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Association of Maternal Resilience and Psychological Distress with Emotional Behavioral Problems of Children with Autism Spectrum Disorder

by

Rabia Mehmood

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CERTIFICATE OF APPROVAL

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by

Rabia Mehmood

(MSP233012)

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Ayesha Saeed	RIU, Islamabad
(b)	Internal Examiner	Ms. Sadaf Zeb	CUST, Islamabad

Ms. Irum Noureen
Thesis Supervisor
January, 2026

Dr. Sabahat Haqqani
Head
Dept. of Psychology
January, 2026

Dr. Arshad Hassan
Dean
Faculty of Management and Social Sci.
January, 2026

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(Rabia Mehmood)

Abstract

Raising a child with Autism Spectrum Disorder (ASD) places substantial demands on caregivers and can elevate maternal psychological distress. The aim of the study was to find the association of maternal resilience and psychological distress with emotional behavioral problems of children with autism spectrum disorder. A correlational research design was used, and data were collected through purposive sampling from 250 mothers of children with ASD aged 4–10 years. Kessler Psychological Distress (Kessler et al. 2002), Brief Resilience Scale (Smith et al. 2008) and Strength and difficulties questionnaire (Goodman 1997) were used to collect the data. Pearson correlation, multiple regression analysis, and independent sample t-tests were employed to assess relationships, predictive effects, and group differences among the study variables. The results indicated a significant positive relationship between children's emotional behavioral problems and maternal psychological distress. Maternal resilience was found to be negatively associated with psychological distress and served as a significant protective predictor. Regression analysis further showed that emotional behavioral problems in children significantly predicted maternal psychological distress. In conclusion, the findings emphasize the protective role of maternal resilience in mitigating psychological distress among mothers of children with ASD, highlighting the importance of resilience-focused interventions to enhance maternal well-being and improve family outcomes. The study highlights the need for family-centered ASD interventions that address maternal psychological distress alongside children's emotional behavioral problems to ensure effective outcomes.

Keywords: Autism Spectrum Disorder, Emotional Behavioral Problems, Maternal Resilience, Psychological Distress, Demographic Variables

Contents

List of Figures

List of Tables

Abbreviations

ASD	Autism Spectrum Disorder
BRS	Brief Resilience Scale
EBPs	Emotional Behavioral Problems
KPD	Kessler Psychological Distress
SDQ	Strength and Difficulties Questionnaire

Chapter 1

Introduction

Autism Spectrum Disorder (ASD) is a pervasive and long-term neurological developmental disorder which manifests in early childhood and impacts upon an individual's ability to communicate, socially interact and behave. It is marked by "persistent deficits in social communication and social interaction across multiple contexts" and by "restrictive, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association, 2013). The expression of ASD is highly variable between individuals so the term "spectrum" is used. Some children might barely have symptoms and may be high functioning in some other respects, and some might show severe issues with communication and behaviors, often along with intellectual disability or sensory problems (Corti et al., 2022).

Globally, estimates indicate that approximately 1 in 127 people were on the autism spectrum based on worldwide prevalence data from 2021, although rates vary considerably across regions due to differences in diagnostic practices and reporting systems (World Health Organization, 2025).

ASD is a condition that presents unusual challenges for the individual with ASD and their family, especially mothers who are often the primary caregivers. Mothers of children with ASD also must cope with the comprehensive needs of their child, including difficulty communicating, learning disabilities, emotional behavioral problems, and the need for constant supervision. These tasks involved in the

care giving process are usually more complex and long term than what is associated with raising children who are not affected by neurodevelopmental disabilities. Emotional behavioral problems, including aggression, hyperactivity, temper outbursts, and emotion dysregulation, are common in children with ASD, which also contribute to greater psychological distress in parents (Karst and Van Hecke, 2012).

1.1 Maternal Resilience

Maternal resilience, defined as the ability to adapt and maintain psychological functioning under chronic stress, plays a critical role in how mothers manage the ongoing challenges associated with raising a child with Autism Spectrum Disorder (ASD) (Bonis, 2016). Recent evidence indicates that higher resilience among mothers of children with ASD is associated with better psychological adjustment, enhanced well-being, and reduced parenting stress, although its protective effects may vary depending on social support and contextual resources available. (Sarhani-Robles et al., 2025).

Resilience may therefore be a fundamental factor in the mitigation of the psychological distress and emotional demands of providing care among mothers of children with ASD. These mothers face ongoing challenges of emotional behavioral problems (EBPs) in the children, social isolation, economic hardship and lack of access to support services. In the absence of coping resources, such chronic stress is associated with psychological distress. Resilience helps mothers perceive and cope with challenges more effectively, while promoting mothers' perceived control, hope, and perseverance to take on the challenges (Stringer et al., 2020).

Resilient mothers are better at adopting active strategies, like social support, problem solving and acceptance of stress. Resilience reduces psychological distress amongst caregivers and is also linked to greater life satisfaction and emotional well-being (Górska et al., 2021). It also encourages improved emotional regulation; mothers will be calmer and more composed when confronted with difficulties and

this will in turn facilitate more positive interactions with their children (Compas et al., 2017).Resilience can have a snowball effect on family functioning. A strong mother is a better provider, as her resilience contributes to creating a nurturing environment that promotes both her own mental health and her child's emotional growth (Gavidia-Payne et al., 2015).

Resilience in mothers of children with developmental disabilities has been shown to develop through spiritual or religious participation, personal development, and access to strong social support networks (Lai et al., 2015). Moreover, learning new coping mechanisms through counseling and participation in peer groups can further strengthen resilience and improve overall family well-being (Bekhet et al., 2012).

In Pakistani culture, social support for mothers of children with Autism Spectrum Disorder (ASD) is often limited, making resilience a crucial factor for their psychological well-being. Promoting and facilitating resilience through community-based programs, parent support and training, and mental health services can make a great difference in the psychological well-being of mothers. It changes the mothers journey from a path of powerlessness and burnout, into strength, adaptability, and hope (Sarwar et al., 2022).

1.2 Psychological Distress Among Mothers

Psychological distress is a state of emotional suffering manifested by symptoms such as anxiety, depression, irritability, difficulty sleeping, and feelings of hopelessness and helplessness (Drapeau et al., 2012).

People experiencing psychological distress may be overwhelmed, tired, isolate themselves, and may not be able to function as well as they would like. If ignored, psychological distress can interfere with mental functioning and eventually develop into more severe mental health disorders, such as major depressive disorder and generalized anxiety disorder (Ben-Noun, 2018). Mothers of children with

Autism Spectrum Disorder (ASD) are particularly at risk of high levels of psychological distress because of the substantial care-giving responsibilities that they carry. Children with ASD also exert significant emotional, physical, and cognitive pressures (Zhou et al., 2022).

Pressure on their parents and caregivers in some cases, when the children are displaying EBPs, including temper tantrums, aggressive behaviors and social withdrawal. These issues tend to endure and become chronic, quite literally because they become part of the caregiver's daily life which can deeply impact the mental health (Demirpençe Seçinti et al., 2024). In a country like Pakistan, responsibilities of caregiving are culturally framed. Roles of women are thought to be responsible for household chores and family morale, often without help from extended family. These inequitable care obligations are associated with higher levels of psychological distress, emotional exhaustion, and feelings of being alone (Zahid et al., 2025).

Moreover, the nonexistence of awareness and social support for ASD in Pakistan intensifies the psychological distress of mothers. Children with ASD are sometimes stigmatized, which can have negative effects on social relationships, tends to limit imitation, help-seeking behaviors and may result in feelings of guilt or shame. Mothers of children with Autism Spectrum Disorder (ASD) are particularly at risk of high levels of psychological distress because of the substantial care-giving responsibilities that they carry. Children with ASD also exert significant emotional, physical, and cognitive pressures Mothers could attribute their child's condition to themselves, or feel that they have been a bad parent, which is likely to worsen her psychological distress (Kelly and Morley, 2016).

Mothers of a child with ASD experience more psychological distress compared with mothers of typical children a phenomenon that is well documented in the literature. Although, this emotional load leads not only to the alteration of the mother's psychological state, but can also disrupt her aims of fostering consistent and nurturing caregiving (Herrero et al., 2024).

Mothers of children with Autism Spectrum Disorder (ASD) are particularly at risk of high levels of psychological distress due to the substantial caregiving responsibilities they carry. Therefore, it is important to recognize and address maternal psychological distress not only to provide appropriate care for the mother but also to facilitate healthier developmental trajectories for children with ASD. Unaddressed psychological distress may compromise maternal responsiveness, emotional availability, and consistency in caregiving practices. In contrast, timely psychological support can enhance maternal well-being and strengthen the mother–child relationship, thereby promoting more positive emotional and behavioral outcomes in children with ASD.(Estes et al., 2013).

