ASSOCIATION BETWEEN STRESS AND PARENTING STYLES IN PARENTS OF CHILDREN with NEURO-DEVELOPMENTAL DISORDER: EXAMINING THE ROLE OF HARDINESS AND SELF-EFFICACY

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The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Faculty of Social sciences for acceptance.

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Candidate of Masters of Philosophy at the National University of Modern Languages hereby declare that the thesis **"**Association between Stress and Parenting Styles in Parents of Children with Neuro-Developmental Disorder: Examining the Role of Hardiness and Self-efficacy**"** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

I also understand that if evidence of plagiarism is found in my thesis/dissertation at any stage, even after the award of a degree, the work may be cancelled, and the degree revoked.

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Name of candidate

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Date

ABSTRACT

Title: Association between Stress and Parenting Styles in Parents of Children with Neuro-Developmental Disorder: Examining the Role of Hardiness and Self-efficacy

The parents of the children with neuro-developmental disorder often experience parenting stress and they have dysfunctional parenting styles due to the factor of stress. Whereas, hardiness and parental self-efficacy most of the time mediate the relationship between parenting stress and parenting styles. The main objective of the present study was to explore the associations between stress and parenting styles in parents of children with neuro-developmental disorders by measure the mediating role of hardiness and parental self-efficacy. The sample comprised of 300 mothers of the children with neurodevelopmental disorders form the city of Rawalpindi and Islamabad age ranges from 5-17 years. To measure the study variables, English version of the scales was used. Parenting Stress scale developed by Berry and Jones(1995) to measure the parenting stress ,Parenting Styles Scale developed by Arnold to measure the different parenting practices, Parenting Sense of Competence scale given by Gibaud and Wallston (1978) were used to measure the variables. Hardiness emerged as a strong mediator of dysfunctional parenting, laxness and hostility whereas parental self-efficacy and parental satisfaction emerged as strong mediators in the association between stress and dysfunctional styles(laxness, hostility and over-reactivity).The results of the study show significant association between the study variables. Results support the previous studies and future implications and limitations are discussed in the end.

Key words: Stress, Parenting Styles, Hardiness, Parental self-efficacy, Mothers of children with NDD

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LIST OF ABBREVIATIONS

1	NDDs	Neuro-Developmental Disorder
2	ASD	Autism Spectrum Disorder
3	ADHD	Attention Deficit Hyperactive Disorder
4	DS	Down Syndrome
5	IDD	Intellectual Developmental Disability
6	PSE	Parental Self-efficacy

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DEDICATION

This thesis is dedicated to my beloved parents, my best buddy Dr. Sadaf Gul and the all the time greatest supervisor Dr. Asia Mushtaq for their love, and encouragement along with endless support. May My Parents Live a very long and healthy life, Ameen!

CHAPTER I

INTRODUCTION

It is commonly said that parents of the children with neurodevelopmental disorders often face great difficulty in managing the various needs of their children especially their behaviors. Because these children have poor verbal communication, social communication, and cognitive functioning. Neurodevelopmental disorders can be defined as various disabilities which are primarily related to impaired brain functioning and neurological functioning. There are various neurological disorders present in children such as Autism, Attention Deficit Hyperactive Disorder, Intellectually Delayed Disability and Down Syndrome etc. Children with these disorders often experience difficulty with communication, gross/ fine motor skills, disruptive behaviors, disturbed practical functioning and other impaired social and neurological functioning. These difficulties or impacts of neurological disorders are not only problematic for such children but also causes stress and difficulty for their parents to manage them. Parents especially mothers of these children with neuro-developmental disorders (NDDs) experience low social support, disturbed family relations, family functioning, poor physical and mental health. Therefore, it is not wrong to say that it is very challenging for parents to nurture their children with special needs. Further, the symptoms in these children with neuro-developmental disorders may appear at a young age and can create considerable difficulties in social, academic, and other aspects of life functioning. The children with special needs also frequently engage in rigid, constrained, and repeated actions. Hence, it is right to say that parenting children with special needs or disabilities is very difficult task for parents and it is a strong factor which causes stress among them due to behavioral and

cognitive issues of their children. This fact often leads towards imbalance and disturbance in the family functioning (Khawar & Saeed, 2016).

Parents who have children with neurological disorders most of the times suffered from anxiety and stress. Resultantly, they show rigid, hostile, anger outbursts and over-reactive behaviors towards their children. The level of stress to manage these children cause poor parenting practices in most of the cases (Lepisto et al., 2017).Furthermore, it is said that the behavioral and emotional difficulties are increasing day by day and causing poor health conditions in children with neuro-developmental disorders (NDDs).Therefore, this a major concern for the world community to investigate these issues related to NDDs as such kind of disorders have a serious impacts on development and growth of children (Merikangas et al., 2010).

On the other hand, the higher level of parenting stress causes poor parenting practices and behaviors in mothers and fathers of the children who have neuro-developmental disorders. This fact also led to the poor mental and physical health of the children due to poor parenting. Parenting stress has deleterious effects on parents, children and overall family functioning. Stress related to parenting children with special needs can negatively influence parents' mental health and wellbeing; several studies have reported an association between chronic stress and poor psychological and physical health in caregivers, as well as reduced satisfaction with life. The literature has clearly demonstrated that parents of children with intellectual disability (ID), as well as other neurodevelopmental disorders (NDDs), experience significantly higher levels of parenting stress than parents of typically developing (TD) children (Fucca et al., 2022).

Resultantly poor parenting leads toward poor psychological health of children parental, as well as developmental outcomes. Several authors, indeed, reported

associations between parenting stress and less stimulating interactions with child, as well as increased risk for child maltreatment and adverse childhood experiences (Vicari et al., 2021). While most parents see parenthood as a pleasurable experience, it is also one of the most demanding responsibilities of early adulthood that takes a toll on them. The problems which these children face during their daily life routine may also cause stress among their parents.

And these pressures or stressors can be linked to the emotional, physical, and mental health of their parents. That's why, it is not wrong to say that raising children with such kinds of neuro-developmental disorders involves a significant amount of stress (Coleman & Karakar, 2011).

1.1 Rationale of the Study

The main goal of the current research is to measure the relationship between parenting styles and parenting stress among parents of the children having disabilities such as autism, attention deficit hyperactivity disorder, Down syndrome and intellectually delayed disabilities. As the prevalence of neuro-developmental disorders is getting increased day by day across the globe which is the core reason behind stress in parents (WHO, 2022). The parents of special needs children are not well aware about strategies for coping with stress. Therefore, the core purpose of this study is to provide the guideline to interventionist to introduce more advance techniques and training programs for parents having special children.

Further, it is designed to measure the main role of the parental self- efficacy and hardiness as mediators between parenting stress and parenting styles (laxness, over- reactivity, and hostility) among those parents who have special children. Parental self-efficacy can serve as a mediator in the relationship between parenting stress and parenting behaviors. When parents feel competent and confident in their

ability to handle the challenges of parenting, they are less likely to experience stress and more likely to engage in positive parenting behaviors. Parental self-efficacy can also act as a mediator against the negative effects of parenting stress. For example, parents who feel confident in their parenting abilities may be better equipped to cope with the demands of parenting and less likely to experience negative outcomes such as depression, anxiety, or burnout.

Hardiness can play a significant role as a mediator in poor parenting practices. Hardiness is a personality trait that refers to the ability to cope with stress and adversity, and it is characterized by three dimensions: commitment, control, and challenge. In previous studies, hardiness was not seen as a mediator in relation with parenting practices and stress. So, it is taken as a mediator in the current study to measure the various impacts of hardiness in that particular dimension. As parents who possess high levels of hardiness are more resilient and better able to cope with the challenges of parenting, even when they engage in poor parenting practices. They are more committed to their role as parents, feel more in control of their parenting, and are more likely to see parenting challenges as opportunities for growth and learning. In contrast, parents who lack hardiness may struggle to cope with the stress of parenting and may resort to poor parenting practices such as harsh discipline or neglectful behavior.

These parents may feel overwhelmed and out of control, and may see parenting challenges as insurmountable obstacles. Therefore, hardiness can mediate the relationship between poor parenting practices and their negative outcomes, such as child behavioral and emotional problems. Parents with high levels of hardiness may be better equipped to overcome the negative effects of poor parenting practices,

whereas parents with low levels of hardiness may be more susceptible to the negative effects of poor parenting practices on their children.

Second, one of the most important reasons for conducting this research is to rule out the impact of demographic variables such as age of the children, age and gender of their parents, socio economic status of the parents, education of parents, nature of disability, its comorbidity with other disorders, severity level of that particular disorder and siblings on parenting stress and parenting styles in parents of children with neurodevelopmental disabilities. This study proposed to examine the effects of parenting styles such as neglectfulness, overreaction, and hostility towards their children. It is evident that most of the time parents have had difficulty dealing with their children who had some kind of disability.

The current study is also supposed to fill a gap in the literature by emphasizing directly on parental experiences of stress, the key role of hardiness, and parenting traits in families having children with physical, mental, or emotional disabilities. This expands knowledge about the relationship between parenting factors and the quality of the parent-child relationship. It is imperative because it addresses the needs of an underserved population of families who need supplementary support and services, as well as the challenges faced by a vulnerable population. This research will also examine how a parent's parenting style, parental stress, and perceived level of competency in raising a child with a disability may affect the overall association they have with that child. In addition, more research is needed to examine whether these parenting characteristics are related to the quality of the parent-child relationship when the child has a disability and is not developing normally.

Hardiness and parental self-efficacy improve the ability of the parents to cope with the difficult situation at this time. For this reason, the main aim of this research is

to measure how Pakistani parents deal with their children with special needs. This research will also provide parents with some effective therapeutic strategies to help them deal with the problems they face at home. Another study conducted by Weiss and his colleague in 2019 shown that hardiness acted as a significant mediator in the relationship between parenting stress and poor parenting practices of parents having children with special needs (Weiss et al., 2019).

Rearing children and adolescents with neurodevelopmental disorders (NDD) is often associated with elevated parental stress and dysfunctional parenting where parenting sense of competence and self- satisfaction often help them to cope with the stress (Mazzoni et al., 2022). However, there is a lack of research addressing these elements in parents of children with neurodevelopmental disorders. The present study will also measure parental sense of competence through two domains: parental self-efficacy and parental satisfaction as mediators in the association between parenting stress and dysfunctional parenting (carelessness, hostility, and over-reactivity) (Loutzenhiser, 2009).

1.2 Statement of the Problem

To raise a normal child nowadays is very challenging for parent but when parents have to raise a child with neurological disorders then it causes often stress in parents of these special children. That parenting stress is one of the leading factors behind the poor or dysfunctional parenting practices. Extensive literature has evidence that the complications which occurs due to such kind of neurological impairments often last for the life time. Thus, mothers raising a child with NDD often face problems such as financial burdens, dismissal, and less participation in social and leisure activities (Beecham et al., 2007).

Gill and Harris (1991) found that some mothers who have children with NDD have elevated personality traits due to some inherent personality traits. Neuro-developmental disorders are changes in mental and neuropsychological conditions that affect brain function and thus cause social, cognitive, and emotional problems. There are two most commonly prevailing neurological disorders which are known as ASD and ADHD and their level of severities may vary from individual to individual. Many NDDs are not well known or less well educated than others (Karakar, 2011).

Researches which were conducted in past has not given more promising results on the given problem. As parenting stress has also impact on hardiness and parental self-efficacy of the parents. On the other hand, hardiness and parental self-efficacy often mediate the relationship between parenting stress and dysfunctional or poor parenting practices. Therefore, it is logical to explore the association between parenting stress and parenting styles (laxness, hostility and over-reactivity) along with the mediating role of hardiness and parental self-efficacy in parents of children with NDDs (Coleman, 2011).

The goal of the present study was to evaluate the relationship between parenting stress and parenting styles (laxness, hostility and over-reactivity and to measure the mediating role of hardiness and parental self-efficacy in parents of children with neuro-developmental disorders. Demographic variables were also explored to measure their considerable impacts on the study variables.

1.3 Research Objectives

The below mentioned are the objectives of the current study;

- To evaluate the relationship between parenting stress, parenting styles, hardiness, and parental self-efficacy among parents having children with neuro-developmental disorders.

- To find out the mediating effects of parental self-efficacy and hardiness on the relationship between parenting styles and parenting stress among parents having children with NDD.
- To explore the group differences in demographic variables (gender and age of the children, birth order, type of delivery, NDD type ,severity level, co morbidities and mother's education, age at the time of delivery, occupation, family income, and family system.) on study variables.

1.4 Research Questions

Below mentioned are the formulated research questions of the current study;

1. How parenting stress correlates with parenting styles, hardiness and parental self-efficacy among parents having children with neuro-developmental disorders?
2. What is the impact of parenting stress on parenting styles (laxness, hostility, and over-reactivity) in parents of children with neuro-developmental disorders?
3. What is the facilitating role of hardiness and parental self-efficacy in the association between parenting stress and parenting styles (laxness, hostility, and over-reactivity) in parents of children with NDDs?

On the basis of above mentioned questioned, following hypotheses were formulated;

Research Hypotheses

1. There is a positive relationship between parenting stress and parenting styles (laxness, over-reactivity, hostility) among parents having children with NDD.
2. Parenting stress is negatively associated with hardiness and parental self-efficacy among parents having children with NDD.

3. Hardiness and parental self-efficacy are negatively associated with parenting styles (laxness, over-reactivity, hostility) among parents having children with NDD.
4. Parenting stress is a positive predictor of dysfunctional parenting styles (laxness, over-reactivity, hostility) among parents of children with NDD.
5. Parenting stress is a negative predictor of hardiness and parental self-efficacy among parents of children with NDD.
6. Hardiness and parental self-efficacy are negative predictors of dysfunctional parenting styles (laxness, over-reactivity, hostility) among parents of children with NDD.
7. Parental self-efficacy and hardiness are mediating the association between parenting stress and parenting styles (laxness, over-reactivity, hostility) among parents having children with NDD.

1.5 Null Hypotheses

1. There is no correlation between parenting stress and parenting styles (laxness, hostility, and over-reactivity) in parents of children with NDDs.
2. Parenting stress do not predict parenting styles (laxness, hostility, and over-reactivity) among parents of children with NDDs.
3. Parenting stress do not predict hardiness and parental self-efficacy in parents of children with NDDs.
4. Hardiness and parental self-efficacy do not mediate the association between parenting stress and parenting styles in parents of children with neuro-developmental disorders.

1.6 Conceptual Framework

A theoretical model is a phenomenon in the field of research which is often framed to explain the possible relationship between the study variables. It is worth important to have a mechanism or process to enlighten how cognitions and emotions affect behaviors because it always allows one for the identification of points of intervention. In psychotherapy, the lack of ability to control one's own self and disruptive thinking patterns are linked to the severity of depressive symptoms, an intervention mechanism to reduce the terrible emotional response of melancholy, (Beck, 2011).

Likewise, the model is proposed to measure of perceptions of how hardy traits of the parents having special children and parental self-efficacy relate to parenting stress, parenting styles. The outcomes will provide an intervention plan that may help in reducing the weak emotional response to parenting stress and may further positively impact parenting behaviors. It is found that there is an association between parenting stress and dysfunctional parenting styles. According to several studies (Deckard et al., 1996; Emery & Tuer, 1993), parental stress is a predictor of parenting practices and hardiness along with parental self-efficacy often act as a mediator in the association between parenting stress and parenting behaviors. Therefore, for the current study, below mentioned is the theoretical model which indicates that there exists a relationship between parenting stress and parenting styles while showing the role of hardiness and parental self-efficacy as a mediator.

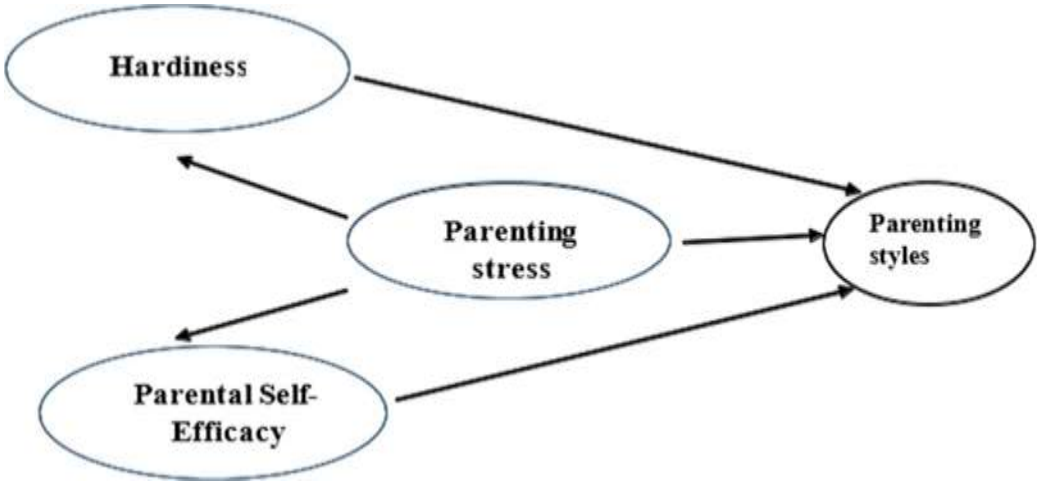

Figure 1.1: *Conceptual Model of the Present Study*

1.7 Significance of the Study

The current study is very significant as it is measuring the parenting stress in those parents who have special children and their parenting styles are very disruptive or poor due to the high level of stress. The current study is evaluating the facilitating role of hardiness and parental efficacy in parents of those children who have special needs. The study is significant enough to give insight to those parents who are efficacious and hardy to cope with stress and to manage their child's socio-emotional and behavioral problems.

1.8 Methodology

The cross sectional research design was used to conduct the study. The sample was collected through purposive sample technique from the special institution of Rawalpindi and Islamabad. The present study comprised of two phase. In first phase, pilot study was conducted in order to check the cultural appropriateness of the measures and then the in second phase, the data was collected from main sample in order to perform the desired statistical analysis. The data for pilot study and main study was collected after taking the permission from the parent institutions and with

informed consent of those parents who have children with neuro-developmental disorders.

1.9 Delimitations

- It was a cross-sectional study. So it cannot be used over a long period of time.
- It does not help determine cause and effect.
- Sample Biases.
- Relatively lower response rate.

1.10 Operational Definition Parenting Stress

According to Holly and his colleagues (2019), parenting stress is the distress which parents experience when they feel that they cannot cope with the situation as a parent of the child with some disabilities. The demands for rearing the children with disabilities are too high and most of the time parents don't have sufficient resources to meet all these demands. In addition to this, the Parental Stress Scale was developed in 1995 by Berry and Jones to measure stress in parents. This scale measured parenting stress in parents of children with neurodevelopmental disorders. The higher the score on this scale, the more stressed out the parents are.

Parenting style

A pattern of parenting attitudes and behaviors to manage the children with neuro- developmental disorders as well as an emotional climate in which the parental behaviors are expressed in different ways, is defined as parenting style (Darling & Steinberg, 1993). The parenting styles were assessed in this study by using a parenting style questionnaire (Arnold et al., 1993). The higher the score on this measure indicates dysfunctional parenting with sub- domains (laxness, over-reactivity and hostility).

Hardiness

Hardiness is a personality trait or characteristic that influences the development of resilient responses to stressful situations in order to manage the stress (Bartone, 2007), as well as a buffer that protects individuals from the negative impacts of stress by providing them with more resources to deal with it (Kobasa, 1979). Hardiness can also be defined as the ability to bounce back with full support and tendency to cope with stress or difficult situation. So, in this study, hardiness was measured by using the Hardy Personality Profile by Salvatore (1991). The higher scores indicate the maximum ability of the parents to bounce back or to cope with the difficult situations.

Parental Self-Efficacy

Parental self-efficacy is the ability of a person to manage the difficult situation or have belief in his ability to cope with the stressful situation. The parenting sense of competence scale was used which was developed by Gibaud-Wallston in 1978. This scale was used to assess parental self-efficacy. The scale measures two dimensions parental self-efficacy and satisfaction among parents as well. The higher scores indicates higher level of parenting sense of competence.

CHAPTER 2

Literature Review of the Study

2.1 Neurodevelopmental Disorders

The neuro-developmental disorders can be defined as a cluster of illnesses or disorders that cause disruption in the function of nervous system and lead to impaired brain functioning as well that can impair emotional stability, learning, self-control and memory process. The complications which occurs due to such kind of neurological impairments often last for the life time. Thus, mothers raising a child with NDDs often face problems such as financial burdens, dismissal, and less participation in social and leisure activities (Beecham et al., 2007). The causes of psychological problems in children attract the attention of researchers and doctors. Childhood is an important period of emotional, social, and behavioral development. Mental health problems can manifest as internal behaviors, such as fear and social rejection, and external behaviors, such as anger, rage, and resistance, as well as inconsistent behavior in the early years. Young children with such fears face problems with age, and those problems are later associated with poor educational, service, and health outcomes. Rearing children and adolescents with neurodevelopmental disorders (NDD) is often associated with elevated parental stress and increased risk of mental health problems, such as anxiety and depression especially in mothers of children with autism spectrum disorder (ASD), Attention Deficit Hyperactive Disorder, and Down syndrome as well (Mazzoni et al., 2022.

Evidence suggests that parental stress is driven by child behavioral difficulties. Neuro-developmental disorders (NDDs) are changes in mental and neuropsychological conditions that affect brain function and thus cause social,

cognitive, and emotional problems. There are two most commonly prevailing neurological disorders which are known as ASD and ADHD and their level of severities may vary from individual to individual. Many NDDs are not well known or less well educated than others (Karakar, 2011).

Any kind of impairment or damage to the brain or nervous cause neuro-developmental disorders in children. Some of the causes are still unknown. All the childhood disorders such as autism, ADHD, IDD, DS, CP, hearing issues, visual issues and various other disorder come under the category of neurological disorders. Most of the time neurological disorders cause disrupt functioning in gross motor and fine motor areas along with speech and language difficulties. The range of severity and symptoms of the each particular disorder sometimes changes with the growth of the child but some may not changes due to ignored behaviors of the parents for their children with NDDs. It is difficult to identify and treat these disorders. Hence the treatment protocols are often based on a team of professional, pharmaceutical and domestic medical programs. As the severity of child symptoms and behavioral challenges are significantly associated with parental stress and mental health problems (Landolo et al., 2022).

