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Exploring the Coping Strategies, Emotion Regulation and Well-Being Indicators of Parents of Neurodivergent Children: A Comparative Study Between Mothers and Fathers in India

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Abstract

The study explores maternal and paternal differences in the coping strategies, emotion regulation and well-being indicators of parents of neurodivergent children in India. Research has shown that the impact of raising a neurodivergent child is different for mothers and fathers. However, most studies focus solely on mothers, and there is insufficient research in the Indian context. It was hypothesised that the emotion regulation, well-being indicators and coping strategies used by fathers and mothers of neurodivergent children are significantly different. 19 mothers and 10 fathers of children (aged 10-16 years) diagnosed with Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder and Learning Disabilities, from the Aatman Academy, Thane participated in the study. The Brief-Coping Orientation to Problems Experienced Inventory (Carver, 1997), Multidimensional Flourishing Scale (Mesurado et al., 2018), Peace of Mind Scale (Lee et al., 2012), and the Cognitive Emotion Regulation Questionnaire-Short Version (Garnefski & Kraaij, 2006) were used to assess coping strategies, well-being and emotion regulation, respectively. A Mann-Whitney U test revealed differences in maternal and paternal results, but they were not significant. Plausible explanations include increased paternal involvement in child-rearing, the dyadic stress model, emotional interdependence in mothers and fathers and communal coping. This study is comprehensive, uses standardised questionnaires, and includes fathers. It can aid mixed methods and longitudinal research on the topic, and in designing timely interventions for parents of neurodivergent children in India.

Keywords: Neurodivergent, emotion regulation, well-being, coping

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Introduction

Being a parent is often described by many as one of the most rewarding experiences of their lives. Yet, given the important place it holds, it can often be emotionally demanding and challenging. These aspects of being a parent can get further magnified in the case of neurodivergent children. For instance, families of children with Autism Spectrum Disorder may endure financial hardship due to expending resources on therapy (Hastings, 2003). Some neurodivergent children might also have comorbidities, which can make caregiving a difficult task. 92% of children with Autism Spectrum Disorder have psychological comorbidities like Oppositional Defiant Disorder, and other behavioural problems (Helland & Helland, 2017). These have shown to contribute to mental tiredness in both mothers and fathers (Cadman et al., 2012). The aforementioned could contribute to poor psychological health in parents of neurodivergent children.

The following paper aims to understand and explore the coping strategies, emotion regulation and well-being indicators of parents of neurodivergent children, with a focus on comparing maternal and paternal differences in these variables, in India.

Understanding Neurodiversity

Baumer & Frueh (2021) describe neurodiversity as the notion that individuals perceive and connect with the world in myriad ways. There is no correct way to think, behave and learn, and neurological differences are not necessarily deficits. The term “neurodiversity” is commonly used to refer to Autism Spectrum Disorder (ASD), and other developmental and neurological conditions such as Attention-Deficit/Hyperactivity Disorder (ADHD) and Learning Disabilities. The 1990s witnessed the birth of the neurodiversity movement. Its purpose was to promote the inclusivity and acceptance of all individuals, including those with neurological variations. Around this time, an Australian sociologist named Judy Singer conceived the term “neurodiversity” in an attempt to promote the inclusion of all ‘neurological minorities’ (Singer, 1998).

Defining Emotion Regulation, Well-Being and Coping Strategies

Emotion regulation comprises “extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, pp. 27–8). Developmental psychologists have considered parental emotional expression to be an essential determinant of children’s social and emotional abilities (Dix, 1991). The emotional expression of parents within a familial context serves as a child’s first point of reference regarding appropriate and inappropriate ways of emotional expression, and develops the child’s capacity for understanding the emotions of others (Halberstadt et al., 1995). Parental emotional expression was also implicated in the conflict between parents and the child’s maladjustment (Fosco & Grych, 2007).

Well-being is described as the union of feeling good and functioning well; experiencing positive emotions like

contentment and happiness and the evolution of an individual’s potential, having autonomy and a purpose in life and creating and experiencing positive relationships (Huppert, 2009). According to Craig et al. (2016), elevated stress levels adversely impact a parent’s well-being. Concerning neurodevelopmental disorders, parents of children with Autism Spectrum Disorder (ASD) experience higher levels of stress which make them more prone to negative psychological health outcomes, as compared to parents of children with other disabilities (Dunn et al., 2001).

The American Psychological Association (2018), defines coping strategies as “an action, a series of actions, or a thought process used in meeting a stressful or unpleasant situation or in modifying one’s reaction to such a situation”. Research has shown that when parents cope with a child’s negative emotions with dysregulated emotional responses, the child’s ability to cope effectively with their negative emotional states is hampered (Denham, 1997). Neurodivergent children, such as those with Autism Spectrum Disorder may display behavioural challenges (for example, meltdowns due to sensory overload). A parent’s inability to cope with them or an unfavourable reaction may exacerbate the problem, leading to frustration in both the child and the parent. Therefore, it is important to study coping techniques employed by those parenting neurodivergent children.