1.3 Emotional Behavioral Problems in Children with ASD

Children diagnosed with Autism Spectrum Disorder (ASD) often exhibit emotional and behavioral problems (EBPs), which have significant implications for their functioning and pose challenges for their caregivers (Hosseini et al., 2023). Common EBPs in children with ASD include aggression, tantrums and emotional dysregulation these behaviors are often more intense and persistent than those seen in typically developing children. Aggression outbursts can be physical or verbal toward the care provider, his or her peers, or objects, and it is frequently driven by the child's tantrum over communication issues or changes in his or her routine (Akram, 2022)

Tantrums, screaming, crying, sometimes hitting and kicking can be common in response to sensory overload, unmet needs, or confusion about social protocols. Emotional dysregulation is the child's inability to cope with intense emotions, often leading to emotional ups and downs, irritability, and impulsive behavior. Social withdrawal, another common problem, refers to avoiding others, limited eye contact, and little interest in creating relationships, further impacting a child's social development stage (Zava et al., 2019).

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition with core symptoms—such as deficits in social communication and restricted/repetitive behaviors that typically become apparent in early childhood, often before three years of age, with subtle early indicators emerging in the first two years of life (Ozonoff et al., 2020) .

Alongside these core features, emotional behavioral problems, including emotional

dysregulation, irritability, and externalizing behaviors, are commonly observed in young autistic children; studies show that many preschool-aged children with ASD exhibit moderate to severe emotional dysregulation and related behavioral challenges as early as the preschool years (ages 2–6), with such difficulties detectable shortly after diagnosis and potentially persisting into later childhood . (Smith et al., 2024).

Since the primary caregiving responsibility lies with mothers, such behaviors place them in a state of constant vigilance and psychological distress. They need to constantly monitor their child's mood, manage their own emotional triggers, and implement targeted behavioral strategies that no one else knows, all while attending to the needs of other children in the family (Herrero et al., 2024). The frequent intense nature of these EBPs is also associated with increased caregiving burden and psychological distress. In countries like Pakistan, where services for ASD are limited and awareness is low, mothers are left to face these challenges without social or institutional support (Chua et al., 2023).Overall, Autism Spectrum Disorder is an early-onset neurodevelopmental condition, with core symptoms and associated emotional and behavioral problems typically emerging in early childhood and varying in severity across mild, moderate, and severe levels of the disorder.

1.4 Need for Contextual Research in Pakistan

Although there is a significant body of research on the psychological consequences of caring for a child with Autism Spectrum Disorder (ASD) in Western settings,

there is a notable scarcity of such studies in non-Western countries, particularly in South Asia. The majority of the existing literature is from high-income countries that are more aware of ASD availability of diagnostic and intervention services, and being able to access the social support systems is much more advanced compared to low- and middle-income countries. Though informative, these studies do not necessarily capture the reality of the lives of mothers in low- and middle-income countries like

Pakistan, which are very different sociocultural. Therefore, evidence from the Western world should not be predicted without limitation, indicating a vital requirement for setting-targeted investigations (Rahman et al., 2016).

In a country like Pakistan, there are several interrelated issues that make this experience different and, in most cases, even more difficult for mothers of children with ASD. Many children go undiagnosed or misdiagnosed, and when they are diagnosed, the diagnosis is often misunderstood or denied. The public does not know much about neurodevelopmental conditions, which fuels stigma, leading to feelings of shame, isolation, and inadequacy for caregivers, usually mothers. These cultural stigmas discourage open conversations about neurodiversity, leaving mothers feeling afraid to speak up for fear of being judged (Grahame, 2023). Further, the healthcare system in Pakistan is not adequately prepared to serve the needs of children with ASD and their families. There is limited access to specialized services, such as speech therapy, occupational therapy and behaviors intervention, particularly in rural and urban areas. In urban areas, offering these services, even if they are available, is also expensive and not covered by public health plans, and creates a great economic pressure on familie. The absence of available support places a greater burden of care on mothers and increases their psychological stress. The complex challenges of parenting an ASD child are not something a mother can be expected to master without early assistance and professional advice (Hossain et al., 2017).

Cultural demands add to the complexity. In Pakistan, the established roles of women due to patriarchal values have stereotyped her as the primary caregiver, not

only being responsible for the care of the child, but also for performing household work and providing emotional support to the extended family.

In the context of a child with behavioral issues or developmental delay it can lead to the mother being held to blame, and even punished for perceived failures as a parent. This culture of blame exacerbates maternal guilt, lowers self-esteem and is associated with increased psychological distress. Furthermore, those mothers from nuclear families can be alienated even from the joint family support in social and emotional domains, rendering them isolated in caring role(Khan, 2016).

Despite these adversities, there is a scarcity of research empirically investigating the extent to which sociocultural and financial strain is affecting maternal mental health in Pakistan. There is limited research on psychological distress among mothers of children with ASD, particularly during the COVID-19 pandemic and with few studies having examined the protective effects of resilience, or the impact of demographic variables, including level of education and family structure.

Consequently, very limited evidence exists on which to base culturally appropriate interventions or to advocate for changes at policy level that might help to lessen the burden on affected families(Kumpfer et al., 2017).

Through examining the interplay among emotional behavioral problems in children with ASD, maternal resilience, and psychological distress in Pakistani culture, the present study seeks to approximate contextually appropriate and actionable knowledge. It may help inform the design of locally appropriate support programs, increase awareness of ASD and caregiver needs, and in turn help to enhance the quality of life of both mothers and their children.

1.5 Theoretical Framework

The key theory that form the foundation of this research the Resilience Theory.

1.5.1 Resilience Theory

Masten (2001) proposed that Resilience Theory places particular emphasis on individuals' capacity to adapt positively, thrive under adverse conditions, and maintain psychological health despite significant challenges. Resilience has been portrayed, in mothers raising children with ASD, as a variable through which they achieve emotional strength of responses to manage their caregiver challenges. Resilience is not merely a product of bouncing back from adversity, but also the process of learning adaptive strategies to better mental health and emotional regulation. Resilient mothers are likely to report increased emotional stability, healthier coping strategies, and better psychological outcomes despite ongoing adversity of having a child with ASD (Ahmed, 2015). Resilience can be enhanced through coping mechanisms, social support, and the ability to reframe the problem more positively. Resilience theory gives an account of how some mothers manage the psychological demands of caregiving and other mothers construct greater levels of distress. It posits that resilience is a protective factor that buffers against the negative impact of caregiving on maternal mental health.

This theory provides a conceptual framework for understanding the interrelationship between the three variables in this study. First, emotional behavioral problems (EBPs) in children with ASD, such as aggression, tantrums, and social withdrawal, create heightened caregiving demands that directly increase mother psychological distress. Second, maternal resilience serves as a protective factor, influencing how mothers respond to these stressors. Resilience buffer the impact of the child's EBPs on mother psychological distress by enabling mothers to employ adaptive coping strategies, seek social support, and reframe challenges positively (Masten, 2001).

1.6 Problem Statement

Autism Spectrum Disorder (ASD) is a pervasive and lifelong neurodevelopmental disorder which has profound effects upon the social, emotional, and behavioral

functioning of an individual. The most challenging feature of ASD are EBPs often exhibited by affected children, like tantrums, aggression, emotional dysregulation, and social disengagement (Russell & Norwich, 2012). These EBPs may be prolong, intense and refractory to conventional parenting approaches, rendering caregiving an extremely stressful and challenging job. For mothers who generally take care of their children in most cultural settings, the challenges associated with separation and loss of care can lead to high psychological distress (anxiety, depression, hopelessness, and emotional exhaustion) (Hayes and Watson, 2013). Studies found that EBPs in children with ASD were significant predictors of caregiver psychological distress and other mental health problems. Indeed, many studies have demonstrated that mothers of children with ASD experience much greater psychological distress than mothers of typically developing children and children with other developmental disorders (Matta et al., 2025).

The literature also points out the importance of resilience in attenuating the impact of caring stress. Resilience, defined as an individual's capacity to adapt effectively in the face of adversity, has been identified as a key protective factor for mothers, enabling them to maintain psychological balance and manage the demands and expectations of caregiving while reducing vulnerability to distress (Bekhet et al., 2012). Some elements of culture, society and economy in Pakistan result in caregiving environment quite different from those of developed countries. Insufficient knowledge of ASD, social stigma related to neurodevelopmental disorders, insufficient health care facilities, and established gender roles magnify the care of the child (Aslam et al., 2023). Moreover, demographic variables such as, maternal education level, family structure (joint or nuclear), and socio-economic status may strongly contribute to resilience and psychological well-being (Tan, 2025). For instance educated mothers may have knowledge about strategies for coping and better access to resources and support, and joint family systems could provide them with more emotional and practical support. These factors have mostly been neglected in the local context and may thus be contributing to an inadequate understanding of the overall psychosocial forces that influence the maternal experiences in the countr (Ambe, 2022).

The absence of context-specific research has far-reaching consequences. First, it does not allow for the development of culture-specific interventions which might reduce maternal stress and enhance psychological well-being.

Second, it restricts awareness and advocacy work that could otherwise destigmatize ASD and promote positive public and professional responses to it. And, in the end, it perpetuates a cycle of silence and invisibility in which mothers are left unsupported, their struggles unacknowledged and their mental health neglected (Tilahun et al., 2023).

Considering the intricate nature of caregiving in ASD and the specific needs of mothers from Pakistan, it is important to examine the relationship between emotional and behavioural problems in children, maternal resilience and psychological distress. How these factors interact within the Pakistani sociocultural context is important for establishing and developing efficient support networks, driving policy and overall shaping the quality of life of the mothers and their children with ASD (Divan et al., 2012).