Literature has shown that various researchers criticizes the styles of effective parents who better refer to the positive development and growth of the child, although there are fewer evidence of variables that parents have the opportunity to perform these high quality parents. The important point is to investigate all these variables in depth to see their effects on parenting practices and especially on all the steps and efforts which parents took to manage the inappropriate behaviors of their children with special needs. Current findings identify parental practices, resilience, and

parental self-efficacy, as well as parental pressure as controlled variables that may influence parental practices (Koretz, 2010).

Among the neurological disorders of the growth of autistic spectrum disorders and impaired hyperactivity of an attentive deficit with maintaining lack of the growth system (i.e. engine and language capabilities, behavioral capabilities, behavioral traits), long -lived system). Numerous studies have shown that parents have more intellectual skills (identifier) more than parents of children with disabled people (Rodrigues et al., 2021).Apart from these findings, it is also a true fact that level of stress and factors causing this stress in parents having children with special needs are not same for all parents. Individual differences exist among them (Baxter et al., 2000). Strathearn and his colleagues in 2021 conducted a study on parents of children with neuro-developmental disorders and the results of the study shown that mothers of the children with ASD, ADHD, IDD and DS were more vulnerable to stress and poor parenting practices (Strathearn et al., 2021).

In general, the signs of disability such as ASD, ADHD, DS and IDD seem to be the most important predictions of parental stress. Another study was conducted in which parents were interviewed about the disability and severity of the disability of their children. Results shown that 55 % of the children were found with at least one disorder either ASD or ADHD or DS and the level of complexity associated with child behavior, in particular. Parenting stress has deleterious effects on parents, children and overall family functioning. Stress related to parenting children with special needs can negatively influence parents' mental health and wellbeing; several studies have reported an association between chronic stress and poor psychological and physical health in caregivers, as well as reduced satisfaction with life. The literature has clearly demonstrated that parents of children with intellectual disability

(ID), as well as other neurodevelopmental disorders (NDDs), experience significantly higher levels of parenting stress than parents of typically developing (TD) children (Fucca et al., 2022).

Resultantly poor parenting leads toward poor psychological health of children parental, as well as developmental outcomes. Several authors, indeed, reported associations between parenting stress and less stimulating interactions with child, as well as increased risk for child maltreatment and adverse childhood experiences (Vicari et al., 2021).

The mothers and fathers who have children with ASD and ADHD have higher levels of parenting stress. In a child with ASD, behavior is characterized as mainstream medical care in parental stress. It is also recognized that mothers and fathers of the ADHD children have significantly positive correlation with parenting stress and severity of the symptoms of that disorder. In turn, the intellectual status of a child, especially intellectual disability (ID), may indicate a surface problem for caregivers when working with poor children and then the most modern spheres of life (i.e., the use of the environment, the use of the environment, Using the environment, domestic behavior and security, exercise, testing, social skills), parental stress can be measured. As part of neurological disorders of growth, genetic syndromes of internal disorders caused by genetic changes that determine the clinical determination (i.e. heart disease, gastrointestinal disorders), are needed (Eubig et al., 2010).

Adams et al., (2020) conducted a study in America in which they included approximately four hundred and thirty parents of the children with special needs .The age of the child ranges from 5 to 18.The results of the study shown that parents of the children who were diagnosed as having ASD and ADHD have more parental stress and poor parenting practices as compared to mothers and fathers of the children

having down syndrome and intellectual disabilities. Hence, the conclusion of their added that parental stress increases (severe parents compared to the previous infection as a result of changes daily in children) for 70 % of participants during the eruption of the early eruption of the Covid-19 (September 2020). However, it is unclear whether medical reality is given to children, whether they are classified in public development, whether they have provided any development, behavior or training (Adams et.al, 2020).

Deault and his colleagues (2010) argue that ADHD is related to problematic family functioning. The breakdown of parent-child relationship and parenting stress is common in such families where children with ADHD are present .Those families who have more than one children with any particular disability have more chances of parenting stress and dysfunctional parenting styles. It is reported that children with ADHD have difficulties, attitudes, and need for their parents to have difficulty managing their behavior. Personality traits may be considered a sign of early development of behavioral processes that may contribute to the development of ADHD. Deater and his colleagues (2014) suggested that family factors such as raising children with limited resources may influence the development and maintenance of personal order. Negative parenting can hinder the development of self-control and help increase and maintain child psychiatry, such as ADHD. In addition, children who are poorly controlled and overly emotional are more likely to suffer from the negative costs of poor parenting (Deater et al., 2014).

Indonesian researcher conducted a research to measure the stress levels of the parents who have special children. It is unfortunate that the number of children with special needs in Indonesia is increasing every year. According to the obtained data, there were 15 million children, of whom 30 to 50 percent of the children were with

some disabilities. And the caregivers or parents are needed to protect and support these children as they grow older. In Indonesia, mothers of the children with special needs are more serious and concerned about their children emotional and behavioral development than parents have children without any disability (Muckle, 2009). On the street to meet the economic needs of families, this study is focused on the tense attempt by mothers. The general view that parents cannot be inaccessible is that their children do not often attend parents and teachers. In this study, parents of children with special needs rarely attended quarterly classes in their children's schools.

Another study was conducted on Japanese and Italian parents in 2021 by Tanaka and his colleagues to measure the cross cultural differences among parents having children with neuro-developmental disorders. The results of the study found that both mothers and fathers of children with ASD could face unique challenges and parenting demands, bearing consequences also on their psychological distress. Higher parental stress and mental health problems in parents of children with ASD can pose further risks for parent–child relationships generating a cascade of adverse effects on parenting functioning. They further found that mothers of the Japanese children with neuro-developmental distress reported more stress as compared to fathers (Tanaka et al., 2021).

According to previous studies, internal and external components are recognized as the causes of stress for adolescent mothers with specific needs. Internal factors are as follows: 1) the conditions of children who perceive mothers. 2) Negative emotions of mothers, such as depression, anxiety and suspicion of her baby's future. 3) Electricity in work with stressful sources; 4) the worst overall shame of the child with different needs, which creates a child's shame with special needs. And 5) the mother's ability to combat tensions. 5) Nature; Difficulty is a characteristic person

who has a set of approaches that lead to energy in demand for life events. 6) Personal resources of people. External factors are as follows: 1) Less social assistance to young mothers with special needs. 2) Limitations to children, parents who trust children, low ability to combine their wishes, increase misconduct in young people, inability to withstand their emotions and 3) higher costs of child benefits (Feldman et.al, 2008).

This previous study examined the level of parental problems experienced by caring mothers with children with various disabilities, including hearing loss, autism spectrum disorder, Down syndrome, and mental disorders. Children with various disabilities express developmental disorders from different angles. Deaf children are those who cannot hear any sound of birth, and this study aims to explain the burden of parents giving birth to children with such disabilities. This limitation of children's social and cognitive development hinders language and academic skills and academic achievement, which can be stressful for mothers. Those mothers who have diagnosed children with intellectual disabilities and Down syndrome are more courageous and efficient in parenting their children with special needs. Because their children's intelligence is lower than that of the average child, and children with these disabilities need more attention and depend on others. Their ability to adapt is low, as is their inability to control social skills. Problems in caring for children with disabilities are associated with the onset of parental Stress (Ratajczsak, 2008).

2.1.1 Parenting Children with Intellectual Disability

It is a widely discussed phenomenon about poor parenting styles and characteristics of the parents who have special children who cannot perform their daily life related skills and have impaired social and academic functioning. It is also a fact that researchers have not paid much attention on this phenomenon of raising children with intellectual disabilities (ID) across the world (Boonen et.al, 2015).

Intellectual disability refers to the slow learning capacity of the children and impaired social or academic functioning. Sometimes it may related to disruptive practical functioning of the child such as unable to do his daily tasks (American Psychiatric Association, 2013). Most of the children with IDD have an IQ level of 60 or less than 60. They have lack of confidence and poor attention span. They most of the time cannot communicate in social gatherings and they also cannot move here and there independently due to lack of proper understanding and decision making skills. This is also one of the factors which is highlighted by the literature that parents of these children with intellectual disability have more stress related to parenting than parents of children without developmentally delayed (Kojima et al., 2019; Oelofsen et al., 2016).The problematic behaviors also causes stress in parents (Plant & Sanders, 2007), another factor is limited financial resources and lack of social and peer supports to those parents who have children with some disabilities (Blacher & Hatton, 2007).

Vermaes et al. (2012) conducted various researches to explore more about parenting stress, parenting styles and the exacerbated medical conditions in children. There he and his colleagues studied a sample of 37 mothers and fathers who have special children .Their age ranges from 7 to 12 years .These children were diagnosed with physical disabilities as Spina Bifida. The researchers associated parental strain stages to levels of bodily and mental impairment caused by Spina bifida. The results of their studies also indicated that there existed a significantly positive relationship between parenting stress and level of severity of the disease. The increased level of impaired functioning in these children due to Spina Bifida causes more stress in parents. The effects are also in step with preceding studies on chronic illnesses and parental pressure (Vermaes et al., 2012).

2.1.2 Parenting Children with Down syndrome

Down syndrome can be defined as addition of 21 extra chromosome and it is a genetic disorder. According to the evidence based assessment, Down syndrome children have poor communication skills (Chapman & Hesketh, 2000), but they often do not have as much behavioral issues just like ASD and ADHD. This distinct phenotype necessitates the conduct of parenting studies in DS, as the findings may differ from those of other causes of intellectual disability or mixed causes. Parents of children with DS have significantly more parenting-stress symptoms than parents of typically developing children. Literature has shown the fact about distinction between the process of nurturing child with Down syndrome and the way to raise a child without DS. Results shown that those parents who have children diagnosed as DS have more elevated levels of stress as compared to those parents who have normal children (Gueta et al., 2021).

A researcher claimed that one advantage of raising children with DS is that parents of such children have less level of stress as compared to parents of children with ASD (Hodapp et al., 2001). A few components might impact this advantage including positive character characters of DS victims, more parental understanding about features and characteristics of this disorder, more social and peer group support, and their mothers are often more composed , brave and the financial status of their family are often high. Despite all these facts, mothers and fathers of DS children have more parenting stress and pressure in their lives as compared to parents having normal children (Dabrowska et al., 2010).In counting, the stress level in parents who have Down syndrome children has been displayed to be more problematic during the early long periods of experience. The demands related to raise a child with DS is increasing

day by day by putting more pressure on parents (Eisenhower et.al, 2005; Fidler et al., 2016).

Thus, sometimes raise a child with DS is quiet easier than raise a child with intellectual disabilities and more problematic behaviors (Stoneman, 2007).However, children with down syndrome have more disturbed mood patterns as compared to intellectually delayed children and this fact pose more psychological harm to the mental health of mothers (Blacher et.al, 2013) .They also observed two categories of parenting practices in parents of children with disabilities. Blacher and his colleague (2013) termed them as positive and negative parenting practices. They found that mothers of the DS children practice more negative parenting styles such as hostile and over-reactive behaviors or responses towards their children. One study found that those mothers who got some training or intervention plans to deal with their children with DS have less level of stress with good parenting styles. Their parenting patterns were more positive and optimistic as compared to those mothers who never received any kind of training to raise these children with disabilities (Baker, 2013).

2.1.3 Parenting Children with Autism

No doubt parenting is a challenging task and parenting a children with special need is too difficult these days. Therefore, autistic children's parents have more difficult life. Parenting children with ASD is a challenging thing for mothers and fathers. Challenges include poor family support, sibling rivalry and parent's separation cases. These parents most of the time experience increased levels of stress, anxiety, and depression (Weinberg et al., 2022).

The prevalence of the special children in the world is approximately 4.4 % (Benjak, 2017).The above mentioned figure implies that approximately 4% of the parents in Croatia have disabled children. Children with disabilities are mostly raised

by their families (97.5 percent), but some are placed in foster care (0.6%), and 0.7% are institutionalized. Those parents are, in fact, a vulnerable group of people with special needs. Families with young disabled children are frequently full of expectations, active, and focused on providing the best possible support services for their children. Despite the fact that services and education for early mediation have been available for about six years, early intervention has been governed by law since 2012 (Mahajnah et al., 2020). Nonetheless, there is a significant disparity between Zagreb and large and small cities, rural and/or remote parts of Croatia in terms of the number, diversity, quality, and availability of support facilities. Parents are irritated and dissatisfied with the lack of information, as well as incompatibility and poor coordination between services (Penik et al., 2013).Moreover, according to several studies, mothers reported very little support not only for their youngsters but also for themselves in contexts of psychological and emotional nourishment, especially during and after their assessment of children with some special needs (Leutar 2014; Penik et al., 2013; Tambuk 2017). Parents were also dissatisfied with the attitude of unprofessional experts toward them (Leutar, 2014).

A recent literature review noted that a plurality of the studies related to parenting a child with autism have focused on stress (Bonis, 2019). Within this context, studies that have examined the parental stress of children with autism have often referred to coping strategies (Shepherd et al., 2018; Urbieta, & Cuadrado, 2017). However, it has been argued that the dichotomization of coping strategies oversimplifies the manner. Thus, the research on how parents and caregivers of children cope with stress remains limited and many key issues remain unresolved (Lai & Oei, 2014). Therefore, efforts to further our understanding of factors that may increase or reduce parental stress are important (Kandari et al., 2022).

According to many studies, motherhood is often associated with major changes in a parent's life, and parenting can be stressful in and of itself. Additionally, parenting stress has a significant influence on health and well-being of the parents, as well as the quality of their relationships with their partner, family members, and their children's academic performance (Penik, 2013).

There is another study reported in the literature which showed that those mother and father who children with intellectual disabilities, ADHD and Autistic disorder often have more parenting stress than parents of the children with normal behaviors and communication skills (Delambo et al., 2013). This is because having a child with unique desires necessitates greater effort and involvement on the part of both caregivers such as mothers and fathers along with long-term parental obligation to their physical and psychological treatment plan. The level of the stress in parents while raising a child with disabilities get worse with the growing age of their children. All of this could cause long-term stress in the family, resulting in chaos and problems (Delambo et al., 2013).

Furthermore, negative parenting or parents who lack self-control and socialization skills are frequently linked to families with teenagers or family members who suffer from mental illness. It is a prevailing misconception that either mother or father is responsible for the disability of his or her children .There is no evident or exact cause of these disabilities. Such kind of blames or accusing each other only cause disturbed family functioning or cause disturbance and tension in the family (Hinshawet, 2011). Parenting stress can also occur due to several other inter and intra familial factor while parenting a child with neuro-developmental disorder particularly autistic children (Akbarzadeh, 2015).

2.1.4 **ASD and Family quality of life**

Autism comes under the umbrella term of autism spectrum disorder which is categorized as lack of social communication skills, repetitive behaviors, fidgeting or hand flapping, lack of eye contact and inability to perform any kind of activity without verbal or physical prompt significant functional impairments (American Psychiatric Association, 2013). Therefore, raising a children with autism can be difficult and challenging for parents. It can have negative impacts on life styles of the parent have children with autism (Boehm et.al, 2015; Meadan et.al, 2010). Families having children with autism have more disturbed relations and more level of stress in fathers and mothers due to the inappropriate behaviors of their children (Hsiao et.al, 2017).That's why these families have poor quality of inter familial terms and low level of life satisfaction in them. According to a study , the prevalence of autistic disorder in China is round about one percent which means the more than 13 million children are present in China with ASD (Sun et al., 2013). It is also estimated that 80 to 85 percent of the families in china with autistic children do not attain their basic life goals and achievements .Therefore they have more level of stress and less level of life satisfaction due to not achieving their basic life goals (China Association of Persons with Psychiatric Disability & their Relatives, 2014). Most of the researches in past have shown the positive correlation between family support and the ability of the family to bounce back to reduce stress level and promote family quality of life (e.g., Boehm et al., 2015; Gardiner et.al, 2014).Thus there is lack of literature on study about family support to parents having autistic children in China. The factors behind the family support and to enhance the quality of life was still unaddressed (Boehm et al., 2015).

2.2 Parenting Stress

Parenting is a process which encourages and always provide support to the physical, emotional, social and intellectual development of children from infancy to adolescence. Parenting also refer to the complicated process of raising a child with some kind of disabilities. Parenting a child with normal development is not that difficult as parenting a child with disability because of the impaired social, practical and intellectual functioning of these children with NDDs. Several factors effect parenting ranges from social class, wealth, culture and income. All these contributing factors of parenting practices most of the time increase the stress level in parents.

According to Holly and his colleagues (2019), parenting stress is the distress which parents experience when they feel that they cannot cope the situation as a parent. The demands for rearing their children with disabilities are too high and they do not have sufficient assets to meet all the demands to raise a children with special needs. Therefore, the difficulty to fulfill the gap between childrearing obligations and access to available assets in order to manage the child with special needs is known as parenting stress. Furthermore, the psychological stress experience by parents while trying to fulfill their roles and demands as parents is called parenting stress (Pinquart, 2018).In other words, a parent's evaluation of his or her feature as a mother and father in the modern environment determines the degree of parental stress often faced by parents. Many studies have shown that those parents who have children with ASD, ADHD and DS experience more stress and anxiety (Carruthers et al., 2018).

Additionally, the more stressful parenting is correlated with poor or dysfunctional parenting, as it often increased the threats of horrible parenting or dysfunctional parenting practices such as neglect, discipline, harshness, overreaction, and authoritarian parenting abbreviated emotional warmth and intimidating

disciplines and many more. Even under such conditions, which are considered extremely normal, a parent's expectation to effectively manipulate the day-to-day needs of raising children can represent a moderate stress response. The model of parental stress presented by Abidin (1992) established a strong relationship between parenting styles and stress, implying that higher levels of parental stress often result in maladaptive parenting behaviors. There are three features of parenting stress such as parental distress, the challenging behavior of child and dysfunctional interaction between parents and children with any disability along with various social concerns. Parents often observe and compare their children's condition with other children. When the parents understand that their infant is not ideal according to other normal children, numerous emotional turmoil are displayed. The excitement can turn into disappointment. The problems associated with caring for children for mothers with autistic are very hard, as a mother is the first person to care for the child (Praspawati et al., 2021)

Further, it is claimed that the problematic behavior of children and his inappropriate communication skills along with repetitive behaviors is strongly associated with parenting stress (Ekas & Whitman, 2010).Raising a child is a greatest responsibility among parents which brings joys, happiness, and contentment side by side stress. Thus, those parents who have special children are more susceptible to stress. Hence, mothers and fathers of a child with any neuro-developmental disorder such as Down syndrome , autism and attention deficit hyperactivity disorder often experience more stressful moments in their lives than parents of children without NDDs (Solomon et al., 2008; Yoong et.al, 2012). Whereas, mothers having special children often have poor or dysfunctional parenting practices due to high level of stress which also cause poor mental and physical health of parents (Cantwell et al.,

2015). Resultantly, fathers and mothers of the disable children cannot perform their daily life related tasks completely and efficiently due to mental pressure. Amongst parents of the children with special needs, mothers are particularly more vulnerable to stress as compared to fathers (Khan, 2014). Arini and Putri (2021) found a significantly positive association between education, age, occupation and socio-economic status of the mothers and found a correlation between motherhood-related stress and the number of youngsters in the family (Mili, 2010).

Most of the parents have strong personality to cope with stress and they have good levels of life satisfaction. But parenting stress, on the other hand, can be worsened when parenting ensues in the midst of adversity. Levels of parenting stress and parental behaviors are influenced by a definite level of parental self-efficacy in their role as a parents, which may be mediated by social supports in the context. Parental self-efficacy, or the belief on one self as a parent that one can effectively manage one's own parental role and assist their children in resolving their problems, has been associated with adaptable family surroundings and positive child responses. Various studies found that there was a substantial positive correlation between parenting stress and age of the child with special need (Lederberg et al., 2002; Mili, 2012; Siegel et al., 2002).The several other factors are also found positively correlated with parenting stress such as, severity of impairment, parental working position, and other socio-demographic features, such as low socio- economic level (Khamis, 2007).

Although these studies are less documented, yet a study conducted by Scorgie (2000) showed that even though parenting children with developmental disorders is too difficult and demands more resources, yet many people report positive changes in their behaviors due to the children with developmental incapacities (Scorgie et.al, 2000).Undeniably, a massive bulk of previous researches indicated that those parents

who do not have children with any disability have less level of parenting stress as compared to those parents who have special children. They also have good parenting practices and high level of parenting efficacy. (Dabrowska et.al, 2010; Vitanza et.al 2019).

The various behavioral and communication problems in the children with such disabilities can cause stressful situations for families, such as: minimal social support, arguments with spouse or grandparents, difficulties in having adequate medical/educational resources, all of these factors can be the causes of parenting stress in mothers of children with special needs and disabilities (Derguy et al. 2016). Furthermore, most of the researchers have paid attention on parental stress, which is particularly linked with problematic behaviors of children and gestures, practical functioning skills, and executive performance (EF). The inner ability to control disruptive mood and emotions is a key aspect of executive performance (i.e., higher-order thinking skills, including the potential to regulate, planning/organizing tasks, trigger, and observe your own behavior) (Godimento et al., 2000). It is said that youngsters with multiple disabilities such as Attention Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD), may have inappropriate behaviors which can be of different categories. Most probably, one level of problematic behavior is more common that are present particularly severe, or even by definition, deficits in executive functioning (Winsler et al., 2007).Various researchers have found that mothers and fathers of the autistic children and children with attention deficit hyperactivity disorder experience more parenting stress especially when their children cannot perform any daily life related skills or tasks (Hayes et.al, 2013; Wiener et al. 2016).

In an analysis of 219 parents of youngsters with autism, Sharpley (1997), reported that most of the mothers having special children with severe level of disabilities had elevated intensities of stress as compared to fathers of children with special needs. The author of this study stated that the three most challenging factors are (a) concern over the durability of the condition; (b) very poor recognition of autistic behaviors by the society and frequently, by the other close friends and family members; (c) the very lower levels of public acceptance and praise received by parents. Subjective parent pain and accompanying stress went unnoticed. Este et al., (2009) measured the extent to which different characteristics and traits of children with special needs influence maternal parenting stress and psychological distress. The study conducted by Este and his colleague (2009) mentioned that all the mothers who have children diagnosed as autistic participated in their study. And mothers of children with developmental disabilities without comorbidity with autism. Hence, results reported more stress in mothers having children with autism and mental health complications. While, the inappropriate behaviors of the children were linked with increased parenting stress and mental health problems in mothers in all cases. This cross-sectional study observed traumatic situations of mothers in relation to life events of their children with neuro-developmental disorders and possible causative aspects. Another study which was conducted in Bangladesh comprised of approximately 905 caregivers of the kids who were diagnosed with neurodevelopmental disorders were surveyed. The sample was collected form eight administrative districts and two municipal districts of the country. Parenting stress in this study was assessed by using the Family Stress and Coping Interview scale. It was found that early diagnosis of a neurodevelopmental disorder, state of mind about the origin of the disorder, upcoming career and accommodation plans for the children,

and coping with sexual needs of these children were all stress causing factors for parents. It was also found that mothers and less educated caregivers experience more parenting stress as compared to fathers and more educated parents having children with NDDs. According to the results of the study, parental distress was also related to the age and diagnosis of the particular disorder before giving a birth to another child (Estes et al., 2009).