The Importance of Studying Mothers and Fathers

Numerous studies have shown that the influence of raising a child with a disability is different for mothers and fathers, and the effect it has on one partner can impact the other. Research has shown that the psychological well-being of one partner affects that of the other in the families of younger children who are disabled (Baker et al., 2005). The depressed mood of a partner can be transmitted to the other spouse through daily interactions. (Larson & Almeida, 1999; Thompson & Bolger, 1999). Research has revealed that the mental health problems of one spouse can result in an increased caregiving responsibility for the other and unpleasant interactions between spouses (Barling et al., 1994; Ruscher & Gotlib, 1988). The aforementioned findings show that the well-being of spouses is interconnected and has an impact on the marital relationship. Furthermore, studies on families of intellectually disabled children have also revealed that the quality of the parents’ marriage affects the relationship of each parent with their child (Hartley et al., 2011). For instance, Floyd and Zmich’s (1991) study found that positive spousal communication was associated with less unpleasant parent-child interactions in parents bringing up children with mild/moderate intellectual disabilities (Floyd & Zmich, 1991). Essex (2002), also discovered that conjugal satisfaction was positively correlated to feelings of closeness towards adult children with an intellectual disability, in both parents. Some evidence suggests that this association may be stronger in fathers (Essex, 2002).

The research findings mentioned above make it apparent that there is a strong connection between the well-being of people in the family of a child with a disability. Studying the impact of rearing a differently-abled child on mothers and fathers, separately, will help in designing support services that acknowledge familial interconnectedness (Hartley et al., 2012).

This will help in increasing positive well-being outcomes in members of the family, resulting in a more cohesive family (Hartley et al., 2012).

Research evidence also suggests that there is a connection between a child's behavioural problems and different areas of well-being for both parents (Baker et al., 2005). Therefore, school and clinic programmes aiming to provide support services to parents should consider the potential differences in the needs of both mothers and fathers (Baker et al., 2005).

Neff (2010) conducted another study which established the importance of studying both fathers and mothers. It attempted to explore the well-being of fathers and social support in the context of rearing a child diagnosed with ADHD. The findings of the study established that children have an impact on a father's well-being. Fathers of differently-abled children are more likely to be actively involved in their children's lives, in non-traditional ways, mainly due to the increased caretaking burden involved (Neff, 2010). This means that fathers might also require support services to deal with the stressors associated with heightened caretaking involvement. However, most interventions focus on mothers and young children, despite the knowledge of the advantages of family-oriented services (Parette et al., 2010; Turbiville & Marquis, 2001). Studying and gathering information on the experiences of both parents is essential to providing holistic support services to them.

Maternal and Paternal Differences in Psychological Parameters in the Context of Raising a Neurodivergent Child

Comprehensive research carried out by Barak-Levy & Atzaba-Poria (2013) explored maternal and paternal resolution styles concerning having a child with a developmental issue. The researchers proposed three hypotheses. The first hypothesis stated that parents would tend to display an unresolved resolution style more frequently than a resolved resolution style. The study also sought to explore whether certain parental and child characteristics like the child's current age and the family's socioeconomic status had an impact on parental resolution style. The third hypothesis proposes that more mothers would employ emotional coping, as opposed to fathers, who would use the cognitive style of coping more frequently. Participants filled out a short demographic questionnaire to gain background information on the child and their parents. The Reaction to Diagnosis Interview (RDI) (Pianta & Marvin, 1993), was used to obtain information from 72 two-parent families. Seventy-one mothers and sixty-five fathers participated in the study (Barak-Levy & Atzaba-Poria, 2013).

The results of Barak-Levy & Atzaba-Poria's (2013) study showed that there are gender variations in how mothers and fathers handle raising their developmentally delayed children. Mothers are more prone to using emotion-focused coping. Fathers, on the other hand, use a more cognitively driven approach to coping with the diagnosis of a disability in their child. The findings provide evidence for gender role theories that claim that women are more likely to display emotions, while men are more rational (Grossman & Wood, 1993).

Barak-Levy & Atzaba-Poria's (2013) work was the first to use the Reaction to Diagnosis interview to assess resolution styles.

It helped in establishing that maternal and paternal coping strategies are different. This finding is important because it may help mental health professionals develop different approaches to deal with maternal and paternal distress associated with raising a differently-abled child. The study, however, is not without limitations. Larger sample sizes may be necessary to definitively establish differences in maternal and paternal resolution. A longitudinal study would help researchers better understand if parental resolution styles remain consistent over time (Barak-Levy & Atzaba-Poria, 2013).

Another study exploring maternal and paternal coping styles and resources was conducted by Al-Yagon (2015). The study drew a comparison between the coping and emotional means of two sets of Israeli parents raising children between eight and twelve years old. Participants included 107 couples with children with Learning Disabilities and 98 couples with children developing at a typical pace. The objectives of the research were to look into sex and group distinctions regarding parents' coping and emotional resources along with the effect of parents' emotional assets on the variations in coping resources. Four self-report questionnaires, namely the Experiences in Close Relationships Scale (Brennan et al., 1998), the Affect Scale (Moos et al., 1987), the Sense of Coherence Scale (Antonovsky, 1987), and the Coping Scale (Moos et al., 1987), were used to obtain data (Al-Yagon, 2015).

The findings of Al-Yagon's (2015) research showed that there were sex differences within the parent cohort that had children with Learning Disabilities. In comparison to mothers, fathers had an elevated avoidant attachment, lesser anxious attachment and negative affect, and reduced use of child-associated coping mechanisms coupled with a better sense of coherence (SOC) (Al-Yagon, 2015).

Al-Yagon's (2015) research has several practical implications. For instance, information on parental affect can help in the designing of interventions to help parents of differently-abled children learn emotion regulation and how it affects their caregiving. Information about a parent's affect may also help in the identification of parents with depressive tendencies who may need additional resources, support and individual therapy. One of the limitations of the study was its cross-sectional design. Therefore, it is difficult to draw conclusions and generalisations about cause and effect in parent-child relationships. Additionally, the sample only included Israeli parents. Therefore, the findings of the study are not generalizable across cultures (Al-Yagon, 2015).

