities are adolescents between ages 12 to 18years who normally should not be in these classes, but because of their deficiency in cognitive processes and their inability to pick up learning like other children of their age without learning disabilities in the inclusive basic schools. According to Nigeria Child Rights Act (2003), a child is described as a person below 18years of age living under the custody of their parent(s) or guardians within the Nigeria territory.

### 3.5 Sampling Technique and Sample Size

The Krejcie and Morgan (1970) formula was used to calculate the true representation (sample size) of the total population which gave a sample size of 322. Furthermore, the 322-sample size was then divided disproportionately as shown in Table 3.1 based on the percentage of the population to find out the actual sample size per school.

**Table 3.1: Population of Inclusive Schools in Abuja and its corresponding sample size**

| Area Council    | Name of School        | Population | Population Percentage | Sample Size |
|-----------------|-----------------------|------------|-----------------------|-------------|
| Abuja Municipal | Abuja Children's Home | 105        | 5.23                  | 17          |
|                 | Model Science School  | 30         | 1.49                  | 5           |
|                 | Pilot Science School  | 51         | 2.54                  | 8           |
|                 | GDSS Karu             | 45         | 2.24                  | 7           |
|                 | GSS Nyanya            | 75         | 3.74                  | 12          |
|                 | GSS Karshi            | 33         | 1.64                  | 5           |
|                 | LEA Utako             | 54         | 2.69                  | 9           |
|                 | GSS Asokoro           | 120        | 5.98                  | 19          |

**Table 3.1: Continued**

|              |                    |             |            |            |
|--------------|--------------------|-------------|------------|------------|
| Kwali        | JDSS Kwali         | 57          | 2.84       | 9          |
|              | GSS Kwali          | 60          | 2.99       | 10         |
|              | GGSS               | 102         | 5.08       | 16         |
| Abaji        | LEA Primary School | 90          | 4.48       | 14         |
|              | GSS                | 105         | 5.23       | 17         |
| Gwagwalada   | LEA Resource Room  | 135         | 6.73       | 22         |
|              | GDSS               | 468         | 23.32      | 75         |
| Bwari        | GGSS               | 159         | 7.92       | 26         |
|              | GDSS               | 123         | 6.13       | 20         |
| Kuje         | JSS Pasali         | 93          | 4.63       | 15         |
|              | GSS Kuje           | 42          | 2.09       | 7          |
|              | JDSS Kuje          | 60          | 2.99       | 10         |
| <b>TOTAL</b> |                    | <b>2007</b> | <b>100</b> | <b>322</b> |

Determination of sample size is important to make an approximation concerning the number of subjects required to answer research questions. Selection of true representative sample of a population revolves round the issue of sample size. To this end, inadequate sample size selection will influence the validity of the study. O'Leary (2017) affirms that the larger the sample size, the greater the reliability of the results. Determination of sample size is viewed from different points. According to Teddie and Tashakori, (2006), a sample size should be chosen to achieve the most balanced among the chances of making errors, the cost of the errors and the cost of the sampling.

Emphasis is placed by past studies on larger sample size when relationships and associations are being tested (Kumar, 2011), this is justified by the principle that a larger sample size will ensure people with diversity of backgrounds are included and make the sample representative of the study population with all statistical inferences (Sayang, 2017). In this study, the sample size was determined using Krejcie and Morgan (1970) formula. Krejcie and Morgan (1970) formula was used in this study because it helps to effectively determine the number of samples needed to represent a population as it is the case in this current study. The method of Krejcie and Morgan

(1970) was followed at the reliability of 0.95 along with the margin of error of 0.5 to determine the sample size for this research. The sample size formula is as follows:

$$S = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

S = required sample size

X<sup>2</sup>= the table value of chi-square for 1 degree of freedom at desired confidence level (3.841)

N= the population size = 2007

P= the population proportion assumed to be 0.5 since this would provide the maximum sample size)

d= the degree of accuracy expressed as a proportion (0.05)

d<sup>2</sup>= the degree of accuracy expressed as a proportion (0.0025)

$$S = \frac{3.84 \times 2007 \times 0.5(1 - 0.5)}{0.05^2(2007 - 1) + 3.84 \times 0.5(1 - 0.5)}$$

$$\frac{3.84 * (2007) * 0.5 * (0.5)}{0.0025 * (2006) + 3.84 * 0.5 * (0.5)}$$

$$\frac{3.84 \times 2007 \times 0.25}{0.025(2006) + 3.84 \times 0.25}$$

$$\frac{3.84 \times 2007 \times 0.25}{0.0025(2006) + 3.84 \times 0.25} = \frac{1926.72}{5.015 + 0.96} = \frac{1926.72}{5.975} = 322.46 \approx 322$$

Only the parents of children identified with learning disabilities within the age 12 to 18 years in inclusive basic schools in Abuja were included in this study. In Nigeria, based on the researcher's observation, typically developing children readily start basic school at the age of 6 years as against 3 years in other parts of the world. However, children with learning disabilities are taken to be ready for school at about age 12

through 18 in order to meet up with their typically developing peers in the inclusive primary schools' program.

### **3.6 Sampling Procedure**

Sampling procedure involves the techniques employed in collecting data in a research study. According to Lance and Hattori (2016), it is the process by which a representative sample is derived from a target population and subsequently collect data from that sample in order to understand something about that population as a whole. In this study, Stratified sampling technique was used. Stratified sampling technique is a means of obtaining a sample by dividing the population of sampling units into non-overlapping groups or categories (called strata) and then selecting a simple random sample from each group or category (Awotunde & Ugodulunwa, 2004). In statistics, a stratum refers to a subset (part) of the population which is being sampled. Researchers rely on stratified sampling when a population's characteristics are diverse and they want to ensure that every characteristic is properly represented in the sample. This helps with the generalizability and validity of the study, as well as avoiding research biases like under coverage bias (Thomas, 2023). One reason for using stratified sampling is to ensure that the different groups of which a population is composed are represented in the sample. Thus, in this study, a population is made up of six area councils with different number of Inclusive Basic Schools per Area council. Specifically, disproportional stratified sampling was used to select 322 parents of children with learning disabilities (LD) from 20 Inclusive Basic Schools (Strata) based on percentage: School 1 had 105 parents of children with learning disabilities representing 5.23% of 2007 parents of children with LD. To calculate the representative sample size: (Find examples below):

$$\text{sample Size} = \frac{\text{Population percentage (\%)} \times \text{calaculated Population Sample Size}}{100}$$

School 1 Sample Size calculation

$$\text{Sample Size} = \frac{5.23 \times 322}{100} = \frac{1684.06}{100} = 16.84 \cong 17$$

School 2 Sample Size calculation

$$\text{ample Size} = \frac{1.49 \times 322}{100} = \frac{479.78}{100} = 4.797 \cong 5$$

School 3 Sample Size calculation

$$\text{ample Size} = \frac{2.54 \times 322}{100} = \frac{817.88}{100} = 8.179 \cong 8$$

School 4 Sample Size calculation

$$\text{Sample Size} = \frac{2.24 \times 322}{100} = \frac{721.28}{100} = 7.21 \cong 7$$

In this study, Abuja as the study location is divided into three zones of the north, south and east. As shown in the table below, in each zone, there are two Area councils. The north is comprised of Abuja Municipal Area Council and Bwari Area council, the South is made up of Kwali and Abaji Area Councils respectively while the East consists of Gwagwalada Area Council and Kuje Area Council.

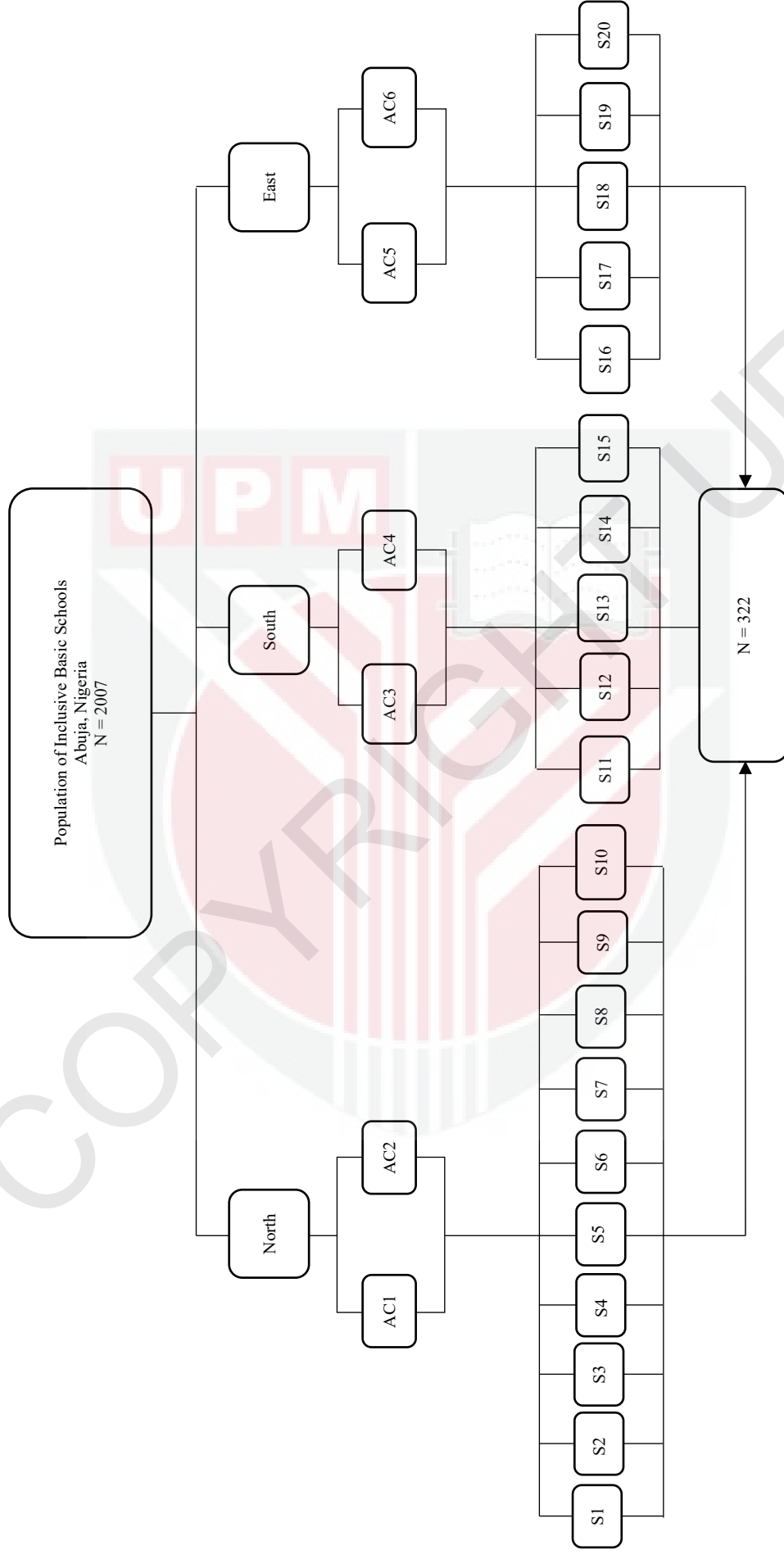
**Table 3.2: Zone and Area Councils of Abuja**

| Zone         | Area Council              | Total Number of Inclusive Basic Schools |
|--------------|---------------------------|-----------------------------------------|
| North        | Abuja Municipal and Bwari | 10                                      |
| South        | Kwali and Abaji           | 5                                       |
| East         | Kuje and Gwagwalada       | 5                                       |
| <b>Total</b> |                           | <b>20</b>                               |

A total of 20 inclusive basic schools comprising both students with and without learning disabilities from the six Area Councils were involved. The schools are co-educational, consist of both male and female children with LD from diverse ethnic groups with English language as a major medium of instructions.

In this study, parents of children with learning disabilities were recruited by simple random technique from the sampled inclusive basic schools, from each stratum. Simple random sampling is a type of sampling in which the researcher randomly selects a subset of participants from a population. In simple random sampling each member of the population has the equal chance of being selected (Thomas, 2020). To randomly determine the sample size for each inclusive basic school, lottery method was adopted. Each element was assigned a unique number. These numbers were written on cut-out papers with some written with red pen while others written in black and white. The papers were folded and assembled in a bucket after which each participant was asked to dip hand into the bucket and pick a paper with an assigned number. Only those that picked the paper with the assigned number written with the red pen were chosen as the sample size for the study in all the inclusive basic schools. The children were identified through school's records as children with learning disabilities and unable to learn like other children their age. Afterwards, the children's demography was collected by the researcher from the available school's records.

**Ac** = Area Council  
**S** = School



**Figure 3.2: Stratified sampling frame for Sample Selection of inclusive Basic schools**

### **3.7 Measurement and Instrumentation**

This section encompasses statements or items used in measuring the study's main constructs hereafter known as instrument of the study. A structured questionnaire was used to collect the data from parents of children with learning disabilities recruited in this study. A questionnaire is a research instrument that consists of series of questions and other prompts for gathering information from the respondents. According to Mills (2011), this type of instrument helps with the vivid description and quantification of data. The questionnaires consist of five-parts: Part A covered the demography of the respondents while Part B covered the variable of parent-child relationship, Part C covered the variable of school environment, Part D covered parental stress and Part E covered the variable of perceived social skill. The researcher gave the research questionnaires to the teachers to distribute to the parents through their children.

Prior to the distribution of the questionnaires to the teachers, the site advisors appointed by the researcher had tutored the teachers who in turn tutored the parents on how to fill the questionnaires. The parents filled out the questionnaires and returned the completed questionnaires to the school. The parents were given three days to fill and return the questionnaires through the same process. Teachers followed up with the parents with SMS messages both to confirm the receipt of the questionnaire from their children and urge to return at record time.

#### **3.7.1 Parent-Child Relationship**

15 questions from the Child-Parent Relationship Scale (CPRS), which was adapted from Pianta (1992), were used to assess parental perception of the quality of their

parent-child relationships. The questions were scored on a 5-point Likert scale (0, 1, 2, 3, and 4), with the options being: Definitely does not apply, Not really, Neutral/Not sure, Applies somewhat, Definitely applies. Since the children have learning disabilities, CPRS was utilized to establish their relationship with their parents. Following are some of the statements:

- i. I share an affectionate, warm relationship with my child.
- ii. My child and I always seem to be struggling with each other
- iii. If upset, my child will seek comfort from me

The maximum score a respondent can get per statement response is 5 and a lowest of 1. If the respondents tick “definitely applies” which is rated 5 multiplied by 15 items making a total of 75. The first section, section B of the instrument which is Parent-Child Relationship (PCR) items were scored “Definitely Applies” (PA) = 5, “Applies Somewhat” (AS) = 4, Neutral/Not Sure (N) = 3, “Not Really” (NR) = 2 and “Definitely Does Not Apply” (DDNA) = 1. The total score results are used to classify the respondents into Low, Moderate and High Parent-Child Relationship levels. A respondent’s (Parent’s) score on the 15 items of PCR ranged from 15 to 75. Thus, a parent who scores one point on each item had  $1 \times 15 = 15$  (minimum score), and the one who scores five points on each item had  $5 \times 15 = 75$  (maximum score). Source: Khorsheed Ahmed (2018).

Where  $n$  = the number of categories you intend to create (Low, Moderate, & High,  $n=3$ )

Maximum = refers to the highest score of the given likert scale (5)

Minimum = refers to the lowest score of the given likert scale (1)

The total score results are used to classify the respondents into Low, Moderate and High Parent-Child Relationship levels. A respondent's (Parent's) score on the 15 items of PCR ranged from 15 to 75. Thus, a parent who scores one point on each item had  $1 \times 15 = 15$  (minimum score), and the one who scored five points on each item had  $5 \times 15 = 75$  (maximum score). Based on this mean scoring system on the five-point scale, response total scores between 15-35 is considered "Low Parent-Child Relationship" Level, Response total scores between 36-56 is rated Moderate Parent-Child Relationship Level, and response total scores between 57-75 is rated High Parent-Child Relationship Level =20

The interval value is 20 for a 5-likert scale Tool

Where  $n$  refers to the number of categories of interest (Low, Moderate, & High,  $n=3$ )

Maximum = refers to the highest sum score (75)

Minimum = refers to the lowest sum score (15)

15-35 = Low Level

36-56 = Moderate Level

57-75 = High Level

But if the categories are two domain: Closeness and Conflict

Based on this mean scoring system on the five-point scale, response total scores between 15-45 is considered "Low Parent-Child Relationship" Level (Conflict), Response total scores between 45.1 – 75.0 is rated High Parent-Child Relationship Level (Closeness). The Cronbach's Alpha ( $\alpha$ ) coefficient of this instrument was 0.98.

=30

The interval value is 30 for a 5-likert scale Tool

Where n= refers to the number of categories of interest (Closeness and Conflict, n=2)

Maximum = refers to the highest sum score (75)

Minimum = refers to the lowest sum score (15)

15.0 - 45.0 = Conflict Level (Low Score)

45.1 – 75.0 = Closeness Level (High Score)

### **3.7.2 School Environment**

School environment includes physical and administrative structures, curriculum and materials, peers and as well as teachers' competencies. The Division of Research, Evaluation, Assessment and Accountability (DREAA) (2004) developed the parent version of the Baltimore City Public School System Climate Survey (BCPSSCS), which consists of 17 items and is scored on a 5-point Likert scale with the categories of "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." The scores are 1, 2, 3, 4, and 5. The instrument measured school climate characteristics and the readiness of the school environment to accommodate the special needs of students with learning disabilities. Following are some of the statements:

- i. I am satisfied with my child's school
- ii. The school does a good job of educating students
- iii. I will recommend this school to other parents

The maximum score a respondent can get per statement response is 5 and a lowest of 1. If the respondents tick "Strongly Agree (SA)" which is rated 5 multiplied by 17 items, making a total of 85. The section D of the instrument which is School

Environment items were scored “Strongly Agree” (SA) = 5, “Agree” (A) =4, Undecided (U) =3, “Disagree” (D) = 2 and “Strongly Disagree” (SD) = 1. The results are used to classify the respondents’ perception into Poor, Fair and Good School Environment levels. A respondent’s (Parent’s) score on the 17 items of BCPSSCS ranged from 17 (minimum) to 85 (maximum). Thus, a parent who scores one point on each item had  $1 \times 17 = 17$ , and the one who scored five points on each item had  $5 \times 17 = 85$ . Based on this scoring system on the five-point scale, response score 17-53 is considered “Poor School Environment Level, response scores between 54-70 is rated Fair School Environment Level, and response scores between 71-85 is rated Good School Environment Level. The Cronbach’s Alpha ( $\alpha$ ) coefficient for this instrument was 0.99.

=22.7

The interval value is 22.7 for a 5-likert scale Tool

Where  $n$  = refers to the number of categories of interest (Low, Moderate, & High,  $n=3$ )

Maximum = refers to the highest sum score (85)

Minimum = refers to the lowest sum score (17)

17-39.7 = Low Level

39.8-62.4 = Moderate

62.5-85 = High Level

### 3.7.3 Parental Stress

Parental stress describes the emotional challenges and the troubles families go through while giving care to children with learning disabilities. These include undue energy

dissipation, obnoxious expenditures, worry, anxiety, grief, shame and guilt, blames, resentment from neighbour and extended family members, marital discords, etc. (Logsdon, 2018).

Parental stress was measured based on the adapted 18 items of the Parental Stress Scale (PSS) developed by Berry and Jones (1995) on a 5-point Likert scale with categories of (1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree, with the assigned scores of 1, 2, 3, 4 and 5. The instrument measured the stress the parents of children with learning disabilities go through in the process of care. Following are some of the statements:

- i. I am happy in my role as a parent
- ii. There is little or nothing I wouldn't do for my child(ren) if it was necessary.
- iii. Caring for my child(ren) sometimes takes more time and energy than I have to give.

The maximum score a respondent can get per statement response is 5 and a lowest of 1. If the respondents tick "Strongly Agree (SA)" which is rated 5 multiplied by 18 items making a total of 90. The section C of the instrument which is Parental Stress Scale (PSS) are scored "Strongly Disagree" (SD) =1, "Disagree" (D) =2, Undecided (U) =3, "Agree" (A) = 4 and "Strongly Agree" (SA) = 5. The results are used to classify the respondents into Low, Moderate and High Parental Stress levels. A respondent's (Parent's) total score on the 18 items of PSS ranged from 18 to 90. Thus, a parent who scores one point on each item had  $1 \times 18 = 18$ , and the one who scores five points on each item had  $5 \times 18 = 90$ . Based on this scoring system on the five-point Likert scale, Response score 0-39 is considered "Low Parental Stress Level, Response scores between 40-50 is rated Moderate Parental Stress Level, and response scores between

51-90 is rated as High Parental Stress Level. The instrument was adopted from Berry and Jones, (1995) with obtained Cronbach's Alpha ( $\alpha$ ) coefficient of 0.97.

=24

The interval value is 24 for a 5-likert scale Tool

Where  $n$ = refers to the number of categories of interest (Low, Moderate, & High,  $n=3$ )

Maximum = refers to the highest sum score (90)

Minimum = refers to the lowest sum score (18)

18-42.9 = Low Level

43.0-67 = Moderate

68.0-90 = High Level

#### **3.7.4 Perceived Social Skills of Children with Learning Disabilities**

Working productively with people, responding skillfully in potentially conflictual circumstances, and using a repertoire of social behaviors, such as tone of voice, hand gestures, facial expressions, and body posture, appropriately are all examples of social skills (Gresham & Elliott, 2008). In attaining the study objectives, the mean value of social skill was operationally measured based on 30 items of the adapted parent version of the Social Skill Questionnaire (SSQ) developed by Spence (1995) on a 3-point Likert Scale with categories of (not true, sometimes true, mostly true) with the assigned scores of 0, 1, 2. The instrument measured the level of ability in social skill of the child with learning disabilities. Following are some of the statements:

- i. Listens to other people's point of views during arguments

- ii. Make requests from parents in a polite way
- iii. Controls his/her temper when he/she loses in a game or competition

The maximum score a respondent can get per statement response is 2 and a lowest of 0. If the respondents tick “Most Truly (MT)” which is rated 2 multiplied by 30 questions making a total of 60. The section E of instrument which is Perceived Social skills were scored “Not true” (NT) =0, Sometimes True (ST) =1, and “Mostly True” (MT) = 2. The total score results are used to classify the respondents into Low, Moderate and High Perceived Social skills levels. A respondent’s (Parent’s) total score on the 17 items of SSQ ranged from 30 to 60. Thus, a parent who scores one point on each item had  $1 \times 30 = 30$ , and the one who scored two points on each item had  $2 \times 30 = 60$ . Based on this scoring system on the three-point scale, Response score 0-39 is considered “Low Perceived Social Skill Level, Response scores between 40-46 is rated Moderate Perceived Social Skill, and response scores between 47-60 is rated High Perceived Social Skill Level (Gresham & Elliott, 2008). The instrument Cronbach’s Alpha ( $\alpha$ ) coefficient was 0.97.

=10

The interval value is 10 for a 5-likert scale Tool

Where  $n$ = refers to the number of categories of interest (Low, Moderate, & High,  $n=3$ )

Maximum = refers to the highest sum score (60)

Minimum = refers to the lowest sum score (30)

30-40 = Low Level

41-50 = Moderate

51-60 = High Level

### **3.7.5 Demographic Information**

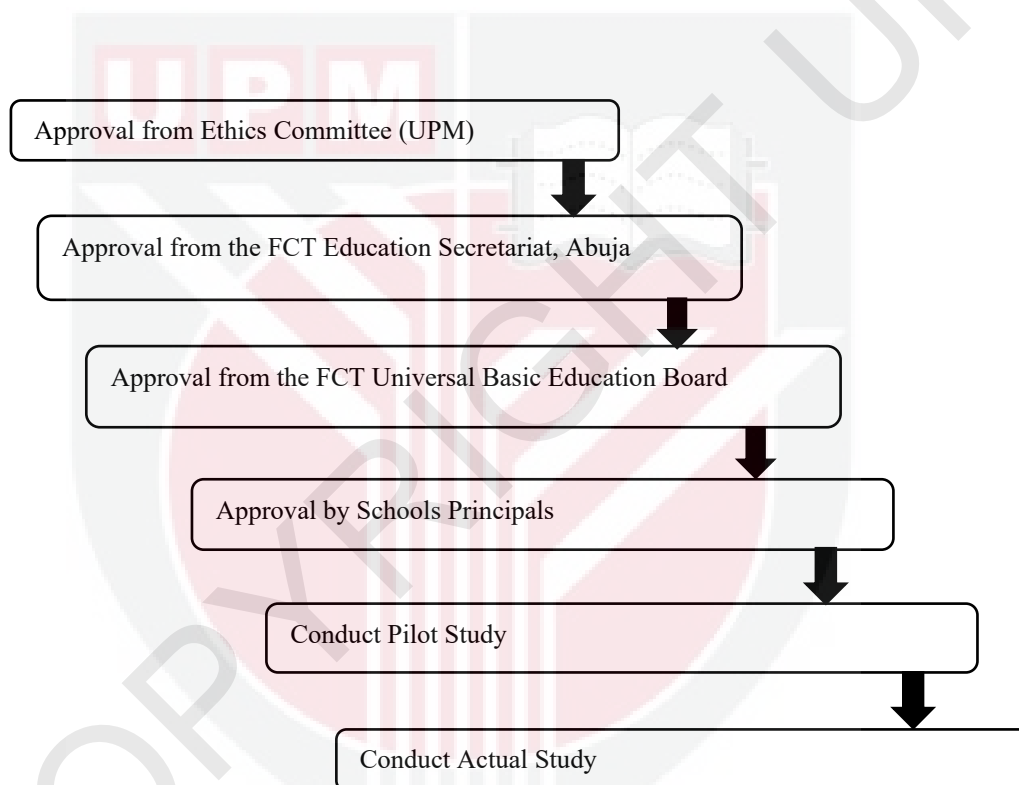
The demographic information was covered by the first segment of the questionnaire. Respondents were asked to supply such information as age, level of education, religion, gender, marital status, number of children, occupation status, income status, etc. as it applies.

### **3.7.6 Data Collection**

In this study, questionnaire was used to collect the data. The participating schools were presented with a letter of introduction from the researcher for approval after which the participants were made to know that their participation was voluntary and without compulsion. The researcher used a drop and pick method to collect the data. A total sample size of three hundred and twenty-two (322) questionnaires were produced and distributed across the selected schools. In each of the schools, the questionnaires were distributed to the students with the assistance of the teachers and the Site Advisors, who also helped in the eventual collection. The students took the questionnaires to their parents to fill, and answer the questions contained therein. While a total of three hundred and fourteen (314) questionnaires were returned given rise to 97.5% returned rate which was appropriate to be used for data analysis.

The data collection exercise also followed approval from the appropriate authorities like the Ethics Committee of Universiti Putra Malaysia (UPM), Federal Capital Territory (FCT) Education Secretariat, Abuja; Federal Capital Territory (FCT) Universal Basic Education Board and the Principals of the inclusive schools involved

in the study. Consent forms were distributed and the respondents were assured of their confidentiality of the information given. The researcher approached the relevant authorities with a letter from the Researcher's Institution at the point of data collection and a go ahead was obtained. The procedure for approval is as follows: Ethics Committee of University Putra Malaysia (UPM), FCT Education Secretariat, FCT Universal Basic Education Board, Abuja, schools' Principals, conduct of pilot study and the conduct of actual study.



**Figure 3.3: Data Collection Procedure**

### **3.7.7 Validity**

Validity refers to the extent to which an instrument measures the concept it asserts to measure in a quantitative study (Blumberg et al., 2005). Validity of a research instrument assesses the extent to which the instrument measures what it is designed to

measure (Robson, 2011). The instrument for this study was adapted from four different instruments and validated by three experts from Special Education and Rehabilitation Sciences Department of University of Jos, Nigeria. The researcher provided each of the experts with a copy of the adopted instrument, aim and objectives of the study, research questions, hypotheses and the method of data analysis for the experts to judge the instrument comprehensiveness, adequacy, and relevance for the pilot and main studies. Based on the experts judgement it was agreed that the instrument was appropriate to measure the independent variables (IV) and the dependent variable (DV) therefore valid. Also, based on previous studies; construct, convergent, concurrent and discriminant validity were used to validate the instrument and, in addition to stakeholders' judgement (Berry & Jones, 1995; Zelman et al. 2018; Algarvio et al. 2018), the instruments were found valid to assess parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities.