2.2.1 Stress Theories and the Role of Parent Cognition

Cognitive theory of stress

The most quoted theoretical concepts and framework of parenting stress were mainly proposed by Lazarus in 1984 and many of them were deeply influenced by ground breaking work on stress by Richard Lazarus (1984). They stated that psychological distress or stress is a particular association between the individual and the environments that is evaluated by the person as difficult or beyond his or her well-being. According to stress and cognitive appraisal theory, stress is two dimensional process which involves the outbreak of stressors by the surroundings and the reaction of persons exposed to these stressors. A typical stress event involves two appraisal processes claimed by Lazarus (1993).In the view of Lazarus (1984), cognitive evaluation occurs when an individual considers two major factors that mainly contribute in his response to stress. First is the frightening tendency of the stress to the individuals and second is the evaluation of resources required to minimize, tolerate, or eliminate the stressors and the stress they provoke. Such types of revised conceptualization delve deeper into examinations of parents' responses to the day-to-day stressors associated with childrearing (Lazarus et al., 1984).

Lazarus and his colleague (1984) drawn a difference from the traditional stimulus response model to emphasize upon the transactional nature of the stress and

all the coping strategies in order to deal with stressors. Stress is not simply a cause or a reaction. Rather, stress is a practice in which the link between individual and the surroundings is reciprocal and two directional. Lazarus (1993) differentiates between physiological stress and psychological stress and put more emphasis on the personal role during the second phase of appraisal theory. Most notably, a key feature of their model is to establish the role of assessment in stress and stress management. The first phase of appraisal theory is related to the nature and extent of the harm to physical and mental health of the individual which occur due to stress. On the first stage the situation or surroundings were evaluated as damaging factors or stressors. The second phase of the appraisal theory was launched to develop the capacity to deal with stressful situation including one's own skills and knowledge as well as external resources such as the help of others. It is the secondary evaluation phase that decides the subsequent coping with hard work and, conversely, the emotional and behavioral consequences of the stressful circumstances. Generally when individuals feel that they do not have sufficient resources to meet their demands then they feel or experience stress and that time they need a self-ability to cope with stressful situation. With this study, the author proposed to develop the idea of secondary evaluation to understand that how evaluation of mothers about their own parenting competence can manage their daily stressful experiences and the consistency and solidity of their parenting behaviors and practices (Lazarus et al., 1984).

Cognitive Behavioral Theory

Parental cognitions facilitate emotion of the parents and behaviors related to parenting a child with special needs according to cognitive behavioral models of maladaptive parenting and child abuse. In many ways, the cognitive behavioral model resembles Abidin's (1992) theory of parental behavior. Milner's (2003) model of

cognitive behavior proposed three main paradigms that play a substantial role in child abuse: (a) maternal and paternal cognitive factors such as maladaptive cognitive patterns and intuitions that are associated with and manipulate parental behavior, (b) discrepancies in parental executive functioning and (c) circumstantial factors such as stress, children characteristics and other socio-economic factors such as poverty. In relation to the first evidence of cognitive behavioral models of children mistreatment, namely parental cognitive elements, Milner (2003) proposed four major pre-existing cognitive schemas: external locus of control, poor acceptance of developmentally appropriate norms, low empathic perspective-taking, and low perceptual attachment, all of which increase risk increase in child abuse. A parent with a poor locus of control may believe that their children are responsible for parent children difficult situations and that they have no control over such conditions. The external locus of control can lead to feelings of anger and frustration, which can lead to child abuse (Milner, 2003).

Parents who have impractical developmental expectations for their child's behavior and skills may react negatively. Empathic perspective-taking refers to the ability of parents in order to understand the challenging situation and to empathize upon dysfunctional parent child relationship. Hostile and over reactive parents often face difficult time to handle their child with inappropriate behaviors and communication skills. They tried their best to reduce the misconception between them and their children .Resultantly, whenever the parent is confronted with a new disciplining situation, pre-existing cognitive schemas linked to constructs such as locus of control and attachment levels are activated. Previous researches have shown that cognitive variables account for a significant portion of the variance on child abuse risk scales, proving the first evidence of the cognitive-behavioral theory of

child abuse. In a study led by Rodriquez and his colleagues (2007) measured the association between cognitive component measured by Milner in 2003 and maternal and paternal risk of child abuse in a group of non- hostile or over reactive parents.

Multiple regression analysis was carried out to measure the external locus of control, low perceived attachment, and low empathic perspective. All this accounted for a significant portion of the variance in an inventory developed to determine child abuse potential .So, it was analyzed that all these factors were significant predictors of children maltreatment along with contextual factors like parenting stress (Rodriquez et al., 2007).

The second part of the cognitive appraisal theory put more emphasis on dysfunctional parenting with child as parenting is the role of executive functioning in parenting behaviors. Milner (2003) particularly drawn the executive roles of parents in child rearing and parenting behaviors. The executive functioning includes problem solving, impulse control, emotional regulation, strong decision making power, cognitive flexibility and perspective taking. Therefore, impairment or ignorance in any of these areas can cause child maltreatment or child abuse. According to a survey conducted by WHO (2019), impaired executive functioning and parenting stress is a significant predictor of child maltreatment (World Health Organization, 2019).

Whereas, parental stress is an inevitable point of the process. It occurs when the expected and actual assets available to mother and father to enable them to succeed as mother and father exceed the expected and authentic sources available to them. It is correct to say that parenting stress can also come from a number of sources. Problem-oriented theories have focused on the various mild to moderate stressors encountered in the lifestyle of a family with young children or teenagers in a typical day or week. Parenting stress causes harsh reactive nurturing and interferes with heat-

responsive parenting. Negative effects of parenting stress on the relationship between children and parents are linked with awful socio-emotional and rational outcomes in children. However, many parents are resilient, and excellent coping techniques can be implemented to limit the poor outcomes of parental stress to nurturing, the parent-child relationship, and the outcomes of the formative year. The highest quality intervention and prevention programs improve parental coping skills and self-efficacy while additionally reducing parental stress, resulting in better family bonding and developmental effects for children (Belsky, 1989).

2.2.2 Stress Theory of Straton and Webster

Straton-Webster (1990) proposed another most important theory of stress, which states that child stressors and family stressors all influence parenting behaviors. Unemployment and low socioeconomic status are examples of non-family stressors, while stress related to marital life and divorce cases are examples of interpersonal stressors. Most stressors in children are related to behavioral problems and problems in daily life. Negative parent-child cooperation contributes to and results from increased parenting stress, such that children's behavioral problems are both a cause and a consequence. In families of children with ADHD and various other behavioral problems, the range of parental distress and children's behavioral difficulties is believed to be elucidated by these negative associations (McCleary, 2002).

Webster-Stratton goes on to say that a variety of parental traits, including cognitive elements such as stressor ratings, mediate the effects of extra-familial, interpersonal, and infant stressors on parental stress. The various factors such as the parents' psychological well-being, their excellent social support, gender and drug use often mediate the effect of stressors on parental distress (Webster et al., 1990).

2.2.3. Factors associated with parenting stress Socio-economic factors

Previous research has identified several possible predictors of parenting stress. According to a study , sufficient financial resources, ability to with challenging situations, significant association between parents and children, sexual characteristics of the children with special needs all are the predictor of parenting stress in both the parents (Viana & Welsh, 2010). Problematic behaviors of the children and their age and the expense of the domestic things have also been identified as significant predictors of maternal parental stress, as well as social difficulties and economic problems. All these factors have different negative impact on the emotional and mental health of both fathers and mothers having children with disabilities such as intellectually delayed, autism, attention deficit hyperactivity disorder and Down syndrome (Skreden et al., 2012).

Gender Differences

Barnett and his colleagues (2011) measured that parents who have developmentally delayed and disabled children have a high likelihood of experiencing high levels of parental stress in their lives. Various research and studies existed that were conducted on gender variants of parenting pressures, and these existing researches have emphasized on specific populations of children and mothers and fathers (Lubiewska , 2016).Parental stress varied according to the sex or gender role. It was found that parental stress in fathers of the children with special needs was related to their courtship and their temperament of the children with any disability (Cromer, 2014).Various studies have found that parents having special daughters experience higher levels of parenting stress and dysfunctional parenting than mothers and fathers of boys with neurodevelopmental disabilities (Lavy, 2011).According to Skreden, and his colleague (2012), the number of children present in the family have

been identified as similar indicators of infant- rearing stress for both mother and father as well. There is an ample evidence existed that mothers maintain and continue their commitment to raising a child with NDD. They never escape the situation. They always try hard to raise their children with disabilities in a more perfect way in order to make them independent in their lives. That's, why mothers are more susceptible to parenting stress (Lin, 2011; Lin, 2015; Lovell et al., 2015).

Disruptive Inter-parental Relationships

The divorcee and separated parents who have children with NDDs often experience more stress while dealing with the difficult or in appropriate behaviors of their children. A single parent is more vulnerable to stress and have more dysfunctional parenting practices as compared to those who are not separated. In a divorce cases, mothers often experience more stress as compared to fathers. Therefore, it is very challenging task for all mother to raise children with neuro-developmental disorders (Nathwani et al., 2021).

Poor Parental Coping Skills

Another element which affect the family environment is the poor parental sense of ability, which is a multifaceted development consisting of social, enthusiastic, and mental traits and self-perceived parental effectiveness and fulfillment with the parenting (Delale, 2011). There aren't too many inspections of stimulating sense of ability associated with stimulating pressure. Because this research showed that maternal pressure correlates negatively with parental accomplishment. It has tended to argue that sense of empowerment is viewed as self-perceived parental accomplishment and life fulfillment in a parent, is associated with pressure in a bidirectional manner (Geikina & Martinsone, 2015). According to Mash

and Johnston (1983), having a child with developmental disabilities creates ongoing pressure on parents that can negatively impact their level of competence and ability.

That pressure most of the time led towards poor sense of ability and competency to cope with the stressful situation. Mothers of the children with developmental difficulties in particularly showed a lower range of parenting skills and competence in a study conducted by Kumara and Harpreet in 2010. However, parental efficacy, parental satisfaction and good parenting was positively related with low levels of stress in parents, which include excessive emotional warmth and parental supervision. Parenting stress is moreover associated with certain dire parenting consequences, such as a tendency to draw attention to terrible characteristics in a little one and maternal despair (Harpreet et al., 2010).

Emotional and Behavioral Problems of Special Children

The association between emotional behavioral problems and the parental stress becomes clearer around the age of 6-7 years (Zaidman et al., 2014). The father and mother can focus on the early showing of inappropriate behaviors and emotions by children with special needs. As it is true that parental stress is highly predictable in terms of emotional behavior problems. Those parents who have children with disability such as autism or ADHD have more parenting stress and poor parenting practices. The level of stress varies with the severity of autistic features in the child (Manning et al., 2011) and adaptive behaviors. The evaluation of relationship between emotional behavioral problems and parenting stress often reveals some interesting points. The behavior and emotional development in parents often influenced by the difficult or problematic behaviors of the children. As a result, behavioral and emotional problems significantly predict parental stress, while stress which is linked

with a dysfunctional character is associated with daily living, communication skills, and cognitive abilities (Giovagnoli et al., 2015).

Furthermore, there exists specific elements which have impacts on parenting styles and stress related to raising a child with neuro-developmental disorders. These elements or factors can be described as contextual factors that can also affect parental stress. Family unity has been shown to be an important indicator of a good life for mothers and father of the autistic children, which includes father and mother working together with their other children as well as with their baby. If a child has siblings, this should subsequently allow for greater potential for interaction in fun and useful joint activities that increase the joy of parenting and thus reduce the pressure (Higgins et al., 2005). In addition to this, the presence of siblings or other normal children in the family is also a strong buffer which can play a key role in lessening the stress level in mothers and fathers of children with a neurodevelopmental disorder in that they will be able to assume some care responsibilities for their sibling who are without a disorder or disability (Lai & Oei, 2014). However, this may not apply to all types of complaints or all cases. Variations in level of stress among parents vary from individual to individual and the type of child's disability is important in that case. (Abbeduto et al., 2004).

There is also a concerning point about the role of siblings in the family that siblings or children without disability also act as significant stressor for the family circle of the autistic children and also exacerbate parental stress. Finally, feeling valued and cared for as a result of receiving social help from others can also be an important variable in parental distress. Social support from partners, family members, and/or long-term support organizations has always been associated with reducing distressing episodes in mother and father of the autistic children and other IDs. This

evidence suggested that social and personal family support in the face of parental stress might be a cautious approach (Corridor et.al, 2011).

Moreover, a longitudinal study was conducted by Cram and Warfield (2001) in order to measure the parent well-being of children with special needs. The study was designed to generate and test conceptual models of child and family development and contribute to the knowledge base that informs social policy and practice. The sample for the investigation was based on 183 parents of Down syndrome children, motor impairment, ASD and with developmental delays. The results of this study found the significant relation between the study variables (Warfield et al., 2001).

2.3 Parenting Styles

Parenting is a complex process to raise a child but when it comes in the case of a special children, then it causes variations in parenting .Parenting is a phenomenon which revolves around the issues of control or management of child with disability. According to Mckinnon and his colleagues (2019), parenting is affected by the inability of child to speak or behave appropriately in the house or in social circumstances. Parents' parenting styles indicate how they regularly interact with their children and are based on certain attitudes and specific behaviors. Parenting is an effort to nurture a child's long-term development by using various connections and techniques. Baumrind's work (2010) is the cornerstone of research in to parenting practices. Warfield, (2005) measured the relationship between parenting practices, social behaviors and personality development in children by observing parent-child associations. Maccoby and his colleague in 1983 created a parenting model that discriminates between authoritarian, indulgent, uninvolved and authoritative parenting styles. According to Baumrind (1968), parental control reflects the standards and needs of parents to assist their children in integrating into diverse social and cultural

contexts. It is possible to divide parental control into three qualitatively different types: acceptance versus rejection; psychological control versus self- control; and corporate control versus lose control (MCkinnon et al., 2019).

The shaping and enhancing psychosocial improvement of children by parents can elicit different results in different ways (Barber et.al 1994). The behaviors parents exhibit as parents have a lasting impact on children's development, with some parenting behaviors being harmful to children's intellectual health. The mental and emotional behavioral problems of childhood and adolescence can primarily alter the lifestyle of those affected and last into adulthood. Other studies have found an association between authoritarian parenting patterns and positive developmental outcomes for infants and adolescents (Kaplan, 2004).Children raised with authority tend to be independent, confident, and emotionally stable. They also exhibit better performance, greater social skills, and better quality coping techniques in school than teens who grew up with different parenting styles. Parenting fashion is one of the indispensable factors in family upbringing. It is an example of extraordinarily stable behavior and a tendency to enlarge and nurture teens through daily activities. Parenting practices typically fall on a continuum between the two anchors of neglect and over-punishment, with extravagance recognized as negative in both directions (Stevens, 2014).

Positive childcare or raising a children with more active responsibilities is a strategy that includes warmth, sensitivity, recognition and responsiveness towards the children with special needs (Kawabata et al., 2011). Literature has shown that parenting styles and ideas related to parenting practices have a significant impact on the psychological and behavioral development of children having NDDs (Brennan et al., 2013) and also influence active parental teaching styles (e.g., feelings of warmth

and understanding) (Ma et al., 2015). There is no doubt that we live in the existence of one of the most sensitive generations in childhood, and these generations grow as children have disabilities. This great sensitivity contrasts with the difficulties that parents seem to experience in many cases in helping their children to adapt to social behavior, which implies, among other things, full academic development. Parenting behavior has long been heralded as a critical ingredient for optimizing child outcomes. Two types of parenting behaviors are frequently studied in the intergenerational transmission of risk—sensitive/responsive parenting and hostile parenting. Sensitive parenting behaviors are defined as the parent's ability to accurately perceive and promptly respond to the child's cues and signals, in both distress and non-distress contexts alike (Racine et al., 2022).

Another study conducted by Garcia (2019) elucidate parental models and various variables that interfere with parent-child interactions. Various analyst considered the status of disability in parenting styles as a modifier. That’s why the main characteristics of the parent-child relationship studied in an accepted manner, and then to take disability into account. Parental practices are understood as a set of attitudes of parents while dealing with the young child which are familiar to him and which together structure an affective environment in which parental behavior is expressed. These include behaviors through which the father and mother develop their own obligations as parents (parenting practices), as well as other types of behavior such as gestures, voice changes, spontaneous expression of influence, etc. the styles have a number of effects on improving teenagers and also on their well-being (Cruise, 2019). However, much of the research on parenting styles and their associations has focused on mothers and fathers of adolescents who are healthy and growing normally.

The parenting behavior of caregivers of adolescents with chronic illnesses is less well understood (Cruise, 2019).

Parents are a source of support for the children with disability such as autism, intellectually disable, attention deficit hyperactive disorders, Down syndrome and various other neurological disorders. Although, raising children with multiple medical conditions is a difficult task yet it has been linked to less positive, consistent, and effective parenting behaviors (Baker, 2005). More research may be needed to understand the factors that contribute to the difficulties of caring for these children. The results showed that parenting styles and hardiness have a positive and significant relationship. Among high school students, parenting styles predicted robust characteristics of parents who have children with neurodevelopmental disorders. Several meta-analyses have demonstrated that when maternal and paternal sensitivity is high, children are more likely to thrive in terms of their socio-emotional behavior, interpersonal skills, and cognitive development (Madigan et al., 2019; Rodrigues et al., 2021)

Among researchers of child socialization, it is widely recognized that fathers and mothers play a key role in the emotional and psychological growth of children. Parents mold and shape their child behaviors through their influence .It requires responsive parenting, not lazy or hostile parenting in parenting the child with special needs (Farzana et.al, 2013).There is a prodigious deal of practical literature on the impact of parenting on child change, but it differs in terms of parental behavior and attitudes, which have been studied as correlations and predictors of child well-being. Greater control indicates a determination that people can have an effective presence in their environment. Such people believe that they can turn a bad situation into a good one. In cases, more tasks can be defined as a full proportion of man, and people have

a specific cause and document their meaning about who they are and evaluate any actions in which they are involved. It seems that such people are happy and complex. Skills and smart people often believe that life is classified by change. They believe that change gives them the opportunity for personal growth and emotional stability (Ma et al., 2015).

According to the previous studies, it is clear that the birth of children with neurological disorders / developmental disabilities increases the chances of parenting stress and depression in mothers and fathers having children with some disabilities (Vilaseca, 2020).The psychosocial activity of parents affects the development and behavior of children with special needs. It is also not clear that how fathers and mothers of children having disabilities experience family functioning, health, and support, or whether there are differences between mother and father experiences. Family activities are related to family health in families with children with special needs. Research shows that both mothers and fathers have similar roles in the health, functioning and social support of their families. Family activity was positively correlated with family health (Vilaseca et al., 2020).

2.3.1 Baumrind View of Parenting Styles

For Baumrind, who was one of the pioneers of parenting style research, socializing the children according to stresses of society while keeping a wisdom of personal integrity was a key part of parenting styles. The process of socializing the child is directly linked with personal integrity of the child. Baumrind's (1971) model, which differs from previous researches reflects a variation in the concept of socialization. It manifests itself such aspects as the perception that the child contributes to the development of self through influence on their parents (Berg, 2011).

This led the author to identify parental styles as features of the parent-child association rather than a parental trait. The early research of the author concentrated on the impact of parental authority patterns on early infantile development. In this way, the author began to clarify and expand on the concept of parental control, which had been previously defined in various ways such as justice, use of corporal punishment, use of explanation. Based on the early works done by Baumrind, parents, according to their educational style, are classified into three groups: authoritarian, authoritative and permissive. Earlier 1980, the three-dimensional model given by Baumrind (1967) had become firmly established in the arena of child growth. However, Baumrind limited his examination to the influence of differences in parenting styles among highly settled families, other researchers have focused on more family types or various other parenting styles such as over-reactivity or hostility (De List, 2007).

Baumrind's paradigm shift facilitated the study of generalizing the parenting styles and parenting behaviors. Baumrind's model was very different for different populations and this allowed them to create out undeviating constructs through which theoretically important aspects of parenting style will be dignified. Parenting style was then defined as a reflection of two basic processes: the digit and type of requests made by the parents (needs) and the strengthening situations of the parents (responses). In this way, authoritative parents are highly emotional and needy. Otherwise, arbitrary parents are a high demand, but a low emotional level. In the view of Baumrind, the experience of finding permissive styles distinguishes two different types of subgroups in the parenting styles: on the one hand, parents allow, determined with high emotional levels. And on the other hand there is a low demand and careless

parents are determined with a less level of interaction and social activity (Zhang & Li, 2011).

As a result of a combination of two-dimensional theory gave by Baumrind (1971), different kinds of logic appear. Verhoeven et al., (2012) stated that less active or lazy parenting style is likely to exacerbate psychological problems and negative parenting styles, e.g. events such as general tinnitus and loud noise, increasing children's social anxiety. Other studies show that children increase their rejection of anxiety (Brown et.al, 2008), overprotection (Bogels et al., 2001), and anxiety. In Chinese study, process of raising a child and guilt were negatively related to self-esteem and emotional balance of adolescents and positively related to behavioral problems. In this study, parental overprotection was linked with alleviated symptoms among ADHD symptoms. Bilateral correlation analysis was carried out to determine the association between parental styles, ADHD symptoms, and behavioral traits, and mediation assessment was used to investigate the mediating role of parental overprotection and attitudes among ADHD symptoms (Arini et al., 2021).

Laxness

Although parenting styles vary across cultures, the Parenting Scale (PS) is used to assess clinical practice in Japan and some countries. As in Western countries, the validity of parenting styles was confirmed in Japan, which indicates the reliability of the two-factor construct for laxity and over activity. Whereas, Indulgence refers to a tendency to be lenient and unpredictable when raising children. Inconsistent and liberal parenting has been reported to be associated with psychological disorders and violence in adolescents.