Concerning coping strategies, Craig et al. (2020), conducted a structured review of the coping mechanisms employed by parents raising children with Attention-Deficit/Hyperactivity Disorder. The researchers looked for articles catalogued in EBSCOhost, PubMed, Scopus and Web of Science using a multitude of expressions such as "ADHD" and "coping", et cetera., in alignment with the guidelines stated by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Of the several results yielded by the search, only fourteen empirical studies were deemed suitable for the study. Out of these, only two reported maternal and paternal coping strategies separately (Craig et al., 2020).

Interestingly enough, Podolski and Nigg's study (2001) reported no differences between maternal and paternal coping

strategies. Their study showed that positive reframing was linked to increased role contentment in both parents (Podolski & Nigg, 2001). However, McKee et al. (2004) study reported a difference between parents of children with ADHD. Looking for social support was shown to have a negative correlation with coping focused on avoidance and affirmatively linked to maternal adaptive-focused coping. Fathers who sought social support showed better coping focused on adaptation, in addition to venting off/focusing on emotions (McKee et al., 2004).

The review conducted by Craig et al. (2020) expanded the existing literature by providing information on the coping mechanisms displayed by parents raising children with ADHD, the measures used for the assessment of coping strategies, and the associations between strategies of coping and other crucial factors including depression symptoms and stress associated with parenting. However, the studies reviewed in total had 2893 mothers and 131 fathers. There is a clear underrepresentation of fathers in the sample, making it difficult to establish gender differences in coping strategies (Craig et al., 2020).

Research has shown dissimilarities in maternal and paternal coping concerning raising a child with Autism Spectrum Disorder (ASD). Mothers tend to be more heavily impacted by the well-being and functioning of their partner and child (Hastings, 2003). Additionally, studies have revealed that mothers of children with Autism Spectrum Disorder experience higher anxiety levels compared to fathers (Hastings 2003).

However, some studies have shown that there are no noteworthy differences in fathers and mothers. For example, Lanfranchi & Vianello (2012), conducted a study to explore the source of control, levels of stress, ability to adjust and family unity in parents raising children diagnosed with Prader-Willi, Williams, Down and Fragile X Syndromes. The participants filled out self-report questionnaires for researchers to collate data on the aforementioned variables. Interestingly enough, the differences in maternal and paternal stress levels were not significant. This finding held true regardless of the condition the child had been diagnosed with. A potential explanation for this finding suggests that rearing a child with an intellectual disability (often associated with the aforementioned syndromes), might be more taxing. Therefore, fathers and mothers may share the caretaker burden, leading to similar stress levels (Lanfranchi & Vianello, 2012).

Research in the Indian Context

A few studies have been conducted in India to understand the influence of raising a neurodivergent child on parents. A study conducted by Padencheri & Russell (2004) aimed to understand the impact of the gender of an intellectually disabled child on their parents' marital intimacy. The other objective of the study was to understand if fathers and mothers in the parent dyad differed in their perceptions of marital intimacy. Participants for the study were recruited from the Christian Medical College's facility for intellectually disabled children. The results of the study found that the average intimacy score of the parents of girls was significantly lower than that of parents of sons. There is no definitive reason for this finding. However, a potential explanation suggests that because women, compared to men,

have poorer social and economic statuses in Indian society, the subjective evaluation of these factors may make raising a daughter with an intellectual disability far more undesirable than raising a son with one. This could have contributed to worse marital intimacy in parents of girls with an intellectual disability (Padencheri & Russell, 2004).

Padencheri & Russell's (2004) study adds valuable contributions to the body of knowledge concerning the challenges of raising a neurodivergent child. However, it is not without limitations. Firstly, participants were recruited from a specialised centre, making it tedious to generalise the study's results to the larger population. Secondly, the study was observational, and cross-sectional and did not account for the possible effects of factors such as the parents' personalities, coping mechanisms, etc. on marital intimacy (Padencheri & Russell, 2004).

A study by Zore (2016), aimed to understand the causes of stress and coping mechanisms employed by parents of children with Attention-Deficit/Hyperactivity Disorder (ADHD). The study found that stressors that are psychological in nature, were higher than other kinds of stressors. Sexual stressors were the lowest. The stressors examined included physical, sexual, psychological, economic, spiritual and social. Out of 200 participants, 187 reported feeling sad about seeing their child suffering and were anxious about their child's treatment (psychological stressors). Concerning coping strategies, the most commonly employed one was talking to friends and relatives. 86 percent of participants reported using this method of coping. The aforementioned finding makes sense in the Indian context. Indian society is mainly collectivistic, with importance being given to forming and maintaining relationships with others. Therefore, it would make sense for Indian parents to seek advice and assistance from those close to them (Zore, 2016).

The study by Zore (2016) made use of semi-structured interviews to obtain data. This data collection method allows for flexibility, as interviewers can ask open-ended questions and modify the interview if required so that it takes a relevant trajectory. However, the study has recruited participants only from Child Guidance Clinics in Mumbai, making it difficult to generalise the findings to the entire Indian population. Additionally, the study used non-probability convenience sampling, and 65% of the respondents were mothers. Therefore, the sample did not represent fathers adequately (Zore, 2016).