Such gaps are sought to be addressed through this study that investigates the relationship among EBPs, maternal resilience, and psychological distress in mothers of children with ASD in Pakistan.

1.7 Research Objectives

i. To examine the association between maternal resilience, psychological distress and

   emotional behavioral problems (EBPs) in children with ASD.

ii. To predict the extent to which EBPs and maternal resilience contribute to psychological distress in mothers.

iii. To assess the influence of demographic variables, family system, and maternal education on maternal resilience and psychological distress.

1.8 Research Questions

i. What is the association between maternal resilience, psychological distress, and emotional behavior problems of children with Autism Spectrum Disorder in mothers of children with ASD?

ii. To what extent do emotional behavioral problems and maternal resilience predict psychological distress in mothers of children with ASD?

iii. How do demographic variables family system and maternal education level affect maternal resilience and psychological distress?

1.9 Research Hypotheses

H1: There will be a significant positive association between emotional behavioral problems in children with ASD and psychological distress in mothers.

H2: There will be a significant negative association between maternal resilience and psychological distress in mothers of children with autism spectrum disorder.

H3: There will be a significant negative association between maternal resilience and emotional behavior problems in children with autism spectrum disorder.

H4: Emotional behavior problems will significantly predict psychological distress in mothers of children with autism spectrum disorder.

H5: Maternal resilience will significantly predict psychological distress among mother of children with autism spectrum disorder.

H6: There will be a significant role of family system and maternal education in the psychological distress and maternal resilience in mother of children with ASD.

Chapter 2

Literature Review

2.1 Parenting and Psychological distress of ASD

Parenting is considered a challenging yet fulfilling role that significantly influences both parent and child development. But for parents of children with ASD (Autism Spectrum Disorder), these difficulties can be far more extreme, sustained, and convoluted (Smith and Jones, 2024). ASD is a chronic neurodevelopmental disorder characterized by deficits in social interaction and communication, as well as limited and repetitive behaviors. These hallmark features of ASD can affect many aspects of caregiving, leading to unique parenting challenges; parenting demands that place caregivers, and particularly mothers, at increased risk for psychological distress and negative mental health outcomes (Parkes et al., 2012).

A study found that mothers of toddlers with ASD show psychological distress levels that are elevated relative to a group of parents of toddlers without ASD. Reported psychological distress was linked with general autism as well as severity of maladaptive behaviors in the form of tantrums, aggression and hyperactivity (Stephenson et al., 2022). Similarly, the impact of emotional behavior problems of children with ASD, in particular externalizing behavior, are more strongly related to psychological distress than the severity of autism. These results highlight that it is not just the identification of an ASD diagnosis that increases the stress felt by

parents, but the day-to-day challenges of managing the behavioral and emotional symptoms associated with the condition (Yesilkaya et al., 2024).

Globally, this increased risk for mental health disorders such as depression, anxiety, and psychological distress among the mothers of children with ASD has been amply documented in research. Compared psychological well-being in parents of preschool children with ASD to those of their children with other developmental delays, reporting that parents of children with ASD reported significantly elevated levels of psychological distress. The research stressed the impact of the distress on mothers, and noted that they were especially pushed to the edge by their traditional role as the primary caregivers, and the psychological burden of overseeing care (Montoya-Gajadhar, 2024).

In another research mothers of children with autism in different countries experienced significant degree of psychological distress than mothers of normal developing children. Results emerged across cultural contexts, indicating that regardless of country, parents of children with ASD experience increased psychological distress. The study also observed that the severity of the child's emotional behavioral problems and the amount of social support the mother received were associated with psychological distress (Al-Jadiri et al., 2021).

Psychological distress was directly related to rates and severity levels of EBPs in children with ASD. They put forth a reciprocal model in which the emotional behavioral problems in children would further enhance psychological distress, and mothers would predict the poorer behavioral outcomes in children, forming a vicious circle of high levels of psychological distress. Equally, the study highlighted maternal reports of greater psychological distress, decreasing the likelihood of vesicles in emotion regulation and coping efforts (Zaidman-Zait et al., 2017).

Moreover, there is a study which show association between degrees of maternal psychological distress and children's disabilities of development in Japan (Suzuki et al., 2015). They concluded that mothers of children with ASD had significantly more psychological complaints of anxiety and sleep disorders than mothers of children with no autism developmental disorders. This research has also brought

to attention the emotional loneliness of mothers, which is frequently exacerbated by social incomprehension or lack of empathy (Bestari and Cherian, 2024).

A meta-analysis involving 92 studies with more than 16,000 participants and concluded that parents, particularly mothers, of children with ASD showed higher levels of psychological distress as compared with those of both neurotypical children and children with other developmental disorders. Common predictors of psychological distress, including child functional status, behavior, family level of stress, and social support, were found in the meta-analysis (Yorke et al., 2018).

Another aspect compounding the maternal stress is the feeling of helplessness to control the child's acts. Most recently study reported that mothers of children with ASD frequently feel a sense of learned helplessness, especially when the child's behavior is aggressive, repetitive, and/or socially inappropriate (Tyszkiewicz-Gromisz and et al., 2024). Failure to anticipate or control such behaviors can lead to a sense of failure, guilt, and frustration—emotions that are exacerbated in a society that blames mothers for their children's developmental or behavioral challenges (Périard-Larivée et al., 2024).

The results of international research also highlight the role of lack of support systems in increasing maternal psychological distress. A Saudi study conducted by Khusaifan and El-Keshky in 2022 reported that poor marital relationships and lack of social and professional support were among the risk factors of maternal psychological distress (Khusaifan and El-Keshky, 2022). Furthermore, the role that socioeconomic status has in the experience of being the mother of a child with a disability cannot be discounted. Families of low SES frequently struggle to access behavior therapy, educational services, and care for a child with ASD. A study found financial strain to be associated with parental and psychological distress (Balaz-Munn, 2019). The family lacks the financial means to access early intervention services necessary to manage the emotional behavioral problems of ASD and enhance the child's functioning (Parish et al., 2012).

Collectively, these international studies provide compelling evidence that mothers of a child with ASD experience a substantially higher mental health burden relative

to mothers of neurotypical children. In particular, mothers are more susceptible to the accumulation of the effects of psychological distress given the ongoing nature of the demands of EBPs, the context of societal pressures, and limited support. Although there may be cultural differences in the expression and the management of stress, mothers of children with ASD are highly vulnerable to psychological distress and would benefit from a specific emotional and social support (Hellström and Beckman, 2021).

Considering the special socio-cultural context of Pakistan, including the involvement of the extended family, low public awareness regarding ASD, financial restraints and low healthcare resources, there is a need for such research. There is a need to understand how Pakistani mothers perceive and deal with the psychological distress of rearing an ASD child and to provide specific interventions that can help them alleviate their distress. Lacking context-specific information, policymakers and other decision makers are likely to invest resources in programs and services that are not aligned with the true needs of families, contributing to the continuation of maternal mental health problems and impaired outcomes for children with ASD (Waheed, 2020).

2.2 Psychological Distress in Mothers

It is well established that parenting a child with Autism Spectrum Disorder (ASD) is a demanding and emotional challenging task. On the demand side, most societies (including South Asia) rely on mothers as primary caregivers (Chen et al., 2025). Several prior studies have shown that mothers of children with ASD experience elevated levels of psychological distress, depression, and anxiety compared to mothers of neurotypical children or children with other developmental disabilities. This additional distress is due to the burden of long-term caring, EBPs in the child, social isolation, stigma and absence of support from institutions and the community (Spencer et al., 2022). Psychological distress is a state of emotional suffering associated with stress, anxiety, depression, irritability, restlessness, fatigue,

insomnia, a loss of interest in activities, appetite changes, and somatic complaints. Among mothers of children with ASD, these symptoms are typically anticipated consequences of long-term exposure to the stressors of caring for a child with the disorder (Zheng et al., 2025). A seminal study showed that mothers of toddlers with an ASD reported significantly more depressive and anxious symptoms than mothers of a typically children. This load did not only stem from the child's diagnosis, but also from the occurrence as well as severity of difficult behavior patterns such as aggression, tantrums and emotional dysregulation (Chua et al., 2023).

In another study, also investigated a large group of parents and observed that mothers of a preschooler with ASD experienced significantly higher overall levels of psychological distress and depressive symptoms, when compared to families of children with other disabilities. The study also highlighted that maternal mental illness was highly associated with the level of severity faced by the child concerning behavioral problems, indicating that EBP played an essential role in the contribution to maternal psychological distress (Parkes et al., 2012).

Similar trends have been observed globally. A study conducted in Japan found that mothers of children with ASD experienced higher levels of depression, anxiety, and sleep disturbances compared to mothers of children with other developmental disorders. The researchers observed that these mothers were emotionally drained and overwhelmed by daily routines; they also felt hopeless, especially when they saw that their child continued to struggle with behavior and communication (Yamaguchi and Fujita, 2021).