Over-Reactivity

Aggression is related to arbitrary and violent parenting practices, including coercion and punishment. Previous research has shown that empowered and hardworking parents improve the complex behavior of children despite cultural differences. Over-reactivity is also linked to parenting based on an intense emotional reaction to inappropriate behaviors of children. Such kind of parenting styles usually lead to frequent punitive punishment and aggression in both the parent and the child. It is found that three things, characteristics of child, personality of parents and psychological well-being are significantly strong predictor of over-reactive parenting (Martorell, 2006).Another study conducted by Arnold in 1993 explained that authoritative parenting styles include children's mental health and behavioral problems. In addition, overeating and segregation are related to complex child behavior in the Japanese population (Martorell, 2006).

Therefore, we assume that the two dysfunctional models relate to the child's behavior in the Japanese model. Factors identified in the parenthood criteria study (Arnold et al., 1993) include hyperactivity, depression, and verbal reactions that reflect severe, mild, and verbal reactions to child abuse. These sub-levels were confirmed on the basis of home observations of parents and children of clinically recommended children and mothers who were abused compared to children who were not reported. Since then, the analysis of several independent factors at the parental level has consistently confirmed the existence of higher efficiency and relaxation factors, but not granulation. However, decisions differ between studies on which materials and which materials best reflect high reactivity and relaxation (Reitman et al., 2001; Rhodes et.al, 2007).

2.4 Association between Parenting Stress and Parenting Styles

Several studies have shown that mothers have a heavier burden in caring for children with autism than fathers and feel stressed. Mother of children with autism experience higher stress than felt by fathers. Some argue that stress in mothers and fathers related to raise a children with special needs can directly or indirectly lead to a disruptive behaviors of children. The parenting style is the best way that parents can educate their children as a manifestation and sense of responsibility to the children. The impact of stress experienced by mothers with autistic children will change the parenting styles given to these children (Faridah, 2021).

Wilder and his colleague in 2022 conducted a study and found that poor parental behaviour often results in more complex behaviour of the children with special needs. They found that the mothers with high social concerns controls and supports her daughters with special needs in her daily life and academic skills. However, most of these previous studies have been focused on children and social problems in immigrant families, while several studies have revealed a relationship between parent styles and social problems in adolescents in immigrant families (Wilder et al., 2021).

It is further found that children having poor self-control and inappropriate behaviors (such as ASD and ADHD) may develop serious problems for parents related to children's behavior. Mothers and fathers of the children with behavioral issues use more common strategies of castigation (verbal and physical) and punishment than other parents (Nicholson et al. 2005). Difficult and stressful parenting is positively associated with children’s behavior problems (Khateeb et al., 2019).

The electronic search resulted in 14 studies published by Arab researchers and 55 studies published by US researchers. The results showed that autism spectrum disorder has many of the same effects on Arab and American families. Six major areas were identified in the results. Financial difficulties associated with raising children with autism spectrum disorder were mentioned more in Arab studies than in US studies. Arab studies had more emphasis on gender than US studies. The results related to quality of life of parents of children with autism spectrum disorder in Arab studies were equivocal. US studies included comparisons with families without a child with autism spectrum disorder, and addressed factors that were associated with quality of life indicators (Hadidi et al., 2019).

Children with autism spectrum disorder (ASD) and attention deficit hyperactive disorder can exhibit persistent deficits in social communication, causing their mothers to experience elevated parenting stress and poor parenting practices during the childrearing process. Some internal and external factors such as hardiness and self- efficacy can mediate this association between stress and parenting practices among parents of the children with neuro developmental disorders (Zhou et al., 2022).

Research in the general population has rigorously established associations between mental health disorders in children and psychological distress in parents. Studies in the general population have proven that parenting stress and poor parenting practices are significantly associated with childhood psychiatric disorders or neuro-developmental disorders after adjusting for other family-related, child-related and environmental factors (Keyser et al., 2017). Parents of children with ASD score high in parental stress scales, even compared to parents of children with other developmental disorders or intellectual or physical disabilities; an increase in scores that measure other mental health problems has also been observed in the mothers of

these children before and after childbirth. Research in the general population has also shown that parental stress and poor parenting practices are distinct but associated phenomena, as each of these factors increases the risk of the other (Guzman et al., 2021).

2.5 Parent-Child Relationship Quality

The nature and quality of relationship between children and parents is always assessed by evaluating specific traits and parenting skills while dealing children with neuro-developmental disorders. Friesen and his colleague (2013) examined the excellence of parent-child relationships based on over a 30-years period. They found that teens who had better parent-child interaction reported more parental warmth, sympathy, and successful dealings with children, as well as fewer instances of over-reactive parenting in their adult parenting practices. Ehrlich (2015) assessed the quality of parent-child relationships as mediated by children. Blood pressure, blood sugar levels and body composition were used to assess metabolic risk which found to be significant predictors of stress (Ehrlich et al., 2015).

Demographic variables such as ethnicity, age, gender, race and level of education were used as a measure of socioeconomic status. Positive father mother relationship with their child were linked with a lower risk for women or mothers, but not for men or fathers, according to the results of this study. Men, but not women, were at greater metabolic risk as a result of mother- child conflict. It has been found that women are protected by supportive father-child conflict, but men are not. There was found no relation between age of the child and parenting stress among parents (Ehrlich et al., 2015. Another factor is the parents' contribution, which is determined by the child's level of contact and information. Another consideration is evaluation of parents about how well he or she communicates with the young person. Boundary

setting is a fourth metric characterized by parents' poor experience of disciplining children. The final area, autonomy, assesses parents' ability to foster independence (Elsabbagh, 2017).

Caring for a child with developmental disabilities is a challenging journey, as the parents must meet greater demands when compared with the parents of children without disabilities. Such parents require additional financial, social, emotional, and physical resources, which may conflict with the competing needs of the other family members. This life-long journey of parents navigating through the medical, developmental, and educational interventions in addition to caregiving responsibilities affects their quality of life. Global estimates demonstrate that 15% of the world population is affected by some form of disability (15). Among these, between 110 and 190 million individuals have significant functional limitations and participation restrictions (Bharuchi et al., 2022).

According to the results of another study conducted by Horrowitz (2004), parents of the autistic children usually spend less time with their children than parents in the general population, consistent with previous research. Regardless of the parents' age group, however, the time they spent with their autistic child did not cause any kind of change. Parents of children with autism also reported feeling less in control, having difficulty setting boundaries, and being unable to communicate with their children. The ability to verbally converse with a child with autism improved as the child got older. All children need love, encouragement, and support for learning with disabilities. Always remember that the way you behave and respond to challenges has a big impact on your child. A good attitude won't solve the problems associated with a learning disability, but it can give your child hope and confidence that things can improve and that they will eventually succeed (Jing et al., 2019)

2.6 Parent Child Dysfunctional Interaction

According to Solis and his colleague in 1995, dysfunctional parent-child interaction (PCDI) refers to beliefs of parents about the emotional significance of their relationship with their child having NDDs, given their expectations regarding the parent-child relationship. Communication can be an obstacle for parents with special children, especially children with learning disabilities, and can indirectly lead to impaired communication between them. According to Abiddin (1995), the behavioral traits that make a child easy or difficult to manage are called a difficult child. In the Parental Stress Index Instrument, the DC subscale indicates perception of parents about how difficult or easy their child is (Bishop et al., 2007). One element that increases parental stress is the inappropriate behavior of their children, particularly children with neurodevelopmental disorders such as ASD, since their characteristics are often impaired in adaptability and day-to-day functioning, requiring extra struggle to help their children cope with everyday life care for and support tasks such as dressing, eating and personal hygiene (Herring et al., 2006).

In addition, sleep deprivation or sleep disturbances, in which they have difficulty falling asleep and wake up multiple times during the night, are often reported by children with learning disabilities (Goodlin et al., 2008). According to a study led in Malaysia by Zaman (2015) examined the stress in parents of children with learning disabilities and their demographics. The writer found that stress related to parenting was high in mothers of children with learning disabilities as compared to fathers of children with learning disabilities. Results of the study shown that 71.4 percent of mothers and 28 .6 percent of fathers have a high level of stress. Even at low stress intensities, only 35.1 percent of mothers are less stressed than fathers (64.9 percent) (Zaman, 2015).

A longitudinal study on parenting stress and family problems within the families of children with special needs was conducted by Woodman and his colleagues in 2016.They found that parents of such children are at high risk of experiencing psychological stress as compared to other parents. They also found 176 families of IDD children suffered more from parenting stress and dysfunctional parenting practices (Marcoulides et al., 2016). Another longitudinal stuy of parenting a child with disabilities indicated higher level of stress in parents of children with neuo-developmental disorders. Parents especially mothers of these children with disabilities were examined in the 3 year longitudinal studies. Results showed the significant relationship between parenting stress and parenting practices of the mothers having children with special needs (Hansn et al., 2016).

2.7 Hardiness as a Mediator

It is a true fact that most of the time individual experience difficult situation and time. At that he or she has the need to have hardy personality in order to cope with the prevailing difficult circumstances. Similarly, parenting a child with specific disability is very stressful for parents especially mothers. Therefore, hardiness or hardy personality often act as a facilitator (Quick et al., 2013) between parenting and parenting stress in mothers and fathers of children with different disabilities such as DS, ADHD , ASD and IDD. Therefore, hardiness can be defined as a personality attribute of characteristics of one's own personality that supports a person in coping, resisting (Weinberg et al., 2011) and actively engaging in transformative coping skills (Quick, et al., 2013).

The transformational coping skills enable a person to reframe a troubling situation into favorable condition as an opportunity rather than a threat (Nelson et.al, 2003). An ability to control the external events, commitments in day-to-day life, and a

challenging perspective when unexpected changes occur are the three factors that make up this trait in parents. According to Kobasa (1979), commitment is defined as accepting one's beliefs, goals, and abilities and believing in their importance. This does not create a sense of alienation, but rather a sense of purpose and involvement. Hence a study was conducted by Weiss and his fellows in 2018 in which they found hardiness as a significant mediator in parents of children with various disabilities. They found that the hardiness mediated the association between parenting stress and their styles to cope with the situation. The results of this study also shown that among parents mother were scored more on family hardiness scale as compared to fathers of the children with special needs (Weiss et al., 2018).

2.7.1 Three Dimensions of Hardiness

According to existential school of thought in psychology, hardiness has three categories: (a) control, (b) commitment, and (c) challenge. These qualities are intertwined, and taken together as they convey a sense of hope and hardiness in the face of adversity. According to Kobasa (1979), control is the assumption that one can control or influence the events of one's life. Rather than seeing oneself as the target of circumstances, an internal locus of control allows one to see one's power to contribute or "manage things". The term hardiness can also be defined as a personal trait that has implications for improving hardy responses to traumatic situations (Bartone 2007), as well as acting as a buffer, protecting people from the dangerous consequences of stress by giving them more options to cope. It is believed that there should be every other cognitive trait that influences parental stress and influences parental activities. Hardy people are more optimistic and confident in their ability to deal with difficult conditions (Delahaij et al., 2010).

Challenge

Panic people assume that stress is a challenging thing that they can cope with it if they get it right. The habit of experiencing stress as a challenge to reduce it often motivates one's ability to take positive steps to address the sources of stress. This practical method of dealing with stressors and stressful situations varies from the more general view of stress as an unhappy, overwhelming, or even devastating force that is overwhelming rather than motivating. (Allred & Smith, 1989)

Commitment

Those people who have more ability to bounce back are more talented to keep their nerves stable in the challenging situation .These people are more committed and they have effective coping strategies to deal with stress. They often thought that their lives are meaningful and have some aims to achieve (in whatever form that meaning may take), and that meanings motivates them to influence their surroundings and to persevere even when those efforts don't appear to be working. A person who don't have any aim or purpose and commitment in life, as well as motivation, will be unable to live a hardy life (Awery, 2014).

Control

Those people who have stable mood and stable emotions have the stronger ability to control the challenging surroundings and to overcome the level of stress. They have a master level skills to keep control over the tough things and to maintain the mental peace level with hardy personality. They perceive stress and unhappy moments as their toughest exam to pass it with more distinctions and rewards though the help of hardy personality profile. So control is the ability to maintain peace and emotional stability (Allred et al., 1989).

2.7.2 Association between Hardiness and Stress

Allred and Smith (2009) found that people with disproportionate resilience or hardy personality have higher quality self-reports about themselves and have a higher overall performance level on disruptive foundations than people with less hardy personality. Beasley et al. (2002) measured that hardiness was negatively correlated with psychological stress, wellbeing, and adversely with melancholy (Maddi et al., 2006; Orr et al., 1990). Caregivers or parents have been the subject of research that has produced the same results. According to McCubbin (1989), parents demonstrate psychologically hardier through open communication and a desire to help.

Psychological hardiness helped families who have special children to deal with subsistence pressures and stress while dealing their inappropriate behaviors. They also have the ability to accept alternatives as good, and persevere in the face of adversity (McCubbin et al., 1987). In contrast, less hardy family members showed more stress, anger and incompetence when it came to caring responsibilities of their children with special needs (McCubbin et al., 1987). Using cross-sectional methodologies, preliminary studies of hardy family was compared in diverse parental groups and uncovered relationship between hardiness and other psychological categories. Then it was found that the hardiness is linked with lower levels of stress, anxiety, and emotional state of depersonalization in mothers of children with autism compared to mothers of children with intellectual disabilities or generally emerging children (Weiss, 2017). In parents of children with ASD, increased family hardship is associated with less stress (Plumb, 2011).

Hardiness is associated with social support, caregiver self-efficacy (Snowdon et al., 1994), and reduced maternal stress in families of people with intellectual disabilities (Ben et.al, 2005). While individuals attributed specific hardiness traits. A

number of studies have identified coping mechanisms that are commonly used by families with a child with Down syndrome (Pahl, 1991; Sloper et.al, 1991). The way a family unit operates can either empower or disempower its followers. The Family Hardiness Index (FHI) was created by McCubbin and Thompson (1986) to quantify the potential of hardiness as a resource for resilience and adaptation. Internal qualities of the family, according to Kobassa, are always defined by strength related factors that are characterized by a sense of control over life events. The articles on hardiness suggest that a sense of control leads to family empowerment and resilience. In addition, it was evaluated that mothers of the children with neuro-developmental disorders are have higher scores on hardiness index scale and they have strong coping skills (Pahl, 2011).

Eschleman and colleagues (2010), performed a meta-analysis of several articles that were all associated with hardiness. They give evidence that hardiness was once positively linked with self-esteem, optimism, extraversion, a sense of unity, and self-efficacy. Neuroticism, terrible affectivity, trait anxiety, and anger have been negatively associated with hardiness. According to the researchers, hardiness also acted as a mediator in stressors of life and work, conflicts related to supervision and peer group, project insecurity, over burden of work, ambiguous situation, functional conflict, work-family conflict, and interpersonal stressors (Dehl et al., 2019). Mental distress, sorrow, burnout, nervousness, undesirable state, post-traumatic stress disorder, poor mental well-being, and obstruction have all been mediated by hardiness in parents of the children having disabilities. Hardiness was also found to be a moderator of the stress-strain association, explaining an unnecessary 4.5 percent of the variance, according to the authors (Eschlemann, 2010).

A hardy personality character has previously been associated positively with problem focused and positive intrusive thoughts and negatively with emotionally-focused and bad intrusive thoughts to figure out the relationship between hardiness and coping skills among parents. Alarcon (2010) found no association between hardiness and avoidance or seeking support. The author speculated that these results should be defined in terms of the fact that hardy people find fewer activities disruptive and have greater resources to successfully manage stressors Furthermore, another research work suggested that hardiness often acted as mediator in the association between stress and health (Alarcon, 2010).

Preliminary investigations into family hardiness have compared hardiness in different parent groups and identified associations among hardiness and other psychological constructs using cross sectional methods. Mothers of children with ASD report less hardiness than mothers of children with intellectual disabilities or typically developing children, and such hardiness is associated with lower levels of depression, anxiety and feelings of depersonalization (Plumb, 2019). Increased family hardiness is associated with less stress in parents of children with ASD. As hardiness often mediated significantly the association between poor parenting practices and stress among parents of children with neuro-developmental disorders (Weiss et al., 2019).

Several coping strategies and hardiness were marked as key indicators to facilitate parents in stressful situation. It was stated that hardiness is the ability of one's own self to cope or overcome the stress. Kobasa (1979) first proposed the trait of hardiness as a safeguard to average the association between stress and mental illness. Hardiness often moderated the relationship between stress and poor parenting in a study of male business leaders who also reported excessive levels of stress,

indicating that executives with little complaints reported higher level of resilient ability as compared to those colleagues who have more complicated chronic illness (Kobasa, 1979).

2.8 Parenting Self-efficacy As a Mediator

Parental self-efficacy is defined as belief of the person or individual in their ability to cope with the tasks involved in caring for a child with special needs. People with higher levels of parenting self-efficacy or self-confidence are less stressed and better prepared to handle the demands of family life. This is particularly significant for parents of children with Autism Spectrum Disorder who face greater parenting difficulties. There exists no measured variables or skills that can show that how to help mothers and fathers of autistic children and how to build higher parenting self-efficacy in them. Although, parental self-efficacy is a broader phenomenon when it links to the concept of parenting children with special needs (Allerd, 1989).

2.8.1 Theory of Self-efficacy

According to self-efficacy theory of Bandura (1982), self-efficacy is a trait that influences a person's engagement in events and resilience in confronting challenge and adversity, patterns about oneself, and the state of misery that is empowered in dealing with environmental demands. The individuals who have more self-efficacy are often proved to be motivating factors for those who have less abilities to cope with situation and have less level of satisfaction. Such kind of people act more efficiently in difficult situations When people have low levels of self-efficacy, they are more likely to internalize failure and refill themselves more easily. Then such things cause depression and stress in them (Bandura, 1982).

Several inter and intra familial factors do not have direct influence on human behaviors. Those behaviors patterns which are supported by psychological well-being

are often promoted by these factors (Bandura, 1993). Efficacy is essential to emotional and cognitive responses of the human beings. Self-efficacy is also described as a confidence in one's own abilities to successfully complete an endeavor to achieve a preferred outcome. This belief is the driving force behind the actions of one own self. It's not a common cause for a character to feel the urge to act to address non-public challenges until they agree that their actions can result in effective punishment (Bandura, 1993).

Ardelt and Eccles (2001) proposed a model based on the work of Furstenberg (1993) and Bandura (1997) to explain the association between parental self-efficacy and parenting behavior patterns in parents of the children with neurological disorders. This model suggests that parents with higher self-efficacy as guardians are more likely to interact in pro-educational, pro-social, and pro-psychological parenting behaviors and policies (Jones & Prinz, 2005). Parents who are not too much efficacious may find it difficult to practice good parenting and may also give up easily when faced with difficulties, which may also support their weak feelings of parental self-efficacy (Ardelt & Eccles, 2001; Jones & Prinz, 2005).

2.8.2 Social Cognitive Theory

According to Bandura (1986) social interaction, communication and experience of the society also influence one’s own personality. According to social-cognitive theory, now environment or surroundings cannot manipulate or manage people, but the individual affects, principles, and cognitions are manipulating them (Bandura, 1986). This opinion stresses on the cognitive, self-balancing, and self-reflective techniques that influence human behaviors .This theory also asserts that people can regulate their surroundings through their own behaviors and beliefs, rather than they simply respond to external circumstances (Grusec, 1992). Individual

cognitions are the most important components in deciding ability of the people to cope with the reality based challenges and direct their behavior according to social-cognitive theory. While the environment has a powerful influence on one's behavior. Individual elements and influence of the environment all work together to human functioning to shape Bandura's social-cognitive theory (Bandura, 1986).

2.8.3 Transactional Theory

The transactional concept captured more intense and potential abilities of the mothers and fathers and surroundings of the child to influence the results of development. The transactional concept also distinguishes that adolescence and the interaction held between parents and children are embedded in the family context and develop reciprocally and bi-directionally with the passage of time (Fiese et al., 2000). In this theory the stress was also laid on the distinctive contribution of the children and its surroundings in attaining developmental outcomes and the recurring two-way interactions between mother and father and children with special needs (Sameroff et.al, 1975). Over the time, mothers and fathers and young people try to adapt, and adjust their manners in response to their collaboration partner (Barnard, 1997).The pronounced power of a child's parents and environment has a powerful impact on developmental outcomes, which has been highlighted by transactional theory.

Children and the parent-child relationship are entangled in family reunification and develop reciprocally, bidirectional over time, according to the transactional idea (Sameroff et.al, 2000). The unique contribution of the infant and its environment to the achievement of developmental outcomes and the recurring, two-way interactions between parents and adolescents over time are both emphasized in this strategy (Sameroff, 1975; Chandler et al., 1975). Each social companion responds to the

behavior of the other, and subsequent behavior can also be influenced as a net result of their response (Sameroff, 2004).

Parents and children observe that how they adapt, change, and modify their habits over the time through the method of social communication and two way interactions (Barnard, 1997). Implications for child and parent outcomes varies from time to time. Adaptive behavioral development and social skills (Landry et al., 1990), enhanced cognitive skills (Stewart, 1973), and educational achievement are all supported by adaptive parent-child interactions (Estrada et al., 1987). Parents with appropriate affects, mutual commitments, reciprocity, emotional availability to the needs of their children with disabilities, opportunities for reinforcement, and a sense of help are more likely to foster their children responses and behaviors (Landry et al., 1990; MullerNix et al., 2004). Parenting functioning is prolonged through the use of incredible parent-child connections. Parents who demonstrate high-quality behaviors toward their teens have been shown to exhibit significant, high-quality changes in the report of psychopathology and nonpublic stress (Hood & Eyberg, 2003). This fact is providing a framework for future awesome interactions, as over time a guardian keep a history of awesome communications with their child and helps form a healthy, ongoing connection. Researchers have started assessing the contributory role of both the mother or father and the infant to comprehend the behaviors unveiled during interactions with one another, based entirely on the perception that adolescents and parents interact together throughout their relationship. Intervention attempts can also focus on goals that need to be adjusted to improve child and household functioning (Lollis, 2003).

Variables which are related with environment and other surroundings often receive more support from society. Various theories have explain the impacts of

psychological well-being of parents in parenting a children with special needs. Amongst them family has a strong influence on the mental health of parents and children while nurturing a child with any disability (Landry et al., 2003).

2.8.4 Parental Self-Efficacy and Parenting Stress

Parental self-efficacy is an extension of self-efficacy in the field of parenting, which refers to the perception of effective parenting ability and belief in the ability to perform parenting tasks (Karraker et al., 2019). A study conducted by Rani and Singh in 2021 found a significant association between parental self-efficacy and parenting stress among 50 parents of the children with neuro-developmental disorders and 50 parents of the children without special needs. Through the purposive sampling, data was obtained from several therapy centers and analyzed using t-test and correlation. Results showed significant differences between both groups of parents in terms of parental stress. The study also found a moderately negative correlation between parental stress and parental self-efficacy in parents of children with disability with a 49 percent commonality (Singh et al., 2021).