### **3.7.8 Reliability Test**

Reliability according to Drost (2011) refers to the degree to which measurement techniques can be dependable to secure a consistent result on repeated application. Reliability of the instrument can be seen from internal consistency from which measurement instruments produce consistent results (Cai et al., 2016). It is a sign of strong reliability when results are constant throughout time and accurately reflect the population being studied. This signifies that a research instrument is reliable if a similar study result can be obtained using a similar methodology. This can be confirmed in three (3) best ways; test and retest, equivalent-forms method and internal-

consistency method. The Cronbach's Alpha, often known as the alpha coefficient, is frequently used to determine the internal consistency of a scale based on the correlation matrix between its various elements. When the Alpha value is more than 0.7, the instrument is considered reliable.

### 3.7.9 Pilot Test

A pilot study is a small-scale test of the suggested tools and procedures to identify problems that can be fixed before the research's actual data collection is conducted (Fraenkel et al., 2011). One of the primary purposes of carrying out a pilot study is to find out if there is any ambiguity, misunderstandings, or other inadequacies with the proposed instruments (Gliner et al., 2011). Therefore, in this study, a pilot test of the research instruments was carried out before moving on to the actual data collection.

**Table 3.3: Reliability Coefficients for Pilot test and Final Test**

| Variables                                                    | Pre-test (n = 46) |                    | Final test (n = 314) |                    |
|--------------------------------------------------------------|-------------------|--------------------|----------------------|--------------------|
|                                                              | No. Items         | Alpha ( $\alpha$ ) | No. Items            | Alpha ( $\alpha$ ) |
| Parent Child Relationship (PCR)                              | 15                | .712               | 15                   | .980               |
| School Environment (SE)                                      | 17                | .903               | 17                   | .997               |
| Parental Stress (PS)                                         | 18                | .804               | 18                   | .972               |
| Social Skills of Children with Learning Disabilities (SSCLD) | 30                | .719               | 30                   | .978               |

The pilot study was carried out in three inclusive basic schools in three neighbouring States of Nasarawa, Kaduna and Niger, from which Abuja, the Federal Capital Territory was carved out. The researcher used 46 parents of children with learning disabilities found in the inclusive schools based on their teachers'/school's records. 46 questionnaires were distributed to the parents who actually constitute the unit of analysis for the study. through their children. The states were considered for pilot study

due to their similar characteristics of interest to Abuja. This is done to make sure the respondents selected for the groups share traits with the primary study participants in the target population, as this will aid in the detection of any issues with the questionnaire design. The reliability was tested using the statistics known as "Cronbach's alpha," which is an index of reliability that measures an instrument's internal consistency and has a coefficient that varies from 0 to 1. (Creswell and Newman, 1993). 0.70 is the bare minimal reliability rating that is acceptable (Aiken, 1994). The reliability test feedback from the pilot test is shown in Table 3.3 above. The Cronbach's alpha coefficients were within the acceptable range of 0.712 to 0.903 for this study. In this investigation, the data obtained for the final study were subjected to a reliability test to ensure that the data were internally consistent. The reliability test results of the final study are also shown in Table 3.3 above, where the Cronbach's alpha coefficients also range between a minimum of 0.972 and a high of 0.980.

#### **3.7.10 Data Preparation**

Data preparation is a crucial stage in research which involves two major data management processes: data cleaning and missing data. It is done at data entry stage to validate the data entered into the computer before the main analysis of the study.

**Data Cleaning:** Data cleaning is the process by which a researcher checks his/her data accuracy (Neuman, 2006). This is a very crucial process in research because proceeding to data analysis without cleaning the data in which a data-set will be thoroughly examined for possible outliers and influential cases will affect its results. Mistakes associated with datasets do not only occur from respondents, researchers may

also mistakenly key in a wrong figure during data entry into the Microsoft Excel spreadsheet and during copying and posting into Statistical Package for Social Sciences (SPSS) software. For instance, failing to correct a respondent's answer error in which he/she from an inclusive school ticked Special school or during data entry 91years was entered in the Microsoft Excel spreadsheet instead of 19years which will affect the findings of a research study. Data cleaning was applied to detect outliers and other values that tend to distort result of the study.

There are two methods for finding errors that are outliers, depending on the descriptive methodology used. If a correct value can be obtained, the data should first be corrected. For instance, using the respondent's date of birth, the age of the respondent can be determined (DOB). In this instance, the incorrect age response has been fixed, therefore the birthday is given. Secondly, choose to leave the data alone in cases when it is truly missing data or has an extreme value (Van den Broeck, et al., 2005).

**Missing Data:** It is very unlikely to conduct survey research without any incomplete data. Respondents may mistakenly or deliberately fail to answer some questions. For example, respondents can refuse to provide an answer (actual "age" but may prefer "age range"), they may also have no answer for the item, forget to answer it or overlook some of the answers (Allison, 2002). Irrespective of the reason for incomplete data, a researcher is expected to solve this problem. The researcher employed a thoughtful data collection strategy which helped him to minimize the number of missing data.

However, it is also common to have some level of missing data (Allison, 2002; Roth, 1994). The reason for correcting the problem of missing data in research is to increase

the statistical power of the sample to the population (strong generalization) without bias (Olinsky, et al., 2003; Roth, 1994). There are many procedures to solve the problem of missing data. Examples are: streetwise deletion approach, replacing with the mean value and others. Each procedure can be appropriate in certain situations. In line with the aforementioned, the study's missing data cases on continuous variables (such as: age, family income, economic class, etc.) were replaced with mean (range groups) of the nearby

### **3.7.11 Exploratory Data Analysis (EDA)**

Exploratory data analysis (EDA) for all the variables should be performed before performing any statistical analysis for a quantitative measurement. EDA was tested using robust statistics and visual representations such as Skewness, Kurtosis, histogram, Q-Q Plot, and Box Plot in this data analysis because it was thought to be crucial to the analysis's performance. The results of the EDA for all the variables are discussed below. All of them were done with the intention of finding errors to make the necessary repairs, smoothing, and re-expression of data easy.

**Parent-Child Relationship:** The histogram showed a symmetrical bell-shaped curve distribution and negatively skewed; and Q-Q plot have shown a slightly straight line. However, the outlier Box Plot indicates 3 cases deviated from center. Since the Skewness =  $-0.045$  and Kurtosis =  $-0.357$  values are within the threshold, then those cases are considered as potential outliers; but according to Pallant (2011), real outliers are accompanied or attached with asterisk. In this case, no asterisk was attached to the case classified as potential outliers; so they were maintained and used in the analysis.

According to George and Mallery (2003), a Skewness and Kurtosis values between +1.0 to -1.0 is considered excellent for the most psychometric purposes, but a value between +2.0 to -2.0 is on many cases also acceptable depending on the particular application. Therefore, the researcher was able to conclude that this variable is normally distributed (See Appendix E).

**Parental Stress:** The histogram showed a symmetrical bell-shaped curve distribution with negative skewness and Q-Q plot have shown a straight line, while the outlier Box Plot indicates only 1 case deviated from the mean. However, the result is considered normally distributed because the Skewness =  $-.039$  and kurtosis =  $-.355$  are within the recommended values of  $-2$  to  $+2$  and  $-1$  to  $+1$  respectively (George & Mallery, 2003) (See Appendix E).

**School Environment:** The normal Q-Q plot was shown to have a slightly straight line with some cases deviated, while the Histogram showed a rather symmetric bell-shaped curve distribution, and the outlier Box Plot indicates 5 deviated from the mean. The Skewness =  $-.409$  and Kurtosis =  $-.652$  values are within the range as suggested by George and Mallery (2003). Even though, the Box plot has shown 5 cases deviated but, the researcher considered those cases as potential outliers since they did not impact the data (See Appendix E).

**Perceived Social Skills of Children with Learning Disabilities:** The histogram look symmetrical bell-shaped curve and Q-Q plot had shown a straight line with little deviation of some scores. Also, the outlier Box Plot reveals 3 cases of potential outlier. Furthermore, the values of Skewness =  $-.203$  and Kurtosis =  $-.136$  are within the

recommended margins (George & Mallery, 2003). So, the researcher assumed that the data meet the assumption of normality (See Appendix E).

### **Collinearity Diagnostic**

Collinearity is the lack of predictor variable independence, typically in a regression-type study (Dormann et al., 2013). It is a typical trait of all psychometric data sets and can be a challenge for parameter estimation since it inflates the variance of regression parameters, which may result in the incorrect identification of important predictors in a statistical model (Dormann et al., 2013). Therefore, collinearity, also known as multicollinearity, characterizes the scenario when two or more predictor variables in a statistical model are linearly connected (Alin, 2010). Numerous statistical procedures, particularly those used most frequently in psychology, are collinearity sensitive (Stewart 1987; Belsley 1991; Chatfield 1995), which leads to unstable parameter estimations, exaggerated standard errors on estimates, and ultimately skewed inference statistics.

The pairwise correlation coefficient ( $r$ ), the condition index (which is the square root of the ratio of each eigenvalue to the smallest eigenvalue of  $(X)$ ), the variance inflation factor (VIF), and its generalized version are the most popular ways to quantify collinearity (VIF: Fox & Monette, 1992). The correlation matrix's determinant and condition number are the two most frequently used metrics. According to Bagozzi, et al. (1981) and Hair (2010), a correlation coefficient ( $r$ )  $>.9$  denotes a high degree of correlation between two constructs, which violates the multicollinearity assumption. In contrast, Montgomery and Design claims (2001). When strongly correlated predictor variables are included in regression models, this is referred to as

multicollinearity, and it has the effect of invalidating some of the fundamental presumptions that underlie their mathematical estimate. In order to diagnose multicollinearity, Montgomery said that the following steps are typically advised:

1. Examining the correlation matrix for high pairwise correlations; this is necessary but insufficient because multicollinearity might exist even when there are no strong pairwise correlations.
2. VIF values above 10 indicate multicollinearity. The more severe the issue, and the lower the tolerance value, the greater the VIFs value. The number 10 indicates multicollinearity.

Since all of the tolerance and variance inflated factors (VIF) of the predictor variables are within the threshold of "VIF 10 and Tolerance  $>.10$ ," respectively, the following Table (Table 3.4) displays the collinearity diagnostic test of the study.

**Table 3.4: Collinearity Diagnostic Test**

| Predictor Variables       | Collinearity Statistics |       |
|---------------------------|-------------------------|-------|
|                           | Tolerance               | VIF   |
| School Environment        | .389                    | 2.570 |
| Parental Stress           | .416                    | 2.402 |
| Parent-Child Relationship | .499                    | 2.002 |

In addition, correlation matrix in Table 3.5 below illustrates the pairwise correlations between the study variables. The result indicates that there is a significant positive and high relationship between school environment and perceived social skills ( $r = .717$ ,  $p < .01$ ). Furthermore, the correlation analysis reveals a significant high and positive correlations between parental stress ( $r = .674$ ,  $p < .01$ ) and parent – child relationship ( $r = .702$ ,  $p < .01$ ) with perceived social skills. After assessing the correlation estimates in the correlation matrix table, it was found out that all the correlation coefficient are less than ( $\leq$ ) .9. In this regard, the assumption of multicollinearity is not violated.

**Table 3.5: Correlation Matrix of independent variables with Perceived Social Skill**

| Variables                                  | Y      | X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> |
|--------------------------------------------|--------|----------------|----------------|----------------|
| Y (Perceived Social Skill)                 | 1      |                |                |                |
| X <sub>1</sub> (School Environment)        | .717** | 1              |                |                |
| X <sub>2</sub> (Parental Stress)           | .674** | .738**         | 1              |                |
| X <sub>3</sub> (Parent-Child Relationship) | .702** | .673**         | .644**         | 1              |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed)

### 3.8 Data Analysis

#### 3.8.1 Descriptive Analysis

Descriptive analysis assists in the description of data characteristics. In this study, descriptive statistics/analyses (mean, standard deviation, percentage and frequency) were used to work out the demographic variables (objective 1).

#### 3.8.2 Inferential Analysis

To test the study's hypotheses, inferential statistics were used. The aim of this study was to examine the relationships between parent-child relationship, school environment, parental stress, and the perceived social skills of children with learning disabilities in Abuja, Nigeria's inclusive basic schools. Examples of inferential statistics/analyses used in the study include Pearson correlation, which was used for the second objective, multiple regression, which was applied to the third objective, and hierarchical regression, which was applied to the fourth objective (mediation).

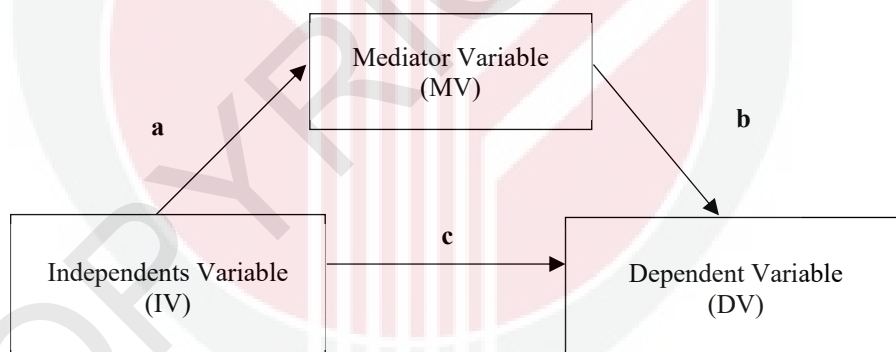
## Testing for Mediating Effects

The Sobel test is used to determine whether a variable carry (or mediates M) the effect of an Independent Variable (IV) on the Dependent Variable (DV) the outcome of interest.

The study used Sobel (1982) test equation to test mediation effect as follows:

$$z - value = a \times b / \sqrt{(b^2 \times s_a^2 + a^2 \times s_b^2)}$$

The criteria for decision is that if  $p\text{-value} \leq 0.05$  implies that there is evidence of mediation and if  $p\text{-value} \geq 0.05$  implies there is no evidence of mediation.



**Figure 3.4: Mediating Model of Parental Stress in the Relationship between Parent – Child Relationship, school environment and Perceived Social Skills of Children with Learning Disabilities (SSCLD)**

Step 1. DV (uses Y as the criterion variable in a regression equation and X as a predictor)

Step 2. Shows that IV is related to the Mediator (uses M as the criterion variable in the regression equation and X as a predictor).

Step 3. Shows that the mediator is related to the DV (uses Y as the criterion variable in a regression equation and X and M as predictors).

Step 4. To establish that M completely mediates the X-Y relationship, the effect of X on Y controlling for M (path c) should be zero.

If all four of these conditions are satisfied, the data support the idea that variable M fully mediates the X-Y relationship; however, if the first three conditions are satisfied but the fourth one is not, partial mediation is suggested. According to Hayes and Preacher (2014), the estimation and interpretation of the indirect effects together with their inferential tests are of concern when investigating a causal process that includes mediation components.

**Table 3.6: Summary of Objectives and Data Analysis Methods**

| No.         | Objectives                                                                                                                                                                                            | Data Analysis                                |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Objective 1 | To describe the level of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and perceived Social Skills of children with learning disabilities (SSCLD).                   | Descriptive Statistics                       |
| Objective 2 | To examine the correlation between parent-child relationship (PCR), school environment (SE), parental stress (PS) and perceived social skills of children with learning disabilities.                 | Pearson Correlation                          |
| Objective 3 | To determine the unique predictor of perceived social skills of children with learning disabilities.                                                                                                  | Multiple Regression                          |
| Objective 4 | To examine the mediating effects of parental stress (PS) between parent-child relationship (PCR), school environment (SE) and perceived social skills of children with learning disabilities (SSCLD). | Parallel Multiple Mediator Regression (PMMR) |

### 3.9 Chapter Summary

The chapter three of this study specifically described the methodology for the conduct of this research. The study employed a cross-sectional survey and descriptive approach

to establish the relationship between parent-child relationship, school environment, parental stress and perceived social skills of children with learning disabilities. The chapter started by explaining the research design, the population and the sampling technique. Furthermore, the chapter discussed the development of questionnaire looking at the established instruments, the reliability and the validity of the instruments with the detailed procedure for data collection. Finally, analysis of data was discussed with the involvement of statistical analysis to answer the research objectives and test the hypotheses.



## **CHAPTER 4**

### **RESULT AND DISCUSSION**

#### **4.1 Introduction**

The results of the current study are presented in this chapter. Descriptive and inferential statistics were used in the investigation. The background profile, perceived social skill, parental stress, parent-child relationship, and school environment levels were all described using descriptive statistics. The Pearson Correlational Matrix Analysis was one of the inferential statistics employed in this study to determine the relationship between the parent-child relationship, the school environment, parental stress, and the perceived social skills of children with learning disabilities. The distinctive predictors of perceived social skills were identified using multiple regression analysis, and the mediating effects of parental stress on the link between independent and criterion variables were estimated using the bootstrap technique using 95% bias-corrected data.

## 4.2 Descriptive Analysis

### 4.2.1 Background Profile

**Table 4.1: Demographic Information Distribution of Children with Learning Disabilities (N=314)**

| Variables                                         | Frequency | Percentage (%) |
|---------------------------------------------------|-----------|----------------|
| <b>Age Groups (Children with LD)</b>              |           |                |
| Less than 13years                                 | 124       | 39.5           |
| 13-14years                                        | 78        | 24.8           |
| 15-16years                                        | 73        | 23.2           |
| 17-18 years                                       | 39        | 12.4           |
| <b>Adolescence</b>                                |           |                |
| Early Adolescence Stage                           | 202       | 64.3           |
| Middle Adolescence Stage);                        | 100       | 31.8           |
| Late Adolescence Stage (18-21years).              | 12        | 3.8            |
| <b>Gender (Children with LD)</b>                  |           |                |
| Female                                            | 175       | 55.7           |
| Male                                              | 139       | 44.3           |
| <b>Inclusive Basic Schools (Children with LD)</b> |           |                |
| Primary Schools                                   | 202       | 64.3           |
| Junior Secondary Schools                          | 112       | 35.7           |

The background profile section comprises of children with learning disabilities age, gender in Inclusive Basic Schools across six Area Councils of Federal Capital Territory (FCT) Abuja, Nigeria, and their parents' age groups, marital status, religion, education status, occupation status, and family income levels. The questionnaires which were brought back by the children from schools were filled by the parents. All respondents in this study were parents of children with learning disabilities in Public Inclusive Basic Schools in Abuja.

Table 4.1 displays a summary analysis of the children with learning disabilities ages as follows: the age group of less than 13 years old were 39.5% (n=124), age group 13 – 14 years old were 24.8% (n=78), age group 15 – 16 years old were 23.2% (n=73), and age group 17 – 18 years old were 12.4% (n=39). Considering the age Mean score

of  $13.5 \pm 2.2$  years which fall within ages 13 – 14 years, it implies that the children with learning disabilities in this age group were higher in number than the other age groups.

Based on World Health Organization (WHO, 2022) categorization, children are categorized into three (3) adolescence stages which reveals that 64.3% (n=202) are in Early Adolescence Stage (12-14 years); 31.8% (n=100) are in Middle Adolescence Stage (15-17 years) and 3.8% (n=12) are in Late Adolescence Stage (18 - 21 years). This implies that more than half of the children with learning disabilities are in their early adolescence stage and the least were in late adolescence stage.

The Children with Learning Disabilities were from Inclusive Basic Schools of which 64.3% (n=202) were from Inclusive Basic Primary Schools, while 35.7% (n=112) were from Inclusive Basic Junior Secondary Schools. This means that more than half of the children with learning disabilities were from Inclusive Basic Primary Schools.

The children with learning disabilities consisted of 55.7% (n=175) female and 44.3% (n=139) males which implies that female children with learning disabilities were higher in Inclusive Basic Schools in Abuja than male children.

**Table 4.2: Demographic Information Distribution of Parent of Children with Learning Disabilities (N=314)**

| Variables                    | Gender   |          | Total     |
|------------------------------|----------|----------|-----------|
|                              | Female   | Male     |           |
| <b>Age Range of Parents</b>  |          |          |           |
| less than 30 years           | 21(6.7)  | 8(2.5)   | 29(9.2)   |
| 31-40 years                  | 64(20.4) | 36(11.5) | 100(31.8) |
| 41-50 years                  | 46(14.6) | 42(13.4) | 88(28)    |
| 51-60 years                  | 31(9.9)  | 39(12.4) | 70(22.3)  |
| Above 60 years               | 13(4.1)  | 14(4.5)  | 27(8.6)   |
| <b>Occupation</b>            |          |          |           |
| Unemployed                   | 40(12.8) | 32(10.2) | 72(22.9)  |
| Public Civil Servants        | 84(26.6) | 66(21.2) | 150(47.8) |
| Self Employed/Artisan        | 28(9.0)  | 23(7.2)  | 51(16.2)  |
| Private Corporate Employment | 23(7.3)  | 18(5.8)  | 41(13.1)  |

**Table 4.2: Continued**

|                                   |           |           |           |
|-----------------------------------|-----------|-----------|-----------|
| <b>Level of Education</b>         |           |           |           |
| Secondary School                  | 31(9.9)   | 12(3.8)   | 43(13.7)  |
| Ordinary Diploma                  | 9(2.9)    | 2(0.6)    | 11(3.5)   |
| NCE                               | 7(2.2)    | 11(3.5)   | 18(5.7)   |
| HND                               | 11(3.5)   | 3(1)      | 14(4.5)   |
| Bachelor's Degree                 | 90(28.7)  | 61(19.4)  | 151(48.1) |
| Master's Degree                   | 20(6.4)   | 32(10.2)  | 52(16.6)  |
| PhD                               | 7(2.2)    | 18(5.7)   | 25(8)     |
| <b>Family Income</b>              |           |           |           |
| Low Income (0-N35,000)            | 58(18.5)  | 28(8.9)   | 86(27.4)  |
| Middle Income (N36,000 - N75,000) | 110(35)   | 93(29.6)  | 203(64.6) |
| High Income (N76,000 & above)     | 7(2.2)    | 18(5.7)   | 25(8)     |
| <b>Parent Marital Status</b>      |           |           |           |
| Single                            | 20(6.4)   | 2(0.6)    | 22(7)     |
| Married                           | 151(48.1) | 133(42.4) | 284(90.4) |
| Separated                         | 2(0.6)    | 0         | 2(0.6)    |
| Widow/Widower                     | 2(0.6)    | 4(1.3)    | 6(1.9)    |
| <b>Religion</b>                   |           |           |           |
| Christianity                      | 126(40.1) | 122(38.9) | 248(79)   |
| Islam                             | 49(15.6)  | 17(5.4)   | 66(21)    |
| Total                             | 175(55.7) | 139(44.3) | 314(100)  |

Table 4.2 displays parents' demographic information that reveals ages of the parents ranging between less than 30 years to 60 years and above. In this regard, the age group of less than 30 years old are 9.2% (n=29)(comprises of 6.7% females and 2.5% males); age group 31 – 40 years old are 31.8% (n=100)(comprises of 20.4% females and 11.5% males); age group 41 – 50 years old are 28.0% (n=80)(comprises of 14.6% females and 13.4% males); age group 51 – 60 years old are 22.3% (n=70)(comprises of 9.9% females and 12.4% males); while parents in the age group of 60 years and above were only 8.6% (n=27)(comprises of 4.1% females and 4.5% males). Considering the age Mean score of 34.12 years (= 34 years) and the standard deviation of 12.34 years which fall within ages 31 – 40years, it indicates that the parents in this age group are slightly higher than the other age groups.

In terms of the marital status of the parents, the analysis reveals that, (n=22) 7% are Single (comprises of 6.4% females and 0.6% males); and, (n=284) 90.4% were Married (comprises of 48.1% females and 42.4% males); while (n=2) 0.6% of the parents are Separated (comprises of 0.6% females and 0% males); and (n=6) 1.9% are

Widows/Widowers (comprises of 0.6% females and 1.3% males);. This implies that majority of the parents are married couples and the least are Separated parents.

In terms of the religious affiliation of the parents, the analysis reveals that, (n=248) 79% (comprises of 40.1% females and 38.9% males); of the parents indicates Christianity, while (n=66) 21% (comprises of 15.6% females and 5.4% males); indicates Islamic religion. This implies that the parents are of both Christianity religion and Islamic religion.

With regards to the parents' educational status, 13.7%(n=43) (comprises of 9.9% females and 3.8% males) had secondary school education, those who have diploma and National Certificate in Education (NCE) were 9.2% (n=29) (comprises of 2.9% and 2.2% females while 0.6% and 3.5% males); while those with first degrees and Higher National Diploma (HND) constituted 52.5% (n=165) (comprises of 3.1% females and 1% males); of the total number of parents that participated in the study. Furthermore, 24.5%(n=77) (comprises of 8.6% females and 15.9% males); of the parents had postgraduate certificates. The analysis reveals that parents with degrees and HND constitute the majority.

In terms of the parents' occupational status, the analysis shows that 22.9%(n=72) are unemployed (comprises of 12.8% females and 10.2% males); 47.8%(n=150) were public civil servants (comprises of 26.6% females and 21.2% males); 16.2%(n=51) are self employed/Artisans (comprises of 9.0% females and 7.2% males); and 13.1%(n=41) are private corporate employees (comprises of 7.3% females and 5.8% males). This implies that majority of the respondents were public civil servants followed by

unemployed, self-employed/Artisans and the least were private corporate employees. This indicates that as civil servants, government is responsible for their income and job security which help them have financial stability to take care of their family. Parental occupation is also an important family background variable. The occupation of one's parents may determine to a large extent one's opportunity to attend school or not.

In terms of family income, the analysis reveals that, 27.4% (n=86) (comprises of 18.5% females and 8.9% males); earn less than ₦35,000 per month, 64.6% (n=203) (comprises of 35.0% females and 29.6% males) earn between ₦36,000 and ₦75,000 per month, while 8.0% (n=25) (comprises of 2.2% females and 5.7% males); earn ₦75,000 and above per month. This shows that majority of the parents earn between ₦36, 000 and ₦75, 000 per month. This is supported by Mean score of family income of ₦55, 000 which lies between ₦36, 000 to ₦75, 000. This indicates that, on the average, majority of the parents earn ₦55, 000 per month. The finding implies financial provisions to take care of their children with learning disabilities are from middle income class of which majority are females.

#### **Specific Objective 1:**

To describe the levels of parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities.

#### 4.2.2 Levels of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities (PSSCLD)

**Table 4.3: Main Variables of the Study (N=314)**

| Variables                                  | Mean±SD    | Gender      |            | Total     |
|--------------------------------------------|------------|-------------|------------|-----------|
|                                            |            | Female      | Male       |           |
| <b>Extent of Parent-Child Relationship</b> | 41.73±4.75 |             |            |           |
| Low                                        |            | 9(2.87)     | 13 (4.14)  | 22(7.0)   |
| Moderate                                   |            | 166 (52.87) | 126(40.13) | 292(93.0) |
| High                                       |            | 0           | 0          | 0         |
| <b>Extent of Parental Stress</b>           | 48.59±5.52 |             |            |           |
| Low                                        |            | 35(11.1)    | 35(11.1)   | 70(22.3)  |
| Moderate                                   |            | 103(32.8)   | 64 (20.4)  | 167(53.2) |
| High                                       |            | 37(11.8)    | 40(12.7)   | 77(24.5)  |
| <b>Extent of School Environment</b>        | 68.25±7.69 |             |            |           |
| Poor                                       |            | 5(1.6)      | 0          | 5(1.6)    |
| Fair                                       |            | 100(31.8)   | 85(27.1)   | 185(58.9) |
| Good                                       |            | 70(22.3)    | 54(17.2)   | 124(39.5) |
| <b>Extent of Perceived Social Skill</b>    | 43.52±4.90 |             |            |           |
| Low                                        |            | 35(11.1)    | 29(9.2)    | 64(20.4)  |
| Moderate                                   |            | 99(31.5)    | 61(19.4)   | 160(51)   |
| High                                       |            | 41(13.1)    | 49(15.6)   | 90(28.7)  |

Note: SD = Standard Deviation.

Table 4.3 presents the result of the analysis for the levels of parent-child Relationship, school environment, parental stress, and perceived social skills of children with learning disabilities. The analysis of the parent-child relationship, as presented in Table 4.3 shows that 22 parents of children with learning disabilities represent 7.0% with a mean and standard deviation  $31.73 \pm 5.03$ , while 292 parents with learning disabilities represent 93.0% with a mean and standard deviation  $42.48 \pm 3.79$ . More so, the total mean score of 41.73 and a standard deviation of 4.75 indicates that majority of the parents reported moderate parent-child relationship with their children, which further indicates that parent's relationship with their children with learning disabilities is acceptable and they could understand each other and communicate with each other. From the foregoing, it can be noted that parent-child relationship is an intimate and unique interaction that guarantees the foundation for the child's personality development, life choices and overall behaviour repertoire (Bdour et al., 2019).