Psychological distress for caregivers increases due to poor emotional self-management, and few positive emotional experiences. For mothers of children with ASD, the daily necessity of managing challenging behaviors may drown out feelings of happiness or reward causing emotional exhaustion. Chronic anxiety and depression can create layers and layers of emotional toll, with symptoms going beyond what is typical in many instances (Care, 2016).

Social understanding and community support and the absence of fundamental factors in the psychological distress of mothers. Every mother often says she

simply cannot talk to anyone else about her child who is 'doing that'. These experiences made it less likely that they would seek help or talk openly about their difficulties (Hellström and Beckman, 2021).

In sum, psychological distress in mothers of children with ASD is complex, multifaceted phenomenon that is embedded in both the specific demands of childcare as well as the sociocultural context. High depression, anxiety and emotional exhaustion are frequent and usually neglected (Mak and Tan, 2022).

The lack of coping mechanisms, the lack of community support, stigma, economic stress, and the lack of institutional services perpetuate a vicious circle of distress, which undermines mother's well-being and, consequently, child care and development. The need to address maternal psychological distress is even more pressing in high-stigma and low-resource settings such as Pakistan. Studies and interventions in future should take a more encompassing view, with carer mental health at the core of all autism care (Amin et al., 2024).

2.3 Maternal Resilience

It can be conceived as a psychological resource that allows an individual to withstand stress, to adapt despite adversity and to recover from negative experiences. In the context of rearing a child with autism spectrum disorder (ASD), maternal resilience is a critical process in the development of how mothers cope with the intense and frequently chronic caregiving demands related to their child's diagnosis (Üzar Özçetin and Dursun, 2020). For mothers of children with ASD, who are subject to high and enduring levels of caregiving demands, and few support systems—particularly in countries such as Pakistan—their well-being can be profoundly affected by their resilience levels (Gallagher et al., 2025).

Masten (2001) introduced the concept of resilience, describing it as a universal, though not extraordinary, capacity that enables individuals to withstand the negative effects of adversity.

Resilience is a complex of active processes that include self-regulation, optimism, strength of emotion, and the capacity to tap into personal and communal resources in confronting multiple stressors of life. In mothers of children with ASD, resilience is thought to be a protective factor that helps mitigate the physiological impact of caregiving (Havighurst et al., 2015).

Higher resilience has been demonstrated to be consistently associated with better psychological outcomes in caregivers of children with ASD. Resilient people are more likely to experience positive emotions that serve to broaden their thought-action repertoires and create durable personal resources (e.g., coping strategies, supportive relations and

psychological insight) (Osborne et al., 2023). In mothers of children with ASD, resilience is associated with increased emotional stability, a better ability to withstand stress, and a more optimistic view of the future despite persisting caregiving requirements (Kalisch et al., 2020).

There is a extensive work on resilience with the physically or developmentally challenged. They found that resilience reduces the long-term psychological effect of stress through accelerating recovery and promoting emotional adjustment. In the context of caregiving, this translates to the idea that resilient mothers are less prone to the development of chronic depression or anxiety and more likely to feel competent and in control of their caregiving role (Schäfer et al., 2022).

In another study which was performed by Yıldız in 2019, resilience was also found to be a strong trait among the Turkish mothers having children with ASD. Furthermore, the mothers' model also indicates that, compared to not demonstrating resilience, mothers who exhibited resiliency were positively associated with lower depressive symptoms and higher emotional well-being (Parish et al., 2012). These mothers also reported higher enjoyment of problem-solving, and more effective social support seeking when under stress. Here, coping efficacy was not considered as a stable disposition, but as something that could be encouraged through social support, positive re framing and empowerment (Yıldız et al., 2019). Felgoise and Dube in 2018 extended this work by examining the impact of resilience in

caregivers of ASD and found that it was directly related to maternal emotional health, quality of life and parenting satisfaction. Mothers with high levels of resilience were better able to deal with the emotional and behavioral problems that their children were experiencing, and they experienced less helplessness, guilt. The study highlighted that resilience made adaptive strategies (acceptance, planning, humor, seeking social support) easier and that this, in turn, decreased distress (Felgoise and Dube, 2018).

Beyond the enhancement of individual emotional outcomes, resilience has also been demonstrated to have a positive impact on family functioning. The association between resilience, QoL, and mindfulness among mothers of children with ASD. Resilient mothers were also found to create a supportive family environment, ensure regular routines, and to demonstrate adaptive coping for other family members. Their well-handling of the stress diminished the general family stress and made a nurturing and predictable home a environment for the child (Mubarak, 2022).

In a country like Pakistan, where mental health services are limited and societal stigma around disability is high, resilience is all the more important for maternal well-being. A lack of institutional support coupled with social norms that disproportionately rest the caregiving burden on mothers, make resilience a factor in mitigating the psychological distress faced when raising a child with ASD.

Rayan and Ahmad in 2017 found that Jordanian mothers who adopted positive reappraisal (a resilient coping strategy) demonstrated lower levels of psychological distress. This indicates that in societies with relatively high traditional conformity and minimal treatment resources for mental health, resilience factor has strong possibility to function as a protection against caregiver burden (Rayan and Ahmad, 2017).

Resilience is a robust defense against the psychological impact of having a child with ASD. It is known to promote maternal health via improved emotional regulation, adaptive coping and support networks. Literature shows that mothers who are resilient report less anxiety and depression, better family functioning,

and higher involvement in their child's care (Mak and Tan, 2022). In countries like Pakistan, where formal systems of support are largely absent, building resilience becomes a key strategy to enhance mental well-being of caregivers and hence outcomes of children with ASD. Resilience-promoting, culturally appropriate programs can change the caregiving dynamic from perpetually stressful to empowering and hopeful. Such interventions strengthen caregivers' coping capacities by fostering problem-solving skills, emotional regulation, and community-based support. (Dijkstra-de Neijs et al., 2025).

2.4 Emotional Behavioral Problems in Children with ASD

Autism Spectrum Disorder (ASD) is notorious for not only the core deficits in the domains of communication and social interactions, but also the high rate of coexistence of EBPs among affected children. EBPs to address in children with ASD can include a wide variety of concerns including aggression, tantrums, irritability, hyperactivity, social withdrawal, emotional dysregulation. These difficulties are not only prevalent but also persistent and severe, with implications for family functioning and high levels of caregiver burden, especially among mothers (Mohamed, 2023).

An emerging literature has unequivocally demonstrated that EBPs in children with ASD are some of the strongest predictors of parental stress, burden, and psychological distress. These signs usually begin during early childhood and can grow worse if they are not treated properly (Mazurek and et al., 2021). Contrary to the core ASD symptomatology of social-communication deficits and rigid, repetitive behaviors, the EBPs that go along with ASD are generally reactive, unpredictable, and intrusive behaviors that regularly challenge caregivers' daily lives. The psychological distress of coping with such behaviors, particularly when there is a lack of support and resources, can have long-term mental health implications for caregivers (Al-Farsi, 2022).

Long-term view on how emotional behavioral problems in children with ASD endure.They reported habits (e.g., anxiety, aggression, attention issues) and that these waxing and waning tendencies for these expressed behaviors was common.

Crucially, the study revealed that these behaviors were significantly related to psychological distress over and above the core symptoms of ASD. This suggests that it is the emotional behavioral problems, and not the diagnosis of autism, which is most detrimental to caregiver well-being (Simonoff et al., 2013).

Similarly, children's externalizing symptoms, such as hyperactivity and aggression, were found to have a stronger direct effect on maternal psychological distress than internalizing symptoms such as anxiety or depression. The erratic and sometimes aggressive nature of such behavior can have mothers feeling constantly on guard, worn out and emotionally spent. Mothers, who tend to be the primary caregivers, are especially burdened continually having to monitor and correct their child's behaviors (Ermann, 2019).

Zaidman in 2017 found that mothers of children with higher levels of EBPs reported significantly greater emotional burden, greater emotion regulation difficulties, and more mental health problems. These mothers felt overwhelmed, isolated, and guilty — many internalized their child's behavior as a reflection of their parenting. The finding that EBPs predict caregiver mental health highlights the importance of addressing EBPs as part of a comprehensive intervention targeting families of children with ASD (Zaidman-Zait et al., 2017).

The association of EBPs with maternal psychological distress has also been demonstrated in diverse cultural settings. For example, a work of Al-Ansari in 2021 the Gulf countries, and came across that aggressive behaviors, temper tantrums, and affective instability in children with ASD significantly predicted maternal anxiety and depression . These actions by the children disrupted family routines in the view of the mothers, reduced social contacts and imposed significant psychological distress. These experiences were compounded by social stigma and a lack of community education, and resulted in further isolation and psychological distress (Al-Ansari et al., 2021).