Parenthood is a demanding undertaking in and of itself, but having a child with special needs can compound the hardship. Parents may experience significant stress in their roles while coping with developmental concerns that result in social, economic/financial difficulties; physical and psychological difficulties; and a low quality of life. The problems associated with disabled children's developmental demands create ambiguity, which many parents find unacceptable. Parenting stress is the worry parents experience when they doubt their ability to cope as parents. When their child has a disability, the demands placed on them are enormous. When a child is disabled, parents frequently lack the financial wherewithal to meet their requests (Pinto et al., 2020). A high sense of effectiveness benefits human achievement and

personal well-being in numerous ways. Confident individuals view difficult jobs as obstacles to overcome rather than dangers to avoid. Parental self-efficacy is a belief in one's ability to successfully complete parenting tasks, which has been shown to be critical for parenting quality. Additionally, parental self-efficacy is frequently related with a higher level of competence when it comes to parenting activities. Self-efficacy is critical for parents in managing with stress and regulating emotions, as well as intellectual adaption to parenting settings. The diverse demands place a strain on the parents of children with ASDs, who typically practice child rearing differently. Thus, parental self-efficacy is a critical characteristic for efficiently parenting the child, regardless of whether the child has a disability or not (Bhagat, 2015).

If a person's perception of competence is high for a talent they value, this contributes to their self-esteem (or low self-esteem if perceived competence for the valued skill is low). Inefficacy judgments in unvalued areas of competence are unlikely to have a major effect on self-concept and self-esteem. The extent to which problematic child behavior and parental stress influence parenting practices can be balanced by higher level of maternal self-efficacy and social support. A study of 100 Indonesian parents of pre-school children measured whether there was a relationship between maternal self-efficacy, child behavior, social support, and parenting practices (Sunayan et al., 2019). Mothers were asked to complete the given scales to measure their perceived self-efficiency, the quality of social support from family and friends, parental stress, the level of engaged and supportive parenting (Bradley & Caldwell, 1984), and their perceptions of behavioral problems in children. Multiple regression analysis was carried out which shows that parenting stress is a negative predictor of self-efficacy in parents of the children with special needs.

Self-efficacy and social support from family and friends have also been found to regulate the relationship between parenting stress, parenting behavior, child behavior problems, and maternal parenting behavior. The results suggested that behavioral difficulties may affect parenting, the impact of this relationship is less in women as compared to man. Women are also more efficacious and courageous to raise a child with disability (Yamaoka et al., 2019). Many parents navigate this stress effectively and find satisfaction and positive regard for this role. Yet parental stress can become exacerbated when parenting is occurring in the face of adverse life situations. Parental stress levels and behaviors are influenced by the level of self-efficacy that a parent experiences in their role and may be mediated by the social supports that occur in context. Parental self-efficacy, the confidence that one can manage effectively the parental role and assist their children in managing problems that occur, has been found to be correlated to adaptive family environments and positive outcomes for children (Cunningham et al., 2020).

Parental expectations and the perception of stigma can increase the stress experienced by adverse situations and deplete already taxed resources. In a society that places great emphasis on the quality of childrearing practices, the pressure that is placed upon parents to ensure optimal outcomes for their children is immense, and the way these practices and outcomes are judged can be harsh. Moreover, stress was negatively associated with more efficacious mothers. Those mother who have strong belief in their abilities to cope with the challenging situation show less level of stress while parenting a child with disability. It was also found that the relationship between parenting and parenting stress was mediated by parental satisfaction and parenting self-efficacy in mothers of the children with NDDs. According to a research, people with effective coping skills and hardy personality are less prone to stress (Doron et al.,

2013). It was found that parenting styles have influence on coping skills of the parents. According to Clark and his colleague (2002), the family environment is an important contextual component that has the ability to influence psychosocial and physical health lines. In particular, the quality of parenting has been linked with a variety of developmental outcomes (Maccoby & Martin, 1983; Baumrind, 1991). Various researchers have associated parenting styles with the development of internalizing and externalizing behaviors, self-concepts, substance use, and coping mechanisms (Clark et al., 2002). A growing body of evidence shows that parental self-efficacy is directly related to parents' ability to create a developmentally appropriate environment for their children (Jones & Prince, 2005). Parenting skills are linked with less depressive symptoms (Gross et.al, 1994; Gondoli & Silverberg, 1997) as well as higher parental satisfaction (Hudson et.al, 2001) and parental warmth (Teti et al., 1991), responsiveness and participation (Gondoli & Silverberg, 1997).

Despite the fact that most parenting research has supposed that parenting style influences adjustment patterns of children, therefore it has been suggested that the relationship may be bidirectional, with children's adjustment influencing a parenting practices (Aunola & Nurmi, 2005). This may be particularly important when considering the role of parenting style in expressing genetic temperament differences in children. The difficult challenges of raising a child with ASD can influence the parenting style which a parent chooses, while parenting style can facilitate coping strategies for parents to better deal with the stressors that arise from dealing with maladaptive behaviors in children with ASD (Nurmi, 2005).

Some research has found an association between parental self-efficacy and parental coping skills, in addition to parental well-being and parenting excellence. According to Dumka and colleagues (1996), high parental efficacy was related with

active coping in European American parents and with positive interpretive coping in Mexican American mothers. While many theoretical theories emphasize the impact of PSE on effective parenting, the empirical evidence is mostly correlative and fails to prove causality. Indeed, it is consistent with Bandura's self-efficacy theory that competent parenting and efficient parenting can lead to increased PSE if their parenting efforts are successful (Jones & Prinz, 2005). The association between parental self-efficacy and parental stress was examined. It was found that mothers who are more self-efficacious shown lower levels of parental stress (Jackson & Huang, 2000; Raikes & Thompson, 2005), and fathers and mothers with higher parental self-efficacy reported better overall mental health than those with lower parental self-efficacy (Jackson & Huang, 2000). According to Jackson (2000), the rationale for the relationship between parental stress and parental self-efficacy may be that mothers with higher levels of parental self-efficacy feel they have more control when dealing with behavioral problems in their children with neurodevelopmental disorders (Jackson , 2000).

Adoptive parents more prone to stress (McGlone et al., 2002). Therefore there is a possibility that these parents may less competent skills to deal with stress. Eanes and Fletcher (2006) conducted a study on seventy two mothers of those children who were diagnosed with disabilities .They measured that those parents who shown higher levels of parental stress described lower levels of competency about the behavioral and concentration related difficulties of their children. The results show that because of parenting stress these mothers have more stress and pressure in parenting a child with NDDs. For example, parents who use supportive resources appropriately, which is a constructive way of coping, may have greater PSE over the long term. In a qualitative study, parents of children with intellectual disabilities who took advantage

of information and treatment opportunities, sought social support, and practiced self-care reported higher parental self-efficacy and self-confidence than those who did not. (Taanila, et al., 2012).

The association between coping and PSE is consistent with previous research showing that social support predicts higher PSE (Cutrona et al., 2010). Many empirical studies have found a negative association between parenting stress and PSE. For example, some parent education studies have found that the intervention had a beneficial effect, as evidenced by lower parental stress and higher PSE (Bloomfield & Kendall, 2012; Keen et al., 2010). Parents who have a challenging child or a child with a disability typically report increased parental stress and low parental self-efficacy (Carter et al., 2006; Spielman et al., 2009).

In addition, findings from a range of researches conducted in the United States imply that PSE may act as a mediator in the relationship between parental stress and parental functioning or engagement. According to Giallo and her colleagues (2013), depression, difficult temperament of children with disabilities, and perceived stress were negatively associated with PSE, which was associated with lower parental involvement. Machida and his colleague (2002) reported similar results on PSE moderation of family stress and parental involvement in a study. Furthermore, Teti and Gelfand (1991) identified three characteristics, namely maternal depression, child problems and a lack of social marital support, as contributing to the observation of inadequate parenting practices about the mediating role of PSE. Jackson and Huang (2000) found that parents with fewer depressive symptoms and less stress had higher PSE, which is also related to positive parenting behaviors (warmth, structure, and providing intellectual stimulation at home) (Jackson & Huang 2000).

In the context of parenting, these studies have confirmed the link between stress, parenting styles and parental self-efficacy among parents having children with special needs such as IDD, DS, ASD and ADHD and many other neurological disabilities. Some further researches has explored the potential of PSE as a stress buffer. The moderating role of PSE was recognized in a study by Raikes and Thompson (2005) in which higher PSE helped parents cope with the stress of a low-income household. Furthermore, Kwok and Wong (2000) discovered that PSE attenuated the relationship between parental stress and parental mental health in a group of parents with young children in Hong Kong. The moderating influence of PSE has only been examined in a few studies. In another study of challenging babies, Leerkes and Crockenberg (2002) found that mothers with moderately high levels of maternal self-efficacy responded sensitively to infant needs, while mothers with low or extremely high levels of self-efficacy responded negatively to infant distress were affected and showed reduced sensitivity. Several studies have found evidence that parents of children with developmental disabilities are more likely to experience children rearing stress due to certain characteristics of their children with special needs such as social weakness (Eisenhower et.al, 2005; Estes et al., 2009; Tervo, 2012 problematic behaviors (Baker et al., 2008) or attention problems (Tervo, 2010), and withdrawal or emotional dysregulations (Tervo, 2012).

Numerous studies have examined the role played by these various disorders, including ASD, in increasing stress levels among parents. And found that parents of children with ASD are more stressed than parents of children with the other three developmental disabilities (Silva & Schalock, 2012). Autism spectrum disorders are characterized by deficiencies in socio-communicative behavior, the occurrence of odd or stereotyped behaviors, a limited range of interests, and in some cases, language

problems. It affects approximately 1 in 88 children (Centers for Disease Control and Prevention, 2012). Mothers of the children with ASD may experience four times more stress than the mother of the children with ADHD and have less parental self-efficacy along with self-satisfaction (Silva & Schalock, 2012).

Despite this understanding, there is a lack of empirical research on stress in parents of young children with ASD (Davis & Carter, 2008). Este et al. (2009) performed one of the few studies to confirm the finding and clearly distinguish between children with ASD and (non-ASD) DD, using current diagnostic criteria and diagnostic procedures. They examined how child diagnosis, adaptive functioning, and problem behaviors affected parental and psychological distress (anxiety/depression) and also found that children with ASD had more problematic behaviors and fewer daily living skills than children with DD. Overall, mothers in the ASD group reported much more parental stress as well as more depression and anxiety than mothers in the DD group, consistent with previous findings (Estes et al., 2009).

2.9 Literature Review of the Variables in Pakistan

In 2013, Batool and Khurshid conducted a study in which they found a significant relationship between impairment severity and parental stress, parental self-efficacy and sense of belonging in parents of the children with neuro-developmental disorders. They found that dysfunctional parenting styles were negatively associated with parenting stress in parents of the children with special needs (Khurshid, 2013).They found no significant gender difference in terms of parental self-efficacy, sense of unity, and parenting stress in parents of children with NDDs. They also found that mother of the children especially boys have more dysfunctional parenting and parenting stress while dealing their child in the daily lives. They performed simple linear and multiple regression analysis in which they confirmed the expected models

of parenting stress and parenting styles by considering the severity of the child's impairment and the parental self-efficacy were both significant predictors of parental stress (Batool & Khurshid, 2013).

They also found that among parents, self-efficacy acts as a mediator between parental stress and parenting practices such as over reactivity in parents of children having NDDs. Other studies have found a significant adverse association between parental self-efficacy and parental stress. Parental stress and sadness can negatively impact parents' perceptions of their own competence and abilities. These results supported Bloomfield and Kendall's contention that parents who feel less able or weak experience more stress as compared to those parents who feel more confident experience less stress. As a result, parental confidence in their parental position in the areas of caregiving and parent-child relationships can help reduce perceived stress (Batool & Khurshid, 2013).

This previously study conducted Batool and her colleagues (2013) found a significant inverse association between parental sense of coherence and stress, consistent with previous quantitative and qualitative research. Parents with a strong sense of competency may feel confident in their parenting and caring roles and can communicate their caring situations and their children's autism-related challenges to their children through meaningfulness: child acceptance. One explanation for this inverse association is that the sense of competence helps perceive life stressors as manageable, reduces stress, and promotes health by supporting a variety of resources within the individual to cope with life events. Sense of Competence – Poor parents are less able to bring order to chaos, identify problems as stressors, and rely on coping strategies to deal with stress. However, in a stepwise regression analysis, SOC combined with infant disease severity and parental self-efficacy did not appear to

predict parental stress. There was found no significant gender difference in terms of parental self-efficacy and parenting stress. These results are partially consistent with previous studies. The reason for the similar stress in both parents could be that both parents value the health of their children with NDDs. It means that the problematic behavior of the children burdens them equally (Batool & Khurshid, 2013). They also identified the most important risk factor for parental stress in this study, parents' ability and confidence in their ability to deal with a child in difficult situations appears to minimize stress (Batool & Khurshid, 2013).

Another study conducted by Sabih and Sajid in 2008 included 60 parents of the autistic children (30 fathers and 30 mothers). The age range of the parents were between 25 and 56 years. The age range of the children were between 4 and 18 years old. They divided the children into two groups based on the category of age: younger children (49) and older children (10-18). Only children with whom both parents such as mothers and father lived together were selected. The sample was collected from several psychiatric services and facilities in Islamabad, Rawalpindi and Wah-Cantt. Data was collected using the Parental Stress Scale (PSS), Autism Behavior Checklist, and Demographic Information Sheet. However, findings of the study contradict previous researches which were conducted in Pakistan on parents of children with autism and intellectual disability that were proposed to assess stress in both parents of the children with neuro-developmental disorders. However, there was no evidence found that demographic factors had an impact on parenting stress among parents. In 2008, Sabih and Sajid found that parents of children with neurodevelopmental disabilities have significantly higher levels of parenting stress. Parents of children with disabilities face unique childcare challenges that cause significant stress and disruption in their family relationships. There is evidence that the obstacles parents

experience and how they deal with them differ depending on the type of disability the child has. Many studies have found that mothers of children with chronic illnesses or debilitating disorders were more likely to experience depressive symptoms and feelings of increased psychological discomfort (Sabih & Sajid, 2008).

In 2015, Batool and her colleagues also found that there is a significant relationship between parenting stress and parenting practices in parents of the special children age ranges from 5 to 16 years. According to research, parenting a child with special needs could impact the long-term health of the parents. Compared to parents of normally developing children, parents of children with special needs experienced lower mental health and more depressive symptoms (Smith & Grzywacz, 2014).

According to another study, 44.4 percent of parents of the disabled children experienced mental stress, 8.9 percent suffered from severe mental illness (Yamaoka et al. 2015). In Pakistan, particularly in rural areas, there is a great delay in detecting intellectual disability. Caregivers experience tremendous stress due to this wasted healing potential in the early developmental years (Mirza et al., 2009). Thus, mothers of the children in these underprivileged areas are more prone to stress due to limited available resources to raise their children or a child with disability (Minhas et al., 2015).

According to the results of a study conducted in Pakistan, mothers of the special children are often confronted with multiple problems in several areas of their lives. Lower education, low income, and a nuclear family system have all been identified as maternal risk factors (Iqbal et al., 2014).According to another study, mothers of the disabled children reported higher levels of stress (76 percent) and anxiety (78 percent) than mothers of non-disabled children. Interestingly, as children age, mothers become more aware of the difficulties of a disabled child and are better

equipped to deal with these expectations, leading to less worry (Ramzan & Minhas, 2014). In contrast to previous research that focused on the negative aspects of caring for children with intellectual disabilities, another nationwide study found that caring for children with intellectual disabilities has positive effects on family life. Learning to cope with specific life issues through experience, feelings of satisfaction and fulfillment, awareness of future issues, and family closeness and strength have been reported by mothers as having positive effects on family life (Lakhani et al., 2013).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The current study was designed to explore the association between parenting stress, parenting styles, hardiness and parental self-efficacy among parents of children with neuro-developmental disorders. The chapter of research methodology includes research design, instruments which were used to measure the study variables, validation and verification of these tools along with sampling technique, population, details about collection of data and statistical plan.

3.2 Research Design

Cross sectional design was used in this study. The research is comprised of two phases:

3.2.1 Phase I (Pilot Study) Objectives

In the first phase a pilot study was conducted in order to assess the cultural appropriateness and ease of understanding for each questionnaire. Results are mentioned below.

Sample: The sample for pilot study was thirty parents (N=30) of the children having neurodevelopmental disorders such as autism, ADHD, IDD and Down syndrome. The responses from mothers were gathered and analyzed only because the responses from the fathers were very less. Hardly two or three fathers have filled the given questionnaires. Therefore, only the responses given by mothers were considered for analysis. Those mothers were selected whose children's age ranges from 5-17 years old. All the demographic variables which are mentioned above were also measured. These all parents were belonged to the city of Rawalpindi and Islamabad.

Procedure

After ethical approval from Institutional Research Board, the special institutions was approached and procedural ways were used to get data collection permission. Informed consent was taken from parents through meeting in schools and on phone calls. Demographic sheet and questionnaires were provided. Detailed instructions related to instruments and ethics related to research e.g. Confidentiality, security, anonymity, right to quit the study at any point etc. was assured. After this, the participants were provided with a demographic sheet along with questionnaires. They were instructed about how to fill the questionnaires. It was communicated that there are no right or wrong answers, their responses will be kept confidential, and the data generated will be used for research purposes only.

Table 3.1

Sample Distribution for pilot study (N=30)

Variables	f (%)	Mean (SD)
Age		11.07(3.31)
Gender		
Girls	23(76.7)	
Boys	7 (23.3)	
Birth Order		
1	12(40.0)	
2	7(23.3)	
3	7(23.3)	
4	4(13.3)	
Disability of the Children		
Autism	10(33.3)	
Attention Deficit	13(43.3)	
Hyperactive Disorder		
Down Syndrome	5(16.7)	
Intellectual	2(6.7)	

Disability		
Any Comorbidity		
ADHD	4(13.3)	
ASD	5(16.7)	
IDD	2(6.7)	
NILL	19(63.3)	
Level of Severity		
Mild	9(30.0)	
Moderate	14(46.7)	
Severe	7(23.3)	
Mother's age at the time of child's birth		27.07(.43)
Education of the Mothers		
Matric	3(10.0)	
Intermediate	10(33.3)	
Bachelors	5(16.7)	
Masters	12(40.0)	
Occupation of the Mothers		
House wives	22(73.3)	
Working	8(26.7)	
Type of Delivery		
Premature	18(60.0)	
Forceps	5(16.7)	
C-section	6(20.0)	
Normal	1(3.3)	
Family System		
Nuclear	22(73.3)	
Joint	8(26.7)	
Family Income		174000.00(156389.214)

f = Frequency, %= percentage

Results

In the pilot study phase of the current study, descriptive analysis and alpha reliability analysis was performed to measure the reliability of the scales that were chosen to measure the study variables. After that correlation analysis was performed to assess the correlation between study variables. The results of all the analysis that were carried out in pilot study phase are mentioned below.

Table 3.2

Descriptive Statistics along with Alpha Reliability Coefficient (N=30)

	No. of Items				Range			
Scales		α	M	SD	Actual	Potential	Skewness	Kurtosis
Parenting Stress Scale	18	.80	47.1	8.38	34-64	18-90	.28	-.93
Parenting Styles	30	.85	122.20	22.11	45-184	30-210	-.27	2.9
Laxness	5	.74	22.65	6.85	7-35	5-35	.14	-.96
Over-reactivity	5	.81	22.26	4.48	8-30	5-35	-.17	-.61
Hostility	3	.71	14.18	4.46	3-21	3-21	-.19	-.69
Parenting Sense of Competence Scale								
Parental Satisfaction	9	.77	16.35	4.71	7-30	9-54	-.01	-.16
Parental Efficacy	7	.74	21.17	6.29	15-40	7-42	-.65	.26
Hardiness Personality Profile	12	.76	.83	3.02	-8-6	12-36	-.68	.83

Table 2 shows the total no of items for each scale and its sub scale. Further it shows the value of Cronbach alpha reliability, mean, standard deviation, actual range, potential range, skewness and kurtosis. The table findings also show that the alpha reliability values for all the scales are above the desired value that is 0.7 (see Fields, 2013).Thus it was concluded that the scales were appropriate and can be used in the context of Pakistani culture.

Table 3.3

Correlation Matrix of the Study Variables (N=30)

No.	Scales	1	2	3	4	5	6	7	8
1	Parenting Stress	1							
2	Dysfunctional Parenting	.15*	1						
3	Laxness	.29*	.81**	1					
4	Over-Reactivity	.20*	.37**	.17*	1				
5	Hostility	.46**	.57**	.41*	.01	1			
6	Parental Satisfaction	-.26*	-.19	-.17	-.12	-.03	1		
7	Parental Efficacy	-.62**	-.57**	-.23*	-.24*	-.34**	.04	1	
8	Hardiness	-.59**	-.13	-.03	.21**	-.35	.40*	.20*	1
	Mean	47.1	122.2	19.9	20.7	11.4	19.1	29.9	8.3
	SD	8.38	25.11	5.99	4.56	5.37	5.16	6.17	3.02

Table 3.3 reveals the results of the bivariate correlation that was performed to evaluate the relationship between the study variables for the pilot study. Findings shows a significantly positive correlation between parenting stress and dysfunctional parenting, laxness, over-reactivity and hostility. It also shows that there is a significantly negative correlation exist between parental self-efficacy, parenting dysfunctional styles and parenting stress. It is found that hardiness is also significantly negatively related to parenting stress and there exist a relationship between hardiness and dysfunctional parenting. The results reveal that hardiness is significantly positively related with over-reactivity. The reason of this finding is the small sample size .Further, the results indicate negative relationship between hardiness and laxness in mothers of children with ASD, DS, ADHD and IDD.

3.2.3 Phase II (Main Study)

After successful completion of Phase I, the Phase II of the current research was initiated which comprised of the main study in which the relationship among the research variables was explored within the indigenous context. The hypotheses and objectives of the main study are mentioned in chapter one.

3.3 Research Instruments

3.3.1 Demographic Sheet

A demographic sheet was provided to each participant to fill it. Various demographic variables were included in the sheet to measure them such as age of the particular children, his/her disability, type of the disability, severity of the disability, no of siblings, birth order, comorbidity with any other disability, age of the mothers at the time of child's birth, her education, occupation, type of delivery, family income and family structure were mentioned as demographic variables in the sheet.