Another study that assesses the coping strategies of parents with neurodivergent children was conducted by Gupta et al. (2013). It aimed to understand the coping approaches employed by parents of children afflicted with Down Syndrome. The sample comprised 14 mothers and 9 fathers. The Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski et al., 2001) was used to evaluate coping strategies. Sociodemographic information including parental age, the child's gender, and the family's socioeconomic condition were also obtained (Gupta et al., 2013).

Gupta et al. (2013) study findings showed that both mothers and fathers employed coping strategies like refocusing on planning, catastrophizing, rumination and positive reappraisal almost evenly. Although fathers displayed better positive refocusing and reappraisal scores than mothers, the distinction had no statistical significance (Gupta et al., 2013).

Gupta et al. (2013) study is important because most people belong to lower socioeconomic strata and lack uniform access to affordable support services. Additionally, there is a dearth of multidisciplinary Down Syndrome clinics. Understanding coping strategies and other psychological tools utilised by parents rearing children with Down Syndrome will help provide adequate services to them.

John (2012) conducted another interesting study in the Indian context that aimed to collect descriptive information regarding stress in mothers of intellectually-disabled children in urban India. The second aim of the research was to identify the predictors of maternal stress. Thirdly, the study sought to create qualitative information linked to the strengths and challenges faced by the participants concerning their child's disability. Mothers were required to complete the Parenting Stress Index-Short Form (Abidin, 1995), and participated in semi-structured interviews to ascertain maternal coping. The children's teachers filled out the Vineland-II teacher rating form (Sparrow et al., 2005)

The results of John's (2012) study found that three-fourths of the mothers recruited for the study displayed clinically significant levels of stress. Additionally, the average stress score of mothers who took part in the research was more than the maternal stress scores obtained from studies on the families of intellectually disabled children from different countries. Mothers of daughters displayed a higher degree of stress than mothers raising sons. This result is in line with Padencheri & Russell's (2004) study findings which showed that marital conflict was higher in the families of girls with intellectual disabilities (John, 2012).

John's (2012) study was one of the first to examine the stress experienced by mothers raising young, intellectually disabled children in urban India. However, the study's sample was too small to reach any definitive conclusions. The sample only represented mothers who had sought educational services for their children. Less than 5 % of disabled individuals in India attend school (Mukhopadhyay & Mani, 2002; National Council of Educational Research and Training, 2005). Therefore, the findings of the study cannot be generalised.

Gaps in the Literature

Most research on parenting a neurodivergent child focuses on mothers. In most cases, they are the main caregivers of their children, which is why many studies tend to target them exclusively (Bader & Phillips, 1999; Cabrera et al., 2000; Lamb & Tamis-LeMonda, 2004). For example, many studies concerning parental perceptions of stress in families with children with ADHD generalised their findings to all parents, without including fathers in their research design (Neff, 2010). The terms 'mothers' and 'parents' are often used interchangeably, making it hard to ascertain the differences between mothers and fathers (Neff, 2010).

Similarly, Barak-Levy & Atzaba-Poria (2013) found that only two studies drew a comparison between maternal and paternal resolution rates with their child's diagnosis, as compared to more than a dozen studies focusing on mothers. Craig et al. (2020), reviewed the coping strategies parents used

for children with ADHD and analysed 14 empirical studies. Only 131 of the total 3024 participants were fathers. There is a clear underrepresentation of fathers in the study samples.

Additionally, research findings show that fathers of children with developmental disabilities have fewer symptoms of stress and depression and greater self-assurance than their counterparts (Bailey et al., 1992; Goldberg et al., 1986; Gray, 2003). Therefore, generalising the results of research focusing on mothers to all parents paints an inaccurate picture of paternal well-being.

Measuring and comparing each parent's well-being separately is essential for several reasons. Understanding each parent's experiences while raising a neurodivergent child will give researchers insight into overall family functioning and the parent's potential impact on the child's development. It will also help to provide tailor-made interventions to support parents as they navigate parenting a neurodivergent child.

There is also a dearth of research on parental coping, emotion regulation and well-being concerning raising a neurodivergent child in the Indian context. Findings from Western studies cannot be applied to Indian parents due to cultural differences in gender roles, perceptions of mental disorders, etc. The studies that have been conducted in the Indian context have mainly recruited participants from specialised centres or educational institutions. Therefore, it is tedious to apply the results of the studies to the parents of neurodivergent children across the country. Additionally, most of the studies had very small sample sizes and employed a cross-sectional design. While cross-sectional designs are good at establishing associations between two or more variables, they cannot definitively determine cause-and-effect relationships (Mann, 2003). This is mainly because research is conducted at one point in time. Therefore, it is difficult to determine whether the findings remain consistent over a period of time, making it tedious to generalise research results and verify the stability of the findings.

Research Question and Hypotheses

Upon thorough examination of the relevant literature and identification of existing gaps, the subsequent research question (RQ) was postulated:

RQ: What are the maternal and paternal differences in emotion regulation, well-being indicators and the coping strategies employed by parents of neurodivergent children in India?

Based on the findings of research carried out by Barak-Levy & Atzaba-Poria (2013), Al-Yagon (2015) and Hastings (2003), the following hypotheses have been formulated. All these studies have consistently found maternal and paternal differences in psychological variables documenting the impact of raising a neurodivergent child.

H₁: The emotion regulation, well-being indicators and coping strategies used by fathers and mothers of neurodivergent children are not significantly different.