In addition to psychological burden, EBPs frequently restrict the child's involvement in educational, leisure and social activities, which in turn impacts the way the mother is involved in the community. This constant social deprivation leads to loneliness and bereavement, which additionally affect psychological health. The sensation of being unable to participate in "typical" extensions of family or utilize public spaces in the company of one's child can be a profound experience of grief, and removal from what is perceived to be the "norm" in society (Gallarotti, 2024). Adding to this caregiving experience is the uncertainty surrounding EBPs. Tantrums, and acts of aggression can come on suddenly be hard to stop, often requiring physical restraint of the child, or that the child be relocated from the situation. This causes caregiver fatigue, loss of sleep, and emotional burnout. It's not uncommon for mothersto report symptoms consistent with chronic stress, such as feeling irritable, having headaches or stomachaches, along with psychological symptoms such as depression, anxiety and emotional numbness. EBPs not only raise the distress of the psychosocial environment, but also diminish a mother's resilience, that is, the ability to cope adaptively with and recover from adversity. Mothers who are consumed with managing emotional behavior problems may have resource or energy limits when it comes to taking care of themselves, seeking social support, and using coping strategies. Such a breakdown in resilience feeds into a vicious cycle where EBPs foster psychological distress and that undermines the ability to cope usefully (Padden and James, 2017).

A study also highlighted the impact of EBPs on the family system as a whole. High levels of child emotional behavioral problems were linked with heightened marital conflict, poor quality of life, and poor sibling relationships. These secondary consequences are continuing to weigh down on the mother, who needs to keep the family's spirits up. All that child management and family peacekeeping, all that effort to look good in public is an almost continual psychological distress (Yorke et al., 2018).

The existing literature generally confirms the negative effects of EBPs on caregivers, and yet little has been written in relation to how these problems, in particular how severity, impact on carers over time, particularly in resource-poor

contexts. In countries such as Pakistan, where the availability of specialized behavioral therapy is minimal and the awareness about ASD by society is poor, the combined impact of EBPs would be more striking. In the absence of early intervention or professional help, such behaviors might intensify and lead to an added burden of caregiving and further decomposition of maternal mental health (Ilias et al., 2018).

The nature and characteristics of psychological distress experienced by mothers is compounded by the Pakistani. Cultural norms may also inhibit the ability of the individual to communicate openly about behavioral issues, which is likely to exacerbate feelings of guilt and shame.

Furthermore, religious and family values may view the child's behaviors as parent failure or punishment from god, intensifying collective suffering. Mothers might feel a pressure to deal with those issues on their own, not to bother others or not to bring "shame" to the family.

This societal stigma serves as a barrier to seeking help." and can slow or stop access to helpful psychological or therapeutic intervention (Kiani et al., 2021). The pervasive and diverse form of EBPs in children with ASD makes it the most salient factor for maternal psychological distress. They don't just happen now – in the day-to-day with its battles and tearful settle-downs – but decades ahead, in a mother's ability to emotionally survive her life, to access other people and to look toward a future.

Given that early identification of EBPs, behavioural intervention and support for the caregiver are all important contributors to both the child's development and the caregiver's mental health, early detection and management of EBPs are essential (Postorino et al., 2017). Overall, the literature strongly supports emotional and behavioural difficulties in children with ASD as key predictors of psychological distress. They are frequently persistent, severe and destabilizing, affecting every aspect of family life and draining caregivers' emotional resources." In under-researched and under-resourced countries such as Pakistan, the influence of EBPs could be exacerbated by societal stigma, lack of support services and cultural

norms. As such, identifying and intervening on EBPs should be a priority for research and intervention efforts directed at improving the lives of families with children with ASD (Falk et al., 2014).

2.5 Demographic Influences

Demographic variables also appear to be important in understanding the psychological well-being of mothers of children with ASD. Within these, mothers' level of education,family structure and SES have repeatedly been identified key predictors of caregiving consequences. These factors will likely impact mothers' perceptions of, and responses to, the challenges of ASD as well as their supports, social networks and coping techniques. In low-resourced settings such as Pakistan, where institutional backing for ASD is not substantial, the demographic characteristics have a lot to say in relation to how mothers can adapt themselves well or they will be stressed at psychological level.

2.6 Maternal Education

Among demographic factors, maternal education has been the most universally studied predictor of caregiver outcomes. Education can increase psychological resilience through exposure to information and ideas, in the form of enhanced knowledge, understanding, critical analysis, and access to services. A mother's education leads her to seek a diagnosis for her child's condition, understand the diagnosis and implement therapy . They're more

adopt to confront stigma, be the voice for their children and retain a sense of self-worth — all of which are protective against strain and mental health (Benson, 2006). Desiningrum in 2019 defined the co-effects of maternal education on psychological well-being in mothers of children with ASD in Indonesia. Maternal education was associated with more expression of positive emotions and use of emotional regulation, higher resilience and problem solving ability. These mothers

had lower levels of depression and anxiety, indicating education serves as a buffer to cope with the emotional strain of caregiving (Desiningrum et al., 2019).

Similarly, there is a Totsika study in 2017 investigated maternal mental health and parenting of their children with ID and ASD is a nationally representative UK sample. Their study revealed that maternal education was strongly associated with psychological distress. Mothers with a high level of education also had significantly more exposure to mental health resources, and were more likely to enact adaptive coping behaviors, such as gathering (Totsika et al., 2017).

2.7 Family Structure

The family context, including its structure (family joint or nuclear) largely influences the experience of care. In extended families, care-giving duties may be shared across several individuals, which may lessen the burden on the mother. Grandparents, uncles, aunts and siblings can also offer emotional and practical support and much-needed respite. This sharing of childcare is consistent with collectivist values that are widely held in many Asian communities and may be a significant factor in supporting maternal coping (Dwairy, 2006).

The studies by Pastor in 2016 investigated the effect of family environment and support on maternal well-being. Mothers in joint families had significantly less stress and more emotional support compared to mothers in nuclear families. Living within a joint family was related to higher mutuality, better economic well-being and a higher perceived social support network - factors favorably influencing mental health (Pastor-Cerezuela et al., 2016).

In Pakistani society, the institution of joint family living is often perceived as a social asset, particularly for women. However, not all mothers experience its benefits equally. The quality of relationships within the joint family plays a critical role in shaping maternal experiences. Mothers report less stress and greater resilience when extended family members are supportive and cooperative (Ali and

Farooq, 2019). Conversely, when family members stigmatize the child or criticize the mother, the joint family structure can become a source of pressure rather than relief (Shah, 2015).

A study by Suzuki in 2015 also underlined the role of locus of control and resilience in coping with caregivers burden. The authors observed that good internal family support was a better buffer of maternal distress in comparison to family structure. In low-resource settings, however, joint families may be the only support available which may ascribe them a more important role in influencing maternal mental health (Yamaguchi and Fujita, 2021).

Chapter 3

Methodology

3.1 Research Design

The current study applies a correlational quantitative research method. For the present study, the main variables for investigation are maternal resilience, emotional behavioral problems (EBPs) in children with Autism Spectrum Disorder (ASD) and psychological distress.

This research design aims not only to examine whether relationships exist between these variables but also to test their predictive roles, particularly how emotional and behavioral problems (EBPs) and maternal resilience predict psychological distress among mothers. Correlational design does not equal cause and effect design; it seeks instead to uncover the nature and strength of relationships. In this study it permits the investigation of how the emotional and behavioral difficulties of children with ASD contribute to their mothers' psychological distress.The study was quantitative, as it is more objective and allows for pinpointing, and is more generalizable because it is based on numerical data from standardized instruments. The process for data collection and analysis is carried out systematically to ensure results are consistent and valid.

Quantitative tools allow the use of statistical techniques, correlation and multiple regression, to test the hypotheses and assess the association between the variables.

3.2 Sampling Method

In the current study, the focus of the study is on mothers of children diagnosed with Autism Spectrum Disorder (ASD) across the twin cities These mothers are chosen due to their active involvement in the caregiving of their children and are thus well positioned to report on both their own psychological experiences (e.g., how distressed they feel, how well they cope) and on the emotional and behavioral problems that are displayed by their children. This targeted strategy ensures that the data collected is deep, meaningful and contextually situated. Purposive Sampling was used because this sampling is particularly relevant when investigating complex social-psychological problems within a culturally bound context. Moreover, purposive sampling facilitates conducting efficient and feasible study, where the researcher can direct recruitment efforts in the institutions, centers, and forums where the target population is easily accessible. Not only does this approach optimize the chance of recruiting suitable participants but it also allows for efficient and budget-appropriate data collection.

3.3 Sample Size

A sample of 250 mothers of autistic children was selected which was determined using G Power calculations. This sample size was predetermined by considering a number of factors, based on the study's objectives, statistical requirements and the practical (and feasible) considerations of obtaining access to the participants within the geographical range of the study. A sample size of 250 was chosen in order to have good statistical power for correlational and multiple regression analysis, which need a minimal number of cases to detect the association among the constructs such as the psychological distress, a emotional behavior problems and maternal resilience. With this large sample, it will be possible to analyze several predictors at the same time, but with valid statistics. It also minimizes the effect of loss of data because of partial responses of subjects during the study. This sample size ensures more reliable findings across the target population.

3.4 Participants Characteristics

3.4.1 Inclusion Criteria

To make the sample relevant and specific, the following inclusion criteria were used to select participants for the study: mothers of children with a diagnosis of Autism Spectrum Disorder (ASD) according to DSM-5 criteria, with children aged 4 to 10 years. The mothers who were the main care providers of their children with ASD were included. The sample also included mothers whose children with autism spectrum disorder were currently undergoing treatment and receiving Behavioral, occupational and speech therapies.