Furthermore, according to Bdour et al. (2019), parent-child relationship is highly nurturing and it goes a long way to prompt the strength of the social, physical, mental, cognitive, linguistic, perceptual and emotional health of the child. Therefore, the parent and the child are expected to exercise interactions on the pedestal of relationship that enhances the maximum educational and developmental outcomes of the child in the long run.

While school environment level was categorized into poor, fair and good, the analysis of the level of school environment as well as perceived social skills of children with learning disabilities, as shown in Table 4.2, indicates that more than half of the parents (n=185) 58.9% reported that the school environment is fair for their children with learning disabilities, while (n=79) 30.9% reported good and (n=32) 10.2% reported poor levels of school environment for their children with learning disabilities. More so, the total mean score of 68.25 and a standard deviation of 7.69 indicate that majority of the respondents reported that the components (teachers, peers, architecture, administration) of the school environment were fair to the development of their children with learning disabilities. This finding indicates that parents have average satisfaction of the school structures, teachers, professional make up, curriculum, basic school facilities, and the instructional methods employed by the teachers in the school environment of their children with learning disabilities

This is in agreement with Castro Oliveira et al. (2022) which explained that a well complemented school climate will promote optimization of the school resources and organization of activities in response to the needs of children. However, on the contrary, Mwarari (2020) explained that low educational level impacts on the parents'

appreciation of level of school environment. In summary, parents of children with learning disabilities reported fair level of school environment for their children with learning disabilities.

The levels of parental stress as presented in Table 4.3 reveal that more than half of the parents ( $n=167$ ) 53.2% reported moderate parental stress, while ( $n=70$ ) 22.3% reported low parental stress. Based on the revealed mean score of 48.59, standard deviation of 5.52, it can be said that majority of the parents reported moderate parental stress. The findings indicate that despite the extra demand of care-giving due to the learning disabilities of their children, parents' stress level can be doused especially when inspired by affection for the child coupled with passionate care-giving and optimism that the care is result oriented. This is in-line with Hon (2019) and Waizbard-Bartov et al. (2019) who reported that raising a child with learning disabilities puts enormous stress on the parents. Parents of children with learning disabilities have been identified to experience untoward and increased stress due to special care required of their children compared to the parents of children without learning disabilities. Past study by Priego-Ojeda and Rusu (2023) and Hu et al. (2019) reported that parental stress refers to aversive psychological reactions to the pressures and demands of parental roles which has a direct impact on the emotional well-being of the mother, the relationship between parents and children, and on the emotional and social development of the child. In summary, parents of children with learning disabilities had parental stress regardless of their age groups. This finding is consistent with Smith (2022) in a study which investigated the stress parents go through while attempting to nurture a child with learning disabilities. In addition, Diana et al. (2021) reported that higher stress levels are created by various factors that influence a family of a child

with special needs. Special needs families are often in a lower income bracket due to the need for one parent to become the primary caregiver of the special needs child. When that aspect is compounded with the high financial necessities for a special needs child, the situation can create even greater stress for the family unit (Ling et al., 2022).

The overall perceived social skills level of children with learning disabilities were categorized into low, moderate and high, based on their parents' responses. The results revealed that, a little above half of the parents (n=159) 50.6% reported moderate perceived social skills of their children with learning disabilities, while (n=65) 20.7% reported low perceived social skills of their children with learning disabilities. The result also revealed a mean score of 43.52 and standard deviation of 4.90. The findings revealed that the learning disabilities of their children notwithstanding, parents adjudged that children with learning disabilities are able to function on social skills moderately. This indicates that children with learning disabilities have a measure of social skills that help them to function in the school, home and the community where they live. In a correlational meta analysis, Hukkelberg et al. (2019) reported that while dealing with children with learning disabilities deficient in social skills, parents become a very important resource for teachers; for example, by being involved in school activities and having regular contacts with teachers, they can let the teachers know about their children, their characteristics, cultural background, resources, needs and past experiences, thus promoting teachers' competence and knowledge regarding their children with learning disabilities.

### 4.3 Correlation Analysis Findings

#### Specific Objective 2:

To examine the correlation between parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities.

Three null hypotheses were formulated based on this objective. To achieve this objective, the Pearson Correlation Analysis was conducted to test relationship between parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities. The effect size of the relationships between the variables are based on Cohen (1988) guidelines: whereby  $r = .10$  (small);  $r = .30$  (medium); and  $r = .50$  (large). To address this objective the following null hypotheses were stated.

**H<sub>01</sub>:** There is no significant relationship between parent-child relationship, and social skills of children with learning disabilities.

**Table 4.4: Summary of Pearson Moment Correlation Coefficients Matrix between Parent-Child Relationship, Parental Stress, School Environment and Perceived Social Skills of Children with Learning Disabilities (n=314)**

| Variables                                  | Y      | X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> |
|--------------------------------------------|--------|----------------|----------------|----------------|
| Y (Perceived Social Skill)                 | 1      |                |                |                |
| X <sub>1</sub> (School Environment)        | .717** | 1              |                |                |
| X <sub>2</sub> (Parental Stress)           | .674** | .738**         | 1              |                |
| X <sub>3</sub> (Parent-Child Relationship) | .702** | .673**         | .644**         | 1              |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

As shown in figure 4.4 above, there is significant correlation between parent-child relationship and perceived social skills of children with learning disabilities. The

finding revealed ( $r = 0.702^{**}$ ,  $p\text{-value} \leq 0.00$ ) that there is a strong positive relationship between parent-child relationship and perceived social skills of children with learning disabilities. Therefore, the null hypothesis ( $H_{01}$ ) is rejected. The findings of this current study indicates that children that experience considerable amount of bonding with their parents are more likely to enjoy positive impacts and significant improvements to their ability to relate better, exhibit high self-esteem and reasonable satisfaction. The findings further indicate that when the parent-child relationship increases, the perceived social skills of children with learning disabilities increases also, and a decrease in parent-child relationship means a decrease in perceived social skills of children with learning disabilities. The findings agree with O'Toole et al. (2021) who reported parent-child relationship as an intervention in the child's day-to-day life that fosters better social and academic skills directed at optimum achievement and the realization of the desired results.

**H<sub>02</sub>:** There is no significant relationship between school environment, and perceived social Skills of children with learning disabilities.

The result of the Pearson correlation test for the relationship between school environment and perceived social skills of children with learning disabilities presented in Table 4.4 shows ( $r = 0.717^{**}$ ,  $p\text{-value} \leq 0.00$ ) that there was a strong positive relationship between school environment and perceived social skills of children with learning disabilities. Therefore, the null hypothesis ( $H_{02}$ ) is rejected. The finding implies that a positive and friendly school environment makes the children with learning disabilities better on social skills. The current result is similar to the results of Widyawan et al. (2020) who asserted that school effectiveness enhances students' learning and development.

The advantages of inclusion and physical activities were recognized. The findings highlighted the significance of encouraging home-school collaboration in the perceived social skills development of students with learning disabilities. Kalgotra et al. (2019) observed and discovered that allowing children with LD to socialize with their regular classmates in the general school setting can improve their behavior. A positive school environment has a significant, long-lasting impact on students' overall ability development and performance, according to the bio-ecological model of human development (Bronfenbrenner, 1995). Additional studies revealed that children with learning disabilities can learn and develop successfully in a cooperative learning environment while displaying a positive social attitude, which boosts their performance and self-esteem (Hukkelberg et al., 2019). As far as the children with learning disabilities are concerned, a trusting school environment that consistently encourages cooperative relationships will help a great deal to take any leap into social competence that is exemplified in all learning experiences.

**H<sub>03</sub>:** There is no significant relationship between parental stress and perceived social skills of children with learning disabilities.

The result of the Pearson correlation test for the relationship between parental stress and perceived social skills of children with learning disabilities is presented in Table 4.4. The result ( $r = 0.674^{**}$ ,  $p\text{-value} \leq 0.00$ ) indicates that there was a significant relationship between parental stress and perceived social skills of children with learning disabilities. Therefore, the null hypothesis (H<sub>03</sub>) is rejected. Vankeer et al. (2020) found a direct effect of parental stress and children's language and social skills. However suggests that these relationships may be bi-directional wherein a decrease in children's social and language skills may increase parental stress and vice versa. The

findings further indicate that a stressed parent has a lot to offer in terms of development of their children with learning disabilities because despite the enormity of the needs of the child, parents strategize more efforts with lots of resilience to ensure that every loop hole created by the disability of the child is covered up. The results show that the current outcome is consistent with Berry and Jones (1995) who reported a significant relationship between parental stress and perceived social skills of children with learning disabilities. Furthermore, Rea-Amaya and Acle-Tomasini (2019) observed that parents of children with disabilities can be full of strategized resilience with increased efforts for care in order to ensure that their children are not developmentally left behind. This is also to ensure that the perceived social skills of their children are on the increase despite their level of stress. This is in contrast to Berry and Jones (1995) who reported a reduction to perceived social skills of the children when the stress of the parent is high.

The overall Pearson correlation Coefficient matrix revealed that each variable parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities had significant relationship between each other.

#### **4.4 Multiple Regression Analysis**

##### **Multivariate Findings**

The relationships between the research variables were investigated using multivariate analysis, including hierarchical, multiple regression, and mediation analyses. Multiple regression analyses were employed in this study to identify the factor that best predicts children with learning disabilities reported social skills. Additionally, mediator

analysis was used to look at the mediating effects of parental stress on the relationships between the school environment, the parent-child relationship, and the perceived social skills of children with learning disabilities. Note that the researcher conducted all assumption testing for the multiple regression models prior to performing the multiple regression analysis. The findings of the assumption testing were reported in chapter 4 before the results of the multiple regression analysis were reported.

The following are the assumption tests that are involved: the variables' linearity—that is, their relationship is linear—their homoscedasticity—that is, their variance and the error term stay constant—their normality—that is, their distribution is normal—and their independence—that is, the fact that every explanatory variable (IV) is independent of each other (See Appendix E).

#### **4.4.1 Factors that Uniquely Predict Perceived Social Skills of Children with Learning Disabilities in Inclusive Basic Schools in Abuja**

##### **Specific Objective 3:**

To determine the unique predictor of perceived social skills of children with learning disabilities.

**H<sub>04</sub>:** The regression coefficient for chosen variables (parent-child relationship, school environment and parental stress equal zero when regressed against perceived social skills of children with learning disabilities.

**Table 4.5: Correlates of Perceived Social Skills of Children with Learning Disabilities Variable**

| <b>Correlation</b>        | <b>Sig. (2-tailed)</b> |      |
|---------------------------|------------------------|------|
| School Environment        | .717**                 | .000 |
| Parental Stress           | .674**                 | .000 |
| Parent-Child Relationship | .702**                 | .000 |

**Table 4.6: Summary of Hierarchical Regression Analyses Predicting Perceived Social Skills of Children with Learning Disabilities in Inclusive Basic Schools in Abuja**

| Model                     | Beta | R                 | R <sup>2</sup> | F           | R <sup>2</sup> Change |
|---------------------------|------|-------------------|----------------|-------------|-----------------------|
| <b>Model 1</b>            |      |                   |                |             |                       |
| Parent-Child Relationship | .594 | .997 <sup>a</sup> | .994           | 51091.580** | .383                  |
| <b>Model 2</b>            |      |                   |                |             |                       |
| Parent-Child Relationship | .075 | .999 <sup>a</sup> | .997           | 56992.588   | .257                  |
| School Environment        | .610 |                   |                |             |                       |
| <b>Model 3</b>            |      |                   |                |             |                       |
| Parent-Child Relationship | .046 | .999 <sup>a</sup> | .997           | 38123.695   | .256                  |
| School Environment        | .555 |                   |                |             |                       |
| Parental Stress           | .073 |                   |                |             |                       |

Note: Predictors: Parent-Child Relationship, School Environment, and Parental Stress. Dependent Variable: Perceived Social Skills of Children with Learning Disabilities \*p < 0.05\*\*, P < 0.01.

**Table 4.7: Summary Results of Multiple Regression on Perceived Social Skills of Children with Learning Disabilities**

| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | t     | p    | Collinearity Statistics |       |
|---------------------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
|                           | B                           | Std. Error | Beta (β)                  |       |      | Tolerance               | VIF   |
| (Constant)                | 11.086                      | 1.835      |                           | 6.043 | .000 |                         |       |
| Parent-Child Relationship | .464                        | .067       | .346                      | 6.981 | .000 | .499                    | 2.002 |
| School Environment        | .394                        | .066       | .332                      | 5.918 | .000 | .389                    | 2.570 |
| Parental Stress           | .252                        | .067       | .206                      | 3.788 | .000 | .416                    | 2.402 |

Note: R<sup>2</sup> = .620, adjusted R<sup>2</sup> = .616

s, t = t-statistics; P = Probability power significant at 0.05; VIF = Variance inflation factor

To determine the unique predictor of perceived social skills of children with learning disabilities, Multiple regression analyses using Hierarchical analysis method were conducted in order to examine to what extent the proposed multiple regression models are supported by the research data. The regression examined how well the individuals' scores on the perceived social skills of children with learning disabilities could be predicted from determined criterion variable. Variables included in the regression model were parent-child relationship, school environment and parental stress (See Table 4.5).

**Note:** Independent Variable [IV<sub>1</sub>] = Parent-Child Relationship (PCR)  
Independent Variable [IV<sub>2</sub>] = School Environment (SE)  
Independent Variable [IV<sub>3</sub>] = Parental Stress (PS)

A Hierarchical linear regression analysis was conducted to evaluate the prediction of Parents perceived Social Skills of their Children with Learning Disabilities (Dependent Variable) from Independent Variables (IV<sub>1</sub> = PCR, IV<sub>2</sub> = SE, & IV<sub>3</sub> = PS) for the first block analysis, the predictor variable(s) Parent-Child Relationship (IV<sub>1</sub>) was analyzed. The results of the first block hierarchical linear regression analysis reveals a Model 1  $F(1, 312) = 5109.58, p < 0.05, R^2_1 = 0.994$ , PCR[Independent Variable 1] was significantly associated with perceived Social Skills [DV] ( $b = 0.594, t = 6.981, p < 0.05$ ) to be statistically significant ( $p < 0.05$ ). Additionally, the  $R^2_1$  value of 0.994 associated with this regression model suggest that the PCR account for 99.4% of the variation in Perceived Social Skills cannot be explained by Parent-Child Relationship alone. A different outcome was found from the second block analysis.

For the second block, the predictor variable School Environment (SE) [IV<sub>2</sub>] was added to the analysis. The results of the second block hierarchical linear regression analysis reveals a model 2.

Model 2:  $F(2, 311) = 56992.58, p < 0.01, R^2_2 = 0.997$ , which include IV<sub>2</sub> ( $b = 0.610, t = 5.918, p < 0.05$ ) to be statistically significant [ $p < 0.01$ ]. Additionally, the  $R^2_2$  change value of 0.257 associated with the regression model suggests that the addition of School Environment [IV<sub>2</sub>] to the first block model account for 25.7% of variation in Perceived Social Skills of Children with learning Disabilities [DV] which means that 74.3% of the variation in Perceived Social Skills of Children cannot be explained by PCR [IV<sub>1</sub>] and SE [IV<sub>2</sub>] alone. Controlling for SE [IV<sub>2</sub>] the regression coefficient

[ $b=0.610$ ,  $t= 5.918$ ,  $p<0.05$ ] associated with School Environment [IV<sub>2</sub>] suggest that with each additional unit of [IV<sub>2</sub>], the dependent variable increases by approximately 0.126units. A similar outcome was found from the third block analysis.

For the third block, the predictor variable Parental Stress (PS) [IV<sub>3</sub>] was added to the analysis. The results of the third block hierarchical linear regression analysis reveals a model 3.

Model 3:  $F(3, 310) = 38123.695$ ,  $p<0.01$ ,  $R^2_2= 0.997$ , which include IV<sub>2</sub> ( $b=0.073$ ,  $t= 3.788$ ,  $p<0.05$ ) to be statistically significant [ $p<0.01$ ]. Additionally, the  $R^2_3$  change value of 0.256 associated with the regression model suggests that the addition of Parental Stress (PS) [IV<sub>3</sub>] to the second block model account for 25.6% of variation in Perceived Social Skills of Children with learning Disabilities [DV] which means that 74.4% of the variation in Perceived Social Skills of Children cannot be explained by Parental Stress [IV<sub>3</sub>] alone. Controlling for Parental Stress [IV<sub>3</sub>] the regression coefficient [ $b=.073$ ,  $t= 5.918$ ,  $p<0.05$ ] associated with Parental Stress [IV<sub>3</sub>] suggest that with each additional unit of [IV<sub>3</sub>], the dependent variable increases by approximately 0.001units.

In Model 1, after entry of Parent-Child Relationship in the equation,  $R^2 = 0.994$ ,  $F(1, 312) = 51091.58$ ,  $p < .001$ . parent-child relationship had a high significant (Beta = .594,  $p < .001$ ) unique contribution in predicting Perceived Social Skills of Children with Learning Disabilities and 38.3% of the variability in Perceived Social Skills of Children with Learning Disabilities could be predicted by scores on parent-child relationship.

In Model 2, the school environment was added to the prediction of Perceived Social Skills of Children with Learning Disabilities by Parent child relationship,  $R^2 = 0.997$ ,  $F(2, 311) = 56992.588$ ,  $p < .01$ . Thus, addition of School Environment variable in the equation resulted in an increase in  $R^2$  by .257 from .383 to .997. Parent-child relationship and School environment jointly accounted for 99.7% of the variance in Perceived Social Skills of Children with Learning Disabilities. In Model 2, school environment was a significant unique predictor ( $Beta = .610$ ,  $p < .01$ ) of Perceived Social Skills of Children with Learning Disabilities.

In Model 3, parental stress was added to the regression equation to determine if differences in parental stress were related to perceived social skills of children with learning disabilities after differences in parent-child relationship and school environment had been statistically accounted for. The results showed that  $R^2 = .997$ ,  $F(3, 310) = .000$ ,  $p > .05$ . Therefore, in model 3, parental stress was also a significant predictor ( $Beta = .073$ ,  $p > .05$ ) of perceived social skills of children with learning disabilities.

In summary, the present findings denote that parent-child relationship, school environment, and parental stress are critical factors in the development of social skills of children with learning disabilities.

Based on the results of the Hierarchical Analyses, the three variables, namely parent-child relationship, school environment, and parental stress were predictors and contribute to variability in the perceived social skills of children with learning disabilities. Thus, the three variables, namely parent-child relationship, school

environment, and parental stress were entered into the equation of the regression model as follows:

To explain the variation in perceived social skills, a three-predictor multiple regression model was proposed into the equation. The three predictors of the proposed model were parent-child relationship ( $X_1$ ), school environment ( $X_2$ ), and parental stress ( $X_3$ ).

The general equation of the proposed regression model takes the form (Equation 4.1):

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + \dots + b_p X_p \quad (4.1)$$

Where

$Y$  = Dependent Variable

$b_0$  = Constant (Intercept)

$b_1$  = Regression Coefficients

$X_1$  = Independent Variable

$X_2$  = Independent Variable

$X_3$  = Independent Variable

$P$  = Number of IVs

= Model error of estimate

Findings are shown in table 4.6. They indicate that the three predictor variables significantly explain perceived social skills of children with learning disabilities.

These predictor variables are parent-child relationship ( $t = 226.034$ ;  $p = .000$ ), school environment ( $t = 19.564$ ;  $p = .000$ ), and parental stress ( $t = 1.431$ ;  $p = .153$ ).

The findings also show that the three-predictor multiple regression model is supported by the data. As demonstrated in Table 4.5, estimates of model coefficient were 11.086 for  $b_0$ , 0.464 for  $b_1$ , 0.394 for  $b_2$ , and 0.252 for  $b_3$ . Therefore, the prediction model assumes the formula:

$$Y (\text{Perceived Social Skills of Children with Learning Disabilities}) = 11.086 + .464 (X_1) + .394 (X_2) + .252 (X_3) +$$

Where

$Y$  = Perceived Social Skills of Children with Learning Disabilities

$X_1$  = Parent-Child Relationship

$X_2$  = School Environment

$X_3$  = Parental Stress

= Model error of estimate

An R-square value of 0.620 means that the three-predictor model explains 62.0% of the variance in perceived social skills of children with learning disabilities. Table 4.6 demonstrates that on the basis of the reported value of the F-statistics ( $F = 168.351$ ,  $p < .01$ ), the model fits the data and thus the slope of the estimated regression model line is not equal to zero, and confirms that there is a linear relationship between perceived social skills of children with learning disabilities and the three predictor variables.

Table 4.6 presents the regression coefficients and shows the significance of the three predictors in the prediction of perceived social skills. A high beta coefficient independent variable is of great importance in the prediction of the criterion variable.

On the basis of the obtained beta values, the beta coefficient for school environment was .555, for parent-child relationship was .046, and for parental stress it was .073. Parent-child relationship, school environment, and parental stress altogether predicted 62.0% of the variations in perceived social skills of children with learning disabilities. School environment emerged as the strongest predictor ( $Beta = 0.555$ ,  $p < 0.001$ ) of perceived social skills of children with learning disabilities, followed by parental stress ( $Beta = 0.073$ ,  $p < 0.001$ ), and parent-child relationship ( $Beta = 0.046$ ,  $p < 0.01$ ).

Table 4.6 revealed the summary result of multiple regression analysis performed to test the predictive effects of parent-child relationship, school environment, and parental stress on perceived social skills of children with learning disabilities. Preliminary analyses were conducted to ensure no violation of the assumption of normality, linearity, multicollinearity and homoscedasticity.

Based on these results, the hypothesized effects of parent-child relationship, school environment, and parental stress on perceived social skills of children with learning disabilities ( $H_{o4}$ ) are rejected. This means that parent child-relationship, school environment and parental stress are significant predictors of perceived social skills of children with learning disabilities. However, of the three predictors, school environment appears to be the most influential predictor which indicates that, school environment (structure, peers, teachers, administration) had the highest impact when it comes to the development of social skills of children with learning disabilities. The results support Del Toro and Wang (2021) assertion that school structure can have a beneficial impact on the well-being of the learning environment or act as a significant learning impediment. Additionally, Daily et al. (2019) discovered that schools with

favorable school climates "encourage cooperative learning, group cohesion, respect, and mutual trust" and tend to have superior student academic performance. Furthermore, this is consistent with Briegel's (2019) observation that the parent-child relationship is predicated on reciprocal interactions, and that these interactions can have a substantial impact on the child's development in terms of emotional, social, physical, and cerebral dimensions.

Based on the findings of the current study, the belief that parents are the primary drivers of developmental progress of their children is quite clear, given the model of parenting behavior studies (Bodner et al., 2020). According to the parenting model of development, parents have a significant impact on the developmental outcomes attained by young children with disabilities. It also claims that one strategy for promoting young children's development is to encourage parents to emphasize or enhance those aspects of parenting that are linked to child development.

Nevertheless, school environment and parental stress in this current study are also significant and crucial to the overall development of the child but they play complementary roles since the development of the child begins with the interactions between the child and the parents right from the cradle. Parents, especially the mothers are the first tutor of the child right from the womb before turning the child to school (Smetackova & Stech, 2021). According to Jeon et al. (2020), since parent-child relationship is a continuous process with an enduring commitment across a child's life from birth to young adulthood, it is a reinforcement to effective learning in the dual settings of home and school. So, parents are to collaborate with other agencies like school within the community to support the learning and development of the child.

Furthermore, parents are to come to terms with the learning disabilities of their children with the good understanding of the required care in order to lessen stress both on them and the child.

#### 4.5 Mediation Analysis

##### Specific Objective 4:

To examine the mediating effects of parental stress in the relationship between parent-child relationship, school environment and perceived social skills of children with learning disabilities.

**H<sub>05</sub>:** Parental stress does not mediate the relationship between parent – child relationship and perceived social skills of children with learning disabilities.

**Table 4.8: Standardized Direct and Standardized Indirect Effects of Regression Coefficient of Perceived Social Skills of Children with Learning Disabilities in the Hypothesized Path Model**

| Hypothesized Relationships |   |                                                                | (β)  | p    | 95% Bootstrap BC CI |      |
|----------------------------|---|----------------------------------------------------------------|------|------|---------------------|------|
|                            |   |                                                                |      |      | LB                  | UB   |
| Direct Model               |   |                                                                |      |      |                     |      |
| Parent-Child Relationship  | → | Perceived Social Skills of Children with Learning Disabilities | .571 | .000 |                     |      |
| School Environment         | → | Perceived Social Skills of Children with Learning Disabilities | .615 | .000 |                     |      |
| Parent-Child Relationship  | → | Parental Stress                                                | .713 | .000 |                     |      |
| Mediation Model            |   |                                                                |      |      |                     |      |
| Parental Stress            | → | Perceived Social Skills of Children with Learning Disabilities | .389 | .000 |                     |      |
| Std. Indirect Effect (SIE) |   |                                                                | .849 | .000 | .167                | .402 |

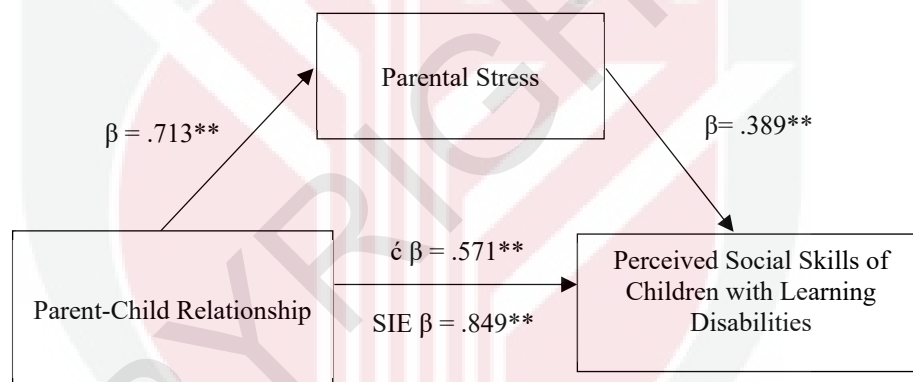
Note: β: - Standardized Direct, Indirect and Total Effects Regression Coefficient; p: - Significant *p* - value; BC: - Bias Corrected; CI: - Confidence Interval; LB: - Lower Bounds; UB: - Upper Bounds.

To achieve this objective, the following hypotheses (hypotheses 5 & 6) were proposed. According to Hayes and Scharkow (2013), when testing a causal process that contains mediation components, the concern is on the estimation and interpretation of the indirect effects together with their inferential tests. In this regard, the use of bootstrap method became necessary in order to test for the mediating effects. In this study, the test of indirect effects was utilized using bootstrap method based on the 95% bias – corrected (BC) confidence interval (CI) (Preacher & Hayes, 2008; Hayes, 2013). The decision criteria are that, when zero (0) is outside the confidence interval (CI) that is; Lower Bounds (LB) and Upper Bounds (UB) then, the indirect effect is significant, otherwise the effect is insignificant (Byrne, 2010; Hayes, 2013). The results of the indirect effect test based on bootstrap method on the 95% bias – corrected confidence interval CI is shown in Tables 4.8 above.

In this regard, Table 4.8 above presents the results of the standardized regression coefficients estimates and the indirect effects test of significance in the relationship between the independent variables (parent–child relationship and school environment) and outcome variable (perceived social skills of children with learning disabilities through mediator (parental stress)).

An examination of the indirect path estimate, as shown in Table 4.8 above indicates evidence of indirect effect of parent–child relationship on perceived social skills of children with learning disabilities through parental stress. Parent–child relationship is found to have a significant direct effect on perceived social skills of children with learning disabilities (PSSCLD) ( $\beta = .571, p < .01$ ) in which parental stress, in turn, significantly affects perceived social skills of children with learning disabilities ( $\beta$

= .389,  $p < .01$ ). Moreover, the standardized indirect effect (SIE) of parent – child relationship on perceived social skills of children with learning disabilities through parental stress was also found to be significant ( $\beta = .849$ ,  $p < .01$ ). Based on the indirect effect test of bootstrap bias-corrected 95% CI which lies between LB (.167) and UB (.402), as zero is outside the range of CI, the research hypothesis ( $H_{o5}$ ) is rejected. This indicates that parental stress has a considerable indirect impact on the perceived social skills of children who have learning disabilities. As a result, the study establishes that parental stress partially mediated the link between the parent-child relationship and the perceived social skills of children with learning disabilities.