H₂: The emotion regulation, well-being indicators and coping strategies used by fathers and mothers of neurodivergent children are significantly different.

Methods

Participants

The sample comprised 29 mothers and fathers of neurodivergent children between 10 and 16 years old, studying at the Aatman Academy, Thane, India. The conditions they were diagnosed with included Attention-Deficit/Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), and Learning Disabilities.

19 mothers between the ages of 35 and 50 participated in the study ($M = 43.4$, $SD = 4.8$, $Mdn = 43$). 10 fathers, between 40 and 55 years of age, took part in the study ($M = 47$, $SD = 5$, $Mdn = 47$). All the participants reported having one neurodivergent child.

The intended sample was supposed to have 30 mothers and 30 fathers. However, due to time constraints and access to a limited number of potential participants, the final sample was smaller than the intended one, and consisted of 19 mothers and 10 fathers. Table 1 provides an overview of the sociodemographic characteristics of the participants.

Sampling Procedure

Participants were recruited from the Aatman Academy, Thane, India, after obtaining permission to carry out research from the Institutional Review Board of FLAME University, Pune, and the principal of the academy. Purposive sampling was used, as the research required only mothers and fathers of neurodivergent children between the ages of 10 and 16. Parents with one neurodivergent child aged between 10 and 16 years,

residing in either nuclear or joint family setups, were eligible for participation in the study. The exclusion criteria included single parents and parents with more than one neurodivergent child, in order to standardise the sample.

Measures

Four measures were used to collect data regarding coping strategies, emotion regulation and well-being.

Coping strategies were assessed using the Brief-Coping Orientation to Problems Experienced Inventory (Brief-COPE; Carver, 1997). It is the condensed version of the Coping Orientation to Problems Experienced Inventory. According to *Coping Orientation to Problems Experienced Inventory (Brief-COPE)* (2021), this self-report scale comprises 28 items used to measure an individual's coping responses in a multitude of stressful situations. An individual's score on the test can help determine if their style of coping is problem-focused, emotion-focused or avoidant. The scale has good psychometric properties with high reliability ($\alpha = .70$).

The Multidimensional Flourishing Scale (MDFS; Mesurado et al., 2018), was one of the scales used to assess well-being. It assesses the social, psychological and emotional well-being of an individual (Saxena & Banerjee, 2021). The dimensions of well-being are assessed objectively with a 5-point Likert Scale (Saxena & Banerjee, 2021). The scale has psychometric validity, and has excellent reliability ($\alpha = .94$) (Saxena & Banerjee, 2021).

The Peace of Mind Scale (PoM; Lee et al., 2012), was the second scale used to measure well-being. It is a 7-item self-report scale that assesses affective well-being (Sahni et al., 2021). According to Sahni et al. (2021), the test's items are reflections of inner peace and harmony experienced by an individual generally, and in daily situations. Participants indicate the frequency of experiencing these internal states on a scale of 1-5 where 1 stands for 'not at all' and 5 denotes 'all the time'. The scale is highly reliable ($\alpha = .91$) (Lee et al., 2012).

The Cognitive Emotion Regulation Questionnaire-Short Version (CERQ-Short; Garnefski & Kraaij, 2006), will be used to measure emotion regulation. It is the shortened, 18-item form of the Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001). This self-report questionnaire has 9 distinct subscales, with 2 items per scale (Garnefski and Kraaij, 2006). Each item is rated on a Likert Scale from 1 to 5, where 1 stands for 'almost never' and 5 stands for 'almost always' (Araujo et al., 2020). The scale is sufficiently reliable with Cronbach alpha values for the subscales ranging from 0.68-0.81 (Garnefski & Kraaij, 2006).

Procedure

Before commencing the study, permission to conduct it was obtained from the Aatman Academy, Thane and FLAME University's Institutional Review Board (Approval number: 2022/11/11/FSP/EXP). After that, a form detailing the purpose of the study was sent to prospective participants on the Aatman Academy's official WhatsApp group. It had a link

Tab. 1. Sociodemographic Characteristics.

Sample Characteristic	Value	n	% (of 29)	M	SD
Sex	Male	10	34.5		
	Female	19	65.5		
Age	Fathers			47.0	5.0
	Mothers			43.4	4.8
Family Type	Nuclear	23	79.3		
	Joint	6	20.7		
Household Income (per annum)	Less than 5 lakhs	4	13.8		
	5-10 lakhs	3	10.3		
	10-20 lakhs	9	31.0		
	More than 20 lakhs	8	27.6		
Employed Parents	Mothers	11	37.9		
	Fathers	8	27.6		
Participants with one neurodivergent child	Fathers	10	34.5		
	Mothers	19	65.5		

Tab. 2. Descriptive Statistics of Psychological Variables.