3.4.2 Exclusion Criteria

Mothers were excluded if their children had not received an official diagnosis of Autism Spectrum Disorder (ASD). Children diagnosed with other neurodevelopmental disorders aside from ASD were also excluded.

3.5 Access to Participants

The recruiting channels that were used to reach the participants consisted of various modalities so as to receive a wide yet representative group of mothers of children with Autism Spectrum Disorder (ASD) from all Pakistan. Potential participants were reached out in the following ways:

3.5.1 Special Education Schools and Autism Centers

Authorizations were received formally through the managers of well-established centers of rehabilitation of autism and institutions of special education in places like Islamabad, and Rawalpindi.

These centers helped to identify the available participants since they referred mothers of children who have formally diagnosed ASD. Scheduling of meetings was done at the centers whereby researchers announced the study to the participants and provided the relevant documentation (information sheet and consent forms).

3.6 Measures

The measuring tools likely to be employed in the study are standardized and include:

3.6.1 Strengths and Difficulties Questionnaire

The Strengths and Difficulties Questionnaire (SDQ), developed by Goodman (1997), is a widely used tool that helps assess the emotional and behavioral challenges of children and adolescents between the ages of 2 and 17.

It has 25 questions, divided into five key areas: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. The questionnaire can be completed by parents, teachers, or the child themselves (self-report for older children). Each item is rated on a 3-point scale: "Not True," "Somewhat True," and "Certainly True." The SDQ has three versions tailored to different age groups.

SDQ has three versions, for children 2-4 years, 4-10 and 11-17 years. First and second version is filled by parents or caregivers and third version is self-report. Completing the SDQ takes about 20 minutes, and it has a reliability score of 0.70 (Goodman, 1997).

3.6.2 Brief Resilience Scale

The Brief Resilience Scale (BRS), developed by Smith et al. (2008), is specifically designed to assess an individual's ability to bounce back or recover from stress a

key component of psychological resilience. In the context of this study, it is used to measure resilience levels among parents, particularly those caring for children with Autism Spectrum Disorder.

The BRS consists of six statements, with respondents rating their agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). To minimize response bias and ensure that answers reflect true feelings or behaviors, three of the six items are reverse-scored. This means that agreement with those items reflects lower resilience, while agreement with the other items reflects higher resilience.

The BRS has been widely used in both clinical and research settings and has shown strong psychometric properties, including a reliability coefficient (Cronbach's alpha) of 0.80, which indicates good internal consistency. This makes it a reliable and valid tool for assessing how well individuals cope with and recover from difficult situations (Smith et al., 2008).

3.6.3 Kessler Psychological Distress Scale K10

The Kessler Psychological Distress Scale (K10), developed by Kessler et al. in (2002), is a widely used screening tool designed to measure non-specific psychological distress, particularly symptoms related to anxiety and depression. It is commonly used in both clinical and research settings to assess mental health status in the general population.

The scale includes 10 items, each asking how often the respondent has experienced particular symptoms—such as feeling tired for no reason, nervous, hopeless, or so sad that nothing could cheer them up—over the past few weeks (not months). Responses are given on a 5-point Likert scale, ranging from 1 (none of the time) to 5 (all of the time).

This scoring approach allows researchers and clinicians to quantify the severity of psychological distress. The K10 is appropriate for adults aged 18 and above and is very efficient, taking only 2 to 3 minutes to complete. It has demonstrated excellent

reliability, with a Cronbach's alpha of 0.93, indicating a high level of internal consistency. This makes the K10 a reliable and valid measure for identifying individuals who may be experiencing significant emotional distress and may need further psychological evaluation or support (Kessler et al., 2002).

Its brevity and robust psychometric properties make it particularly useful in large-scale research and clinical screening. It allows for easy comparison across populations and can help track changes in psychological distress over time.

3.7 Procedure

In order to assure sufficient ethical standards and systematic data gathering, a series of standardized documentation instruments were used throughout the study. These documents were necessary for communicating to potential participants the details of the study, obtaining consent, and for confidentiality and protocol integrity. The following materials were used:

3.7.1 Informed Consent Form

Consent was obtained from all participants or mothers, and the letter of consent explained the plan and procedures of the study, the risks and benefits, and the rights of participants. It was emphasized that participation was voluntary, and they could withdraw at any time with no consequences. For face-to-face data collection, participants gave written informed consent before participation.

3.7.2 Demographic Information Form

Participants were required to fill a brief sheet of demographic information, including the age of child, gender of child, education of the mother, type of family system (joint/nuclear) and socio-economic status. This form allowed for the analysis of

the effect of demographic variables on the psychological distress and maternal resilience.

3.7.3 Confidentiality Assurance

The confidentiality and anonymity of the participants were ensured through wording in the information sheet and consent form, which explicitly stated this. The participants were guaranteed that their responses would be kept in a safe place, in a way that would not allow for individuals to be recognized, and used only for research in an ethical manner.

Chapter 4

Results

This chapter presents the results of the statistical analyses conducted to examine the relationships among children's emotional behavioral problems (EBPs), maternal resilience, and psychological distress among mothers of children with Autism Spectrum Disorder (ASD). The chapter begins with a description of the demographic characteristics of the participants and their children, followed by the assessment of the reliability of the study instruments. Descriptive statistics are then reported to summarize the main study variables, providing an overall profile of EBPs, resilience, and psychological distress within the sample. Subsequently, inferential statistical analyses are presented to address the study objectives and test the proposed hypotheses. Pearson correlation analyses were conducted to examine the associations among EBPs, maternal resilience, and psychological distress. Multiple regression analyses were then performed to determine the predictive role of children's EBPs, maternal resilience, and selected demographic variables in explaining variations in maternal psychological distress.

These findings provide an empirical basis for evaluating the study hypotheses and understanding the psychological experiences of mothers caring for children with ASD. The findings presented in this chapter form the foundation for the interpretation. They highlight key patterns in maternal resilience, psychological distress, and the emotional behavioral problems of children with ASD. These insights will

TABLE 4.1: Demographic Analysis of the Participants ($N = 250$)

Variables	n	%
Child Gender		
Male	136	54.4
Female	114	45.6
Child Age (Years)		
4	60	24.2
5	45	18.1
6	37	14.9
7	27	10.9
8	19	7.7
9	28	11.3
10	23	9.3
Family System		
Joint	125	50.0
Nuclear	124	49.6
Qualification of Mothers		
Below Intermediate	62	25.7
Undergraduate	119	49.4
Postgraduate	60	24.9
Socio-Economic Status		
Middle Class	240	96.0
High Class	10	4.0

Note. n = number of participants in each category; % = percentage of total participants.

inform practical recommendations for supporting both maternal well-being and child outcomes.

Table 4.1 presents the demographic characteristics of the respondents and their children. Among the 250 children included in the study, 136 (54.4%) were male and 114 (45.6%) were female, indicating a slightly higher proportion of male children. This finding is consistent with previous research suggesting that Autism Spectrum Disorder (ASD) is more prevalent among boys than girls.

With respect to age, the children ranged from 3 to 10 years. The largest proportion

of children were 4 years old (n = 60, 24.2%), followed by those aged 5 years (n = 45, 18.1%) and 6 years (n = 37, 14.9%). Smaller proportions were observed among children aged 7 years (10.9%), 9 years (11.3%), and 10 years (9.3%), while the lowest percentage was noted for children aged 3 years (3.6%).

In terms of family system, 125 respondents (50.0%) belonged to joint families, whereas 124 (49.6%) belonged to nuclear families, indicating an almost equal distribution between the two family structures.

Regarding maternal education, 62 mothers (25.7%) had education below the intermediate level, 119 mothers (49.4%) were undergraduates, and 60 mothers (24.9%) were postgraduates, suggesting that nearly half of the mothers had completed undergraduate education.

With respect to socio-economic status, the majority of the participants belonged to the middle socio-economic class (n = 240, 96.0%), while a small proportion of respondents were from the high socio-economic class (n = 10, 4.0%). This distribution highlights that nearly half of the mothers possessed undergraduate qualifications, reflecting a moderately educated sample overall. These demographic factors provide an important background for understanding variations in maternal resilience, psychological distress, and children's emotional behavioral problems outcomes

TABLE 4.2: Descriptive statistics of study variables

Scale	**N**	**α**	**M**	**SD**	**Range**		**Skewness**	**Kurtosis**
					Actual	**Potential**		
KPD	10	.65	29.97	5.65	14–44	10–50	-0.31	0.05
BRS	6	.76	16.26	2.53	10–23	6–30	0.04	-0.53
SDQ	25	.92	24.69	8.25	2–44	25–75	0.30	0.91

Note. N = number of items in the scale; M = mean; SD = standard deviation; α = Cronbach's alpha, S = Skewness, K = Kurtosis, KPD = Kessler Psychological Distress Scale; BRS = Brief Resilience Scale; SDQ = Strengths and Difficulties Questionnaire.

Table 4.2 shows the descriptive statistics of the study variables, including psychological distress (Kessler Psychological Distress Scale), resilience (Brief Resilience

Scale), and emotional-behavioral problems (Strengths and Difficulties Questionnaire). The reliability coefficients (Cronbach's alpha) indicated acceptable to excellent internal consistency for the scales, with values ranging from .65 to .92.