3.3.2 Parental Stress Scale

Parenting stress scale was used in the current study to measure parenting stress in mothers of the children with special needs. This scale was developed by Berry and Jones (1995). It is an 18 items self-report scale with items representing both emotional benefits, personal development and resource demands and restrictions related aspects of parenthood. In terms of their typical relationship with their children, respondents indicate whether they agree or disagree. It was 5 Likert scale. Strongly disagree, disagree, undecided, agree, and strongly agree are the five points on the scale. To compute the parental stress score, items 1, 2, 5, 6, 7, 8, 17, and 18 were reverse scored

as follows: (1=5) (2=4) (3=3) (4=2) (5=1). The item scores were then summed up. The alpha reliability of the scale is 0.83.

3.3.3 Parenting Style Scale

The Parenting Style Scale (Arnold et al., 1993) was used to measure the parenting styles such as laxness, over-reactivity and hostility in parents of children with special needs. The scale has 30 items on a 7-point scale, with low scores specifying good parenting and high scores indicating dysfunctional parenting or poor parenting. The Parenting Scale has three dimensions: laxness (LX), over-reactivity (OR), and hostility (H).The left anchor receives a score of 1 if the "ideal" anchor is on the left. If the "ideal" anchor is on the right, the scoring is reversed, with the right anchor receiving a 1 instead of a 7. For instance, item 2 has a right anchor, so if the caregiver circled 6, it would be counted as 2. The total score is the sum of all items divided by 30. To attain a factor score, sum the items in that factor and divide by the number of items in that factor. There are a few things that aren't on the list (NF). The items are listed by factor, and whether the "ideal" anchor is on the left (L) or right (R) side is noted. The alpha reliability coefficient ranges from 0.63 to 0.84.

3.3.4 Hardy Personality Profile

Hardy personality profile was used to measure the study variable known as hardiness. The scale was used by Salvatore Maddi (1991).It has twelve questions that were designed to measure one’s degree of hardiness which specifies one’s aptitude to be resilient, or in other words, quickly buffer against stress. Three traits are related with one’s ability to buffer stress: commitment, control and challenge. The Cronbach’s Alpha reliability ranges between 0.81 to o.87.

3.3.5 Parenting Sense of Competence Scale

The Parenting Sense of Competency Scale (PSOC) that was given by Gibaud-Wallston in 1978 was used to measure parental self –efficacy in parents of children with neurodevelopmental disorders. The PSOC is a 17 item scale, with 2 subscales such as parental self-efficacy and parental satisfaction. Each item is rated on a 6 point Likert scale anchored by 1 = "Strongly Disagree" and 6 = "Strongly Agree". Nine (9) items (#s 2, 3, 4, 5, 8, 9, 12, 14, and 16) on the PSOC are reverse coded. However, the nine items on the PSOC are reverse coded, this is important for accurate scoring. And reverse coded means that a high score on the individual item is not indicative of having a sense of competency; essentially, the item is worded negatively. The Cronbach's Alpha value is 0.88.

3.4 Sampling Technique and Population

In the present study, purposive sampling was used. The sample for the pilot study comprising of Phase I of this research included mothers of children with NDD (N = 30) with in the age range 5-17years from special schools of Islamabad and Rawalpindi. On the other hand, the sample for the main study in Phase II of this research comprised of mothers having children with NDD (N = 300) using purposive sampling technique from Islamabad, and Rawalpindi regions of Pakistan. The only responses of the mothers were assembled to perform the analysis as the no of responses obtained from fathers of these children were very few not more than five.

3.4.1 Inclusion Criteria

The inclusion criterion comprises of those mothers who have children with neuro-developmental disorders and within the age range from 5-17.Those mothers were the part of the study who have girls and boys with neuro-developmental disorders.

3.4.2 Exclusion Criteria

The mothers who have girls and boys having NDDs with physical disability were not selected for study. Further, separated cases or divorced mothers who have children with neuro-developmental disorders were also not the part of data.

Table 3.4

Sample Distribution for Main Study (N=300)

Variables	f (%)	Mean (SD)
Age		11.16(3.5)
Gender		
Girls	159(47.0)	
Boys	141(53.0)	
Birth Order		
1	121(40.3)	
2	106(35.3)	
3	44(14.7)	
4	29(9.7)	
Disability of the Children		
Autism	81(27.0)	
Attention Deficit Hyperactive Disorder	111(37.0)	
Down Syndrome	71(23.0)	
Intellectual Disability	37(12.0)	
Any Comorbidity		
ADHD	41(13.5)	
ASD	20(6.7)	
IDD	10(3.3)	
NILL	229(76.3)	

Level of Severity		
Mild	124(41.3)	
Moderate	134(44.7)	
Severe	42(14.0)	
Mother's Age at the time of Child's Birth		28.51(5.1)
Education of the Mothers		
Matric	28(9.33)	
Intermediate	74(24.66)	
Bachelor	27(9)	
Masters	171(57)	
Occupation of the Mothers		
House Wives	236(78.66)	
Working	64(21.33)	
Type of Delivery		
Premature	147(49)	
Forceps	55(18.33)	
C-Section	55(18.33)	
Normal	43(14.33)	
Family System		
Nuclear	221(73.7)	
Joint	79(26.3)	
Family Income		242616.67(181747.97)

3.5 Data Collection

After ethical approval from Institutional Research Board, the special institutions was approached and procedural ways were used to get data collection permission. Informed consent was taken from parents through meeting in schools and on phone calls. Demographic sheet and questionnaires were provided. Detailed instructions related to instruments and ethics related to research e.g. Confidentiality, security,

anonymity, right to quit the study at any point etc. was assured. After this, the participants were provided with a demographic sheet along with questionnaires.

They were instructed about how to fill the questionnaires. It was communicated that there are no right or wrong answers, their responses will be kept confidential, and the data generated will be used for research purposes only.

3.6 Data Analysis

Quantitative method was used for the statistical analysis and interpretation of the results. After collecting data, it was gathered or assembled in SPSS 21.Then data was firstly screened and then cleaned out in order to check the errors and to remove them which can create problems in the way of further analytical procedures. Normal distribution of the data was checked to see whether the parametric assumptions are met or not. Hence, descriptive statistics were used to find out the mean values, standard deviation, skewness and kurtosis etc. Percentage and frequencies for calculated for categorical data. Bivariate correlation analysis was performed to measure the correlation between parenting stress, parenting styles (laxness, hostility and over-reactivity), hardiness and parental self-efficacy among mothers of children with neuro-developmental disorders.

3.7 Research Ethics

All the research participant were approached after taking informed consent and they were set free to withdraw from the study at any point. The participants were briefed about the purpose of the research study. It was assured to them that they would not be subject to any physical or psychological harm at any point. Respect and dignity of the participants were prioritized.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF THE DATA

The present study was conducted to measure the relationship between parenting stress and parenting styles (laxness, hostility and over-reactivity) in parents of children with neurodevelopmental disorders. Another objective of the current study was to measure the mediating effects of hardiness and parental self-satisfaction along with parental self-esteem. The results were collected and combined in a document after performing various analysis on the main study sample. All the results have been demonstrated in below mentioned tables along with relevant description of the data.

4.1Descriptive Analysis and Reliability Evaluation of the Variables

The below mentioned values are descriptive statistics of the study variables on the sample (N=300). All the values were obtained from the analysis that were performed by using SPSS .Moreover, the Cronbach alpha reliability and descriptive for all the scales and demographic variables were calculated and they are mentioned in table 5.

Table 4.1

Descriptive Statistics along with Alpha Reliability Coefficient (N=300)

Scales	No. of Items	A	M	SD	Range		Skewness	Kurtosis
					Actual	Potential		
Parenting Stress Scale	18	0.71	53.68	6.74	34-68	18-90	-.67	.32
Parenting Styles	30	.93	138.85	32.56	45-197	30-210	-.040	-.86
Laxness	5	.74	22.65	6.85	7-35	5-35	.14	-.96
Over-Reactivity	5	.81	22.26	4.48	8-30	5-35	-.17	-.61
Hostility	3	.71	14.18	4.46	3-21	3-21	-.19	-.69
Parenting Sense of Competence Scale								
Parental Satisfaction	9	.71	16.47	4.71	7-31	9-54	.47	.21
Parental Efficacy	7	.75	22.19	6.29	9-40	7-42	.32	-.37
Hardiness Personality Profile	12	.72	.55	2.34	-8-7	0-36	.02	-.08

Note: a = Cronbach Alpha; M = Mean, SD = Standard Deviation; S = Skewness; K = Kurtosis;

Table 4.1 depicts the descriptive statistics and the alpha reliability of all the scales that were used in the current study. The reliability analysis of all the scales shows that values of Cronbach alpha are ranges from low to high and they are meeting the standard of desired value for Cronbach alpha which is 0.7. The satisfactory value for the Cronbach alpha reliability ranges between .7 to .9, in order label a test as good one (Kline, 2000, p. 13). Table 4.1 also shows the descriptive statistics as mean and standard deviation for variables used in the study such as parenting stress, parenting styles, hardiness and self-efficacy. The skewness (+2 to -2) and normality check recommends that the data is normally distributed and parametric test assumptions are met. Therefore, it was analyzed that parametric tests can be used to test the hypothesis.

4.2 Relationship between Study Variables

Pearson Product Moment correlation was performed to measure the relationship between the study variables.

Table 4.2

Correlation Matrix of the Study Variables (N=300)

No.	Scales	1	2	3	4	5	6	7	8	9	10	11
1	Parenting Stress	1										
2	Dysfunctional Parenting	.34**	1									
3	Laxness	.27**	.84**	1								
4	Over-Reactivity	.26**	.73**	.55**	1							
5	Hostility	.39**	.79**	.67**	.47**	1						
6	Parental Satisfaction	-.19**	-.18**	-.23**	-.19**	-.20**	1					
7	Parental Efficacy	-.38**	-.21**	-.26**	-.09	-.27**	.56**	1				
8	Hardiness	-.19**	-.23**	.06	.08	-.02	-.01	.06	1			
9	Hardy-Control	-.06	.15*	.07	.23**	.14*	-.05	-.07	.57**	1		
10	Hardy-Commitment	-.17**	-.09	-.05	-.02	-.10	.03	.09	.60**	.11*	1	
11	Hardy-Challenge	-.11*	.03	.08	-.04	-.06	-.09	.09	.53**	-.07	-.16*	1
	Mean	53.68	138.85	22.65	22.26	14.18	16.47	22.19	.55	-.36	.37	.21
	SD	6.74	32.56	6.84	4.48	4.46	4.71	6.29	2.34	1.26	1.44	1.49

**p= < 0.05, **p= < 0.01*

Table 4.2 indicates that there is a significant positive correlation between parenting stress and parenting styles (laxness, over-reactivity, hostility) among mothers having children with NDD. This mean that if one variable increases, then the other one also increases. In this way the results of the table are supporting the first hypothesis of the current study. Secondly, it was hypothesized that there is a negative relationship between parenting stress and hardiness. So the findings also depict that

hardiness and parental self-efficacy is significantly negatively associated with parenting stress and dysfunctional parenting in parents having children with NDD. There exists a negative significant correlation between hardiness, parental self-efficacy, satisfaction and dysfunctional parenting which also supports the third hypothesis of the study. There is also significant negative correlation between parenting stress, parenting styles, parental efficacy and parental satisfaction.

4.3 Regression Analysis

Simple linear regression analysis was performed to measure the effects of independent variable (parenting stress) on the dependent variable (dysfunctional parenting and its three dimensions such as laxness, over-reactivity and hostility). The simple linear regression analysis was also carried out to measure the effect of independent variable on the mediators which are hardiness and parental self-efficacy. The effects of hardiness, parental satisfaction and parental efficacy as an independent variables on the dependent variables (Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility) were also measured. The results of these analyses along with their respective explanation are mentioned in the following tables.

Table 4.3

Simple Linear Regression Analysis on Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility by Parenting Stress (N=300)

Dysfunctional Parenting							
						95 % CL	
Variables	B	SEB	B	t	p	LL	UL
Parenting Stress	1.65	.26	.34	6.31	.000	1.14	2.18
R = .344, R^2= .11, (F = 39.10***)							
Hostility							
Parenting Stress	.25	.03	.39	7.35	.000	.19	3.29
R = .39, R^2= .15, (F = 54.13***)							
Laxness							
Parenting Stress	.27	.05	.26	4.76	.000	.15	.38
R = .27, R^2= .71, (F=22.71***)							
Over-reactivity							
Parenting Stress	.17	.03	.25	4.60	.000	.098	.24
R=.25, R^2= .66, (F=21.18***)							

Table 4.3 reveals that the there is a strong effect of parenting stress on the dependent variable which is dysfunctional parenting, (Laxness, Over-Reactivity and Hostility). Results of the current study also indicates that parenting stress accounts for 11% of variance in dysfunctional parenting (R = .344, ΔR^2= .11, F = 39.10**), 71 % of variance in laxness (R = .27, ΔR^2= .71, F=22.71**), 15 % of variance in hostility (R =.39, ΔR^2= .15, F = 54.13**) and 66 % of variance in Over-reactivity (R=.25, ΔR^2= .66, (F=21.18**).It shows that parenting stress is significantly positive predictor of dysfunctional parenting, laxness , over-reactivity and hostility.

Table 4.4

Simple Linear Regression Analysis on hardiness by Parenting Stress (N=300)

Hardiness							
						95% CI	
Variable	B	SEB	β	T	p	LL	UL
Parenting Stress	-.07	.02	-.19	-3.49	.000	-.10	-.03
R = .19, R^2= .03, (F = 12.18***)							

Table 4.4 shows the effects of parenting stress on hardiness by indicating that parental stress is a significantly negative predictor of hardiness (B= -.069, β= -.19 <.001) and parenting stress accounts for 3 % of variance in hardiness with a significant F ratio (R = .19, ΔR^2= .03, F = 12.18***).

Table 4.5

Simple Linear Regression Analysis on Parental satisfaction and parental efficacy by Parenting Stress (N=300)

Parental Satisfaction							
						95%CI	
Variable	B	SEB	β	t	p	LL	UL
Parenting Stress	-.13	.04	-.19	-3.30	.000	-.21	-.05
R = .19, R^2= .03, (F = 11.19***)							
Parental Efficacy							
Parental Stress	-.15	.05	-.38	-7.09	.000	-.45	-.25
R = .38, R^2= .14, (F = 50.33***)							

Table 4.5 reveals the effect of parental stress on parental satisfaction and parental efficacy with variance of 3 % and 14 % respectively with a significant F ratio (R = .19, ΔR^2= .03, F = 11.19***) and (R = .38, ΔR^2= .14, F = 50.33***). Hence, Parenting stress is a negative predictor of parental satisfaction and parental efficacy (parental satisfaction; B= - .13, β= -.19 < .001 and parental efficacy; B= -.15, β= -.38 < .001).

Table 4.6

Simple Linear Regression Analysis on Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility by Hardiness (N=300)

Dysfunctional Parenting								Laxness						
						95% CI							95% CI	
V.A	B	SEB	B	t	p	LL	UL	B	SEB	B	t	p	LL	UL
Hardiness	.64	.80	.04	.80	.46	-.93	2.22	.16	.16	.58	.99	.31	-.16	.50
	R = .04, *R²*= .00, (*F* =.64)							*R* = .05, *R²*= .00, (*F*=.99)						
	Hostility							Over-reactivity						
Hardiness	-.05	.11	-.02	-.47	.63	-.26	.16	.15	.11	.08	1.3	.16	-.06	.37
	R = .28, *R²*= .00, (*F* = .22)							*R*=.08, *R²*= .00, (*F*=1.9)						

Table 4.6 shows the effects of hardiness on dysfunctional parenting, laxness, over- reactivity and hostility with variance of 0 % respectively with a non-significant F ratio (R =.04, ΔR^2= .00, F = .64), (R = .05, ΔR^2= .00, F = .99), (R = .28, R^2= .00, F = .22) and (R = .08, ΔR^2= .00, F = 1.9). . Hence, Hardiness is not predicting dysfunctional parenting, laxness, over-reactivity and hostility.

Table 4.7

Multiple Linear Regression Analysis on Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility by Parental satisfaction and Parental Efficacy (N=300)

Dysfunctional Parenting								Laxness						
						95% CI							95%CI	
Variables	B	SEB	β	t	p	LL	UL	B	SEB	β	t	p	LL	UL
Parental Satisfaction	-.67	.46	-.09	-1.44	.000	-1.5	.24	-.18	.09	-.12	-1.86	.000	-.37	.01
Parental Efficacy	-.85	.35	-.16	-2.42	.000	-1.5	-.16	-.21	.07	-.19	-2.89	.000	-.35	.06
	R = .23, R^2= .54, (F = 8.55***)							R = .28, R^2= .08, (F=12.89***)						
	Hostility							Over-reactivity						
Parental Satisfaction	-.07	.06	-.07	-1.12	.000	-.19	.05	-.19	.06	-.20	-3.04	.000	-.32	-.07
Parental Efficacy	-.16	.04	-.22	-3.41	.000	-.25	-.06	.02	.04	.03	.45	.000	-.07	.11
	R = .27, R^2= .07, (F = 12.43***)							R=.19, R^2= .03, (F=5.73***)						

Table 4.7 shows the effect of parental satisfaction and parental efficacy on dysfunctional parenting, (Laxness, Over-Reactivity and Hostility). The variance account for 54 %, 8 %, 7% and 3 % respectively with significant F ratio (Dysfunctional parenting; R = .23, ΔR^2= .54, (F = 8.55**), (Laxness; R = .28, ΔR^2= .08, (F=12.89**), (Hostility; R = .27, R^2= .07, (F = 12.43**) and (over-reactivity; R=.19, ΔR^2= .03, (F=5.73**). It shows that parental satisfaction and parental efficacy is significantly negative predictor of dysfunctional parenting, laxness, and hostility .While parental efficacy is significantly positive predictor of over-reactivity and this fact is different in case of parental satisfaction as results are showing that parental satisfaction is significantly negatively predicting over-reactivity.

4.4. Mediation Analysis on the Study Variables

Regression analysis was performed to measure the mediating role of hardiness in the association between parenting stress and parental styles in the mothers of children with neurodevelopmental disorders. Sobel test was used to measure or estimate the statistical significance of indirect effect in mediation analysis. All the results either significant or non- significant are reported in the below mentioned tables along with the obtained paths (A-B-C).

Table 4.8

Mediating effect of Hardiness in relationship between Parenting Stress and Dysfunctional Parenting (N=300)

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting Stress	1.66	.26	6.13	.000	1.77	.26	6.65	.000	.12	.03	-3.04	.002	.14	3.11

Table shows that the B value for the indirect effect is significant. The B value was calculated through sobel test. T statistics and the B value which are obtained from sobel test are mentioned in the table. Hence, it is concluded that the hardiness acts as a mediator between parenting stress and dysfunctional parenting styles.

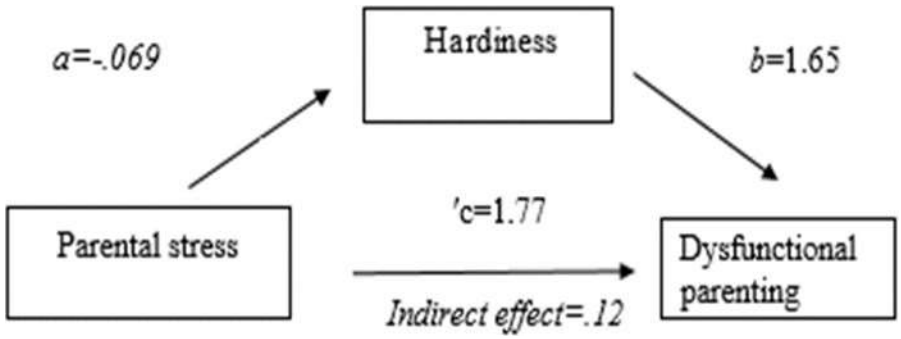

Figure 4.1*: Mediation model for the effect of hardiness in association between parenting stress and dysfunctional parenting styles*

Table 4.9

Mediating effect of Hardiness in relationship between Parenting Stress and Laxness

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting Stress	.27	.05	4.76	.000	2.93	.05	5.09	.000	0.02	.001	-2.94	.08	.01	.66

*p<0.05

Table shows that the B value for the indirect effect is not significant as the p values is greater than the desired significance level which is p= 0.05.It means that hardiness is not mediating the relationship between parenting stress and laxness which is one of the dimensions of dysfunctional parenting styles.

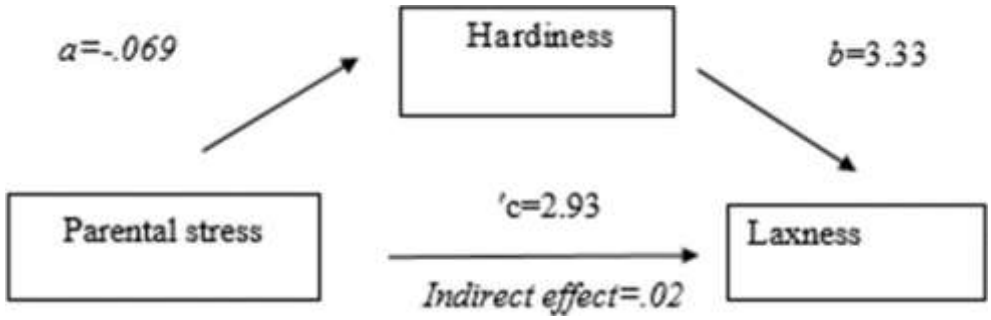

Figure 4.2: *Mediation model for the effect of hardiness in association between parenting stress and laxness*

Table 4.10

Mediating effect of Hardiness in relationship between Parenting Stress and Over-reactivity (N=300)

	Total effect				Direct effect				Indirect effect				95% CL	
	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UP
Parenting stress	1.71	.37	4.60	.000	1.89	.038	5.02	.000	0.01	0.00	-1.97	.04	04	.47

**p<0.05*

Table shows that the B value for the indirect effect is significant and it was calculated through using Sobel test. All the values along with B value and t statistics are mentioned in the above table which shows that hardiness is still acting as a positive mediator. Hence, it is concluded that the hardiness acts as a mediator in the association between parenting stress and over-reactivity.