Sig. \*\* $p < .01$ , \* $p < .05$

**Figure 4.1: Mediating Model of Parental Stress in the Relationship between Parent – Child Relationship and Perceived Social Skills of Children with Learning Disabilities**

This result supports Zhang et al. (2020) findings that parents may feel less frustrated in their interactions with their children with learning disabilities, which could lead to better parenting techniques that encourage child self-regulation (social skills).

**H<sub>o6</sub>:** Parental stress does not mediate the relationship between school environment and perceived social skills of children with learning disabilities

**Table 4.9: Standardized Direct and Standardized Indirect Effects of Regression Coefficient of School Environment and Perceived Social Skills of Children with Learning Disabilities in the Hypothesized Path Model**

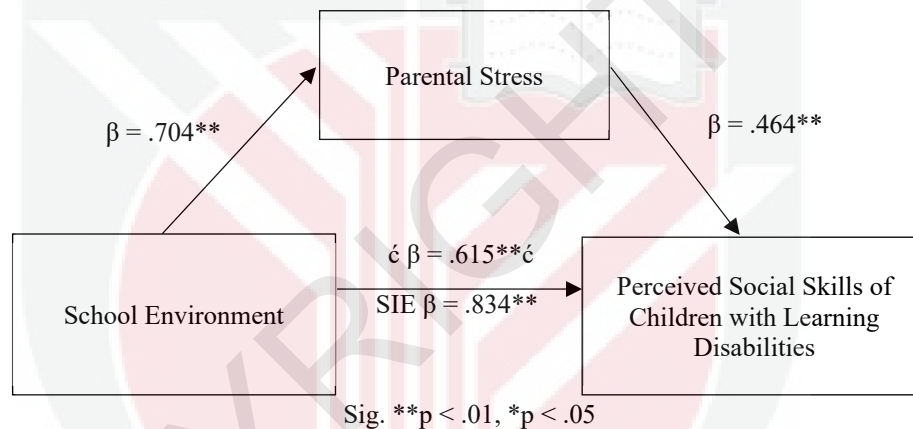
| Hypothesized Relationships |   |                                                                | $(\beta)$ | p    | 95% Bootstrap BC CI |      |
|----------------------------|---|----------------------------------------------------------------|-----------|------|---------------------|------|
|                            |   |                                                                |           |      | LB                  | UB   |
| Direct Model               |   |                                                                |           |      |                     |      |
| School Environment         | → | Parental Stress                                                | .704      | .000 |                     |      |
| Parental Stress            | → | Perceived Social Skills of Children with Learning Disabilities | .464      | .000 |                     |      |
| School Environment         | → | Perceived Social Skills of Children with Learning Disabilities | .615      | .000 |                     |      |
| Std. Indirect Effect (SIE) |   |                                                                | .834      | .000 | .246                | .424 |

Note:  $\beta$ : - Standardized Direct, Indirect and Total Effects Regression Coefficient;  $p$ : - Significant  $p$  - value; BC: - Bias Corrected; CI: - Confidence Interval; LB: - Lower Bounds; UB: - Upper Bounds.

In line with the hypothesized statement above, the result in Table 4.9 has shown an indication of mediating effect of parental stress in the hypothesized relationship. The finding revealed a significant direct effect of school environment on social skills of children with learning disabilities ( $\beta = .615, p < .001$ ) in which parental stress likewise significantly influenced social skills of children with learning disabilities ( $\beta = .464, p < .001$ ). The standardized indirect effect (SIE) coefficient of school environment on social skills of children with learning disabilities through parental stress was also found to be significant ( $\beta = .834, p < .001$ ). Thus, based on the indirect effect test of bootstrap bias-corrected 95% CI which lies between LB (.246) and UB (.424), as zero is outside the range of CI, the research hypothesis ( $H_{06}$ ) is in fact rejected. This clearly indicated that, there is partial mediating effect of parental stress on the relationship between school environment and perceived social skills of children with learning disabilities.

To regulate the impacts of the school environment and parent-child relationship on the perceived social skills of children with learning disabilities upon entry into the model, mediation incorporates a third variable, (parental stress), in accordance with Baron and Kenny (1986). If the mediator is only partially successful in mitigating the impact of

the intervention on the outcome, then the intervention continues to have some direct influence on the outcome even after the mediator is included in the model. This is known as partial mediation. This suggests that there may be a direct relationship between the independent and dependent variables in addition to a significant relationship between the mediator and the dependent variable. The results of this study partially support an expansion of knowledge on the impact that parental stress plays in the relationship between the school environment, the parent-child relationship, and the perceived social skills of children with learning disabilities in inclusive school setting.



**Figure 4.2: Mediating Model of Parental Stress in the Relationship between School Environment and Perceived Social Skills of Children with Learning Disabilities**

The study supports Mcdermott et al. (2022) findings that children with developmental delays may struggle to distinguish between appropriate actions based on social circumstances, leading them to be disobedient against their parents while displaying appropriately restrained assertiveness with their peers. Studies confirm the significance of reducing parenting stress while aiming to promote child social development.

#### 4.6 Summary of Findings

The primary objectives of the current study were to investigate the mediators and determinants of perceived social skills among children with learning disabilities in inclusive schools in Abuja, Nigeria. Six different hypotheses were created and put to test in accordance with the research objectives. Table 4.10 gives a summary of the findings for the current investigation.



**Table 4.10: Summary of Findings**

| Objectives                                                                                                                                                                                                           | Statistics                   | Results                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 1:                                                                                                                                                                                                         |                              | <b>Levels of Parent-Child Relationship:</b> 59.9% moderate PCR, 19.7% high PCR and 20.9% low PCR. Majority of the parents reported moderate PCR.                                                                                                                                              |
| To describe the level of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of children with learning disabilities.                                          |                              | <b>Levels of School Environment:</b> 58.9% reported fair school environment, 30.9% good school environment and 10.2% poor school environment. Majority of the parents reported fair school environment.                                                                                       |
| RQ 2: What are the levels of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities?                                      | Descriptive                  | <b>Levels of Parental Stress:</b> 53.2% reported moderate parental stress, 24.5% reported high parental stress and 22.3% reported low parental stress. Majority of the respondents reported moderate parental stress.                                                                         |
|                                                                                                                                                                                                                      |                              | <b>Levels of Perceived Social Skills of Children with Learning Disabilities:</b> 50.6% reported moderate perceived social skills, 28.7% high social skills and 20.7% low levels of social skills. A little above half reported moderate social skills of children with learning disabilities. |
| <b>Objective 2:</b><br>To examine the correlation between Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities (SSCLD). |                              |                                                                                                                                                                                                                                                                                               |
| <b>H<sub>0</sub>1:</b> There is no significant relationship between Parent-Child Relationship (PCR) and Perceived Social Skills of Children with Learning Disabilities.                                              | Pearson Correlation Analysis | H <sub>0</sub> 1 is rejected                                                                                                                                                                                                                                                                  |
| <b>H<sub>0</sub>2:</b> There is no significant relationship between School Environment (SE) and Perceived Social Skills of Children with Learning Disabilities.                                                      |                              | H <sub>0</sub> 2: is rejected                                                                                                                                                                                                                                                                 |
| <b>H<sub>0</sub>3:</b> There is no significant relationship between Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities.                                                         |                              | H <sub>0</sub> 3 is rejected                                                                                                                                                                                                                                                                  |

**Table 4.10: Continued**

|                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Objective 3:</b><br/>To determine the unique predictor of perceived social skills of children with learning disabilities.</p>                                                                                                      | <p>Findings revealed school environment as the unique predictor with <math>R^2</math> of 0.55.</p>                                                                                                                                                 |
| <p><b>Ho4:</b> The regression coefficient for chosen variables (Parent-Child Relationship, School Environment and Parental Stress) equal zero when regressed against Perceived Social Skills of Children with Learning Disabilities.</p> | <p>Multiple Regression Analysis</p> <p><b>Ho4 is rejected</b></p>                                                                                                                                                                                  |
| <p><b>Objective 4:</b><br/>To examine the mediating roles of Parental Stress (PS) between Parent-Child Relationship (PCR), School Environment (SE) and Perceived Social Skills of Children with Learning Disabilities.</p>               | <p>Parallel Multiple Mediator Regression (PMMR)</p> <p><b>Ho5 is rejected</b></p> <p>Parental stress partially mediated the relationship between parent-child relationship and perceived social skills of children with learning disabilities.</p> |
| <p><b>Ho6:</b> Parental stress does not mediate the relationship between the school environment and the perceived social skills of children with learning disabilities</p>                                                               | <p><b>Ho6 is rejected</b></p> <p>Parental stress partially mediated the relationship between school environment and perceived social skills of children with learning disabilities.</p>                                                            |

#### **4.7 Chapter Summary**

In Chapter 4, the specific findings of the current study were recovered. Descriptive analyses have been used to address the study objectives by explaining the distribution of data. The Pearson Moment Correlation, Multiple Regression, and Parallel Multiple Mediator Regression were used to examine the predictors and mediators of the perceived social skills of children with learning disabilities. Inferential statistics were used to evaluate the null hypotheses at the 0.05 significance level. The findings were presented with an explanation and a discussion based on prior research, in accordance with the objectives of the study and the null hypotheses. The chapter concluded with outlining the conclusions. The thesis will be concluded in the following chapter (chapter 5) with discussion, an overview, conclusions, and suggestions for further research.

## CHAPTER 5

### **DISCUSSION, SUMMARY, IMPLICATIONS, SUGGESTIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH, AND CONCLUSION**

The last chapter began with the discussion of results, summary of findings based on the research objectives of the present study, followed by the presentation of a general conclusion. The study's implications were later discussed on the basis of theoretical and practical consequences. This was followed by several recommendations suggested for future research where the current study has served as a basis for future studies.

#### **5.1 Discussion**

The findings of this current study were derived from 314 parents of children with learning disabilities in twenty inclusive basic schools that cut across six Area Councils of Federal Capital Territory (FCT) Abuja, Nigeria, on demographic information of the children with learning disabilities, and their parents; parent-child relationship (PCR), school environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with learning disabilities from the viewpoints of fathers and mothers of children with learning disabilities. Correlation, Hierarchical Regression and mediation analyses were used to test the hypotheses.

The children with learning disabilities age group comprises: 39.5% (n=124) are less than 13 years old, 24.8% (n=78) were between 13 – 14 years old, 23.2% (n=73) were between 15 – 16 years old, and 12.4% (n=39) were 17 – 18 years old with an overall mean age of  $13.5 \pm 2.2$  years. This finding based on World Health Organization (WHO,

2022) categorization, children were categorized into three (3) adolescence stages which revealed that 64.3% (n=202) were in Early Adolescence Stage (12-14years); 31.8% (n=100) were in Middle Adolescence Stage (15-17years) and 3.8% (n=12) were in Late Adolescence Stage (18 - 21years). These children with learning disabilities were in those classes due to their lack of cognitive ability and not because of their ages. This finding is in contrast to Ugwuanyi et al. (2021) on the effects of mother-child mediated learning strategies on cognitive modifiability and psychological resilience of children with learning disabilities in inclusive primary schools in Enugu State, Nigeria., The study utilized a sample of 60 mothers and 60 children with LD. These children were both male (63%) and female (37%) primary five level children diagnosed with LD, and their mean age and standard deviation of the children was  $10.5 \pm 1.04$  years.

Parents' of children with learning disabilities comprises 175(55.7%) females who were majority and 139(44.3%) males who were contacted through their children in the Inclusive Basic Schools. While the parents ages comprise of 6.7% females and 2.5% males who were less than 30 years; 20.4% females and 11.5% males were between age group 31 – 40 years old; 14.6% females and 13.4% males were between age group 41 – 50 years old; 9.9% females and 12.4% males were between age group 51 – 60 years old; and 4.1% females and 4.5% males were between age group 60 years and above. This means that majority of the parents were between reproductive age group.

The marital status findings of the parents shows 6.4% of the females and 0.6% of the males were single parents; 48.1% females and 42.4% males were Married; 0.6% females and 0% males are Separated parents; and 0.6% females and 1.3% males were Widows/Widowers parents. This finding shows that majority of the parents were married couples and the least are Separated parents.

In terms of the religious affiliation of the parents, the analysis revealed that, 40.1% females and 38.9% males were of Christianity religion, while 15.6% females and 5.4% males were of Islamic religion. This implies that female parents were majority in both Christianity religion and Islamic religion that care more for their children with learning disabilities, while more male Christians than Islamic when it comes to caring for their children with learning disabilities.

Findings on parents of children with learning disabilities educational status showed that 9.9% females and 3.8% males had secondary school education; 2.9% and 2.2% females while 0.6% and 3.5% males have diploma and National Certificate in Education (NCE) respectively; and 3.1% females and 1% males had first degrees and Higher National Diploma (HND) respectively. In addition, 8.6% females and 15.9% males parents had postgraduate certificates. The analysis revealed that parents with degrees and HND constitute the majority.

Parents' of children with learning disabilities occupational status revealed that 12.8% females and 10.2% males were unemployed; 26.6% females and 21.2% males were public civil servants; 9.0% females and 7.2% males were self employed/Artisans; and 7.3% females and 5.8% males were private corporate employees. The finding showed that females were in the majority among the respondents in public civil service followed by unemployed, self-employed/Artisans and the least were private corporate employment.

The parents of children with learning disabilities family income showed that 18.5% females and 8.9% males earn less than ₦35,000 per month; 35.0% females and 29.6%

males earn between N36,000 and ₦75,000 per month; and 2.2% females and 5.7% males earn ₦75,000 and above per month. This means that majority of the female parents of children with learning disabilities earn between ₦36, 000 and ₦75, 000 per month while the male parents were the majority who earn ₦75,000 and above per month in the Inclusive Basic Schools in Abuja.

#### **5.1.1 Discussion on Levels of Parent-Child Relationship (PCR), School Environment (SE), Parental Stress (PS) and Perceived Social Skills of Children with Learning Disabilities (PSSCLD)**

The finding revealed that majority of the parents who were females reported moderate parent-child relationship with their children with learning disabilities than the male parents. The finding further showed that parent's relationship with their children with learning disabilities is acceptable and they could understand each other and communicate with each other. From the foregoing, it can be noted that parent-child relationship is an intimate and unique interaction that guarantees the foundation for the child's personality development, life choices and overall behaviour repertoire (Bdour et al., 2019). Furthermore, according to Bdour et al. (2019), parent-child relationship is highly nurturing and it goes a long way to prompt the strength of the social, physical, mental, cognitive, linguistic, perceptual and emotional health of the child.

The finding further showed that female parents were in the majority across fair, good and poor levels of school environment, (physical structure, teachers, professional make up, curriculum, basic school facilities, and the instructional methods employed by the teachers of their children with learning disabilities. This finding is in agreement with Oliveira et al. (2022) which explained that a well complemented school climate will promote optimization of the school resources and organization of activities in response

to the needs of children. However, on the contrary, Mwarari et al. (2020) explained that low educational level impacts on the parents' knowledge level of school environment. In summary, parents of children with learning disabilities reported fair level of school environment for their children with learning disabilities.

The finding also showed that male and female parents of children with learning disabilities at the low level of stress were equal, but females were in the majority at the moderate level of stress while male parents of children with learning disabilities were in the majority at the high level of parental stress than female parents of children with learning disabilities. This is in-line with Hon (2019) and Waizbard-Bartov et al. (2019) who reported that raising a child with learning disabilities puts enormous stress on the parents. Parents of children with learning disabilities have been identified to experience untoward and increased stress due to special care required of their children compared to the parents of children without learning disabilities. The finding is also in agreement with Smith (2022) who reported that the stress parents go through while attempting to nurture a child with learning disabilities is enormous because they lacked access to information on the phenomena and were unaware of the programs, services, and policies that were intended to help their children with learning disabilities.

The finding again revealed that the perceived social skill level of female parents of children with learning disabilities were in the majority in the low and moderate level while male parents of children with learning disabilities were in the majority at high Perceived Social skills level than female parents. The finding of the current study is in-line with Hukkerlberg et al. (2019) with the reports that, in dealing with children with learning disabilities deficient in social skills, parents become a very important

resource for teachers; for example, by being involved in school activities and having regular contacts with teachers, they can let the teachers know about their children, their characteristics, cultural background, resources, needs and past experiences, thus promoting teachers' competence and knowledge regarding their children with learning disabilities.

### **5.1.2 Relationship Analysis of Findings between Parents-Child Relationship, School Environment, Parental Stress, and Perceived Social Skills of Children with Learning Disabilities**

**H<sub>01</sub>:** The finding of this current study showed that there is a significant relationship between parent-child relationship and perceived social skills of children with learning disabilities. Therefore, the null hypothesis ( $H_{01}$ ) is rejected. Statistically, it means that as parent-child relationship increases, the perceived social skills of children with learning disabilities increases also, and a decrease in parent-child relationship means a decrease in perceived social skills of children with learning disabilities. The findings agree with O'Toole et al. (2021) who reported parent-child relationship as an intervention in the child's day-to-day life that fosters better social and academic skills directed at optimum achievement and the realization of the desired results.

**H<sub>02</sub>:** The finding showed that a significant relationship exist between school environment and perceived social skills of children with learning disabilities. Statistically it means that as the appreciation of the school environment by the parents increases, the perceived social skills of children with learning disabilities increases also, and a decrease in parents' appreciation means a decrease in parents' perceived social skills of their children with learning disabilities. The current result is similar to

the results of Widyawan et al. (2020) who asserted that school effectiveness enhances students' learning and development.

The advantages of inclusion and physical activities were recognized. The findings highlighted the significance of encouraging home-school collaboration in the social skill development of students with learning difficulties. Kalgotra et al. (2019) observed that allowing children with LD to socialize with their regular classmates in the general school setting can improve their behavior. A positive school environment has a significant, long-lasting impact on students' overall ability development and performance, according to the bio-ecological model of human development (Bronfenbrenner, 1995). Additional studies revealed that children with learning difficulties can learn and develop successfully in a cooperative learning environment while displaying a positive social attitude, which boosts their performance and self-esteem (Hukkerlberg et al., 2019). As far as the children with learning disabilities are concerned, a trusting school climate that consistently encourages cooperative relationships will help a great deal to take any leap into social competence that is exemplified in all learning experiences.

Ho 3: The finding showed that there was a significant relationship between parental stress and perceived social skills of children with learning disabilities. Statistically, it means that as parental stress increases, parents' perceived social skills of children with learning disabilities increases also, and a decrease in parental stress, the parents' perceived social skills of children with learning disabilities also increases.

The results showed that the current outcome is consistent with those of Isa et al. (2017) and Cetin et al. (2022) who found that parents of children with learning disabilities experience a moderate level of stress and higher levels of caregiving for their children with learning disabilities than parents of typically developing children. Furthermore, parents of children with learning disabilities can be full of strategized resilience with increased efforts for care in order to ensure that their children are not developmentally left behind. This is also to ensure that the social skills of their children are on the increase despite their level of stress. This is in contrast to Berry and Jones (1995) who reported a reduction to social skills of the children when the stress of the parent is high. Parental stress in the view of Ashley and Graf (2019) and Ashley et al. (2023) has a significant relationship with the child's behavioural and developmental deficit. The overall Pearson correlation Coefficient matrix revealed that each variable parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities had significant relationship between each other.

### **5.1.3 Analysis of Findings of Unique Predictor of Perceived Social Skills of Children with Learning Disabilities**

**H<sub>04</sub>:** A Hierarchical linear regression analysis was conducted to evaluate the prediction of Parents' perceived Social Skills of their Children with Learning Disabilities (Dependent Variable) from Independent Variables ( $IV_1 = \text{PCR}$ ,  $IV_2 = \text{SE}$ , &  $IV_3 = \text{PS}$ ) for the first block analysis, the predictor variable(s) Parent-Child Relationship ( $IV_1$ ) was analyzed. The results of the first block hierarchical linear regression analysis revealed a Model 1  $F(1, 312) = 5109.58$ ,  $p < 0.05$ ,  $R^2_1 = 0.994$ , PCR [Independent Variable 1] was significantly associated with perceived Social Skills [DV] ( $b = 0.594$ ,  $t = 6.981$ ,  $p < 0.05$ ) to be statistically significant ( $p < 0.05$ ). Additionally,

the  $R^2_1$  value of 0.994 associated with this regression model suggest that the PCR account for 99.4% of the variation in Perceived Social Skills cannot be explained by Parent-Child Relationship alone. A different outcome was found from the second block analysis.

For the second block, the predictor variable School Environment (SE) [IV<sub>2</sub>] was added to the analysis. The results of the second block hierarchical linear regression analysis revealed a model 2.

Model 2:  $F(2, 311) = 56992.58, p < 0.01, R^2_2 = 0.997$ , which include IV<sub>2</sub> ( $b = 0.610, t = 5.918, p < 0.05$ ) to be statistically significant [ $p < 0.01$ ]. Additionally, the  $R^2_2$  change value of 0.257 associated with the regression model suggests that the addition of School Environment [IV<sub>2</sub>] to the first block model account for 25.7% of variation in Perceived Social Skills of Children with learning Disabilities [DV] which means that 74.3% of the variation in Perceived Social Skills of Children with Learning Disabilities cannot be explained by PCR [IV<sub>1</sub>] and SE [IV<sub>2</sub>] alone. Controlling for SE [IV<sub>2</sub>] the regression coefficient [ $b = 0.610, t = 5.918, p < 0.05$ ] associated with School Environment [IV<sub>2</sub>] suggests that with each additional unit of [IV<sub>2</sub>], the dependent variable increased by approximately 0.126 units. A similar outcome was found from the third block analysis.

For the third block, the predictor variable Parental Stress (PS) [IV<sub>3</sub>] was added to the analysis. The results of the third block hierarchical linear regression analysis revealed a model 3.

Model 3:  $F(3, 310) = 38123.695, p < 0.01, R^2 = 0.997$ , which include  $IV_2$  ( $b = 0.073, t = 3.788, p < 0.05$ ) to be statistically significant [ $p < 0.01$ ]. Additionally, the  $R^2_3$  change value of 0.256 associated with the regression model suggests that the addition of Parental Stress (PS) [ $IV_3$ ] to the second block model account for 25.6% of variation in Perceived Social Skills of Children with Learning Disabilities [DV] which means that 74.4% of the variation in Perceived Social Skills of Children with Learning Disabilities cannot be explained by Parental Stress [ $IV_3$ ] alone. Controlling for Parental Stress [ $IV_3$ ] the regression coefficient [ $b = .073, t = 5.918, p < 0.05$ ] associated with Parental Stress [ $IV_3$ ] suggests that with each additional unit of [ $IV_3$ ], the dependent variable increases by approximately 0.001 units.

#### **5.1.4 Analysis of Findings of Mediating roles of Parental Stress (PS) Between Parent-Child Relationship (PCR), School Environment (SE) and Perceived Social Skills of Children with Learning Disabilities**

**H<sub>05</sub>:** parental stress has a considerable indirect impact on the social skills of children who have learning disabilities. As a result, the study establishes that parental stress partially mediated the link between the parent-child relationship and the perceived social skills of children with learning disabilities. This result supports the findings of McDermott et al. (2022), that parents may feel less frustrated in their interactions with their children, which could lead to better parenting techniques that encourage child self-regulation (social skills).

**H<sub>06</sub>:** This clearly indicates that, there is partial mediating effect of parental stress in the relationship between school environment and perceived social skills of children with learning disabilities. This finding is in agreement with Van keer et al. (2020) who found a direct effect of parental stress and children's language and social skills.

However, Van keer et al. (2020) suggest that these relationships may be by-directional wherein a decrease in children's social and language skills may increase parental stress. Also finding is in-line with Baron and Kenny (1986) with the assertion that mediation entails a third variable (parental stress) to control the effects of school environment, and parent-child relationship on perceived social skills of children with learning disabilities upon entry into the model. Furthermore, the finding is in agreement with Ampalagan et al., (2021) who stated that if school environment that is designed to help children with learning disabilities develop their wide range of skills is effectively and efficiently implemented, the children's performance will be high and their parents' stress levels will be low.

The study supports the findings of McDermott et al. (2022) that children with developmental delays may struggle to distinguish between appropriate actions based on social circumstances, leading them to be disobedient against their parents while displaying appropriately restrained assertiveness with their peers. Studies confirm the significance of reducing parenting stress while aiming to promote child social development.

## **5.2 Summary of Findings**

The major goal of the current study was to examine the association between the parent-child relationship, the school environment, parental stress, and the perceived social skills of children with learning disabilities in Abuja, Nigeria's inclusive schools. To supplement the cross-sectional methodology, this study used a descriptive, relational design. In Abuja, self-administered surveys were given to inclusive schools. The

surveys were sent to a total of 322 parents through their children with learning disabilities using stratified sampling technique.

The children with learning disabilities were ages between 12 to 18 years; with a mean score of  $13.5 \pm 2.2$  years which fall within ages 13 – 14 years. This implies that the children with learning disabilities in this age group were higher in number than in the other age groups. As for the adolescent stage, more than half (64.3%) were in the Early Adolescent Stage (12-14 years); while 31.8% were in Middle Adolescent Stage (15-17 years) and 3.8% were in Late Adolescent Stage (18 - 21 years). In addition, 64.3% of the children were from Inclusive Basic Primary Schools, and 35.7% were from Junior Secondary Schools. From the gender distributions of the children, 55.7% were female and 44.3% were males, making the number of female children with learning disabilities higher than the males in the Inclusive Basic Schools in Abuja.

The parents of children with learning disabilities in the Inclusive Schools in Abuja, Nigeria were with different age groups: Most (31.8%) of them were between 31-40 years old. As for marital status, the majority (90.4%) were married couples. Religious affiliation of the parents cut across the two religions: Christians were 79% and Moslem were 21%. Also, more than half of the parents (52.5%) were holders of Bachelor's degrees and Higher National Diploma (HNDs) while the least (9.2%) were holders of Ordinary National Diploma and National Certificate in Education (NCE).

In terms of occupational status, most of the parents (47.8%) were public/civil servants and the least were private corporate employees (13.1%). Family income scores revealed that most (64.6%) of the parents were from the middle-income group while the least of them (8.0%) were from the high-income group.

**Objective 1:**

To describe the levels of parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities.

According to the findings, the parent-child relationship was largely rated as moderate (59.9%), the school environment was rated as fair (58.9%), parental stress was rated as moderate (53.2%), and the perceived social skills of children with learning disabilities were likewise rated as moderate (50.6%).

**Objective 2:**

To examine the relationship between parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities.

Results demonstrated a considerable positive relationship between parent-child relationships and the perceived social skills of children with learning disabilities. Additionally, it was discovered that children with learning disabilities' social skills and the school environment had a strong relationship. Furthermore, it was found that parental stress was positively related with the perceived social skills of children with learning disabilities. The variables have a strong positive relationship coefficient with one another, according to the overall Pearson Correlation Coefficient matrix.

**Objective 3:**

To determine the unique predictor of perceived social skills of children with learning disabilities.

The results revealed that school environment is the most significant predictor of perceived social skills of children with learning disabilities.

#### **Objective 4:**

To examine the mediating effects of parental stress between parent-child relationship, school environment, and perceived social skills of children with learning disabilities.

In order to determine how parental stress affects children with learning disabilities' social skills and parent-child relationships, the Ho5 hypothesis was developed in relation to the aforementioned purpose. The current research demonstrates that parental stress has a considerable indirect impact on perceived social skills of children with learning disabilities. As a result, the study establishes that parental stress partially mediated the relationship between the parent-child relationship and the perceived social skills of children with learning disabilities.

In a similar vein, the Ho6 hypothesis was developed to determine whether parental stress mediates the relationship between a child's social skills and their school environment. The results showed a substantial direct impact of the school environment on the perceived social skills of children with learning disabilities. ( $\beta = .615, p < .01$ ) in which parental stress ( $\beta = .464, p < .01$ ), and school environment ( $\beta = .834, p < .01$ ) on perceived social skills of children with learning disabilities were found to be significant. Indicating that, there is partial mediating effect of parental stress in the relationship between school environment and perceived social skills of children with learning disabilities.

The findings of this study filled the gap in the body of knowledge about the prediction of social skills in children with learning disabilities that was highlighted by the problem statement. Conversely, these findings can be applied to the entire population of learners enrolled in inclusive basic schools.

### **5.3 Implications**

Several implications were emphasized based on the results of the current study. In Abuja, Nigeria, these implications were examined from the theoretical, methodological, and practical perspectives about parental impact and contributions to the perceived social skills development of children with learning disabilities.

#### **5.3.1 Theoretical Implications**

Studies on the variable factors (parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities and family background factors (Fathers' and Mothers': age, marital status, religious status, educational level, occupational status, and family income) are scarce in Nigeria, as was mentioned in the introductory chapter.