The results demonstrate that the mean score for psychological distress was M = 29.97 (SD = 5.65), with scores ranging from 14 to 44. This suggests that, on average, mothers of children with ASD reported moderate levels of psychological distress.

The mean score for resilience was M = 16.26 (SD = 2.53), with observed scores ranging from 10 to 23. This indicates that the mothers reported moderate resilience. For emotional behavioral problems of children, the mean score was 24.69 (SD = 8.25), with scores ranging between 2 and 44. This highlights that, on average, children exhibited moderate emotional behavioral problems, with a considerable variation among individuals.

Skewness (S) and kurtosis (K) values fell within the acceptable range (±1). Overall, these descriptive findings suggest that the sample represents moderate psychological distress, resilience, and child difficulties, providing a sound basis for further correlational analysis.

TABLE 4.3: Normality assumptions

Scales	**M**	**Median**	**Mode**	**SD**	**S**	**K**	**K–S**	*p*
KPD	29.97	30.0	30.0	5.65	-0.31	0.05	0.078	.00
BRS	16.26	16.0	15.0	2.53	-0.04	-0.53	0.111	.00
SDQ	24.69	25.0	25.0	8.25	0.30	0.91	0.110	.00

Note. M = mean; SD = standard deviation; S = skewness; K = kurtosis; K–S = Kolmogorov–Smirnov test; *p* = significance value. KPD = Kessler Psychological Distress Scale; BRS = Brief Resilience Scale; SDQ = Strengths and Difficulties Questionnaire.

Table 4.3 presents the normality statistics for psychological distress (KPD), maternal resilience (BRS), and emotional behavioral problems (SDQ). The means and medians across all three variables are quite close (e.g., KPD: M = 29.97, Median = 30.0), suggesting approximate central tendency alignment. Similarly, the mode values are also close to the mean and median, further supporting approximate symmetry in distribution. However, the Kolmogorov–Smirnov (K–S) test

results were significant for all three scales (p = .00), which statistically indicates a deviation from perfect normality. Despite this, in studies with larger samples (N = 250 in this case), the K–S test is often overly sensitive and may flag even minor deviations as significant.

Given that the skewness/kurtosis values fall within the acceptable range of –1 to +1, the distributions can be considered approximately normal for the purposes of parametric testing. This supports the decision to proceed with Pearson's correlations and regression analyses in subsequent steps. Table 4.3 presents the normality statistics for psychological distress (KPD), maternal resilience (BRS), and emotional and behavioral problems (SDQ). The means and medians for all three variables are quite close (e.g., KPD: M = 29.97, Median = 30.0), suggesting an approximate alignment of the central tendency. Similarly, the mode values are also close to the mean and median, further supporting approximate symmetry in distribution.

However, the results of the Kolmogorov-Smirnov (KS) test were significant for all three scales (p = .00), which statistically indicates a deviation from perfect normality. Despite this, in studies with larger samples (N = 250 in this case), the K–S test is often overly sensitive and may flag even minor deviations as significant. Skewness/kurtosis values fall within the acceptable range of –1 to +1, the distributions can be considered approximately normal for the purposes of parametric testing. This supports the decision to proceed with Pearson's correlations and regression analyses in subsequent steps.

As shown in Figure 4.1, the distribution of KPD (Kessler Psychological Distress Scale) scores illustrates a roughly bell-shaped distribution, centered around the mean score of M = 29.96 with a standard deviation of SD = 5.26 (N = 250). The frequency of responses clusters near the center (25–35), and gradually tapers off toward the tails, which is consistent with the general characteristics of a normal distribution.

Supporting this visual interpretation, the Shapiro–Wilk test (p = .175) is non-significant, indicating that the null hypothesis of normality cannot be rejected.

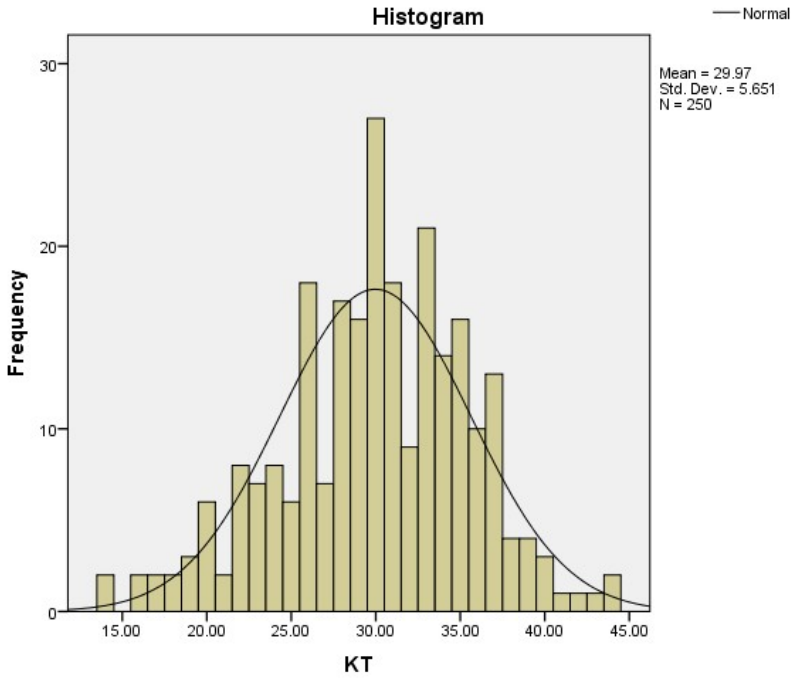

FIGURE 4.1: Histogram of psychological distress among participants.

Similarly, although the Kolmogorov–Smirnov test (p = .007) is significant, this discrepancy is expected in large samples, as the K–S test is highly sensitive to minor deviations. Researchers generally consider Shapiro–Wilk more reliable for assessing normality when N ¡ 2000 (Razali & Wah, 2011). Taken together, both the histogram and Shapiro–Wilk results suggest that KPDT scores are approximately normally distributed. This justifies the use of parametric analyses (such as Pearson correlations and regression) in evaluating the relationships between psychological distress, resilience, and emotional–behavioral problems.

As shown in Figure 4.2, the distribution of BRST illustrates the distribution of resilience scores among mothers of children with ASD (M = 16.26, SD = 2.53, N = 250). The data clusters more heavily between 14 and 18, indicating that most mothers reported moderate resilience levels. The distribution, however, shows slight asymmetry, with a longer tail extending toward higher scores (20–23), suggesting a mild positive skew. Despite this minor skewness, the overall pattern does not deviate substantially from normality. The frequency of scores forms a unimodal curve, with the peak around 15–16, close to the mean and median.

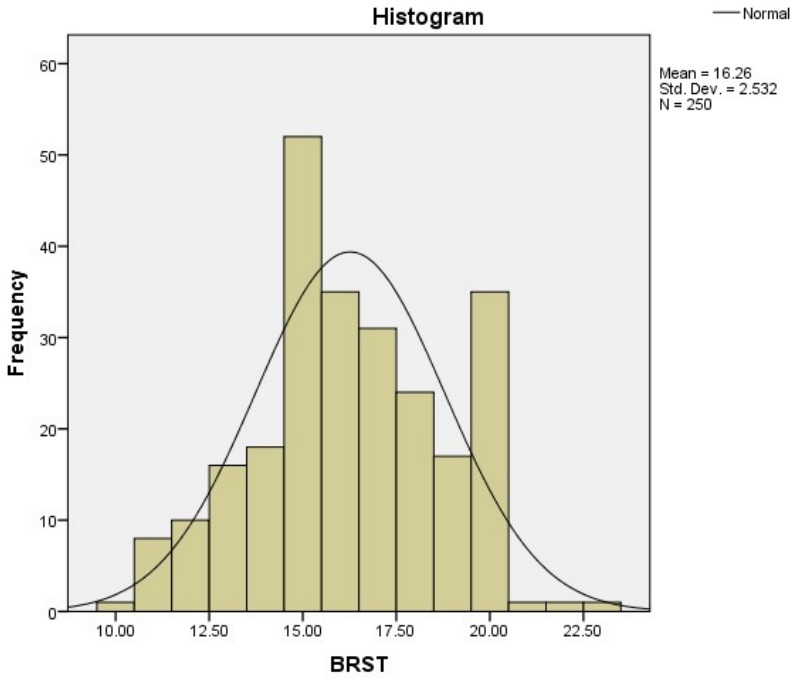

FIGURE 4.2: Histogram of resilience scores among participants.

This alignment between central tendency measures supports the assumption of approximate normality. In terms of statistical testing, as seen in the Shapiro–Wilk and Kolmogorov–Smirnov analyses, even if the results suggested slight deviations, large sample sizes like N = 250 generally allow parametric tests to remain robust. Thus, the BRST scores can be treated as approximately normally distributed, justifying the application of parametric procedures such as Pearson correlation and regression for further analyses.