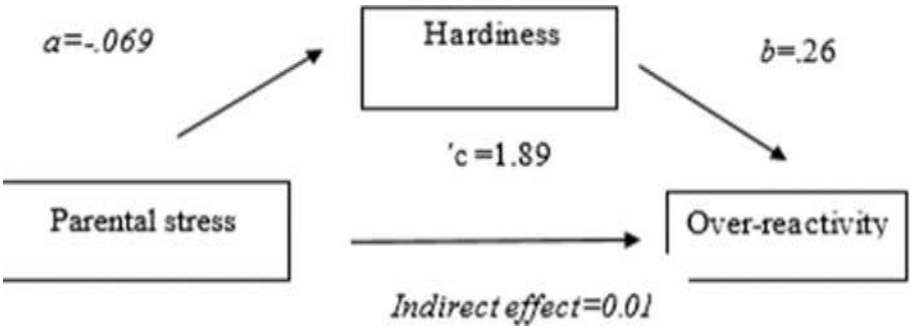

Figure 4.3: *Mediation model for the effect of hardiness in association between parenting stress and over-reactivity*

Table 4.11

Mediating effect of Hardiness in relationship between Parenting Stress and Hostility

	Total effect				Direct effect				Indirect effect				95% CL	
	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.25	.03	7.35	.000	.26	.36	7.40	.000	0.07	0.00	-0.92	0.35	-.10	.30

**p<0.05*

Table shows that the B value for the indirect effect is not significant as the p values is greater than the desired significance level which is p=0.05.It means that the relationship between parenting stress and hostility is not mediated by hardiness which is another dimension of dysfunctional parenting styles.

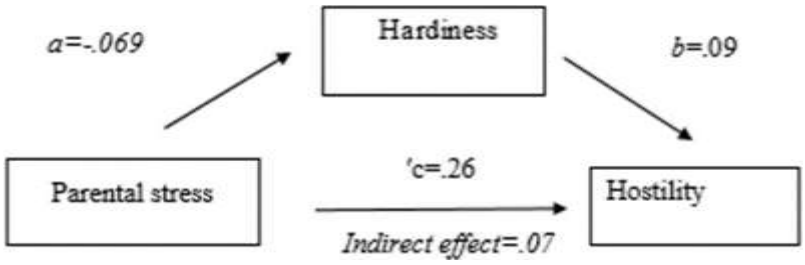

Figure 4.4; *Mediation model for the effect of hardiness in association between parenting stress and hostility*

Table 4.12

Mediating effect of Parental Efficacy in relationship between Parenting Stress and Dysfunctional Parenting

	Total effect				Direct effect				Indirect effect				95% CL	
	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	1.65	.26	6.31	.000	1.47	.28	5.19	.000	.17	.05	1.50	.08	- 1.13	.64

**p<.05*

Table shows that the B value for the indirect effect is not significant as the p values is greater than the desired significance level which is p= 0.05.It means that the relationship between parenting stress and dysfunctional parenting is not mediated by parenting efficacy.

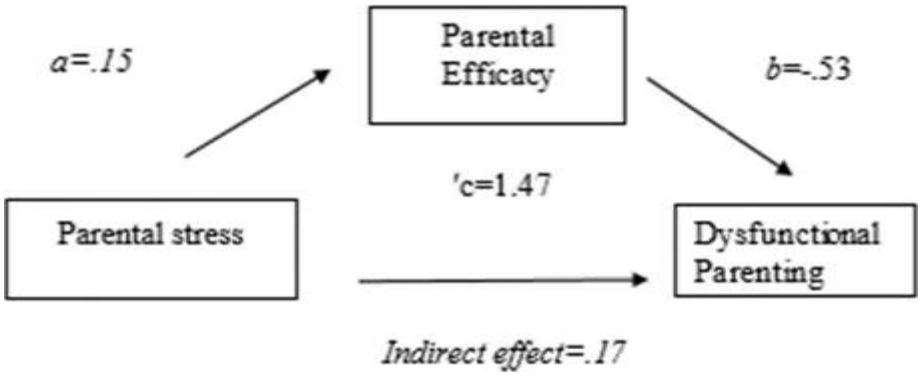

Figure 4.5: *Mediation model for the effect of parental self-efficacy in association between parenting stress and Dysfunctional Parenting*

Table 4.13

Mediating effects of Parental Efficacy in association between Parenting Stress and Laxness

Total effect					Direct effect				Indirect effect				95% CL	
	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.27	.05	4.76	.000	1.97	.06	3.26	.002	.03	.01	2.25	.02	.10	.36

**p<.05*

Table shows that the B value for the indirect effect which is calculated through using Soble test calculator test. It also indicates that the relationship between parenting stress and laxness is being mediated by parental self-efficacy.

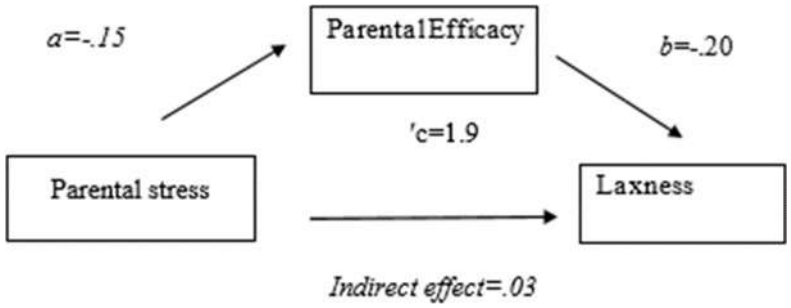

Figure 4.6: *Mediation model for the effect of parental self-efficacy in association between parenting stress and laxness*

Table 4.14

Mediating effects of Parental Efficacy in relationship between Parenting Stress and Over-reactivity

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.17	.03	4.60	.000	.17	.04	4.34	.000	.00	.00	-.25	.79	-.07	.09

**p<.05*

Table shows that the B value for the indirect effect is not significant which means that parental efficacy is not acted as mediator between parenting stress and over-reactivity. The values for indirect effect were obtained from sobel test.

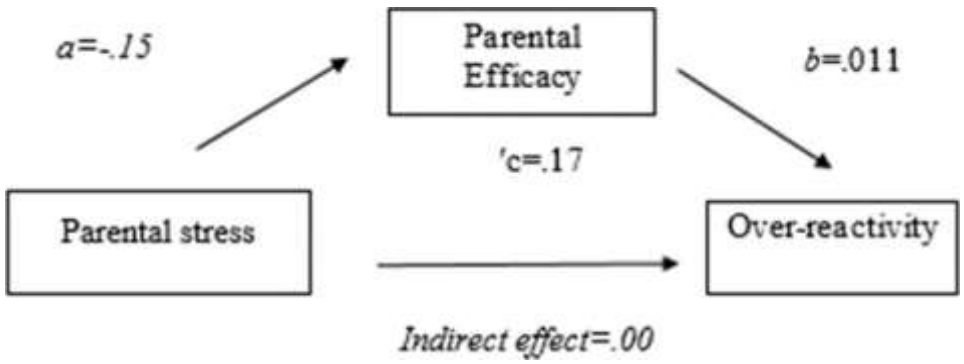

Figure 4.7: *Mediation model for the effect of parental self-efficacy in association between parenting stress and over-reactivity*

Table 4.15

Mediating role of Parental Efficacy in relationship between Parenting Stress and Hostility

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.25	.35	7.35	.000	.22	.03	5.91	.000	.01	.00	1.90	.04	.18	.02

Table shows that the B value for the indirect effect is significant which indicates that parental efficacy acts as a mediator between parenting stress and hostility which is a dimension of parenting a child with disability. Although overall effect reduces but still parental efficacy acted as positive mediator.

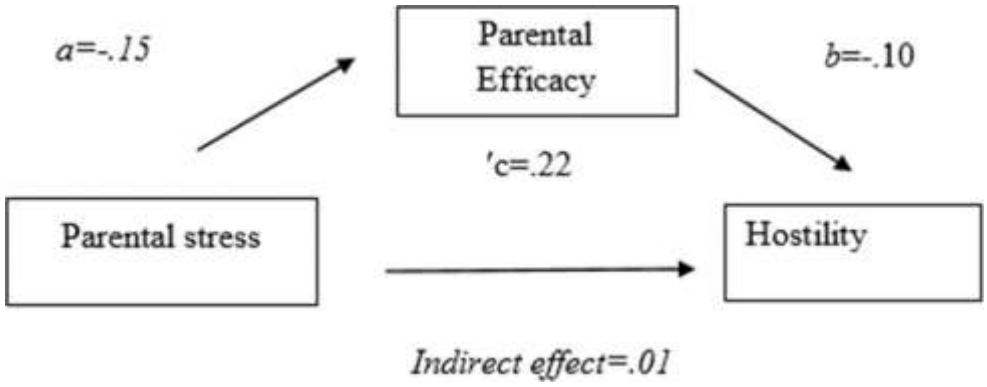

Figure 4.8: *Mediation model for the effect of parental self-efficacy in association between parenting stress and hostility*

Table 4.16

Mediating effect of Parental Satisfaction in relationship between Parenting Stress and Dysfunctional Parenting

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	1.65	.26	6.31	.000	1.54	.26	5.80	.000	.11	.06	1.91	.05	-1.6	-.13

**p< .05*

Table shows the results of the Sobel test which reveals the significant B value for the indirect effect. Therefore, it also indicates the mediating role of parental satisfaction in the association between parenting stress and dysfunctional parenting.

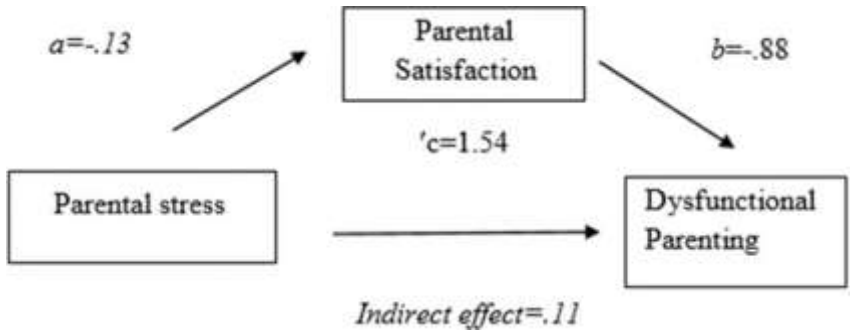

Figure 4.9: *Mediation model for the effect of Parental Satisfaction in association between parenting stress and Dysfunctional Parenting*

Table 4.17

Mediating effect of Parental Satisfaction in relationship between Parenting Stress and Laxness

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	P	B	S.E	t	p	LL	UL
Parenting stress	.27	.05	4.76	.000	.23	.05	4.11	.000	.03	.01	2.37	.01	-.43	-.11

**p< .05*

Table depicts that the B value for the indirect effect is significant at $p<0.05$ and this results was obtained from Sobel test. Hence it means that the relationship between parenting stress and laxness is mediated by parental satisfaction. The direct effect reduces but still the mediator which is parental satisfaction is mediating the positive association between parenting stress and laxness.

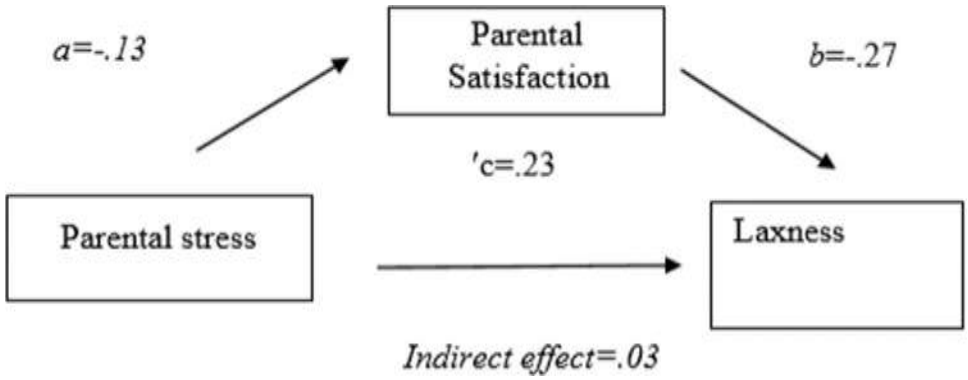

Figure 4.10: *Mediation model for the effect of Parental Satisfaction in association between parenting stress and laxness*

Table 4.18

Mediating effect of Parental Satisfaction in relationship between Parenting Stress and Over- reactivity

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.17	.03	4.60	.000	.15	.03	4.06	.000	.11	.00	2.04	.04	-.24	-.03

**p<.05*

Table depicts that the B value for the indirect effect is significant at p<0.05. Hence it means that the relationship between parenting stress and over-reactivity is mediated by parental satisfaction.

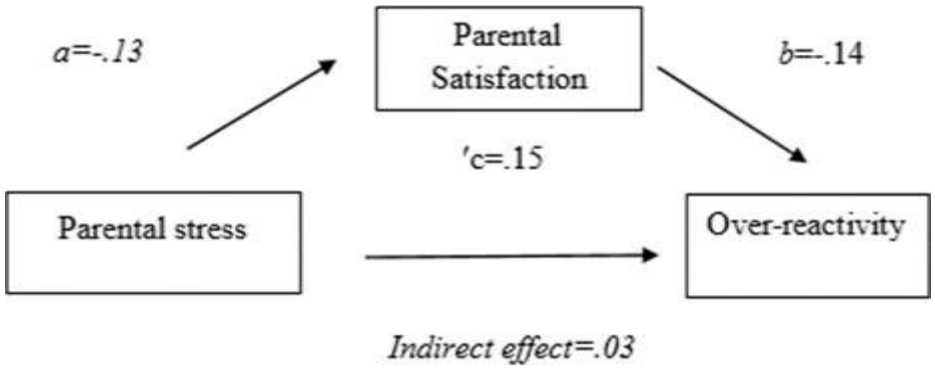

Figure 4.11: *Mediation model for the effect of Parental Satisfaction in association between parenting stress and over-reactivity*

Table 4.19

Mediating effect of Parental Satisfaction in relationship between Parenting Stress and Hostility

	Total effect				Direct effect				Indirect effect				95% CL	
VA	B	S.E	t	p	B	S.E	t	p	B	S.E	t	p	LL	UL
Parenting stress	.25	.03	7.35	.000	.24	.04	6.81	.000	.01	.00	1.98	.004	.17	.31

**p<.05*

Table depicts that the B value for the indirect effect is significant at p<0.05. Hence it means that the relationship between parenting stress and hostility is mediated by parental satisfaction.

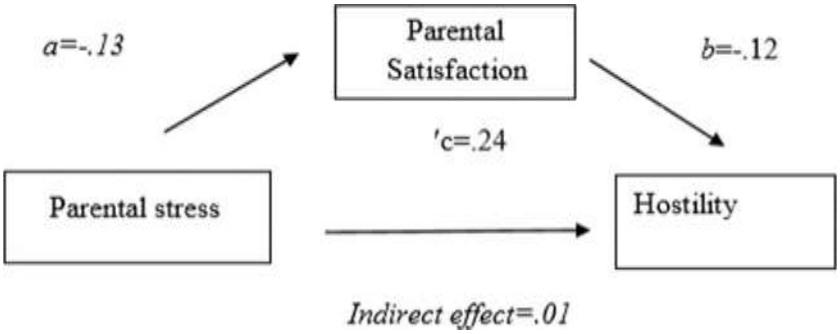

Figure 4.12: *Mediation model for the effect of Parental Satisfaction in association between parenting stress and hostility*

4.5 Group Comparisons on Demographic Variables

To see the possible interaction effects between gender of the children, types of disorder, severity of the particular disorders, its comorbidity with other disorders and mother's education, multivariate and univariate analysis was performed through General Linear Model. Hence, no significant interaction effects were emerged between the above mentioned demographical variables. Therefore, t-test and One-Way ANOVA was performed. And significant results which were emerged through t-

test and One-Way ANOVA were reported in the below table. Whereas, t-values were not significant for some demographical variables such as family system and occupation of mothers. Similarly, only significant results were reported for the demographic variables such as types of disability and levels of disability severity after performing One-Way ANOVA.

t-Test

The following table is a representation of the outcomes of the t-test analysis performed to identify gender differences**.**

Table 4.20

Mean, standard deviations and t-values for mothers having girls and boys with NDDs on parental stress, parenting styles, parental efficacy and hardiness (N=300)

	Mothers having boys with NDDs (n=141)		Mothers having girls with NDDs (n=159)				95% CI		Cohen's d
Variables	*M*	*S.D*	*M*	*S.D*	*t(298)*	*p*	*UL*	*LL*	
Parental Stress	54.58	6.52	52.88	6.85	2.18	.03	-3.22	-.16	.25
Parenting Styles	143.87	31.8	134.40	32.62	2.53	.01	-16.81	-2.12	.29
Laxness	23.24	6.74	22.13	6.92	1.40	.16	-2.66	.44	-
Over-Reactivity	22.71	4.65	21.85	4.31	1.66	.09	-1.88	.15	-
Hostility	14.50	4.31	13.89	4.58	1.17	.24	-1.61	.41	-
Parental Satisfaction	16.63	5.00	16.33	4.45	.55	.57	-1.37	.76	-
Parental Efficacy	21.99	6.12	22.36	6.44	.51	.61	-1.06	1.80	-
Hardiness	.59	2.40	.50	2.29	.31	.75	-.62	.44	-

Note: CI=Confidence Interval, UL=Upper Limit, LL= Lower limit

Table 4.20 reveals the gender differences among mothers of boys and girls children having NDD on the study variables i.e. parental stress, dysfunctional parenting (laxness, Over-reactivity, hostility), parental satisfaction and parental efficacy. Results shows that mothers of the boy's children have more parenting stress and bad parenting practices as compared to mothers of girls children. Therefore, results suggest that parenting stress and bad parenting practices/dysfunctional parenting is higher in mothers of boys as compared to mothers of girls.

One-Way ANOVA

In addition to independent sample t-test, one-way ANOVA was performed to determine the group differences among types and levels of disability severity on parental stress, parenting styles, parental efficacy and hardiness. The results of the analysis were mentioned in the below table.

Table 4.21

Difference among types of disability on parental stress, parenting styles, parental efficacy and hardiness ((N= 300)

	ASD (n=81)	ADHD (n=111)	DS (n=71)	IDD (n=37)			
Variables	M(SD)	M(SD)	M(SD)	M(SD)	F	p	Post-hoc
Parental stress	53.5(7.44)	53.9(7.06)	53.2(6.06)	53.8(5.50)	.16	.920	
Parenting Styles	137.3(33.9)	139.47(31.7)	142.4(29.5)	133.3(37.4)	.72	.53	
Laxness	22.1(7.2)	22.93(6.71)	22.91(6.82)	22.2(6.60)	.24	.86	
Over-reactivity	22.23(4.65)	22.36(4.33)	22.5(4.55)	21.4(4.50)	.47	.70	
Hostility	14.5(4.27)	14.1(4.40)	14.0(4.37)	13.6(5.24)	.40	.75	
Parental Satisfaction	16.40(5.26)	15.6(4.42)	17.0(4.56)	18.2(4.07)	3.3	.01	.03
Parental-Efficacy	23.2(6.88)	21.8(6.64)	21.4(5.66)	22.3(4.29)	1.20	.31	
Hardiness	.22(2.66)	.81(2.27)	.39(2.08)	.78(2.26)	1.21	.30	

Table 4.21 shows that only IDD was reported significant with high mean values on parental satisfaction as compared to other types of disability. Hence, it is evident that parental satisfaction is higher in mothers of children having Intellectual Disability Disorder (IDD) as compared to other categories such as ASD, ADHD and DS.

Table 4.22

Difference among levels of disability severity on parental stress, parenting styles, parental efficacy and hardiness ((N= 300)

	Mild (n=180)		Moderate (n=100)		Severe (n=121)				
Variables	M	SD	M	SD	M	SD	F	p	Post-hoc
Parental stress	.53	7.35	.53	6.11	.54	6.89	.20	.81	
Parenting Styles	138.50	34.81	136.21	31.07	148.30	29.11	2.23	.11	
Laxness	22.60	7.36	22.40	6.60	23.59	6.07	.48	.61	
Over-reactivity	21.97	4.65	22.23	4.33	22.16	4.48	1.10	.33	
Hostility	14.33	4.45	13.59	4.51	15.59	4.05	3.38	.03	Moderate <severe
Parental Satisfaction	15.98	4.34	16.64	5.01	17.38	4.71	1.54	.21	
Parental-Efficacy	22.16	6.39	22.02	6.35	22.78	5.87	.23	.79	
Hardiness	.572	2.10	.574	2.34	.40	2.99	.09	.91	

Table 4.22 reveals the significant differences among levels of disability severity on parental stress, parenting styles, parental efficacy and hardiness. Table reveals the significant values of F for severe level of the disability as compared to mild and moderate levels of disability. So there was a statistical evidence that the means of the associated demographic variables are significantly different.

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The current study was conducted to measure the relationship between parenting stress and parenting styles among mothers of children with neuro-developmental disorders along with the mediating effect of hardiness, parental satisfaction and parental self-efficacy in the context of Pakistani culture. For the present study, the focus was on to evaluate the relationship between parenting stress and dysfunctional parenting along with its three sub-categories as laxness, over-reactivity and hostility. The study was proposed to measure the relationship between parenting stress, parenting styles (laxness, over-reactivity and hostility), hardiness, and parental self- efficacy among parents having children with neuro-developmental disorders. Additionally , the another objective of the study was to find out the mediating effect of parental self-efficacy and hardiness on the relationship between parenting styles and parenting stress among parents having children with neuro-developmental disorders.

5.2 Findings

Findings of the study indicate that there is a positive correlation between parenting stress and dysfunctional parenting styles (laxness, hostility and over-reactivity) among mothers having children with neuro-developmental disorders. The findings also depict that there is a negative relationship between parenting stress, dysfunctional parenting styles hardiness and parental efficacy. Further, results of the

study indicates that parental self-efficacy and satisfaction along with hardiness is mediating the association between parenting stress and dysfunctional parenting styles. Such findings of the current study can help parents to cope with stress while dealing with their special children.

5.3 Discussion

The current study was conducted to measure the relationship between parenting stress and parenting styles among mothers of children with neuro-developmental disorders along with the mediating effect of hardiness, parental satisfaction and parental self-efficacy in the context of Pakistani culture. For the present study, the focus was on to evaluate the relationship between parenting stress and dysfunctional parenting along with its three sub-categories as laxness, over-reactivity and hostility. The study was proposed to measure the relationship between parenting stress, parenting styles (laxness, over-reactivity and hostility), hardiness, and parental self-efficacy among parents having children with neuro-developmental disorders.