The study examined the gaps in the literature and offered empirical proofs on the relationship between the parent-child relationship, the school environment, parental stress, and the perceived social skills of children with learning disabilities.

The results of the current study demonstrated that parental stress and the social skills of children with learning disabilities have substantial relationship with the parent-child

relationship and the school environment. These results are consistent with the attachment theory of development (Bowlby,1973) and the Bio-ecological model of development (Bronfenbrenner, 1995). Bronfenbrenner and Bowlby emphasized that development is a function of a relationship system between the children with learning disabilities and their family and school environment. The findings of this study support Bio-ecological Model's assertions that children with learning disabilities exist in inclusive basic schools where a Bio-ecological milieu influences how well their skills develop. The model observes that children with or without disabilities develop in a complex social world hence a balanced environment involving the family, the teachers, the peers as important social figures and change agents will help to facilitate a better child outcome with the required interactions

From the interactions of the Bio-ecological Model and Attachment Theory, environment of children with learning disabilities is very important in order for parents to route their children with learning disabilities through social skills programs for efficient inculcation and development, while interacting with all the elements of their social environment. This interaction between the parent and the child is considered very crucial as it assures that the children are in safe hands and secured environment that enhance their positive disposition to explore their world, develop acceptable social skills and form good relationships and in turn developmental strides. This will help to reduce the parent's stress and worries in the entire care process. This result highlights that when parents are low on stress, and the school environment is positive and friendly, the parents' perceived social skills of their children with learning disabilities is high also.

The partial mediation results of this current study confirmed that parental stress and the perceived social skills of children with learning disabilities are significantly related with the parent-child relationship and the school environment. These results are consistent with the model and theory discussed above.

Bowlby and Bronfenbrenner emphasized that developmental attachment is a functional relationship between the parents, and the development of their children with learning disabilities. The more these children are attached to their parents, the more they are appreciative of their environment and the more the social skills increase.

### **5.3.2 Methodological Implications**

Although the research method used in this quantitative study was not new, it was suitably adopted to address the questions generated. The study examined the gaps in the literature and offered empirical proof on the relationship that exist between the parent-child relationship, the school environment, parental stress, and the perceived social skills of children with learning disabilities. The results of the current study demonstrated that parental stress and the perceived social skills of children with learning disabilities are significantly related with the parent-child relationship, and the school environment. These results are consistent with the relationship design (Decarlo, 2021)

However, this study has contributed to the body of knowledge by bringing a new perspective of data collection to limelight. This implies that data was collected from the parents on behalf of the children with learning disabilities since they could not answer the questionnaire by themselves.

### 5.3.3 Practical Implications

Despite their mild appearance, learning disabilities in children appear to have a general negative impact on parents and families, comparable to that created by more evident disabilities like physical, cerebral, or severe developmental disabilities. (Jenaro et al., 2020). Although the incidence of learning disabilities in Nigeria is not as high compared to the western countries but observably, a high disparity occurs when it comes to intervention and development programs. In Nigeria, there is a high volume of lagging by government and families in terms of care, education and development for children with learning disabilities. This has led to elevated incidence and poor rate of improvement and development which has made the children with learning disabilities of no particular relevance to themselves and their communities.

The current study used a quantitative research method to determine the nature of the impact as well as home, school and community responses. The findings of the current research informed practice in several ways. Firstly, as the current sample involves school-going children with learning disabilities in inclusive schools, learning disabilities therapists and other helping professionals in schools may apply the findings of the current research in their practice with students who need help with overcoming feelings of rejection from family members, teachers and peers due to deficit in their social skills and inundating feelings of social exclusion from interaction conferences. More often than not, students display behavioural problems in school due to their deficient social competence.

As a matter of policy, the findings will inform the need for schools to help parents adjust positively by improving communication with them and by establishing services that would benefit children with LD, as schools are widely recognized to be a significant cause of stress for parents. Communication between parents and schools can be improved when all parties are aware of the requirements, possibilities, and limitations that apply in each environment (Ang & Spencer, 2022). In order to promote home-school communication and improve the well-being of children with learning disabilities, schools can conduct a regular parent-school forum based on the idea of parent-professional partnership.

Furthermore, the current practice will help to inform speedy assessment and effective programs that would be beneficial to the examination and education of children with LD who have been linked to the stress of parents. Additionally, the current findings will help to inform better coordination among players in the field of education and developmental psychology, including teachers, experts, and other child care professionals (e.g., medical personnel, social welfare officers, psychologists, etc). The findings will also inform participation of children with learning disabilities in the general education system and receive an education in mainstream schools, according to Article 24 of the United Nations Convention on the Rights of Persons with Disabilities. In the majority of sub-Saharan Africa, there are currently no comprehensive development frameworks or educational programs for the LD population.

Lastly, the findings of the current study will inform awareness in the society on the burden of having a child with learning disabilities towards setting up a buffering

definite and concrete programs geared towards early detection and early interventions for children with learning disabilities. Expectant mothers would be presented with early necessary antenatal education and rules. This would help to minimize the birth of children with learning disabilities. Furthermore, the current findings will inform the establishment of assessment and diagnostic centers at strategic locations in order to turn in suspected cases of learning disabilities for early detection and development of care programs so as to prevent secondary impact. The findings will also inform the establishment of more inclusive schools that are accessible to the child's community of residence and are development friendly for training effectiveness and efficiency as well as employment of more special educators and allied professionals to work with the parents so as to meet the specific needs of these children with learning disabilities and ensure that the principles of inclusion are well driven.

#### **5.4 Suggestions from the Study**

The findings of this study indicated that parents of children with LD require assistance. Such assistance could begin with addressing the concerns that have already been identified, which can be aided through public and community programs. A community-based support program might be one such program to assist parents in managing the daily stress and difficulties of raising a child with LD, as well as interactions with the school in order to serve the needs of children with learning disabilities. The assistance program could look into and build competent parenting skills, as well as build enduring social competence in children with learning disabilities. An established community organization, such as the local Association for Learning Disabilities, may run such programs. However, it will be a great and rewarding move

if a Learning Disabilities Association can be established because to the best of my knowledge, there is no such Association in existence in Nigeria. Also Support groups should be established to help parents deal with the unique demands and challenges that come with having a child with learning disabilities which consequently depresses the ability for social competence in the child. As a support group for parents and siblings of children with developmental problems, there would be the need to demonstrate a periodic check on the parents and families, in order to help alleviate the unanticipated and in turn help to improve the child's social skills (Jenaro et al., 2020).

In Nigeria, for instance, teachers in schools for students with learning disabilities deal the same curriculum as teachers in regular schools. In addition, para-professionals, psychologists and special educators working with children with learning disabilities should be careful to draw the child away from the tasks that could possibly degenerate the condition of the child with learning disabilities and also be careful to alleviate the stress of the parents (Isa et al., 2017; Cetin et al., 2022), so as not to spike excess burden on them which could possibly prevent them from bringing their children with learning disabilities from their various homes to attend schools or care centres. This would make accessing service delivery systems easier for the children by the parents. Besides, parents of children with learning disabilities should be provided with relevant skills on stress management. This will help them to put together appropriate and timely information that will help them cope well with their daily work routine and the demand for care for their children with learning disabilities in order to enhance the maximum results of their wards. It would be a great service if labeling is minimized in schools, and alternate methods of designating children for special services are explored. Schools may also emphasize their support for children with LD in order to gain the

trust of the children as well as their parents. Moreover, parents of children with learning disabilities should be equipped with relevant parent-child relationship skills to help them better understand their children with learning disabilities and give adequate care crucial to meeting their developmental and social skill needs. This can be engendered in parent/teacher interactions as well as provisions of relevant and specific seminars and workshops.

### **5.5 Recommendations for Future Research**

The results of this study inspired some suggestions and recommendations for additional investigation. First, this study used a cross-sectional survey strategy for its descriptive research, which involved gathering data from a variety of samples at one particular period. This approach reduced time and expenses, but it also established the variables' initial relationships. Thus, it is advised that longitudinal study be carried out whenever time and resources allow. With the respondents being tracked over time, longitudinal research design will be able to investigate this study for a considerable amount of time (Thomas, 2020). In addition, research using experimental research is also recommended for future studies.

However, better understanding of the relationship between parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities was obtained despite the short period of time. Based on this study, parental stress appeared as the only mediator. This indicates that it is crucial to implement stress management interventions among parents of children with learning disabilities. The effectiveness of the intervention can be evaluated through

experimental research design. By experimenting and improving the intervention, researchers are then able to provide the platform to reduce the stress and the risk factors that the parents of children with learning disabilities go through in the process of care, there by promoting or increasing the protective factors of their relationship with their children with learning disabilities.

Secondly, the current study mainly focused on a single respondent which is the parent of the child with learning disabilities. The respondents were also recruited from the same state but different schools from different local government Areas. The respondents were parents of already identified children with learning disabilities and mainstreamed in inclusive schools in Abuja, Nigeria. Thus, the findings could not be generalized across the rest of the states in Nigeria. To this end, it is recommended that the study is reproduced to cover a wider geographical coverage for better picture and maximum impact. By replicating this current study, it may be discovered that respondents from other states and diverse ethnic groups could yield different outcomes.

In this current study, the number of respondents selected for the study was restricted due to the limited number of inclusive schools in Abuja and also the limited number of pupils with learning disabilities enrolled in the available inclusive schools. Since development is an ongoing process, it is presumed that more inclusive schools will be established in the near future and further enrolment of students with learning disabilities will be encouraged. When this is done, future research would be recommended with a larger population for optimal results.

Thirdly, this current study employed quantitative approach where self-administered close-ended questionnaires were distributed to all the participants. This approach restricted the respondents from providing a variety of answers to the questions being asked. Thus, mixed-method research design which will involve both quantitative and qualitative methods is recommended for future study. With this method, the researchers will be able to gather information through close-ended and open-ended questionnaires. By using this method, respondents are able to considerably express their views and experiences freely with reasonable details which will help to provide the researcher with more information. Fourthly, whereas, the data were collected from the parents of identified school going children with learning disabilities, a level of bias may be expressed. This is because as learning disabilities is a serious issue and parents are often times in denial of the existence of the phenomenon among their children, they may supply inaccurate information in the process of filling the questionnaires. Hence information from multiple sources may be required. Third party data such as from the siblings, teachers and the typical peers of children with learning disabilities etc. for future studies may be advised so as to reduce the level of bias as the study covers a wide range of respondents.

The investigation of the family background factors (parents' age, marital status, religious affiliation, educational attainment, occupational status, and family income), as well as the variable factors (parent-child interaction, the school environment, parental stress, and perceived social skills of children with learning disabilities in Abuja, Nigeria) was the final focus of this study. However, the study did not take into account other aspects of social skills development in children with learning disabilities, such as self-esteem, self-assertion, etc. Therefore, it is advised that these be considered

for future research in order to increase understanding of social skills in children with learning disabilities.

## **5.6 Conclusion**

The current study examined the parent-child relationship, school environment, parental stress, and perceived social skills of children with learning disabilities in Inclusive schools in Abuja, Nigeria. The background profile included information on the age, gender, types of schools, and stage of adolescence of the children as well as the parents' age, marital status, religion, degree of education, employment, and family income. Children with learning disabilities' perceived social skills, the school environment, parental stress, and parent-child relationships are among the study's variables. The current study discovered that children with learning disabilities in Abuja, Nigeria, have substantial social skill development issues, where approximately 58.9% of the parents of children with learning disabilities reported fair school environment, 56.6% reported moderate social skills of children with learning disabilities, 59.9% of the parents reported moderate parent-child relationship, and 53.2% of the parents reported moderate parental stress.

The results of this study demonstrated that there is a very substantial association between the individual variables (parent-child relationships, school environment, parental stress, and perceived social skills of children with learning disabilities).

The current study examined whether the parent-child relationship, the school environment, and parental stress might predict the perceived social skills of children

with learning disabilities. The school environment was the most significant predictor (0.871), and it best explains the perceived social skills of children with learning disabilities. The school environment seems to be the most predicting factor that can be used to reduce parental stress significantly, therefore school management handling children with learning disabilities should ensure that parents are well integrated in the discharge of school programs and activities in order to obtain their consistent views and feedback on the impact the school has on the child and also ensure that appropriate specialists are available in the school and where they are not available they should be able to have a structure that will assure the parents that their children are in a safe environment.

The second predictor was parent-child relationship. The positive scores indicate that the higher/stronger the relationship between parents and their children with learning disabilities the higher/stronger the children's perceived social skills will be. This enables them to adjust to school and developmental dictates more easily.

A child's learning disability and their relationship with their parents, as well as their school environment and perceived social skills, are all partially mediated by parental stress, according to the simultaneous mediation test. This suggests that parental stress is correlated with the relationship between the parent-child relationship, the school environment, and the perceived social skills of children with learning disabilities.

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## APPENDICES

### Appendix A



Universiti Putra Malaysia, Faculty of Human Ecology

Dear Sir/Ma.

This questionnaire is designed to enable the researcher collect data for a Doctoral Degree (PhD) dissertation in Human Development and Family Studies, Faculty of Human Ecology, Universiti Putra Malaysia. The research title is **Parent-Child Relationship, School Environment, Parental Stress and Perceived Social Skills of Children with Learning Disabilities in Inclusive Schools in Abuja, Nigeria.**

Please assist in filling the questionnaire voluntarily. We strongly assure you that all information provided would be highly confidential and used only for academic purposes.

Please note that your name, phone number and address are not needed in this survey so as to give you the ultimate confidentiality.

Thank you for your assistance.

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The questionnaire below is meant to collect data for academic purpose. Please tick {√} in the blank spaces as required. Your contribution will help immensely to realize the purpose of this study. Thank you.

## SECTION A: DEMOGRAPHIC PROFILE

Parents are to fill this.

1. Age:
2. Occupation:
3. Level of Education: Secondary school ☐ Ordinary Diploma ☐  
NCE ☐ HND ☐ Bachelor's Degree ☐ Master's Degree ☐  
PhD ☐
4. Number of Children with LD
5. Gender: Male ☐ Female ☐
6. Marital Status: Single ☐ Married ☐ Separated ☐ Divorced ☐  
Widow/Widower ☐
7. Religion: Christianity ☐ Islam ☐ Traditional ☐

It is our hope that you can read the following statements carefully and please circle (0) OR tick {√} in the blank spaces as required, your response by choosing number 1 to 5

## SECTION B: PARENT-CHILD RELATIONSHIP

Please indicate how these statements reflect the magnitude of relationship between you and your child by ticking (✓) in the appropriate box.

1 = Definitely does not apply 2= Not really 3 = Neutral/Not sure 4= Applies somewhat 5= Definitely Applies

| S/N | ITEM                                                                          | Definitely does not apply | Not really | Neutral/ Not sure | Applies somewhat | Definitely applies |
|-----|-------------------------------------------------------------------------------|---------------------------|------------|-------------------|------------------|--------------------|
| 1   | I share an affectionate, warm relationship with my child.                     |                           |            |                   |                  |                    |
| 2   | My child and I always seem to be struggling with each other                   |                           |            |                   |                  |                    |
| 3   | If upset, my child will seek comfort from me                                  |                           |            |                   |                  |                    |
| 4   | My child is uncomfortable with physical affection or touch from me.           |                           |            |                   |                  |                    |
| 5   | My child values his/her relationship with me                                  |                           |            |                   |                  |                    |
| 6   | When I praise my child, he/she beams with pride.                              |                           |            |                   |                  |                    |
| 7   | My child spontaneously shares information about himself/herself.              |                           |            |                   |                  |                    |
| 8   | My child easily becomes angry at me.                                          |                           |            |                   |                  |                    |
| 9   | It is easy to be in tune with what my child is feeling.                       |                           |            |                   |                  |                    |
| 10  | My child remains angry or is resistant after being disciplined                |                           |            |                   |                  |                    |
| 11  | Dealing with my child drains my energy                                        |                           |            |                   |                  |                    |
| 12  | When my child is in a bad mood, I know we're in for a long and difficult day. |                           |            |                   |                  |                    |
| 13  | My child's feelings toward me can be unpredictable or can change suddenly.    |                           |            |                   |                  |                    |
| 14  | My child is sneaky or manipulative with me.                                   |                           |            |                   |                  |                    |
| 15  | My child openly shares his/her feelings and experiences with me.              |                           |            |                   |                  |                    |

## SECTION C PARENTAL STRESS

Please indicate how these statements reflect the magnitude of relationship between you and your child by ticking (✓) in the appropriate box.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

| S/N | ITEM                                                                                    | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
|-----|-----------------------------------------------------------------------------------------|-------------------|----------|-----------|-------|----------------|
| 1   | I am happy in my role as a parent                                                       |                   |          |           |       |                |
| 2   | There is little or nothing I wouldn't do for my child (ren) if it was necessary.        |                   |          |           |       |                |
| 3   | Caring for my child(ren) sometimes takes more time and energy than I have to give.      |                   |          |           |       |                |
| 4   | I sometimes worry whether I am doing enough for my child(ren).                          |                   |          |           |       |                |
| 5   | I feel close to my child(ren).                                                          |                   |          |           |       |                |
| 6   | I enjoy spending time with my child(ren).                                               |                   |          |           |       |                |
| 7   | My child(ren) is an important source of affection for me.                               |                   |          |           |       |                |
| 8   | Having child(ren) gives me a more certain and optimistic view for the future            |                   |          |           |       |                |
| 9   | The major source of stress in my life is my child(ren).                                 |                   |          |           |       |                |
| 10  | Having child(ren) leaves little time and flexibility in my life.                        |                   |          |           |       |                |
| 11  | Having child(ren) has been a financial burden.                                          |                   |          |           |       |                |
| 12  | It is difficult to balance different responsibilities because of my child(ren).         |                   |          |           |       |                |
| 13  | The behaviour of my child(ren) is often embarrassing or stressful to me.                |                   |          |           |       |                |
| 14  | . If I had it to do over again, I might decide not to have child(ren).                  |                   |          |           |       |                |
| 15  | I feel overwhelmed by the responsibility of being a parent                              |                   |          |           |       |                |
| 16  | Having child(ren) has meant having too few choices and too little control over my life. |                   |          |           |       |                |
| 17  | I am satisfied as a parent                                                              |                   |          |           |       |                |
| 18  | I find my child(ren) enjoyable                                                          |                   |          |           |       |                |

## SECTION D: SCHOOL ENVIRONMENT

Please indicate how these statements reflect your perception of your child's school by ticking (✓) in the appropriate box.

1= Strongly disagree 2= Disagree 3 = Neutral 4= agree 5 = Strongly agree

| S/N | ITEM                                                                                   | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|-----|----------------------------------------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| 1   | I am satisfied with my child's School                                                  |                   |          |         |       |                |
| 2   | The school does a good job of educating students                                       |                   |          |         |       |                |
| 3   | I will recommend this school to other parents                                          |                   |          |         |       |                |
| 4   | The school building is clean and well maintained                                       |                   |          |         |       |                |
| 5   | There are a lot of broken windows, doors, or desks at my child's school.               |                   |          |         |       |                |
| 6   | My child's school has clearly defined expectations for students' behaviour.            |                   |          |         |       |                |
| 7   | Students are rewarded for positive behaviour.                                          |                   |          |         |       |                |
| 8   | My child school is a safe place                                                        |                   |          |         |       |                |
| 9   | My child is safe going to the school                                                   |                   |          |         |       |                |
| 10  | Teachers at the school know my child well                                              |                   |          |         |       |                |
| 11  | Teachers care about my child                                                           |                   |          |         |       |                |
| 12  | It is important for my child to attend school everyday                                 |                   |          |         |       |                |
| 13  | It is important for my child to try hard in school                                     |                   |          |         |       |                |
| 14  | It is important for my child to finish high school                                     |                   |          |         |       |                |
| 15  | I have enough opportunity to talk with teachers about my child's progress or problems. |                   |          |         |       |                |
| 16  | When my child does something good at school usually hear about it from the school.     |                   |          |         |       |                |
| 17  | When my child does something bad at school, I usually hear about it                    |                   |          |         |       |                |

## SECTION E: PERCEIVED SOCIAL SKILL

Please indicate how these statements reflect your perception of your child by ticking

(√) in the appropriate box.

0= Not true 1= Sometimes true 2= Mostly true

| S/N | ITEM                                                                            | Not True | Sometimes True | Mostly True |
|-----|---------------------------------------------------------------------------------|----------|----------------|-------------|
| 1   | Listens to other people's point of views during arguments                       |          |                |             |
| 2   | Make requests from parents in a polite way                                      |          |                |             |
| 3   | Controls his/her temper he/she loses in a game or competition                   |          |                |             |
| 4   | Reacts appropriately if other kids tease him/her or say unkind things           |          |                |             |
| 5   | Asks to join in activities with other kids in an appropriate manner             |          |                |             |
| 6   | Expresses affection or positive feelings to others                              |          |                |             |
| 7   | Does kind things for others voluntarily                                         |          |                |             |
| 8   | Gives compliments or says nice things when appropriate                          |          |                |             |
| 9   | Controls his/her temper when told off or criticized by parents                  |          |                |             |
| 10  | Asks permission before borrowing or using other people's things                 |          |                |             |
| 11  | Shares things with other kids his/her age                                       |          |                |             |
| 12  | Controls hi/her temper during disappointment with other kids                    |          |                |             |
| 13  | Asks other kids if he/she may join in their activities                          |          |                |             |
| 14  | Has an appropriate facial expression (e.g. not excessive grinning or aggressive |          |                |             |
| 15  | Apologizes when he/she does something wrong.                                    |          |                |             |
| 16  | Joins in family activities                                                      |          |                |             |
| 17  | Invites others to join in games or activities                                   |          |                |             |
| 18  | Tells a parent if he/she has a problem or needs help                            |          |                |             |
| 19  | Expresses sympathy or concern to others who are hurt or upset                   |          |                |             |
| 20  | Follows the rules in games or activities                                        |          |                |             |
| 21  | Takes part in social or sporting activities with other kids                     |          |                |             |
| 22  | Takes part in conversation with adults                                          |          |                |             |
| 23  | Makes eye contact appropriately with others during conversation                 |          |                |             |
| 24  | His/her tone of voice is appropriate (e. g. not aggressive or unusual)          |          |                |             |
| 25  | Controls his/her temper when he/she does not get his/her own way with parents   |          |                |             |
| 26  | Laughs or smiles when appropriate                                               |          |                |             |
| 27  | Takes part in conversations with other kids                                     |          |                |             |
| 28  | Shows that he/she is listening to others during conversations                   |          |                |             |
| 29  | Can express his/her feeling of anger but without losing his temper              |          |                |             |
| 30  | Stand up for his/herself appropriately if other kids act unreasonably           |          |                |             |

THANK YOU

## Appendix B



**PEJABAT TIMBALAN NAIB CANSOLOR (PENYELIDIKAN DAN INOVASI)**  
**OFFICE OF THE DEPUTY VICE CHANCELLOR (RESEARCH AND INNOVATION)**

Reff. : UPM/TNCPI/RMC/1.4.18.2 (JKEUPM)  
Date : 22 April 2020

Dr. Sa'odah Binti Ahmad  
Department of Human Development and Family Studies  
Faculty of Human Ecology  
Universiti Putra Malaysia  
Serdang, Selangor

Dear Madam/Sir,

**RESEARCH PROJECT: PARENT-CHILD RELATIONSHIP, SCHOOL ENVIRONMENT, PARENTAL STRESS AND PERCEIVED LEARNING-DISABLED CHILD'S SOCIAL SKILL IN ABUJA, NIGERIA.**

**REFERENCE NO: JKEUPM-2020-039**

**RESEARCHER : OLABISI AKINOLA PATRICK**  
**SUPERVISOR : DR. SA'ODAH BINTI AHMAD**

The Ethics Committee for Research involving Human Subjects of University Putra Malaysia (JKEUPM) has studied the proposal for the above project and found that there were no objectionable ethical issues involved in the proposed study.

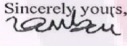
Please find the list of documents received and reviewed with reference to the study and committee members who reviewed the documents (as attached).

Notwithstanding above, we will not be responsible for any misconduct on the part of researcher in the course of carrying out the research.

**Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.**

Thank you.

**"WITH KNOWLEDGE WE SERVE"**

Sincerely yours,  


**PROF. DR. ZAMBERI SEKAWI**  
Chair  
Ethics Committee for Research involving Human Subjects  
Universiti Putra Malaysia

✉ Pejabat Timbalan Naib Canselor (Penyelidikan dan Inovasi), Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia  
Pejabat Timbalan Naib Canselor (P&I) ☎ 603-8947 1002 ☎ 603-8946 4134, Pejabat Pentadbiran TNCPI ☎ 603-8947 1608, Pejabat Pengarah, Pusat Pengurusan Penyelidikan (RMC) ☎ 603-8947 1601, Pejabat Pengarah, Putra Science Park (PSP) ☎ 603-8947 1291  
🌐 <http://www.tncpi.upm.edu.my>

**ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS  
(JKEUPM)  
UNIVERSITI PUTRA MALAYSIA**

|                       |                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Research title</b> | <b>: Parent-Child Relationship, School Environment, Parental Stress and Perceived Learning-Disabled Child's Social Skill in Abuja, Nigeria.</b> |
| <b>Study Site</b>     | <b>: Abuja, Nigeria.</b>                                                                                                                        |
| <b>JKEUPM Ref No.</b> | <b>: JKEUPM-2020-039</b>                                                                                                                        |
| <b>Researcher</b>     | <b>: Olabisi Akinola Patrick</b>                                                                                                                |
| <b>Supervisor</b>     | <b>: Dr. Sa'odah Binti Ahmad</b>                                                                                                                |

Documents received and reviewed with reference to the above study:

1. Ethics Application Form, Version 2 dated 6/4/2020
2. Respondent Information Sheet & Consent (English), Version 2 dated 6/4/2020
3. Respondent Information Sheet & Guardian's / Parent's Consent (English), Version 2 dated 6/4/2020
4. Proposal (English), Version 2 dated 6/4/2020
5. Questionnaires/ Interviews (English), Version 2 dated 6/4/2020
6. Curriculum Vitae of:
  - a. Dr. Sa'odah Ahmad
  - b. Assoc. Prof. Dr. Mariani Mansor
  - c. Dr. Mohd Najmi Daud
  - d. Olabisi Akinola Patrick

The University Research Ethics Committee, Universiti Putra Malaysia (JKEUPM) operates in accordance to the ICH-GCP Guidelines.

Decision by JKEUPM:

- ☒ Approved
- ☒ **Permission MUST BE OBTAINED from the respective hospitals/ institutions before conducting the research**
- ☐ Disapproved

Please note that the approval is **VALID UNTIL 22 APRIL 2021**

Researchers should comply with the following:

- I. Complete a Study Final Report upon study completion (Form 3.2).
- II. Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

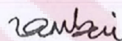
- III. Applicable for Clinical Trial Studies and Clinical interventional Studies only: Progress Report has to be submitted to JKEUPM at every 6 months from the date of approval (Form 3.1). Report occurrences of all Serious Adverse Events (SAEs), Suspected Unexpected Serious Adverse Reaction (SUSARs) and Protocol Deviation/ Violation at all JKEUPM approved sites to JKEUPM. SAEs are to be reported within 15 calendar days from awareness of event by investigator. Initial report of SUSARs are to be reported as soon as possible but not later than 7 calendar days from awareness of event by investigator, followed by a complete report within 8 additional calendar days.

The required forms can be obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM) website (<http://www.tncpi.upm.edu.my/faildokumen>).

Date of Approval: 22 April 2020

Members of the JKEUPM who reviewed the documents:

- i. Primary Reviewer: Assoc. Prof. Dr. Lee Yok Fee
- ii. Informed Consent Reviewer: Assoc. Prof. Dr. Sarva Mangala Praveena



**PROF. DR. ZAMBERI SEKAWI**

**Chair**

Ethics Committee for Research involving Human Subjects  
Universiti Putra Malaysia

JKEUPM is recognised by The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER) in collaboration with the Forum for Ethical Review Committees in Asia and the Western Pacific Region (FERCAP) for its compliance with the Declaration of Helsinki, International Conference on Harmonization (ICH) Guidelines, Good Clinical Practice (GCP) Standards, Council for International Organizations of Medical Sciences (CIOMS) Guidelines, World Health Organization (WHO) Standards and Operational Guidance for Ethics Review of Health-Related Research and Surveying and Evaluating Ethical Review Practices, EC/IRB Standard Operating Procedures (SOPs), and Local Regulations and Standards in Ethical Review.