Psychological Variable	Mothers		Fathers	
	M	SD	M	SD
Problem-Focussed Coping	3.2	0.4	2.8	0.7
Emotion-Focussed Coping	2.2	0.4	1.9	0.5
Avoidant Coping	1.7	0.5	1.9	0.9
Acceptance	8.3	2.1	8.2	1.8
Positive Refocusing	6.3	2.1	6.8	1.9
Refocus on Planning	7.6	1.9	7.8	1.7
Positive Reappraisal	8.0	1.9	7.9	2.2
Putting Into Perspective	6.8	1.7	7.5	2.1
Positive Emotion Regulation	36.9	7.2	38.2	7.5
Rumination	6.6	1.9	6.0	2.0
Self-Blame	4.1	1.1	4.3	1.3
Catastrophizing	4.0	2.0	4.3	2.2
Other-Blame	3.5	1.7	2.6	0.7
Negative Emotion Regulation	18.1	4.7	17.2	4.3
Subjective Well-Being	14.1	2.4	13.3	4.3
Psychological Well-Being	16.4	1.7	16.9	2.0
Emotional Well-Being	15.3	3.7	13.8	5.1
Affective Well-Being	22.0	6.6	23.3	7.2

to a Google Form consisting of the consent form and a sheet to fill out demographic details. These included name, age, gender, annual income, number of neurodivergent children, condition the child was diagnosed with, family type (single parent, joint, nuclear, etc.), educational qualification and occupation. It was not mandatory for participants to provide information about anything other than their gender, the number of neurodivergent children they had, and family type. This was to help the researcher identify single parents and those with more than one neurodivergent child, in order to exclude them from the study. The form also contained the aforementioned questionnaires and a list of mental health resources for parents who may have wanted to seek help or support.

After clicking on the "I give my consent" option in the Google Form, participants filled out their demographic details and answered the aforementioned questionnaires.

Analysis

A Shapiro-Wilk test (Shapiro & Wilk, 1965), on the IBM SPSS Statistics Version 29.0.0.0 (241), revealed that the data were not normally distributed. This test was used as the sample had less than 50 participants.

A Mann-Whitney U test (Mann & Whitney, 1947), was used to assess the differences in maternal and paternal scores. It is the non-parametric counterpart of the Independent Samples t Test (Gosset, 1908), and was used as the distribution of data was not normal.

Results

A total of 29 parents answered the questionnaires. The final sample comprised 19 mothers and 10 fathers, of children with Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder (ADHD) and Learning Disabilities. The age range of mothers was 35-50 ($M = 43.4$, $SD = 4.8$, $Mdn = 43$) and fathers was 40-55 ($M = 47$, $SD = 5$, $Mdn = 47$). Table 2 provides an overview of the descriptive statistics of the psychological variables considered in the study.

Table 3 lists the scores for each of the subscales of the Brief-Coping Orientation to Problems Experienced Inventory (Brief-COPE) (Carver, 1997). The Mann-Whitney U test (Mann & Whitney, 1947) showed that no significant differences existed in the scores of mothers and fathers across any of the subscales of the Brief-COPE (Carver, 1997).

According to Table 4, the total scores for positive emotion regulation strategies (CERQ-Short Positive) for mothers were ($Mdn = 38$, $n = 19$) and fathers were ($Mdn = 41$, $n = 10$), $U = 79.00$, $z = -0.73$, $p = 0.461$. The total scores for negative emotion regulation strategies (CERQ-Short Negative) for mothers were ($Mdn = 18$, $n = 19$) and fathers were ($Mdn = 16.50$, $n = 10$), $U = 88.50$, $z = -0.30$, $p = 0.764$. The Mann-Whitney U test (Mann & Whitney, 1947) consistently showed that maternal and paternal scores were not significantly different, on any of the subscales of the Cognitive Emotion Regulation Questionnaire-Short (Garnefski & Kraaij, 2006).

Table 5 shows that the total score for mothers was ($Mdn = 48$, $n = 19$) and the total paternal score was ($Mdn = 43.5$, $n = 10$), $U = 75.00$, $z = -0.92$, $p = 0.358$. A Mann-Whitney U test (Mann & Whitney, 1947) revealed that there were no significant differences in the scores of mothers and fathers across all the subscales of the Multidimensional Flourishing Scale (MDFS) (Mesurado et al., 2018).

According to the Mann-Whitney U test (Mann & Whitney, 1947) there were no consequential differences in the scores of mothers ($Mdn = 22$, $n = 19$) and fathers ($Mdn = 22$, $n = 10$), $U = 85$, $z = -0.46$, $p = 0.645$, shown in table 6.

Discussion

The study aimed to study maternal and paternal differences in the emotion regulation, coping strategies and well-being

Tab. 3. Brief-Coping Orientation to Problems Experienced Inventory (Brief-COPE) for Mother ($n = 19$), Father ($n = 10$) and Total ($N = 29$).

Variable	Mothers		Fathers		Mann-Whitney U	Z	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks			
Problem-Focussed Coping	16.55	314.50	12.05	120.50	65.50	-1.36	0.173
Emotion-Focussed Coping	16.26	309.00	12.60	126.00	71.00	-1.10	0.270
Avoidant Coping	15.13	287.50	14.75	147.50	92.50	-0.12	0.908

$p < 0.05$

Tab. 4. Cognitive Emotion Regulation Questionnaire-Short (CERQ-Short) for Mother ($n = 19$), Father ($n = 10$) and Total ($N = 29$).