Additionally , the another objective of the study was to find out the mediating effect of parental self-efficacy and hardiness on the relationship between parenting styles and parenting stress among parents having children with neuro-developmental disorders. The literature of the study was the strongest motivating factor to conduct and complete this study. The literature of the study indicated that there is a positive relationship between parenting stress and parenting styles (laxness, over-reactivity, hostility) among parents having children with special needs. Therefore, it was assumed that there is a positive relationship between parenting stress and parenting styles in parents of children with NDDs. The results of the present study shown

agreement with the first formulated hypothesis by indicating that there existed a significantly positive correlation between parenting stress and dysfunctional parenting (laxness, over-reactivity, and hostility) which means that the parenting stress is a strong predictor of dysfunctional parenting. On the other hand, it was also hypothesized that the higher the level of hardiness and parental efficacy the lower will be stress among parents and the results of the present study also show agreement with the second hypothesis. The literature also indicated that parenting stress is negatively related with hardiness and parental self-efficacy among mothers having children with neuro-developmental disorder (Praspawati et al., 2021).Hence the results of the current study also reveals that the hardiness is negatively correlated with parenting stress which means that the higher level of hardiness is increasing the ability of parents to cope with or bounce back with full support to face the difficult challenges.

Furthermore, the third hypothesis was formulated to evaluate the hardiness and parental self-efficacy are negatively associated with parenting styles (laxness, over-reactivity, hostility) among parents having children with neurodevelopmental disorders. The current study results found an agreement with this hypothesis by indicating that hardiness and parental self-efficacy are negatively associated with dysfunctional parenting (laxness, over-reactivity and hostility). It means that those parents who have hardy personality and self-efficacy the ability to cope with difficult circumstances are less over-reactive, and hostile. They also have good parenting styles. Similarly, enough indications shown that hardiness has a negative impacts on dysfunctional parenting (laxness, over-reactivity and hostility) (Allred & Smith , 2009).Correspondingly, various studies showed that parental satisfaction and parental self-efficacy had negative impacts on the dysfunctional parenting, laxness, over reactivity and hostility (Arini et al., 2022).Therefore the results of the present study

also indicated the significant negative correlation between parental self-efficacy and dysfunctional parenting among mothers of children with neuro-developmental disorders.

The descriptive for the present study variables, along with the frequencies and, means, of the demographic variables such as gender, age, siblings, disorder, type of severity, comorbidity with other disorders, family system, income, mother age at the time of children birth, type of delivery, mother education and occupation of mother were obtained for carrying out further analyses on the collected data. The foremost objective of the present study was to see the association between parental stress and dysfunctional parenting (laxness, over-reactivity and hostility). The current study used a measure of laxness and over-reactivity to build on previous research by focusing on parenting styles linked to child misbehavior (Fucca et al., 2021). Certainly, parents who labeled behavior of their children as both lax and over-reactive parenting said their children exhibited both externalizing and internalizing behaviors.

There also exists a significant positive association between parental styles and dysfunctional parenting (laxness, over-reactivity and hostility) which indicates that the higher level of parental stress are significantly associated with higher levels of dysfunctional parenting. These results are supported by plenty of previously existing literature (Erdwinds et.al, 2019). The parenting stress is negatively related with hardiness and parental self-efficacy among parents having children with NDD. There is a negative significant correlation found between hardiness and parenting styles. There also found significant negative correlation between parenting styles, parental efficacy and parental satisfaction. The level of stress increases while to manage these children and it causes poor parenting practices in most of the cases (Lepisto et.al, 2017). Whereas, parents having special children often have poor or dysfunctional

parenting practices due to high level of stress which also cause poor mental and physical health of parents (Cantwell et al., 2015). To observe the effect of independent variables (Parental stress) on the dependent variables (Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility) and on the mediating factors hardiness, parental satisfaction and parental self-efficacy, simple linear regression analysis was performed. The effects of hardiness, Parental satisfaction and parental efficacy as an independent variables on the dependent variables (Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility) were also measured. The results of these analyses along with their respective explanation are presented in the above mentioned table. Simple linear regression analysis was carried out to measure the effects of parental stress on Dysfunctional Parenting, Laxness, Over-Reactivity and Hostility which shows that parental stress is a positive predictor of dysfunctional parenting (Baker et al., 2013) and parental stress is negative predictor of hardiness.

Whereas parenting stress is a negative predictor of parental satisfaction and parental efficacy. In the study hardiness was also measured as a predictor of dysfunctional parenting which shows that it is not a significant predictor of dysfunctional parenting, laxness, over-reactivity and hostility. It shows that parental satisfaction and parental efficacy are negative predictors of dysfunctional parenting, laxness, and hostility .While parental efficacy is positive predictor of over-reactivity and this fact is different in case of parental satisfaction as results are showing that parental satisfaction is negatively predicting over-reactivity.

Mediation Analysis

The mediation analysis was performed through regression which shows that hardiness is acting as a mediator in the association between dysfunctional parenting,

over-reactivity and parenting stress as the B value for the indirect effect is significant but it is not found as a significant mediator between hostility and laxness. It also shows agreement with the formulated hypothesis that hardiness is a mediator in the association between dysfunctional parenting and parenting stress among parents having children with special needs. Literature has also shown the evidence that the relationship between parenting stress and dysfunctional or poor parenting is often mediated by hardiness (Eschlemann, 2010). The cut off score of the mothers on hardy personality profile shows that mothers are less hardy. Their score was moderately low. In future some sort of relaxation techniques and counseling sessions are highly recommended to boost up the hardiness in parents who have special children.

It was also found that the association between laxness and hostility and parenting stress was mediated by parental self-efficacy and parental satisfaction which are the two dimensions of the dysfunctional parenting styles. Hill and her colleagues also found that parental efficacy and hardiness often played key role as mediators in the association between parenting and parenting stress in parents of children with neuro-developmental disorders. They conducted a study on mothers who have children with intellectual disabilities and they found that those mothers who have hardy personality and high parental efficacy have more confidence in their abilities to apply effective ways of interacting with their children (Hill et.al,2009). Parental satisfaction which is the sub category of the scale which measured parental efficacy among parents was found as a significant mediator in the association between dysfunctional parenting, laxness, hostility, over-reactivity and parenting stress with a significant B value for the indirect effect which was calculated through Sobel test. Literature has indicated that higher level of parental self- efficacy and parental

satisfaction have been associated with more positive or good parenting practices along with lower level of stress (Chambers et al.,2017).

Group Comparison

To see the possible interaction effects between gender of the children, types of disorder, severity of the particular disorders, its comorbidity with other disorders and mother's education, multivariate and univariate analysis was performed through General Linear Model. Hence, no significant interaction effects were emerged between the above mentioned demographical variables. Therefore, t-test and One-Way ANOVA was performed. Therefore, significant results which were emerged through t-test and One-Way ANOVA were reported in the below table. Whereas, t-values were not significant for some demographical variables such as family system and occupation of mothers. Similarly, only significant results were reported for the demographic variables such as types of disability and levels of disability severity after performing One-Way ANOVA. Findings of the current study reveal the gender differences among mothers of boys and girls children having NDD on the study variables i.e. parental stress, dysfunctional parenting (laxness, Over-reactivity, hostility), parental satisfaction and parental efficacy. Adam and his colleague in 2020 found that the mothers of the boys who have disabilities or mental health issues have more stress and poor parenting behaviors as compared to mothers of the girls with some disabilities (Adams et.al, 2020).

Results shows that mothers of the boy's children have more parenting stress and bad parenting practices as compared to mothers of girls children. Therefore, results suggest that parenting stress and bad parenting practices/dysfunctional parenting is higher in mothers of boys as compared to mothers of girls. Results also

show the significant differences among levels of disability severity on parental stress, parenting styles, parental efficacy and hardiness. Findings found the significant values of F for severe level of the disability as compared to mild and moderate levels of disability. So it was concluded that the means of the associated demographic variables are significantly different. The literature has marked that the severe disabilities such as severe level of ASD and ADHD is linked with more parenting stress and dysfunctional parenting styles in parents of children with disabilities of special needs with severe level of disability (karst et al., 2012).

5.4 Conclusion

Having a developmentally disabled child poses great challenges for the family, especially for the primary caregiver, who in most cases is the mother. The mental health and well-being of the mothers are of great concern in such circumstances and play a vital role in ensuring the stability and care of the family. Health professionals, researchers, families, organizations and society as a whole must work together to ensure this. Raising awareness in societies and families to reduce negative attitudes about children's disabilities, targeting social programs to support parents in caring for their developmentally disabled child, and providing education and empowerment services to mothers, with disabilities and Managing their child's needs can go a long way in reducing stress in mothers of developmentally disabled children. This, in turn, can improve the overall well-being of the family and children with special needs.

However, the results of the present study conclude that parental stress is positively associated with parenting style as it is a negative predictor of resilience and parental self-efficacy along with parental satisfaction. Whereas, hardiness is negatively correlated with parental stress and also negatively associated with

dysfunctional parenting (carelessness, over-reactivity, and hostility). On the other hand, hardiness also acts as a strong mediator in dysfunctional parental neglect and over- reactivity. The mediating role of parental satisfaction and self-efficacy is also important. For example, parents of children with neurodevelopmental disorders reported high levels of parental stress, although research shows that the level of stress experienced by parents varies depending on the type of stress and the child's disability.

Most of the studies measured the elements that influence parental stress in families with children with intellectual disabilities, and childhood behavioral problems appear to be the most reliable predictor of stress in these parents. According to research, the relationship between parenting stress and behavior problems in children is transactional, meaning that parenting stress can exacerbate behavior problems in children over time. As a result, developing effective evidence-based interventions to manage parental stress in families with children with NDDs is critical to promoting positive outcomes for parents and children with NDDs.

5.5 Limitations and Suggestions of the Study

The following limitations are noted in the present study:

- The present study is conducted in twin of Islamabad and Rawalpindi. The data from different cities can give more promising variations on the study variables
- The cross sectional design was used in which all the variables were simultaneously measured and it does not allow to determine the cause-effect relationship. Future research should use longitudinal designs to verify causal pathways.

- The third limitation of the study is lack of paternal responses. It is evident that fathers can also experience parental stress in a different ways than mothers while raising a child with disability. So the group differences in mothers and fathers may also be considered as an important factor in future research
- Any future research should include parent training to reduce parenting stress and provide them with information about their children's maladaptive behaviors'.
- In the current study, separation cases and single parents were no considered which can give more promising results to deal with stress and dysfunctional parenting in parents of children with neuro-developmental disorders.

5.6 Implications

The importance of parenting self-efficacy and hardiness which is the ability to bounce back in the toughest situation in each individual is highly emphasized by the current study. Self- control and introspection skills indicate proper self-functioning, which is critical to dealing with stressors and being aware of all problems. This study found that hardy parents and sense of competence act as buffers against the onset of parental stress.

- As a result, there is an opportunity to educate parents on how to develop positive thinking to reduce parenting stress, such as: cognitive behavioral therapy and problem-solving therapy.
- The results of the present studies may prove very beneficial in educating parents about the coping strategies to deal with the inappropriate behavior of their children with neurodevelopmental disorders.

- In addition, various seminars and workshops can be organized to teach them how to deal with parental stress and how to recover by explaining different relaxation techniques.
- Likewise, both parents can be trained to counsel and empower their child at home using behavioral therapy, ABA techniques, and art therapy tasks.
- This study gives parents of children with learning disabilities a better understanding of parental stress. In order to help families with disabled children and reduce their burden, appropriate policies and facilities must be implemented.
- In addition, parents of children with special needs should be offered appropriate parenting courses and training. Overall, parents will no doubt experience stress, limited financial support, lack of time, and emotional and physical exhaustion, but stress needs to be managed properly.
- As a result of the findings of this study, it is critical to provide ongoing educational and counseling programs to improve parents' coping patterns in caring for their disabled children by addressing the children's problems and needs as well as the parents' mental health.

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Demographic Form

RESPECTED PARENTS!

ASSALAM O ALAIKAM

I am collecting data for my thesis work (Requirement of **MPHIL-PSYCHOLOGY From NUML**) regarding issues of parents having special children under the supervision of **Dr. Asia Mushtaq .** I will keep your information confidential and will use this information just for the purpose of research work and analysis. Therefore, your cooperation and precious time is required.

Basic Information

Name of the children…… Birth Order……

Age of the child…… Gender……

Siblings…… Disability/Disorder; Autism/IDD/DS/CP/ADHD

Types of Severity :(Mild/Moderate/Severe/Profound)

Any Comorbidity…… Other Symptoms; Hitting---------Biting----------Shouting----------

--Over Crying----------Mood--------

Mother's Age at the time of birth…… Type of Delivery…….

Mother's Education……Occupation…… Father's Age……..

Father's Education…… Father's occupation…….

Family Income…… Family structure……

Parental Stress Scale

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

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

No of item	Statement	Strongly Agree	Disagree	Undecided	Agree	Strongly Agree
1	I am happy in my role as a parent	1	2	3	4	5
2	There is little or nothing I wouldn't do for my child(ren) if it was necessary.	1	2	3	4	5
3	Caring for my child(ren) sometimes takes more time and energy than I have to give.	1	2	3	4	5
4	I sometimes worry whether I am doing enough for my child(ren).	1	2	3	4	5
5	I feel close to my child(ren).	1	2	3	4	5
6	I enjoy spending time with my child(ren).	1	2	3	4	5
7	My child(ren) is an important source of affection for me.	1	2	3	4	5
8	. Having child(ren) gives me a more certain and optimistic view for the future.	1	2	3	4	5
9	The major source of stress in my life is my child(ren).	1	2	3	4	5
10	Having child(ren) leaves little time and flexibility in my life.	1	2	3	4	5
11	Having child(ren) has been a financial burden.	1	2	3	4	5
12	. It is difficult to balance different responsibilities because of my child(ren).	1	2	3	4	5
13	The behaviour of my child(ren) is often embarrassing or stressful to me.	1	2	3	4	5
14	If I had it to do over again, I might decide not to have child(ren).	1	2	3	4	5
15	I feel overwhelmed by the responsibility of being a parent.	1	2	3	4	5

16	Having child(ren) has meant having too few choices and too little control over my life	1	2	3	4	5
17	I am satisfied as a parent	1	2	3	4	5
18	I find my child(ren) enjoyable	1	2	3	4	5

Parenting Scale

At one time or another, all children misbehave or do things that could be harmful, that are "wrong," or that parents don't like. Examples include: hitting someone, whining, throwing food, forgetting homework, not picking up toys, lying, having a tantrum, refusing to go to bed, wanting a cookie before dinner, running into the street, arguing back, coming home late. Parents have many different ways or styles of dealing with these types of problems. Below are items that describe some styles of parenting. For each item, circle the number that best describes your style of parenting during the past 2 months with your child.

No of items	Statements
1	**When my child misbehaves**...
	I do something right away. (1 - 2 -3 -4 -5 -6 -7) I do something about it later
2	**Before I do something about a problem...**
	I give my child several reminders or warnings (1 -2 -3 -4 -5 -6 -7)I use only one reminder or warning
3	**When I'm upset or under stress...**
	I am picky and on my child's back. (1 -2 -3 -4 -5 -6 -7) I am no more picky than usual
4	**When I tell my child not to do something...**
	I say very little. (1 -2 -3 -4 -5 -6 -7) I say a lot.
5	**When my child pesters me...**
	I can ignore the pestering (1 -2 -3 -4 -5 -6 -7) I can't ignore the pestering
6	**When my child misbehaves...**
	I usually get into a long argument with my child. (1 -2 -3 -4 -5 -6 -7) I don't get into an argument.
7	**I threaten to do things that...**
	I am sure I can carry out. (1 -2 -3 -4 -5 -6 -7) I know I won't actually do
8	**I am the kind of parent that...**
	sets limits on what my child is allowed to do(1 -2 -3 -4 -5 -6 -7) lets my child do whatever he or she wants.
9	**When my child misbehaves...**
	I give my child a long lecture(1 -2 -3 -4 -5 -6 -7) I keep my talks short and to the point.

10	**When my child misbehaves...**
	I raise my voice or yell (1 -2 -3 -4 -5 -6 -7) I speak to my child calmly
11	**If saying no doesn't work right away...**
	I take some other kind of action. (1 -2 -3 -4 -5 -6 -7) I keep talking and trying to get through to my child.
12	**When I want my child to stop doing something...**
	I firmly tell my child to stop (1 -2 -3 -4 -5 -6 -7) I coax or beg my child to stop.
13	**When my child is out of my sight...**
	I often don't know what my child is doing (1 -2 -3 -4 -5 -6 -7) I always have a good idea of what my child is doing
14	**After there's been a problem with my** **child...**
	I often hold a grudge (1 -2 -3 -4 -5 -6 -7) things get back to normal quickly.
15	**When we're not at home...**
	I handle my child the way I do at home. (1 -2 -3 -4 -5 -6 -7) I let my child get away with a lot more.
16	**When my child does something I don't like...**
	I do something about it every time it happens (1 -2 -3 -4 -5 -6 -7) I often let it go
17	**When there's a problem with my child...**
	things build up and I do things I don't (1 -2 -3 -4 -5 -6 -7) things don't get out of hand. mean to do
18	**When my child misbehaves, I spank, slap, grab,** **or hit my child...**
	never or rarely (1 -2 -3 -4 -5 -6 -7) most of the time
19	**When my child doesn't do what I ask...**
	I often let it go or end up doing it myself. (1 -2 -3 -4 -5 -6 -7) I take some other action.
20	**When I give a fair threat or warning...**
	I often don't carry it out. (1 -2 -3 -4 -5 -6 -7) I always do what I said
21	**If saying "No" doesn't work...**
	I take some other kind of action. (1 -2 -3 -4 -5 -6 -7) I offer my child something nice so he/she

	will behave
22	**When my child misbehaves...**
	I handle it without getting upset (1 -2 -3 -4 -5 -6 -7) I get so frustrated or angry that my child can see I'm upset.
23	**When my child misbehaves...**
	I make my child tell me why he/she did it (1 -2 -3 -4 -5 -6 -7) I say "No" or take some other action
24	**If my child misbehaves and then acts sorry...**
	I handle the problem like I usually would. (1 -2 -3 -4 -5 -6 -7) I let it go that time.
25	**When my child misbehaves...**
	I rarely use bad language or curse (1 -2 -3 -4 -5 -6 -7) I almost always use bad language.
26	**When I say my child can't do something...**
	I let my child do it anyway. (1 -2 -3 -4 -5 -6 -7) I stick to what I said.
27	**When I have to handle a problem...**
	I tell my child I am sorry about it. (1 -2 -3 -4 -5 -6 -7) I don't say I'm sorry.
28	**When my child does something I don't like, I insult my child, say mean things, or call my child names...**
	never or rarely. (1 -2 -3 -4 -5 -6 -7) most of the time.
29	**If my child talks back or complains when I handle a problem...**
	I ignore the complaining and stick to what I said (1 -2 -3 -4 -5 -6 -7) give my child a talk about not complaining
30	**If my child gets upset when I say "No"...**
	I back down and give in to my child. (1 -2 -3 -4 -5 -6 -7) I stick to what I said.

Hardy Personality Profile: Test Your Hardiness

Instructions: Please use a 0-3 scale to score each of the following statements. Answer how you are today, not how you would like to feel. Then score your answers below.

No of item	Statement	Strongly Disagree	Mildly Disagree	Mildly Agree	Strongly Agree
1	My best efforts at work/school make a difference	0	1	2	3
2	Trusting to fate/universe is sometimes all I can do in a relationship	0	1	2	3
3	I often wake up each day eager to start, work on, or complete a project	0	1	2	3
4	Viewing myself as a free person tends to promote stress and frustration.	0	1	2	3
5	I would be willing to sacrifice financial security in my work if something really challenging came along	0	1	2	3
6	I get stressed when my plans go awry and my schedule is disrupted	0	1	2	3
7	Anybody, from any social demographic, can have an influence on politics	0	1	2	3
8	Without the right breaks, it is difficult to be successful in my field.	0	1	2	3
9	I know what I am doing and why I am doing it at work/school.	0	1	2	3
10	Becoming close to people makes me feel a sense of obligation to them	0	1	2	3
11	I relish the chance to encounter new situations as an important part of life.	0	1	2	3
12	I really don’t mind when I have lots of free time with nothing to do.	0	1	2	3

Parenting Sense of Competence Scale

The Parenting Sense of Competency Scale (PSOC) was developed by Gibaud-Wallston as part of her PhD dissertation and presented at the American Psychological Association by Gibaud-Wallston and Wandersman in 1978. The PSOC is a 17 item scale, with 2 subscales. Each item is rated on a 6 point Likert scale anchored by 1 = "Strongly Disagree" and 6 = "Strongly Agree". Nine (9) items (#s 2, 3, 4, 5, 8, 9, 12, 14, and 16) on the PSOC are reverse coded. The version of the scale used for Young Moms Connect (YMC) is essentially the same as the original version with the exception of the words "baby" and "infant" in the first version changed to "child" in the current version to permit scale use with parents of children who are older than infants.

No of item	**Statement**	**Strongly Disagree**	**Somewhat Disagree**	**Disagree**	**Agree**	**Somewhat Agree**	**Strong Agree**
1	The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired	1	2	3	4	5	6
2	Even though being a parent could be rewarding, I am frustrated now while my child is at his / her present age.	1	2	3	4	5	6
3	I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot.	1	2	3	4	5	6
4	I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated	1	2	3	4	5	6
5	My mother was better prepared to be a good mother than I am.	1	2	3	4	5	6
6	I would make a fine model for a new mother to follow in order to learn what she would need to know in order to be a good parent.	1	2	3	4	5	6

7	Being a parent is manageable, and any problems are easily solved.	1	2	3	4	5	6
8	A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.	1	2	3	4	5	6
9	Sometimes I feel like I'm not getting anything done	1	2	3	4	5	6
10	I meet by own personal expectations for expertise in caring for my child.	1	2	3	4	5	6
11	If anyone can find the answer to what is troubling my child, I am the one.	1	2	3	4	5	6
12	My talents and interests are in other areas, not being a parent	1	2	3	4	5	6
13	Considering how long I've been a mother, I feel thoroughly familiar with this role	1	2	3	4	5	6
14	If being a mother of a child were only more interesting, I would be motivated to do a better job as a parent	1	2	3	4	5	6
15	I honestly believe I have all the skills necessary to be a good mother to my child.	1	2	3	4	5	6
16	Being a parent makes me tense and anxious	1	2	3	4	5	6
17	Being a good mother is a reward in itself.	1	2	3	4	5	6