## Appendix C



### FEDERAL CAPITAL TERRITORY ADMINISTRATION

#### EDUCATION SECRETARIAT

#### DEPARTMENT OF SPECIAL NEEDS EDUCATION

F.C.T.A No. 1, Kapital Road, Area 11, P.M.B 24, Garki Abuja-Nigeria

Email: fctadsne@outlook.com

Olabisi Akinola Patrick  
Faculty of Human Ecology  
University Putra.  
Malaysia.

16th October, 2020

#### RE: REQUEST TO VISIT FCT SCHOOLS FOR DATA COLLECTION

Sequel to your request for permission to visit FCT Schools for purposes of data collection to further your research, I wish to convey approval for your request and to state that the data so collected shall strictly be for academic purposes only.

kind regards.

  
Aturu, Jonah O.  
Director.



## Appendix D



Akinola Olabisi <celdaabuja@gmail.com>

---

### Permission to use CPRS

5 messages

---

Akinola Olabisi <celdaabuja@gmail.com>  
To: pianta@virginia.edu

Mon, Jan 20, 2020 at 7:17 PM

Dear Sir,  
I have this great pleasure to write you on the above subject.  
My name is Olabisi Akinola Patrick, a PhD student with University Putra Malaysia. My current research interest is on Family Involvement, School Environment, Family Stress and Perceptual Ability among children with learning disabilities. I shall be very grateful if I can be permitted to use the Child-Parent Relationship Scale to measure one of my variables.  
Gazillion thanks for your prompt and favourable response.

--  
Olabisi Akinola Patrick  
PhD Student  
Department of Human Development and Family Studies  
Faculty of Human Ecology  
University Putra Malaysia  
43000 Serdang  
Selangor  
+60163960200

---

Pianta, Robert C (rcp4p) <rcp4p@virginia.edu>  
To: Akinola Olabisi <celdaabuja@gmail.com>

Mon, Jan 20, 2020 at 11:29 PM

Thank you for your interest and note. Yes you have my permission to use the STRS for the purposes you describe.  
Best wishes

---

Robert C. Pianta, Ph.D.  
Novartis US Foundation Professor of Education  
Dean, Curry School of Education and Human Development  
Founding Director, Center for Advanced Study of Teaching and Learning  
PO Box 400260  
University of Virginia  
Charlottesville, VA 22904-4260      TEL: 434.243.5481  
<http://curry.virginia.edu/academics/directory/robert-c.-pianta>

---

**From:** Akinola Olabisi <celdaabuja@gmail.com>  
**Date:** Monday, January 20, 2020 at 6:16 AM  
**To:** "Pianta, Robert C (rcp4p)" <rcp4p@virginia.edu>  
**Subject:** Permission to use CPRS

Dear Sir,

I have this great pleasure to write you on the above subject.

My name is Olabisi Akinola Patrick, a Phd student with University Putra Malaysia. My current research interest is on Family Involvement, School Environment, Family Stress and Perceptual Ability among children with learning disabilities. I shall be very grateful if I can be permitted to use the Child-Parent Relationship Scale to measure one of my variables.

Gazillion thanks for your prompt and favourable response.

**Image removed by sender.**

[Quoted text hidden]

---

**Akinola Olabisi** <celdaabuja@gmail.com>  
To: "Pianta, Robert C (rcp4p)" <rcp4p@virginia.edu>

Tue, Jan 21, 2020 at 1:05 PM

Thank you very much Sir for your kind and favourable response.

[Quoted text hidden]

---

**Akinola Olabisi** <celdaabuja@gmail.com>  
To: iyanuadebo@yahoo.com

Wed, Aug 24, 2022 at 6:02 PM

----- Forwarded message -----  
**From:** Akinola Olabisi <celdaabuja@gmail.com>  
**Date:** Mon, Jan 20, 2020 at 7:17 PM  
**Subject:** Permission to use CPRS  
**To:** <pianta@virginia.edu>  
[Quoted text hidden]

--  
Olabisi Akinola Patrick  
PhD Student GS48207  
[Quoted text hidden]

mail - Permission to use Baltimore City Public School System Climat...

<https://mail.google.com/mail/u/0/?ik=05b9525451&view=pt&search=>



Akinola Olabisi <celdaabuja@gmail.com>

---

### Permission to use Baltimore City Public School System Climate Survey (BCPSSCS)

3 messages

---

**Akinola Olabisi** <celdaabuja@gmail.com>  
To: mailtocityschoolsceo@bcps.k12.md.us, communications@bcps.k12.md.us

Wed, Aug 21, 2019 at 9:06 AM

Dear Sir/ma

My name is Olabisi Akinola patrick, currently a PhD student from University Putra Malaysia. I wish to please request the permission of your esteemed office to make use of the above stated scale to measure one of my variables. I shall be very grateful if you can send me the original scale, the interpretation and the meaning of the score. Thanking you in anticipation and God bless.

--  
Olabisi Akinola Patrick  
PhD Student  
Department of Human Development and Family Studies  
Faculty of Human Ecology  
University Putra Malaysia  
43000 Serdang  
Selangor  
+60163960200

---

postmaster@bcps.k12.md.us <postmaster@bcps.k12.md.us>  
o: celdaabuja@gmail.com

Wed, Aug 21, 2019 at 9:06 AM

**Delivery has failed to these recipients or distribution lists:**

[mailtocityschoolsceo@bcps.k12.md.us](mailto:mailtocityschoolsceo@bcps.k12.md.us)

The recipient's e-mail address was not found in the recipient's e-mail system. Microsoft Exchange will not try to redeliver this message for you. Please check the e-mail address and try resending this message, or provide the following diagnostic text to your system administrator.

Final-Recipient: rfc822;mailtocityschoolsceo@bcps.k12.md.us  
Action: failed  
Status: 5.1.1  
Diagnostic-Code: smtp;550 5.1.1 RESOLVER.ADR.RecipNotFound; not found

----- Forwarded message -----

From: Akinola Olabisi <celdaabuja@gmail.com>  
To: <mailtocityschoolsceo@bcps.k12.md.us>, <communications@bcps.k12.md.us>  
Cc:  
Bcc:  
Date: Wed, 21 Aug 2019 09:06:05 +0800  
Subject: Permission to use Baltimore City Public School System Climate Survey (BCPSSCS)  
Dear Sir/ma

My name is Olabisi Akinola patrick, currently a PhD student from University Putra Malaysia. I wish to please request the permission of your esteemed office to make use of the above stated scale to measure ore of my variables I shall be very grateful If you can send me the original scale, the interpretation and the meaning of the score. Thanking you in anticipation and God bless.

--  
Olabisi Akinola Patrick  
PhD Student  
Department of Human Development and Family Studies  
Faculty of Human Ecology  
University Putra Malaysia  
43000 Serdang  
Selangor  
+60163960200

---

**CAUTION:** This email originated from outside the Baltimore City Public School System. Do not click links, give sensitive information, or open attachments unless from a trusted source. Forward all suspicious emails to [CitySchoolsphish@bcps.k12.md.us](mailto:CitySchoolsphish@bcps.k12.md.us).

---

---

**Communications** <Communications@bcps.k12.md.us>  
To: Akinola Olabisi <celdaabuja@gmail.com>, "mailtocityschoolsceo@bcps.k12.md.us"  
<mailtocityschoolsceo@bcps.k12.md.us>

Thu, Aug 22, 2019 at 8:28 PM

Hi Akinola,

Please see the research and data page on the school district's website to request this information: <https://www.baltimorecityschools.org/research-and-data-requests>

24/8/2022, 6:09 pm

mission to use Baltimore City Public School System Climat... <https://mail.google.com/mail/u/0/?ik=05b9525451&view=pt&search=a...>

Thank you,

Abby Lane  
Communications  
Baltimore City Public Schools

---

**From:** Akinola Olabisi <[celdaabuja@gmail.com](mailto:celdaabuja@gmail.com)>  
**Sent:** Tuesday, August 20, 2019 9:06 PM  
**To:** [mailtocityschoolsceo@bcps.k12.md.us](mailto:mailtocityschoolsceo@bcps.k12.md.us) <[mailtocityschoolsceo@bcps.k12.md.us](mailto:mailtocityschoolsceo@bcps.k12.md.us)>; Communications <[Communications@bcps.k12.md.us](mailto:Communications@bcps.k12.md.us)>  
**Subject:** Permission to use Baltimore City Public School System Climate Survey (BCPSSCS)

Dear Sir/ma

[Quoted text hidden]

**CAUTION:** This email originated from outside the Baltimore City Public School System. Do not click links, give sensitive information, or open attachments unless from a trusted source. Forward all suspicious emails to [CitySchoolsphish@bcps.k12.md.us](mailto:CitySchoolsphish@bcps.k12.md.us).

NOTICE: The information contained in this e-mail may be confidential and is intended solely for the use of the named addressee. Access, copying or re-use of the e-mail or any information contained herein by any other person is not authorized. If you are not the intended recipient please notify us immediately by returning the e-mail to the originator.

mail - Permission to use Parental Stress Scale

<https://mail.google.com/mail/u/0/?ik=05b9525451&view=pt&search=a..>



Akinola Olabisi <[celdaabuja@gmail.com](mailto:celdaabuja@gmail.com)>

---

### Permission to use Parental Stress Scale

3 messages

---

**Akinola Olabisi** <[celdaabuja@gmail.com](mailto:celdaabuja@gmail.com)>  
To: [judy-berry@utulsa.edu](mailto:judy-berry@utulsa.edu)

Mon, Feb 3, 2020 at 2:56 PM

Dear Prof.,  
I have this great pleasure to write you on the above subject.  
My name is Olabisi Akinola Patrick, a Phd student with University Putra Malaysia. My current research interest is on Parent-Child Relationship, School Environment, Parental Stress and Perceptual Ability among children with learning disabilities. I shall be very grateful if I can be permitted to use the Parental Stress Scale to measure one of my variables.  
Gazillion thanks for your prompt and favourable response.

Sincerely,

--  
Olabisi Akinola Patrick  
PhD Student GS48207  
Department of Human Development and Family Studies  
Faculty of Human Ecology  
University Putra Malaysia  
43000 Serdang  
Selangor  
+60163960200

---

**Berry, Judy** <judy-berry@utulsa.edu>  
To: Akinola Olabisi <celdaabuja@gmail.com>

Tue, Feb 4, 2020 at 9:51 AM

You have my permission to use the Parental Stress Scale for your research.  
Dr. Judy Berry

Sent from my iPhone  
[Quoted text hidden]

---

**Akinola Olabisi** <celdaabuja@gmail.com>  
To: "Berry, Judy" <judy-berry@utulsa.edu>

Tue, Feb 4, 2020 at 12:40 PM

Thank you very much Prof.  
[Quoted text hidden]

Gmail - Permission to use social skills questionnaire (SSQ)

<https://mail.google.com/mail/u/0/?ik=05b9525451&view=pt&search=a..>



Akinola Olabisi <celdaabuja@gmail.com>

---

**Permission to use social skills questionnaire (SSQ)**

3 messages

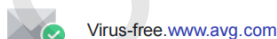
---

**Akinola Olabisi** <celdaabuja@gmail.com>  
To: "s.spence@griffith.edu.au" <s.spence@griffith.edu.au>

Wed, Aug 24, 2022 at 9:50 PM

Dear Professor Spence,  
My name is Akinola patrick Olabisi, A PhD student with University Putra Malaysia. I wish to request your kind permission to use your social skills questionnaire (SSQ) to measure a social skill variable, one of the variables of my research study.  
I thank you, Prof. for being an inspiration. I anticipate your favorable response.  
--  
Olabisi Akinola Patrick  
Ph.D. Student  
Department of Human Development and Family Studies

Faculty of Human Ecology  
University Putra Malaysia  
43000 Serdang  
Selangor  
+60163960200



---

**Susan H Spence** <s.spence@griffith.edu.au>  
To: Akinola Olabisi <celdaabuja@gmail.com>

Thu, Aug 25, 2022 at 3:33 PM

Dear Akinola,  
Thank you for your email  
You have my permission to use the SSQ in your research project.  
Please note that the measure is now rather old and the norms are similarly not recent.  
However, you are most welcome to use the scale if it meets your purposes.  
Good luck with your research.  
Kind regards  
Sue

\*\*\*\*\*

Susan H Spence, AO, FASSA, FAPS, PhD., MBA., BSc (Hons)  
Professor Emeritus, Australian Institute of Suicide Research and Prevention, and School of Applied Psychology,  
Level 1, Building M24, Mount Gravatt Campus,  
Griffith University,  
176, Messines Ridge Rd., Mt Gravatt,  
QLD 4121, Australia  
Email: [s.spence@griffith.edu.au](mailto:s.spence@griffith.edu.au)  
Tel: +61 7 37353338  
<http://www.brave-online.com/>  
<http://www.scaswebsite.com/>

---

**From:** Akinola Olabisi <[celdaabuja@gmail.com](mailto:celdaabuja@gmail.com)>  
**Sent:** Wednesday, August 24, 2022 11:50 pm  
**To:** Susan H Spence <[s.spence@griffith.edu.au](mailto:s.spence@griffith.edu.au)>  
**Subject:** Permission to use social skills questionnaire (SSQ)

1 of 2

25/8/2022, 3:50 pm

Gmail - Permission to use social skills questionnaire (SSQ)

<https://mail.google.com/mail/u/0/?ik=05b9525451&view=pt&search=a...>

[Quoted text hidden]

---

**Akinola Olabisi** <[celdaabuja@gmail.com](mailto:celdaabuja@gmail.com)>  
To: Susan H Spence <[s.spence@griffith.edu.au](mailto:s.spence@griffith.edu.au)>

Thu, Aug 25, 2022 at 3:49 PM

Thank you very much prof.

[Quoted text hidden]

--  
Olabisi Akinola Patrick  
PhD Student GS48207

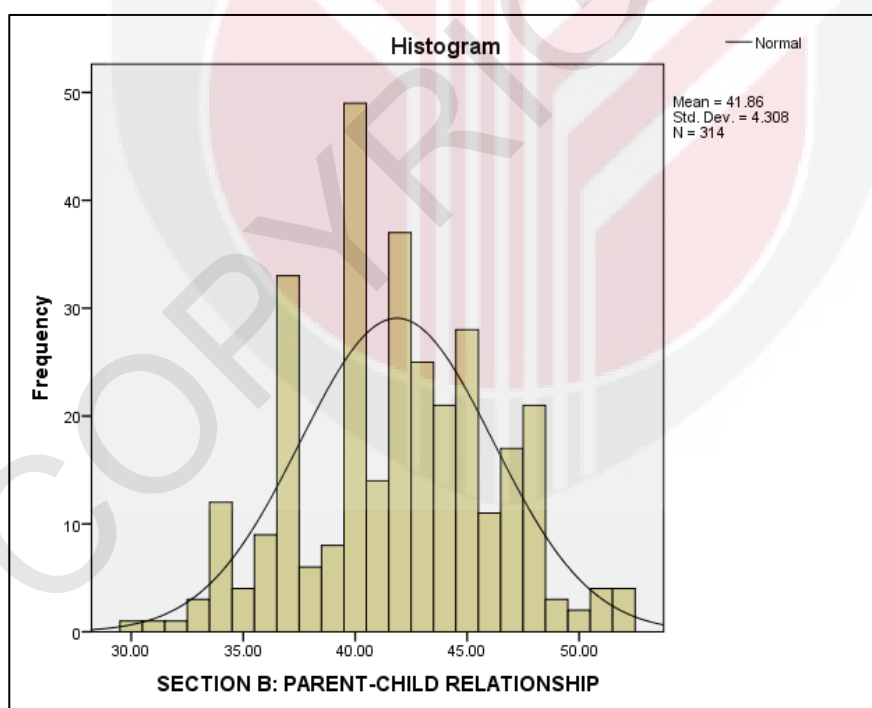
[Quoted text hidden]

## Appendix E

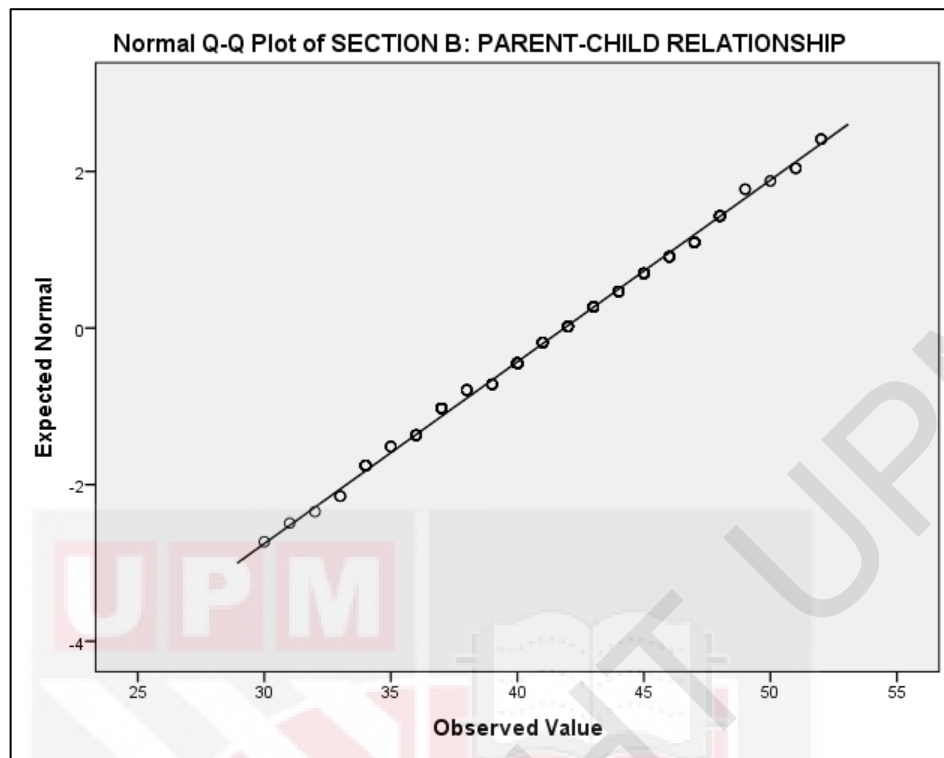
### Descriptive Tables and Figures for Normality Test

Descriptive of Parent-Child Relationship

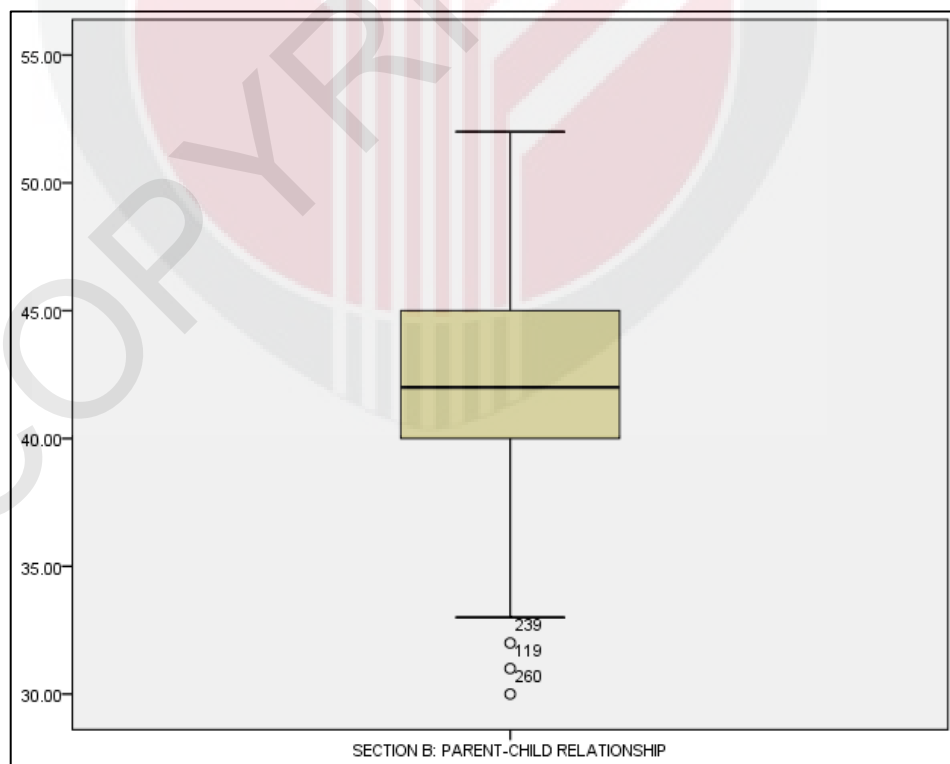
|                                      |                                  |             | Statistic | Std. Error |
|--------------------------------------|----------------------------------|-------------|-----------|------------|
| SECTION B: PARENT-CHILD RELATIONSHIP | Mean                             |             | 41.8599   | .24313     |
|                                      | 95% Confidence Interval for Mean | Lower Bound | 41.3815   |            |
|                                      |                                  | Upper Bound | 42.3383   |            |
|                                      | 5% Trimmed Mean                  |             | 41.8740   |            |
|                                      | Median                           |             | 42.0000   |            |
|                                      | Variance                         |             | 18.562    |            |
|                                      | Std. Deviation                   |             | 4.30834   |            |
|                                      | Minimum                          |             | 30.00     |            |
|                                      | Maximum                          |             | 52.00     |            |
|                                      | Range                            |             | 22.00     |            |
|                                      | Interquartile Range              |             | 5.25      |            |
|                                      | Skewness                         |             | -.045     | .138       |
|                                      | Kurtosis                         |             | -.357     | .274       |



Histogram of Parent-Child Relationship



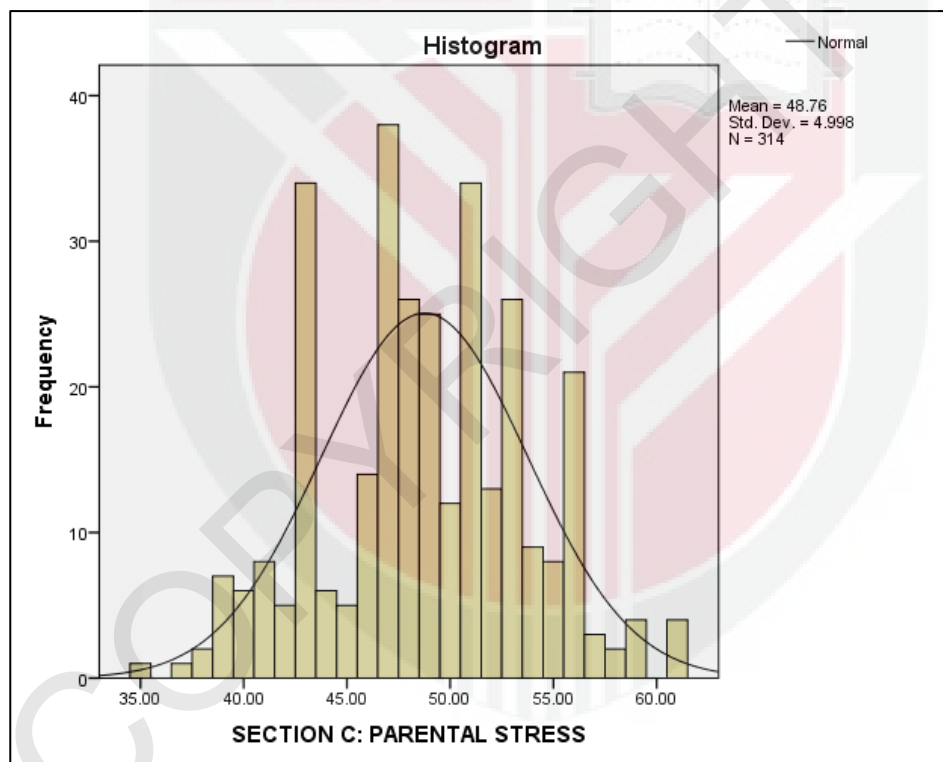
Normal Q-Q Plot of Parent-Child Relationship



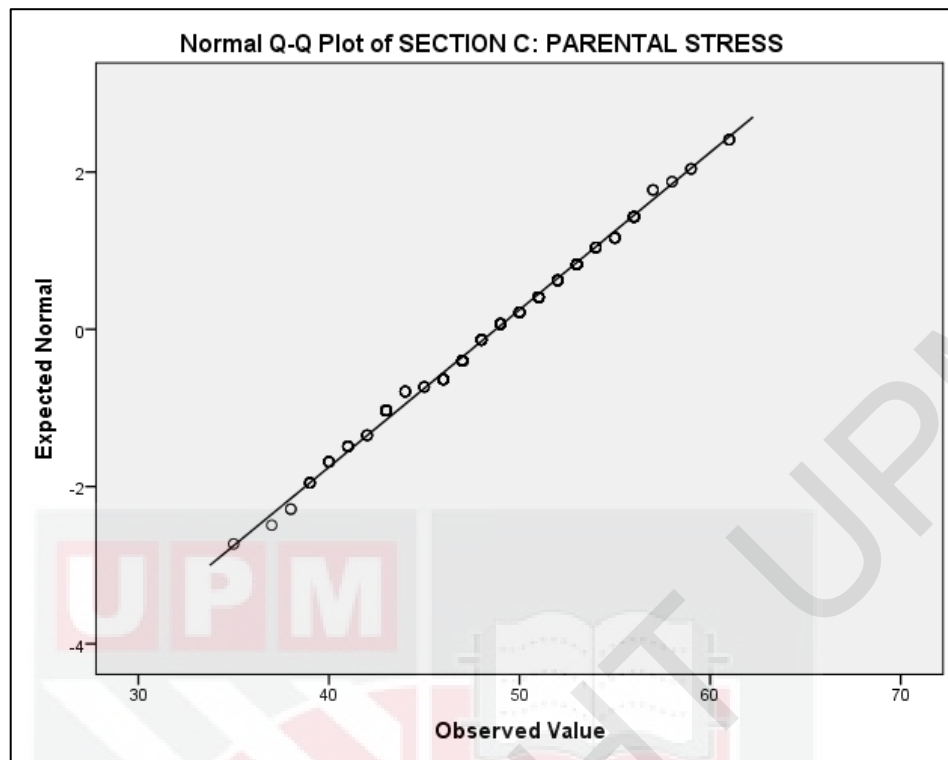
Outlier Box Plot of Parent-Child Relationship

## Descriptives of Parental Stress

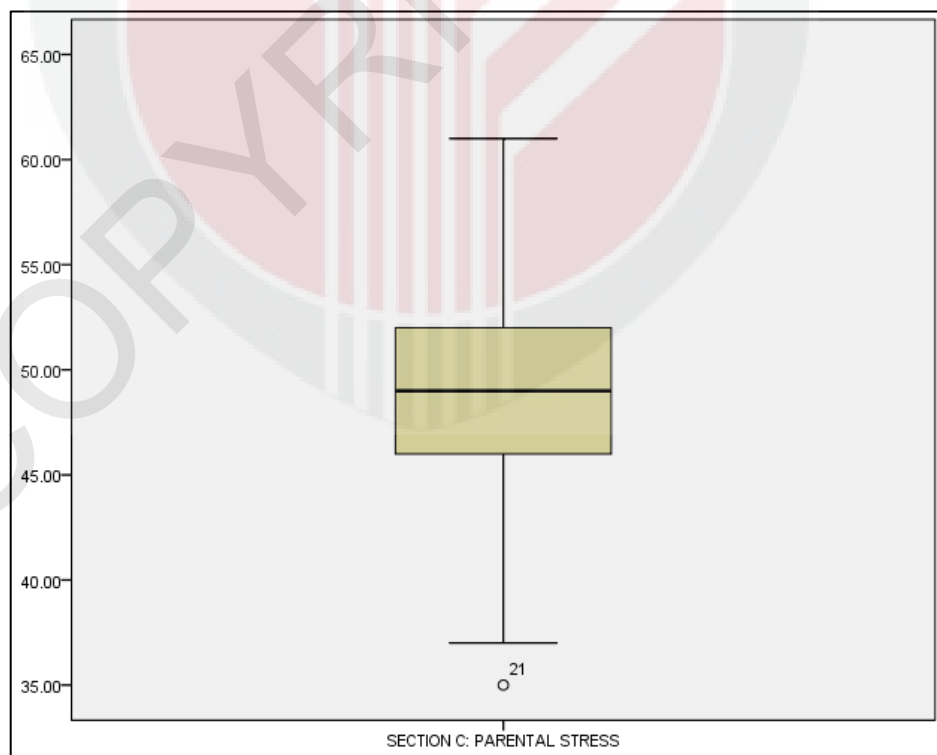
|                            |                                  |             | Statistic | Std. Error |
|----------------------------|----------------------------------|-------------|-----------|------------|
| SECTION C: PARENTAL STRESS | Mean                             |             | 48.7580   | .28203     |
|                            | 95% Confidence Interval for Mean | Lower Bound | 48.2030   |            |
|                            |                                  | Upper Bound | 49.3129   |            |
|                            | 5% Trimmed Mean                  |             | 48.7714   |            |
|                            | Median                           |             | 49.0000   |            |
|                            | Variance                         |             | 24.976    |            |
|                            | Std. Deviation                   |             | 4.99764   |            |
|                            | Minimum                          |             | 35.00     |            |
|                            | Maximum                          |             | 61.00     |            |
|                            | Range                            |             | 26.00     |            |
|                            | Interquartile Range              |             | 6.00      |            |
|                            | Skewness                         |             | -.039     | .138       |
|                            | Kurtosis                         |             | -.355     | .274       |