Variable	Mothers		Fathers		Mann-Whitney U	Z	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks			
CERQ-Short Positive	14.16	269.00	16.60	166.00	79.00	-0.73	0.461
Acceptance	15.47	294.00	14.10	141.00	86.00	-0.43	0.667
Positive Refocusing	14.42	274.00	16.10	161.00	84.00	-0.51	0.608
Refocus on Planning	14.68	279.00	15.60	156.00	89.00	-0.28	0.779
Positive Reappraisal	14.92	283.50	15.15	151.50	93.50	-0.07	0.944
Putting Into Perspective	13.68	260.00	17.50	175.00	70.00	-1.17	0.244
CERQ-Short Negative	15.34	291.50	14.35	143.50	88.50	-0.30	0.764
Self-Blame	14.39	273.50	16.15	161.50	83.50	-0.56	0.577
Rumination	15.97	303.50	13.15	131.50	76.50	-0.86	0.390
Catastrophizing	14.50	275.50	15.95	159.50	85.50	-0.45	0.655
Other-Blame	16.47	313.00	12.20	122.00	67.00	-1.35	0.176

Note. CERQ-Short Positive = Cognitive Emotion Regulation Questionnaire-Short positive emotion regulation strategies, CERQ-Short Negative = Cognitive Emotion Regulation Questionnaire-Short negative emotion regulation strategies. $p < 0.05$

Tab. 5. Multidimensional Flourishing Scale (MDFS) for Mother ($n = 19$), Father ($n = 10$) and Total ($N = 29$).

Variable	Mothers		Fathers		Mann-Whitney U	Z	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks			
Subjective Well-Being	15.45	293.50	14.15	141.50	86.50	-0.39	0.694
Psychological Well-Being	14.47	275.50	16.00	160.00	85.00	-0.47	0.642
Emotional Well-Being	15.63	297.00	13.80	138.00	83.00	-0.56	0.579
Total Score	16.05	305.00	13.00	130.00	75.00	-0.92	0.358

$p < 0.05$

Tab. 6. Peace of Mind Scale (PoM) for Mother ($n = 19$), Father ($n = 10$) and Total ($N = 29$).

Variable	Mothers		Fathers		Mann-Whitney U	Z	p
	Mean Rank	Sum of Ranks	Mean Rank	Sum of Ranks			
Total Score	14.47	275.00	16.00	160.00	85.00	-0.46	0.645

$p < 0.05$

indicators of parents of neurodivergent children. The findings of the research show strong support for the null hypothesis which states that there are no significant differences in emotion regulation, well-being indicators and coping strategies used by fathers and mothers of neurodivergent children.

The pattern of results aligns with the results of studies with small samples, discussed above. For instance, the study conducted by Gupta et al. (2013), aimed to understand the coping mechanisms employed by parents of children with Down Syndrome. The researchers recruited 9 fathers and 14 mothers. The study's findings revealed that both parents

used coping strategies like Catastrophizing, Refocusing on Planning, Rumination and Positive Reappraisal nearly equally. Additionally, while paternal scores on the Positive Refocusing and Positive Reappraisal subscales were higher than maternal scores, there was no statistical significance between the two (Gupta et al., 2013). The findings of the present study align with these results, as shown in Table 4. Similarly, Podolski and Nigg's (2001) study, which recruited mothers and fathers of 66 children with Attention-Deficit/Hyperactivity Disorder (ADHD), found no noteworthy differences in the coping strategies employed by both parents. These findings are in

alignment with the present study's findings, listed in Table 3. Similarly, Lanfranchi & Vianello's (2012) study also found no notable differences in the stress experienced by mothers and fathers, in parents of children diagnosed with Prader-Willi, Down, Fragile X or Williams Syndrome.

A potential explanation for similar maternal and paternal results can be found in Table 1. Only 20.7% of participants reported being members of joint families, as opposed to 79.3% having nuclear families. It is possible that in nuclear families, both parents may share the responsibility of taking care of their neurodivergent child, due to the unavailability of help from other family members.

Another explanation for the lack of statistically significant differences in maternal and paternal results across all the questionnaires can be found in Neff's (2010) study. The researcher suggested that fathers may be more involved in caregiving for their neurodivergent child, as the caretaker burden is more (Neff, 2010). Therefore, the impact of rearing a neurodivergent child on the well-being, emotion regulation, and coping strategies of mothers and fathers may be similar.

Additionally, over the last few decades, the roles and responsibilities associated with fatherhood have expanded to include child-rearing responsibilities in addition to breadwinning. This is a result of alterations in cultural and social norms regarding the role of each parent (Koster & Castro-Martin, 2021). Fathers are more involved in the daily nurturing of their children, which could explain why maternal and paternal results are so similar. Changes in economic trends could be responsible for the cultural and social shifts in gender roles. According to Pradhan (2011), gender-based labour division in a household is determined by opportunities and participation in the labour market. The process of commercialization in developing countries like India has led to the creation and expansion of markets and job opportunities. The development of the economic system has led to more women joining the workforce (Pradhan, 2011). Since their roles are no longer restricted to the domestic sphere, the roles of men have also become more flexible and now include childcare and other household responsibilities. Evidence in Table 1 shows that 11 out of 19 or 57.9% of mothers reported being employed. Therefore, it is possible that they split the responsibility of childcare with their spouses, leading to similar maternal and paternal results.

From a theoretical perspective, the stress in couples is now being looked at as a dyadic occurrence instead of something that affects only an individual (Bodenmann, 2005). According to Bodenmann (2005), dyadic stress is a stressful occurrence that affects both partners in a relationship. This could be direct when a stress-inducing event confronts both partners or indirect when the stress faced by one partner spills over onto the other. Both situations evoke joint appraisals along with individual ones. Additionally, couples may make use of common coping endeavours or resources to deal with the stressful event, also called dyadic coping (Bodenmann, 2005). Parents may experience dyadic stress if their child is neurodivergent. To manage to raise a child with special needs, mothers and fathers may employ joint appraisals and dyadic coping, which could explain the lack of statistically significant differences in the study results.