Histogram of Parental Stress



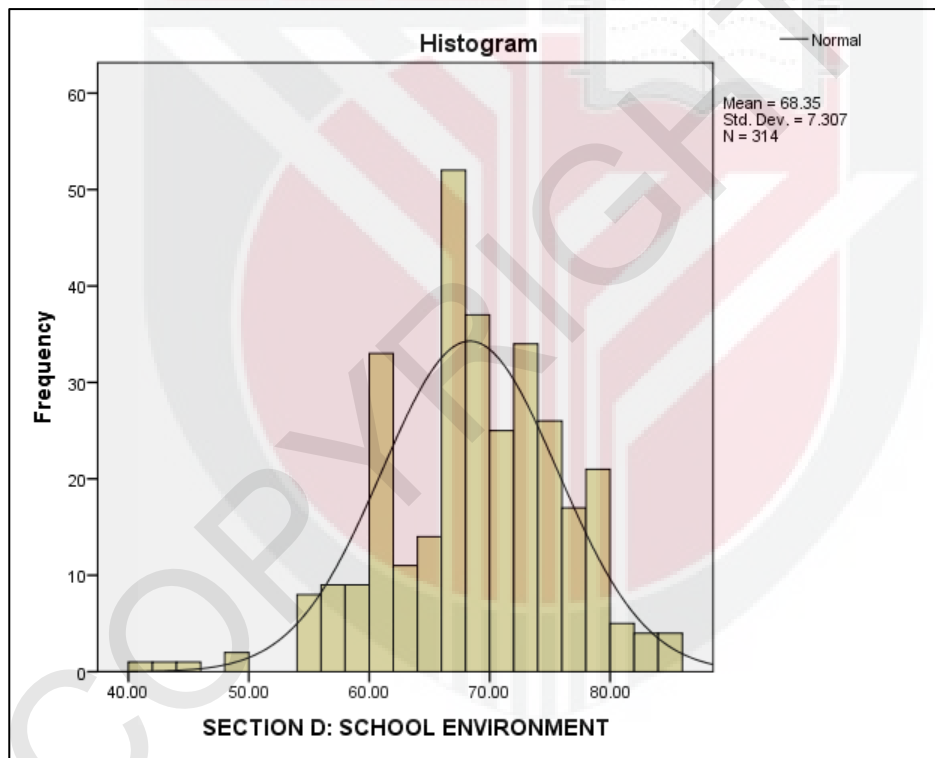
Normal Q-Q Plot of Parental Stress



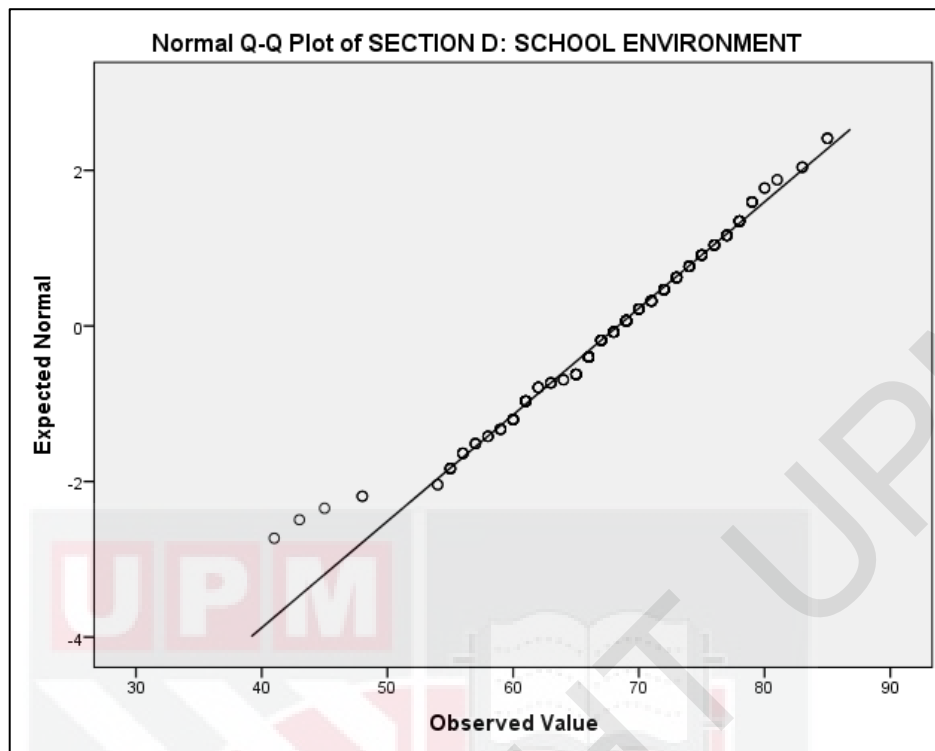
Outlier Box Plot of Parental Stress

Table 3: Descriptives of School Environment

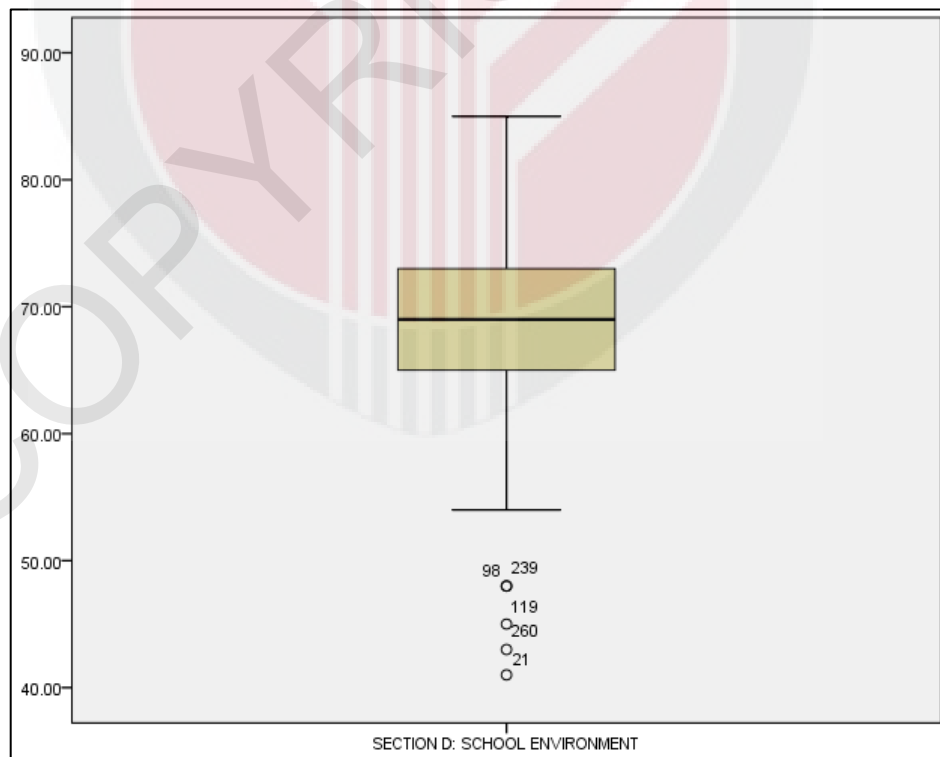
|                               |                                  |             | Statistic | Std. Error |
|-------------------------------|----------------------------------|-------------|-----------|------------|
| SECTION D: SCHOOL ENVIRONMENT | Mean                             |             | 68.3503   | .41238     |
|                               | 95% Confidence Interval for Mean | Lower Bound | 67.5389   |            |
|                               |                                  | Upper Bound | 69.1617   |            |
|                               | 5% Trimmed Mean                  |             | 68.5085   |            |
|                               | Median                           |             | 69.0000   |            |
|                               | Variance                         |             | 53.398    |            |
|                               | Std. Deviation                   |             | 7.30737   |            |
|                               | Minimum                          |             | 41.00     |            |
|                               | Maximum                          |             | 85.00     |            |
|                               | Range                            |             | 44.00     |            |
|                               | Interquartile Range              |             | 8.25      |            |
|                               | Skewness                         |             | -.409     | .138       |
|                               | Kurtosis                         |             | .652      | .274       |



Histogram of School Environment



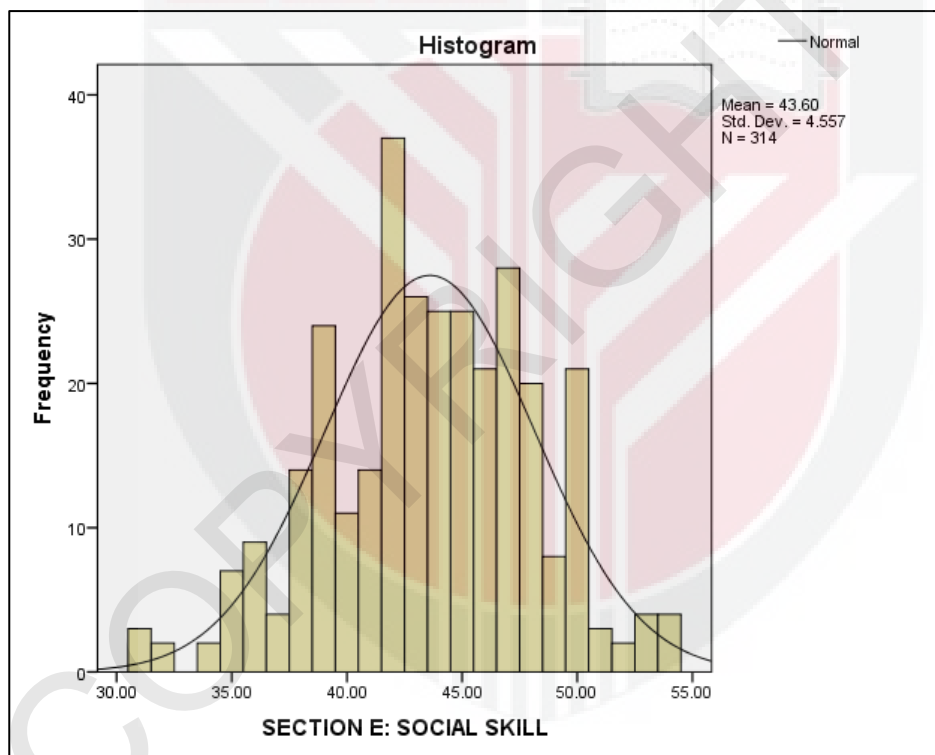
Normal Q-Q Plot of School Environment



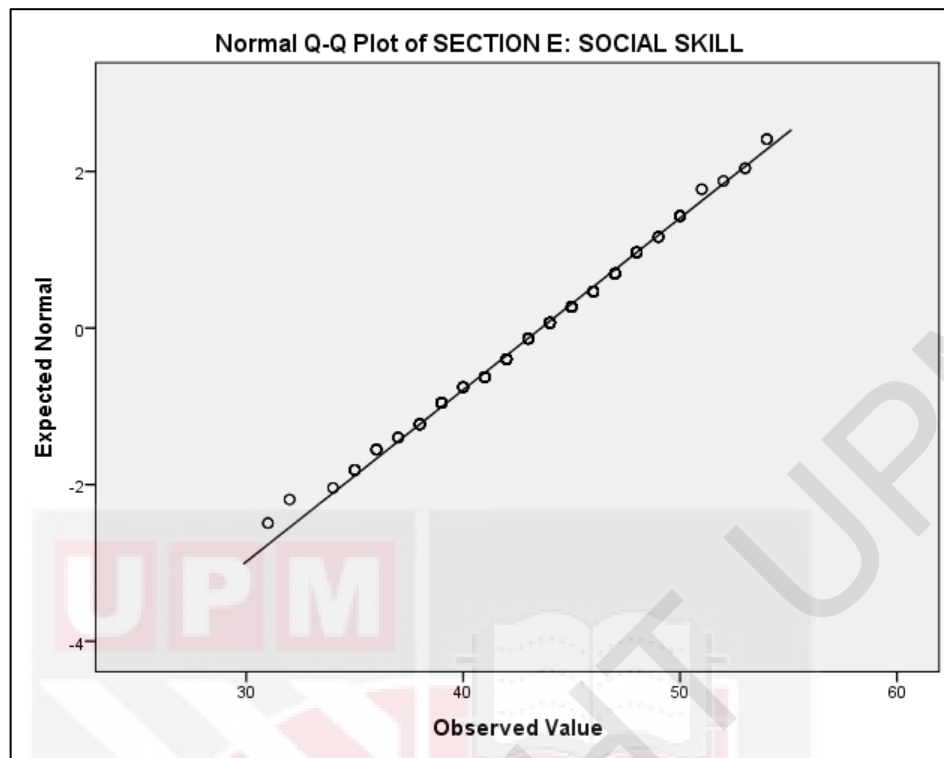
Outlier Box Plot of School Environment

## Descriptives Perceived Social Skill

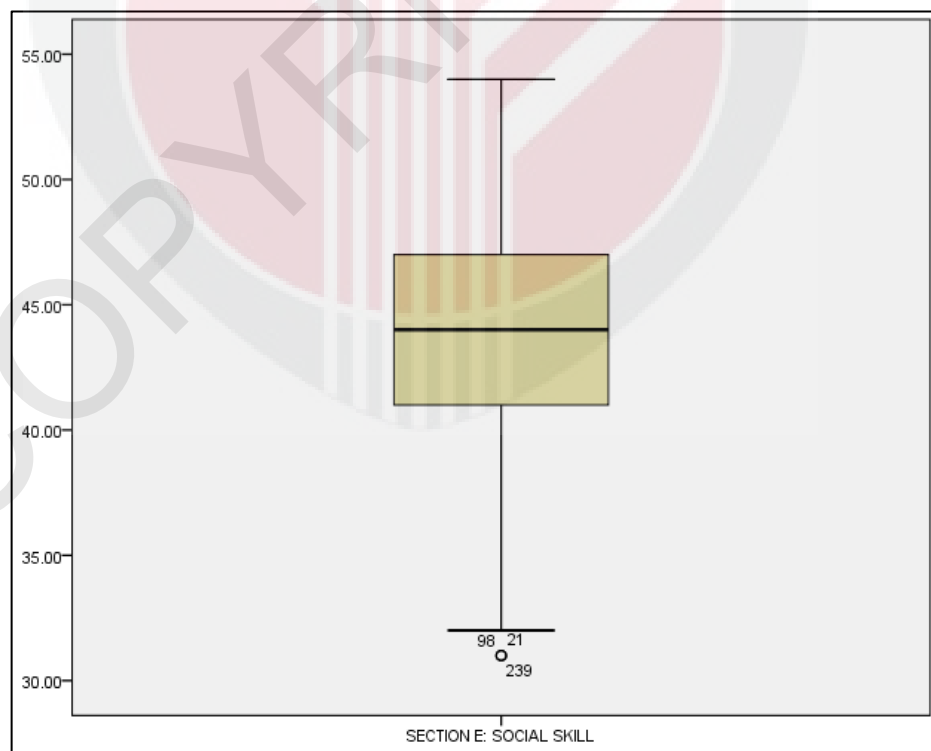
|                                      |                                     |             |  | Statistic | Std. Error |
|--------------------------------------|-------------------------------------|-------------|--|-----------|------------|
| SECTION E: PERCEIVED<br>SOCIAL SKILL | Mean                                |             |  | 43.5987   | .25716     |
|                                      | 95% Confidence Interval<br>for Mean | Lower Bound |  | 43.0927   |            |
|                                      |                                     | Upper Bound |  | 44.1047   |            |
|                                      | 5% Trimmed Mean                     |             |  | 43.6617   |            |
|                                      | Median                              |             |  | 44.0000   |            |
|                                      | Variance                            |             |  | 20.765    |            |
|                                      | Std. Deviation                      |             |  | 4.55686   |            |
|                                      | Minimum                             |             |  | 31.00     |            |
|                                      | Maximum                             |             |  | 54.00     |            |
|                                      | Range                               |             |  | 23.00     |            |
|                                      | Interquartile Range                 |             |  | 6.00      |            |
|                                      | Skewness                            |             |  | -.203     | .138       |
|                                      | Kurtosis                            |             |  | -.136     | .274       |



Histogram of Social Skill



Normal Q-Q Plot of Social Stress



Outlier Box Plot of Social Skill

## Appendix F

### Multiple Regression Assumption Analysis for Parental Stress

**Variables Entered/Removed<sup>a</sup>**

| Model | Variables Entered                                                                               | Variables Removed | Method |
|-------|-------------------------------------------------------------------------------------------------|-------------------|--------|
| 1     | SECTION E: SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT <sup>b</sup> |                   | Enter  |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

b. All requested variables entered.

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .998 <sup>a</sup> | .996     | .996              | .28795                     |

a. Predictors: (Constant), SECTION E: SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT

b. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

**ANOVA<sup>a</sup>**

| Model        | Sum of Squares | df  | Mean Square | F         | Sig.              |
|--------------|----------------|-----|-------------|-----------|-------------------|
| 1 Regression | 7046.742       | 3   | 2348.914    | 28328.858 | .000 <sup>b</sup> |
| Residual     | 25.704         | 310 | .083        |           |                   |
| Total        | 7072.446       | 313 |             |           |                   |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

b. Predictors: (Constant), SECTION E: PERCEIVED SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT

**Coefficients<sup>a</sup>**

| Model                             | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|-----------------------------------|-----------------------------|------------|---------------------------|--------|
|                                   | B                           | Std. Error | Beta                      |        |
| 1 (Constant)                      | -.396                       | .147       |                           | -2.693 |
| SECTION C: PARENTAL STRESS        | -.056                       | .058       | -.066                     | -.977  |
| SECTION D: SCHOOL ENVIRONMENT     | .620                        | .056       | 1.003                     | 11.124 |
| SECTION E: PERCEIVED SOCIAL SKILL | .059                        | .064       | .061                      | .920   |

**Coefficients<sup>a</sup>**

| Model                             | Sig. | Collinearity Statistics |         |
|-----------------------------------|------|-------------------------|---------|
|                                   |      | Tolerance               | VIF     |
| 1 (Constant)                      | .007 |                         |         |
| SECTION C: PARENTAL STRESS        | .329 | .003                    | 384.815 |
| SECTION D: SCHOOL ENVIRONMENT     | .000 | .001                    | 693.861 |
| SECTION E: PERCEIVED SOCIAL SKILL | .358 | .003                    | 368.931 |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

#### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions |                            |                               |
|-------|-----------|------------|-----------------|----------------------|----------------------------|-------------------------------|
|       |           |            |                 | (Constant)           | SECTION C: PARENTAL STRESS | SECTION D: SCHOOL ENVIRONMENT |
| 1     | 1         | 3.991      | 1.000           | .00                  | .00                        | .00                           |
|       | 2         | .009       | 20.555          | .97                  | .00                        | .00                           |
|       | 3         | 3.105E-5   | 358.500         | .01                  | .52                        | .00                           |
|       | 4         | 1.205E-5   | 575.558         | .01                  | .48                        | 1.00                          |

#### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Variance Proportions              |     |
|-------|-----------|-----------------------------------|-----|
|       |           | SECTION E: PERCEIVED SOCIAL SKILL |     |
| 1     | 1         |                                   | .00 |
|       | 2         |                                   | .00 |
|       | 3         |                                   | .56 |
|       | 4         |                                   | .44 |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

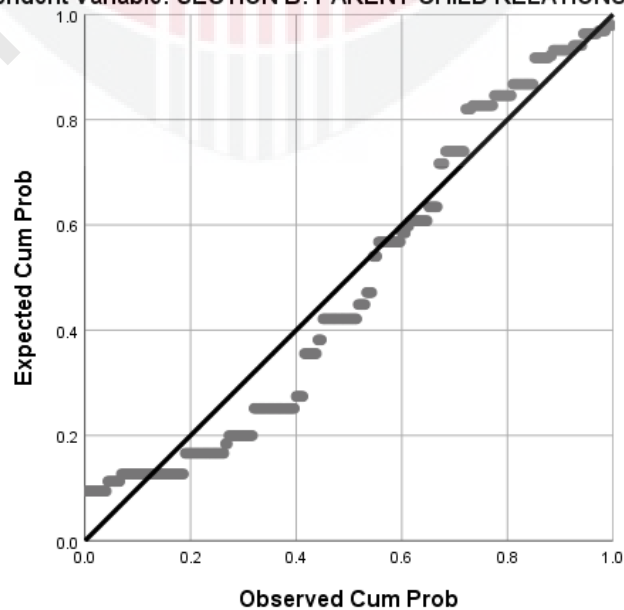
#### Residuals Statistics<sup>a</sup>

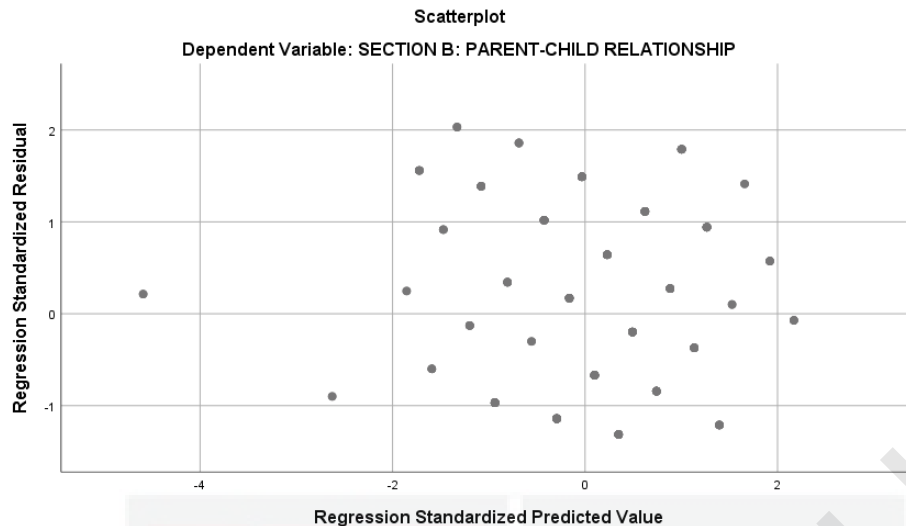
|                      | Minimum | Maximum | Mean    | Std. Deviation | N   |
|----------------------|---------|---------|---------|----------------|-----|
| Predicted Value      | 19.9384 | 52.0206 | 41.7261 | 4.74484        | 314 |
| Residual             | -.37847 | .58504  | .00000  | .28657         | 314 |
| Std. Predicted Value | -4.592  | 2.170   | .000    | 1.000          | 314 |
| Std. Residual        | -1.314  | 2.032   | .000    | .995           | 314 |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

## Charts

Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP





## Appendix G

### Multiple Regression Assumption Analysis for School Environment

#### Variables Entered/Removed<sup>a</sup>

| Model | Variables Entered                                                                                                | Variables Removed | Method |
|-------|------------------------------------------------------------------------------------------------------------------|-------------------|--------|
| 1     | SECTION B: PARENT-CHILD RELATIONSHIP, SECTION C: PARENTAL STRESS, SECTION E: PERCEIVED SOCIAL SKILL <sup>b</sup> | .                 | Enter  |

a. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

b. All requested variables entered.

#### Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .999 <sup>a</sup> | .999     | .999              | .24809                     |

a. Predictors: (Constant), SECTION B: PARENT-CHILD RELATIONSHIP, SECTION C: PARENTAL STRESS, SECTION E: PERCEIVED SOCIAL SKILL

b. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

#### ANOVA<sup>a</sup>

| Model        | Sum of Squares | df  | Mean Square | F          | Sig.              |
|--------------|----------------|-----|-------------|------------|-------------------|
| 1 Regression | 18504.538      | 3   | 6168.179    | 100216.020 | .000 <sup>b</sup> |
| Residual     | 19.080         | 310 | .062        |            |                   |
| Total        | 18523.618      | 313 |             |            |                   |

a. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

b. Predictors: (Constant), SECTION B: PARENT-CHILD RELATIONSHIP, SECTION C: PARENTAL STRESS, SECTION E: PERCEIVED SOCIAL SKILL

| Coefficients <sup>a</sup>            |                             |            |                           |        |
|--------------------------------------|-----------------------------|------------|---------------------------|--------|
| Model                                | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|                                      | B                           | Std. Error | Beta                      |        |
| 1 (Constant)                         | .402                        | .126       |                           | 3.195  |
| SECTION C: PARENTAL STRESS           | .535                        | .040       | .384                      | 13.527 |
| SECTION E: PERCEIVED SOCIAL SKILL    | .521                        | .046       | .332                      | 11.229 |
| SECTION B: PARENT-CHILD RELATIONSHIP | .460                        | .041       | .284                      | 11.124 |

| Coefficients <sup>a</sup>            |      |                         |         |  |
|--------------------------------------|------|-------------------------|---------|--|
| Model                                | Sig. | Collinearity Statistics |         |  |
|                                      |      | Tolerance               | VIF     |  |
| 1 (Constant)                         | .002 |                         |         |  |
| SECTION C: PARENTAL STRESS           | .000 | .004                    | 242.723 |  |
| SECTION E: PERCEIVED SOCIAL SKILL    | .000 | .004                    | 262.977 |  |
| SECTION B: PARENT-CHILD RELATIONSHIP | .000 | .005                    | 196.652 |  |

a. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

| Collinearity Diagnostics <sup>a</sup> |           |            |                 |            |                            |                         |
|---------------------------------------|-----------|------------|-----------------|------------|----------------------------|-------------------------|
| Model                                 | Dimension | Eigenvalue | Condition Index | (Constant) | Variance Proportions       |                         |
|                                       |           |            |                 |            | SECTION C: PARENTAL STRESS | SECTION E: SOCIAL SKILL |
| 1                                     | 1         | 3.990      | 1.000           | .00        | .00                        | .00                     |
|                                       | 2         | .010       | 20.491          | .98        | .00                        | .00                     |
|                                       | 3         | 4.360E-5   | 302.533         | .00        | .32                        | .09                     |
|                                       | 4         | 3.072E-5   | 360.394         | .02        | .68                        | .91                     |

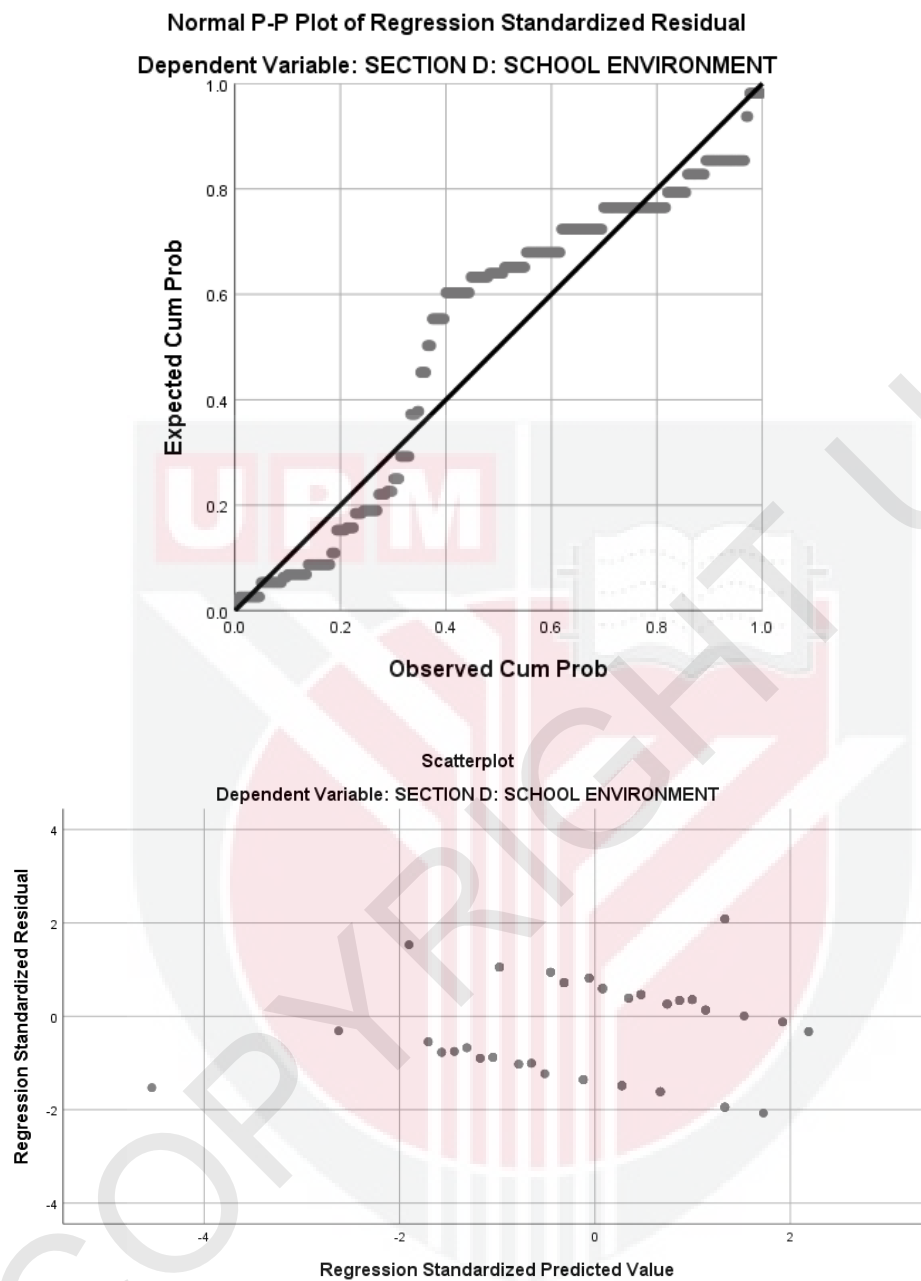
| Collinearity Diagnostics <sup>a</sup> |           |                                      |  |     |
|---------------------------------------|-----------|--------------------------------------|--|-----|
| Model                                 | Dimension | Variance Proportions                 |  |     |
|                                       |           | SECTION B: PARENT-CHILD RELATIONSHIP |  |     |
| 1                                     | 1         |                                      |  | .00 |
|                                       | 2         |                                      |  | .00 |
|                                       | 3         |                                      |  | .96 |
|                                       | 4         |                                      |  | .04 |

a. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

| Residuals Statistics <sup>a</sup> |         |         |         |                |     |
|-----------------------------------|---------|---------|---------|----------------|-----|
|                                   | Minimum | Maximum | Mean    | Std. Deviation | N   |
| Predicted Value                   | 33.3793 | 85.0808 | 68.2548 | 7.68895        | 314 |
| Residual                          | -.51415 | .51746  | .00000  | .24690         | 314 |
| Std. Predicted Value              | -4.536  | 2.188   | .000    | 1.000          | 314 |
| Std. Residual                     | -2.072  | 2.086   | .000    | .995           | 314 |

a. Dependent Variable: SECTION D: SCHOOL ENVIRONMENT

## Charts



## Appendix H

### Multiple Regression Assumption Analysis for Parental Stress

**Variables Entered/Removed<sup>a</sup>**

| Model | Variables Entered                                                                                                   | Variables Removed | Method |
|-------|---------------------------------------------------------------------------------------------------------------------|-------------------|--------|
| 1     | SECTION D: SCHOOL ENVIRONMENT, SECTION B: PARENT-CHILD RELATIONSHIP, SECTION E: PERCEIVED SOCIAL SKILL <sup>b</sup> | .                 | Enter  |

a. Dependent Variable: SECTION C: PARENTAL STRESS

b. All requested variables entered.

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .999 <sup>a</sup> | .997     | .997              | .28251                     |

a. Predictors: (Constant), SECTION D: SCHOOL ENVIRONMENT, SECTION B: PARENT-CHILD RELATIONSHIP, SECTION E: PERCEIVED SOCIAL SKILL

b. Dependent Variable: SECTION C: PARENTAL STRESS

**ANOVA<sup>a</sup>**

| Model |            | Sum of Squares | df  | Mean Square | F         | Sig.              |
|-------|------------|----------------|-----|-------------|-----------|-------------------|
| 1     | Regression | 9525.437       | 3   | 3175.146    | 39783.408 | .000 <sup>b</sup> |
|       | Residual   | 24.741         | 310 | .080        |           |                   |
|       | Total      | 9550.178       | 313 |             |           |                   |

a. Dependent Variable: SECTION C: PARENTAL STRESS

b. Predictors: (Constant), SECTION D: SCHOOL ENVIRONMENT, SECTION B: PARENT-CHILD RELATIONSHIP, SECTION E: PERCEIVED SOCIAL SKILL

**Coefficients<sup>a</sup>**

| Model |                                      | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|-------|--------------------------------------|-----------------------------|------------|---------------------------|--------|
|       |                                      | B                           | Std. Error | Beta                      |        |
| 1     | (Constant)                           | -.384                       | .144       |                           | -2.667 |
|       | SECTION E: PERCEIVED SOCIAL SKILL    | .089                        | .062       | .079                      | 1.431  |
|       | SECTION B: PARENT-CHILD RELATIONSHIP | -.054                       | .056       | -.047                     | -.977  |
|       | SECTION D: SCHOOL ENVIRONMENT        | .694                        | .051       | .966                      | 13.527 |

**Coefficients<sup>a</sup>**

| Model                                | Sig. | Collinearity Statistics |         |
|--------------------------------------|------|-------------------------|---------|
|                                      |      | Tolerance               | VIF     |
| 1 (Constant)                         | .008 |                         |         |
| SECTION E: PERCEIVED SOCIAL SKILL    | .153 | .003                    | 367.512 |
| SECTION B: PARENT-CHILD RELATIONSHIP | .329 | .004                    | 274.305 |
| SECTION D: SCHOOL ENVIRONMENT        | .000 | .002                    | 610.474 |

a. Dependent Variable: SECTION C: PARENTAL STRESS

### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Eigenvalue | Condition Index | (Constant) | Variance Proportions    |                                      |
|-------|-----------|------------|-----------------|------------|-------------------------|--------------------------------------|
|       |           |            |                 |            | SECTION E: SOCIAL SKILL | SECTION B: PARENT-CHILD RELATIONSHIP |
| 1     | 1         | 3.990      | 1.000           | .00        | .00                     | .00                                  |
|       | 2         | .009       | 20.544          | .97        | .00                     | .00                                  |
|       | 3         | 3.893E-5   | 320.171         | .02        | .36                     | .68                                  |
|       | 4         | 1.352E-5   | 543.325         | .01        | .64                     | .32                                  |

### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Variance Proportions          |     |
|-------|-----------|-------------------------------|-----|
|       |           | SECTION D: SCHOOL ENVIRONMENT |     |
| 1     | 1         |                               | .00 |
|       | 2         |                               | .00 |
|       | 3         |                               | .01 |
|       | 4         |                               | .99 |

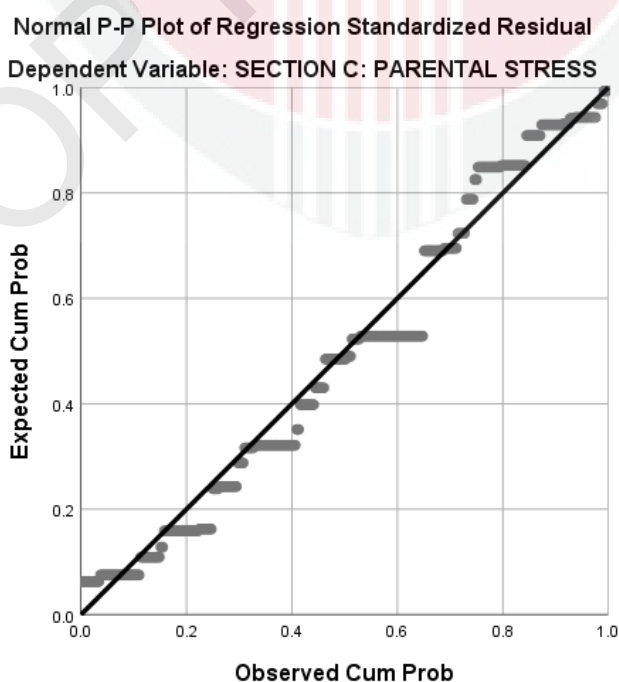
a. Dependent Variable: SECTION C: PARENTAL STRESS

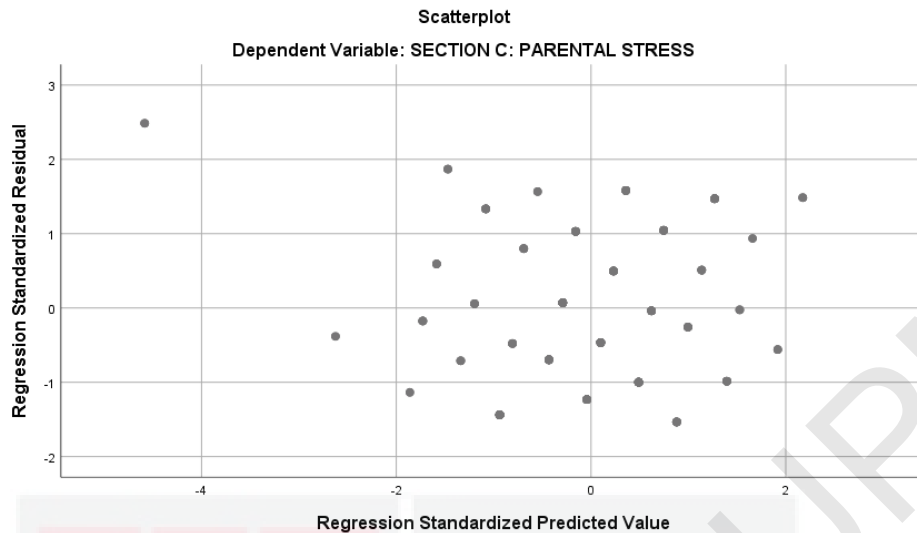
### Residuals Statistics<sup>a</sup>

|                      | Minimum | Maximum | Mean    | Std. Deviation | N   |
|----------------------|---------|---------|---------|----------------|-----|
| Predicted Value      | 23.2977 | 60.5806 | 48.5860 | 5.51658        | 314 |
| Residual             | -.43336 | .70227  | .00000  | .28115         | 314 |
| Std. Predicted Value | -4.584  | 2.174   | .000    | 1.000          | 314 |
| Std. Residual        | -1.534  | 2.486   | .000    | .995           | 314 |

a. Dependent Variable: SECTION C: PARENTAL STRESS

## Charts





## Appendix I

### Multiple Regression Assumption Analysis for Perceived Social Skills of Children with Learning Disabilities

#### Variables Entered/Removed<sup>a</sup>

| Model | Variables Entered                                                                               | Variables Removed | Method |
|-------|-------------------------------------------------------------------------------------------------|-------------------|--------|
| 1     | Section C: Parental Stress, Section B: Parent-Child Relationship, Section D: SCHOOL Environment | .                 | Enter  |

a. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

b. All requested variables entered.

#### Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .999 <sup>a</sup> | .997     | .997              | .25625                     |

a. Predictors: (Constant), SECTION C: PARENTAL STRESS, SECTION B: PARENT-CHILD RELATIONSHIP, SECTION D: SCHOOL ENVIRONMENT

b. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

#### ANOVA<sup>a</sup>

| Model |            | Sum of Squares | df  | Mean Square | F         | Sig.              |
|-------|------------|----------------|-----|-------------|-----------|-------------------|
| 1     | Regression | 7510.030       | 3   | 2503.343    | 38123.695 | .000 <sup>b</sup> |
|       | Residual   | 20.356         | 310 | .066        |           |                   |
|       | Total      | 7530.385       | 313 |             |           |                   |

a. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

b. Predictors: (Constant), SECTION C: PARENTAL STRESS, SECTION B: PARENT-CHILD RELATIONSHIP, SECTION D: SCHOOL ENVIRONMENT

| Coefficients <sup>a</sup>            |                             |            |                           |        |
|--------------------------------------|-----------------------------|------------|---------------------------|--------|
| Model                                | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|                                      | B                           | Std. Error | Beta                      |        |
| 1 (Constant)                         | .103                        | .132       |                           | .781   |
| SECTION B: PARENT-CHILD RELATIONSHIP | .046                        | .050       | .045                      | .920   |
| SECTION D: SCHOOL ENVIRONMENT        | .555                        | .049       | .871                      | 11.229 |
| SECTION C: PARENTAL STRESS           | .073                        | .051       | .083                      | 1.431  |

| Coefficients <sup>a</sup>            |      |                         |         |  |
|--------------------------------------|------|-------------------------|---------|--|
| Model                                | Sig. | Collinearity Statistics |         |  |
|                                      |      | Tolerance               | VIF     |  |
| 1 (Constant)                         | .436 |                         |         |  |
| SECTION B: PARENT-CHILD RELATIONSHIP | .358 | .004                    | 274.401 |  |
| SECTION D: SCHOOL ENVIRONMENT        | .000 | .001                    | 690.130 |  |
| SECTION C: PARENTAL STRESS           | .153 | .003                    | 383.468 |  |

a. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

| Collinearity Diagnostics <sup>a</sup> |           |            |                 |            |                                      |                               |
|---------------------------------------|-----------|------------|-----------------|------------|--------------------------------------|-------------------------------|
| Model                                 | Dimension | Eigenvalue | Condition Index | (Constant) | Variance Proportions                 |                               |
|                                       |           |            |                 |            | SECTION B: PARENT-CHILD RELATIONSHIP | SECTION D: SCHOOL ENVIRONMENT |
| 1                                     | 1         | 3.990      | 1.000           | .00        | .00                                  | .00                           |
|                                       | 2         | .010       | 20.486          | .95        | .00                                  | .00                           |
|                                       | 3         | 4.247E-5   | 306.516         | .00        | .62                                  | .00                           |
|                                       | 4         | 1.201E-5   | 576.392         | .05        | .38                                  | 1.00                          |

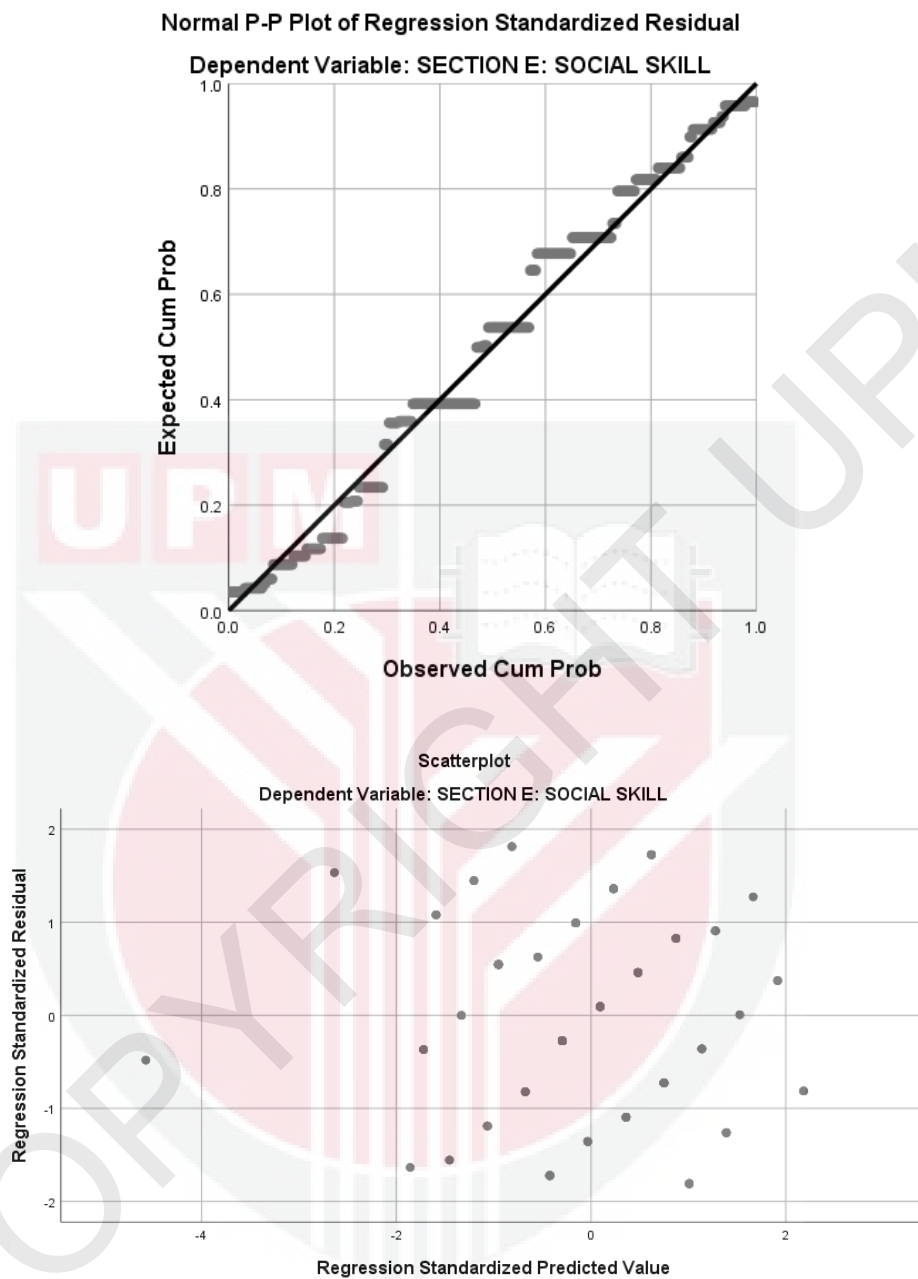
| Collinearity Diagnostics <sup>a</sup> |           |                            |  |     |
|---------------------------------------|-----------|----------------------------|--|-----|
| Model                                 | Dimension | Variance Proportions       |  |     |
|                                       |           | SECTION C: PARENTAL STRESS |  |     |
| 1                                     | 1         |                            |  | .00 |
|                                       | 2         |                            |  | .00 |
|                                       | 3         |                            |  | .33 |
|                                       | 4         |                            |  | .67 |

a. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

| Residuals Statistics <sup>a</sup> |         |         |         |                |     |
|-----------------------------------|---------|---------|---------|----------------|-----|
|                                   | Minimum | Maximum | Mean    | Std. Deviation | N   |
| Predicted Value                   | 21.1234 | 54.2086 | 43.5191 | 4.89834        | 314 |
| Residual                          | -.46348 | .46476  | .00000  | .25502         | 314 |
| Std. Predicted Value              | -4.572  | 2.182   | .000    | 1.000          | 314 |
| Std. Residual                     | -1.809  | 1.814   | .000    | .995           | 314 |

a. Dependent Variable: SECTION E: PERCEIVED SOCIAL SKILL

## Charts



## Appendix J

### Multiple Regression Assumption Analysis for Parent-Child Relationship

**Variables Entered/Removed<sup>a</sup>**

| Model | Variables Entered                                                                                         | Variables Removed | Method |
|-------|-----------------------------------------------------------------------------------------------------------|-------------------|--------|
| 1     | SECTION E: PERCEIVED SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT <sup>b</sup> | .                 | Enter  |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

b. All requested variables entered.

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .998 <sup>a</sup> | .996     | .996              | .28795                     |

a. Predictors: (Constant), SECTION E: PERCEIVED SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT

b. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

**ANOVA<sup>a</sup>**

| Model        | Sum of Squares | df  | Mean Square | F         | Sig.              |
|--------------|----------------|-----|-------------|-----------|-------------------|
| 1 Regression | 7046.742       | 3   | 2348.914    | 28328.858 | .000 <sup>b</sup> |
| Residual     | 25.704         | 310 | .083        |           |                   |
| Total        | 7072.446       | 313 |             |           |                   |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

b. Predictors: (Constant), SECTION E: PERCEIVED SOCIAL SKILL, SECTION C: PARENTAL STRESS, SECTION D: SCHOOL ENVIRONMENT

**Coefficients<sup>a</sup>**

| Model |                                   | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|-------|-----------------------------------|-----------------------------|------------|---------------------------|--------|
|       |                                   | B                           | Std. Error | Beta                      |        |
| 1     | (Constant)                        | -.396                       | .147       |                           | -2.693 |
|       | SECTION C: PARENTAL STRESS        | -.056                       | .058       | -.066                     | -.977  |
|       | SECTION D: SCHOOL ENVIRONMENT     | .620                        | .056       | 1.003                     | 11.124 |
|       | SECTION E: PERCEIVED SOCIAL SKILL | .059                        | .064       | .061                      | .920   |

**Coefficients<sup>a</sup>**

| Model                             | Sig. | Collinearity Statistics |         |
|-----------------------------------|------|-------------------------|---------|
|                                   |      | Tolerance               | VIF     |
| 1 (Constant)                      | .007 |                         |         |
| SECTION C: PARENTAL STRESS        | .329 | .003                    | 384.815 |
| SECTION D: SCHOOL ENVIRONMENT     | .000 | .001                    | 693.861 |
| SECTION E: PERCEIVED SOCIAL SKILL | .358 | .003                    | 368.931 |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

| Collinearity Diagnostics <sup>a</sup> |           |            |                 |                      |                            |                               |
|---------------------------------------|-----------|------------|-----------------|----------------------|----------------------------|-------------------------------|
| Model                                 | Dimension | Eigenvalue | Condition Index | Variance Proportions |                            |                               |
|                                       |           |            |                 | (Constant)           | SECTION C: PARENTAL STRESS | SECTION D: SCHOOL ENVIRONMENT |
| 1                                     | 1         | 3.991      | 1.000           | .00                  | .00                        | .00                           |
|                                       | 2         | .009       | 20.555          | .97                  | .00                        | .00                           |
|                                       | 3         | 3.105E-5   | 358.500         | .01                  | .52                        | .00                           |
|                                       | 4         | 1.205E-5   | 575.558         | .01                  | .48                        | 1.00                          |

| Collinearity Diagnostics <sup>a</sup> |           |                                   |  |  |  |     |
|---------------------------------------|-----------|-----------------------------------|--|--|--|-----|
| Model                                 | Dimension | Variance Proportions              |  |  |  |     |
|                                       |           | SECTION E: PERCEIVED SOCIAL SKILL |  |  |  |     |
| 1                                     | 1         |                                   |  |  |  | .00 |
|                                       | 2         |                                   |  |  |  | .00 |
|                                       | 3         |                                   |  |  |  | .56 |
|                                       | 4         |                                   |  |  |  | .44 |

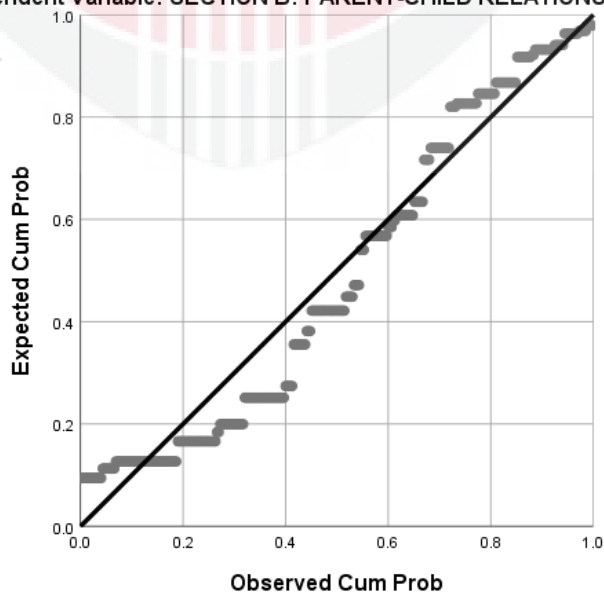
a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

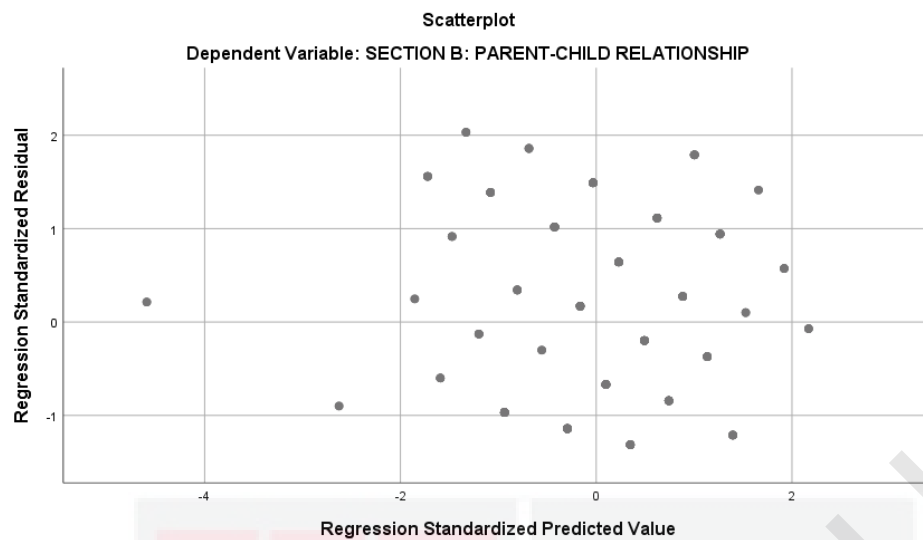
| Residuals Statistics <sup>a</sup> |         |         |         |                |     |
|-----------------------------------|---------|---------|---------|----------------|-----|
|                                   | Minimum | Maximum | Mean    | Std. Deviation | N   |
| Predicted Value                   | 19.9384 | 52.0206 | 41.7261 | 4.74484        | 314 |
| Residual                          | -.37847 | .58504  | .00000  | .28657         | 314 |
| Std. Predicted Value              | -4.592  | 2.170   | .000    | 1.000          | 314 |
| Std. Residual                     | -1.314  | 2.032   | .000    | .995           | 314 |

a. Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP

## Charts

Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: SECTION B: PARENT-CHILD RELATIONSHIP





## BIODATA OF STUDENT

Akinola Patrick Olabisi is a Specialist Practitioner in learning disabilities for about thirty-two years now and a Consultant in special and general education. He is a Consultant to many private and government institutions in Nigeria. He is a regular participant at international and local workshops and conferences. He organizes round the year, inductive and proficient seminars, workshops and conferences for parents, teachers, policy makers, administrators and caregivers of persons with special needs to enhance expertise and develop capacity. He is an up-to-date author of several books in their volumes with focus on child care and special needs education. He served as Consultant to the late First Lady of Nigeria, Chief Mrs Stella Obasanjo (2000 - 2002), and also the Coordinator of her pet project - Child Care Trust (2006 - 2010). He holds Bachelor's and Master's Degrees in learning disabilities. He is currently a PhD student in the prestigious University Putra Malaysia. He serves as the President, Board of Trustees and the Executive Director, **Oasis Centre for Learning Disabilities and Audiology** and Coordinator/Consultant, **Special Needs Education Consult, Abuja, Nigeria**. He was privileged to serve as the pioneer President of Human Ecology Post Graduate Students Association (**HEPSA**). He also served as the Secretary General, Nigerian Students Community, UPM (2019/2020). He is an Inclusion Advocate and a member of Council for Exceptional Children (America), National Association for Exceptional Children (Nigeria), Education in Emergency working group (**EIEWG**) (**UNICEF, Nigeria**), Association of Institutions and Initiatives for the Care of the mentally Handicapped Children in West and Central Africa Sub-region (Nigeria Chapter). He has among others, the following publications to his credit: Therapies for Children with Arithmetic Problems; Child Care and Special Needs Education (Vol. 1-

5); Attention Deficit Hyperactivity Disorder: A Handbook for parents, teachers and caregivers. Akinola Patrick Olabisi is a husband of one wife, with three grown up boys and a daughter.



## LIST OF PUBLICATIONS

- Ahmad, S., Olabisi, A. P., Daud, M. D., Mansor, M., & Eyiaroni, A. F. (2023). Influence of Family Background on Social Skills Development of Children with Learning Disabilities in Abuja, Nigeria (SCOPUS).
- Olabisi, A. P., Ahmad, S., Mansor, M., & Daud, M. N. (2022). Examining the Relationship between Parents' Profile and Parent – Child Relationship among Parents of Children with Learning Disabilities (SCOPUS).
- Olabisi, A. P., Ahmad, S., Mansor, M., & Daud, M. N. (2022). Parental Stress and Parents' Profile among Parents of Children with Learning Disabilities (ERA).
- Olabisi, A. P., Daud, M. N., Ahmad, S., & Mansor, M. (2022). Examining the Assessment Profile of Perceptual Ability among Children with Learning Disabilities. (SCOPUS).

### Book

- Olabisi, A. (2018). Attention Deficit Hyperactivity Disorder (ADHD) in Children: A Handbook for Parents, Teachers and Caregivers.