The concept of emotional interdependence is also relevant to the findings of the research. It essentially means that the emotions of a person are inextricably linked to those of the individual with whom they share a close relationship (Sels et al., 2016). Emotional interdependence can manifest in numerous forms, such as emotional transmission from one partner to the other (Larson & Almeida, 1999), and synchrony or the simultaneous covariation of partners' emotions (Butler, 2011). Additionally, researchers exploring attachment posit that partners in a relationship "coregulate"; the process by which one individual influences the other's affect, leading to interwoven, undulating patterns of emotion (Butler & Randall, 2013). The concepts of emotional transmission, synchrony, and coregulation could explain why there are similarities in the results of mothers and fathers. The emotion regulation, coping mechanisms and well-being indicators of mothers and fathers could be exerting a mutual influence on each other, and are interlinked.

Communal coping could also explain the similarities in the results of mothers and fathers. It is a type of relationship-oriented coping which posits that people handle stress in light of interpersonal relationships (Afifi et al., 2006; Lyons et al., 1998). In the context of a marital relationship, partners must be looked at as an interdependent system where one partner influences the other (Bodenmann et al., 2006). In communal coping, partners view a stressor as a shared issue to be dealt with together (concerning the study, this would be the challenges associated with raising a neurodivergent child), and therefore deal with the stressor jointly (Alimoradi et al., 2022). This may contribute to mothers and fathers influencing each other's appraisals of the situation, emotions, et cetera, leading to similarities in their emotional regulation, well-being and coping strategies.

Strengths and Limitations

One of the study's primary advantages is that it focuses on both fathers and mothers. As mentioned in the extant literature review, fathers are grossly underrepresented in studies pertaining to the impact of raising a neurodivergent child. There is also a lack of research on the topic in the Indian context. Studying both fathers and mothers is important as research has shown that the well-being of conjugal partners is interdependent (Baker et al., 2005). Additionally, the study uses a multitude of standardised questionnaires to assess well-being, emotion regulation and coping strategies, making it well-rounded. Thirdly, the study chose an appropriate age range for neurodivergent children (10-16 years) as the diagnosis of a disability tends to happen later in developing nations compared to developed countries (Daley, 2004; Wilcox et al., 2007). Lastly, the study design is easy to replicate, as the researcher has made use of standardised, relatively short and easy-to-answer questionnaires to collect data.

However, the study is not without limitations. Only 10 fathers partook in the research, as compared to 19 mothers. Therefore, it is possible that fathers were not adequately represented in the sample. A larger sample is a must to be able to draw any concrete conclusions regarding maternal and paternal

differences in emotion regulation, well-being and coping strategies in the context of raising a neurodivergent child. Additionally, parents were recruited only from the Aatman Academy, Thane. Participant demographic characteristics, including age and socioeconomic status, were similar. This limits the degree to which the study's results can be generalised. The study used self-report questionnaires, so the data could be subjected to various biases including selective memory, exaggeration and social desirability. Additionally, mothers and fathers were recruited independently. Therefore, it is not possible to assess whether the emotion regulation, well-being and coping mechanisms of one partner are associated with those of the other.

Future Directions

The study can serve as the basis for longitudinal research on the topic, to check whether the findings are stable over a period of time. This, in turn, could help identify possible risk factors that could be adversely affecting the well-being, emotion regulation and coping strategies of parents of neurodivergent children. Timely interventions, tailored to the needs of mothers and fathers could be devised using this information. Future research on the topic could be conducted using a larger sample. The results can be compared to those of this study, and the reasons for similarities or differences can be probed into. Researchers could also draw inter and intra-group comparisons between parents of children diagnosed with different conditions, to understand if and why differences and similarities exist. The current study could also pave the way for mixed methods research to understand the reasons for differences or similarities in maternal and paternal well-being, emotion regulation and coping strategies in the context of raising a neurodivergent child.

Conclusions

Raising a neurodivergent child has many concomitant challenges which can take a toll on parents. Studying mothers and fathers is essential as literature has revealed that there are gender differences in the way parents adapt to raising a neurodivergent child. The impact this has on them is also different. However, there is a dearth of research on fathers, and in the Indian context. Therefore, this study tried to address this gap by exploring emotion regulation, coping strategies and the well-being of mothers and fathers in the context of raising a neurodivergent child. Contrary to most research on the topic, the results revealed that there were no significant differences in maternal and paternal coping, well-being and emotion regulation. The evolution of social and economic trends has contributed to changes in maternal and paternal responsibilities concerning child-rearing. With more women joining the workforce (11 out of 19 mothers reported being employed, as shown in Table 1, fathers have to contribute more to childcare, the burden of which is higher when a child is neurodivergent. Additionally, 79.3% of participants

reported having nuclear families, so it is possible that the entire responsibility of childcare is shouldered entirely by both parents. This could contribute to emotional interdependence, communal coping and dyadic stress and coping, leading to similarities in the results of mothers and fathers.

Ethical approval

Permission to conduct the study was obtained from FLAME University's Institutional Review Board (Approval number: 2022/11/11/FSP/EXP).

Data availability statement

The data used in the study are available on the Open Science Framework.

<https://osf.io/sdvby/>

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Authors' contribution

Both authors were involved in deciding the research topic, devising the structure of the paper and writing the Discussion on research findings. Adya Sinha carried out data collection and research for the literature review and other elements of the paper including writing the manuscript. Dr. Garima Rajan contributed substantially to decisions concerning research methodology, data analysis, editing of drafts and overall feedback and mentoring on the manuscript.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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