As shown in Figure 4.3, the distribution of SDQ scores shows the children's emotional behavioral problems as reported by mothers ($M = 24.69$, $SD = 8.25$, $N = 250$). The distribution appears to approximate a normal bell-shaped curve, with the majority of scores concentrated around the 20–30 range, where the mean, median, and mode are closely aligned. This clustering suggests that most children in the sample exhibited moderate levels of emotional and behavioral difficulties. The curve also shows slight positive skewness, indicated by the small tail extending toward higher values (35–50). This suggests that while most mothers reported average difficulty levels, a smaller subset of children demonstrated more severe behavioral emotional challenges. However, the distribution remains unimodal, with

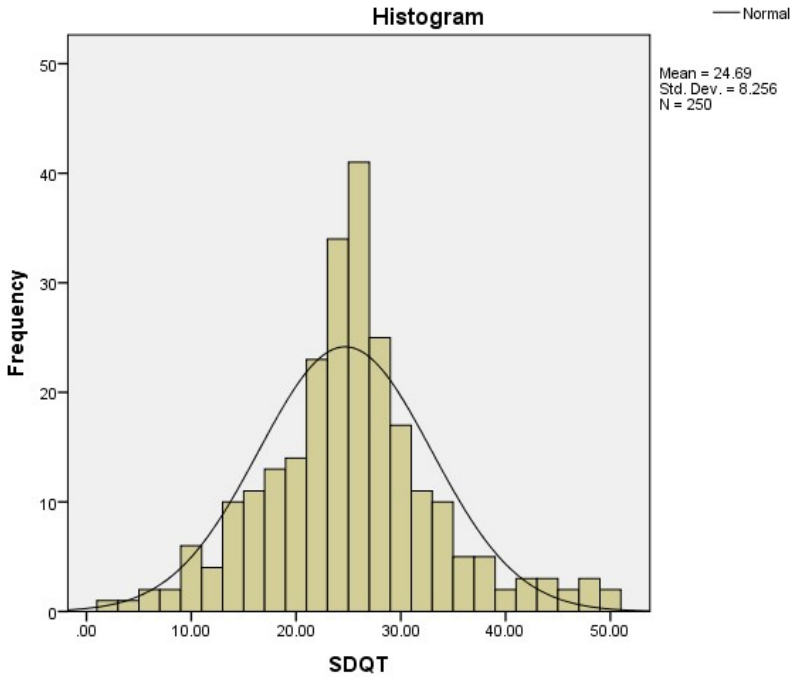

FIGURE 4.3: Histogram of children's emotional-behavioral difficulties (SDQ).

one clear peak near the mean. Given the sample size (N = 250), this slight deviation does not pose a major problem, as parametric tests are robust to minor violations of normality. Thus, the SDQT data can be considered suitable for parametric statistical analyses, such as Pearson correlations and regression, to examine associations with maternal resilience and maternal psychological distress.

TABLE 4.4: Correlation between Resilience, Psychological Distress and Emotional Behavioral Problems

	Variable	**1**	**2**	**3**
1	Psychological Distress	-	0.056	0.175**
2	Maternal Resilience		-	-0.079
3	Emotional Behavior Problems			-

Table 4.4 presents the Pearson correlation analysis which revealed a significant positive association between psychological distress and emotional behavioral problems (r = .175, p = .005). This finding indicates that as children's emotional and behavioral problems increase, mothers tend to report higher levels of psychological distress. On the other hand, maternal resilience was not significantly correlated

with psychological distress (r = .056, p = .380) or with emotional behavioral problems (r = –.079, p = .212). These nonsignificant values suggest that, in this sample, resilience did not directly buffer maternal psychological distress or reduce the impact of child emotional behavioral problems. The results highlight that children's emotional and behavioral problems are more strongly linked with maternal psychological distress than resilience, which contrasts with some prior studies that identify resilience as a protective factor.

TABLE 4.5: Mean, Standard Deviation, and Independent Samples t-test for Family System Differences ($N = 250$)

Variables	**Nuclear (n = 138)**		**Joint (n = 112)**		**t**	*p*	**95% CI**		**Cohen's d**
	M	SD	M	SD			LL	UL	
PD	29.21	5.78	30.58	5.48	-1.92	.055	-2.78	-0.03	.243
RS	16.24	2.30	16.28	2.71	-0.12	.890	-0.67	0.59	.015
EBPs	25.13	5.19	24.35	5.49	1.13	.257	-0.56	2.12	.146

Note. PD = Psychological Distress; RS = Resilience; EBPs = Emotional Behavioral Problems, M = mean; SD = standard deviation, t = independent-samples t-test; CI = confidence interval; p = significance, Cohen's d = effect size.

Table 4.5 Mothers of nuclear families ($M = 29.21$, $SD = 5.78$) reported less psychological distress compared to those from joint families ($M = 30.58$, $SD = 5.48$). The difference approached statistical significance, $t(248) = -1.92$, $p = .055$, with a small effect size. This suggests that while joint-family mothers tended to report somewhat higher distress, the difference is to be considered statistically significant at the conventional .05 level.

Similarly, the resilience scores were nearly identical for nuclear families ($M = 16.24$, $SD = 2.30$) and joint families ($M = 16.28$, $SD = 2.71$), $t(248) = -0.12$, $p = .89$, Cohen's $d = .015$, indicating that there were no significant differences in maternal resilience between family systems.

Nuclear-family mothers ($M = 25.13$, $SD = 5.19$) reported slightly higher EBPs in children compared to joint-family mothers ($M = 24.35$, $SD = 5.49$). However, this difference was not significant, $t(248) = 1.13$, $p = .257$, with a small effect size (Cohen's $d = .146$). This suggests that family structure does not significantly influence reports of child BPs.

TABLE 4.6: Mean, Standard Deviation, and One-way ANOVA for Maternal Education Differences ($N = 250$)

Variables	**BI (n=62)**		**UG (n=119)**		**PG (n=60)**		**F**	p	**95% CI**	
	M	**SD**	**M**	**SD**	**M**	**SD**			**LL**	**UL**
PD	31.22	5.21	29.47	5.50	29.58	6.36	2.13	.12	29.90	32.55
RS	15.87	2.31	16.37	2.73	16.15	2.25	0.83	.43	15.28	16.45
EBPs	24.93	5.69	24.74	4.99	24.23	5.68	0.29	.75	23.49	26.38

Note. PD = Psychological Distress; RS = Resilience; EBPs = Emotional Behavioral Problems; BI = Below Intermediate; UG = Undergraduate; PG = Postgraduate; M = mean; SD = standard deviation; F = one-way ANOVA statistic; CI = confidence interval; LL = lower limit; UL = upper limit; p = significance.

Table 4.6 presents the results of a one-way analysis of variance (ANOVA) conducted to examine whether mothers' education level affected psychological distress, resilience, or emotional behavioral problems (EBPs) in their children.

The results showed no statistically significant differences across education groups for any variable. Although mothers with lower education reported slightly higher distress (M = 31.22) than those with undergraduate (M = 29.47) or postgraduate (M = 29.58) education, this difference was not significant, F(2, 247) = 2.13, p = .12. Similarly, resilience and EBPs did not vary meaningfully across education levels. These findings suggest that maternal education, while theoretically linked to coping resources and awareness, did not play a determining role in maternal psychological outcomes in this sample. The persistent caregiving demands and emotional challenges associated with ASD appear to influence maternal well-being regardless of educational background.

TABLE 4.7: Multiple Regression Analysis Predicting Psychological Distress ($N = 250$)

Predictor	**B**	**SE**	β	**t**	p	**95% CI LL**	**95% CI UL**
(Constant)	23.369	2.873	–	8.133	.000	17.71	29.02
Resilience	0.147	0.140	0.066	1.050	.295	-0.128	0.422
EBPs	0.169	0.066	0.161	2.562	.011	0.039	0.299
$\Delta R^2 = 0.036$							
$F = 4.56$							

Note. B = unstandardized regression coefficient; SE = standard error of B; β = standardized coefficient; CI = confidence interval; EBPs = Emotional Behavioral Problems; p = significance.

Table 4.7 shows the multiple regression analysis that predicts psychological distress among mothers of children with ASD. The findings indicate that the overall model included resilience and emotional behavioral problems (EBPs) as predictors. The constant was statistically significant ($B = 23.369$, $p < .001$), representing the baseline level of psychological distress. Resilience, however, did not significantly predict psychological distress ($B = .147$, $\beta = .066$, $t = 1.050$, $p = .295$), suggesting that higher resilience levels were not associated with lower distress in this sample.

The confidence interval ($CI = -0.128$ to $.422$) also crossed zero, further confirming its non-significance. In contrast, emotional behavioral problems emerged as a significant predictor of psychological distress ($B = .169$, $\beta = .161$, $t = 2.562$, $p = .011$). This positive association demonstrates that higher levels of emotional and behavioral problems in children significantly contributed to greater psychological distress in mothers. Overall, these results partially support the study's hypotheses: while EBPs significantly predicted maternal distress, resilience did not show the expected protective effect.

Chapter 5

Discussion and Conclusion

This research study was meant to analyze the association among maternal resilience and psychological distress and emotional behavioral problems among children with autism spectrum disorder (ASD). Rearing a child with ASD is an emotionally challenging and stressful process that can put mothers in a stressful condition that usually affects their psychological health. This study aimed to investigate the interaction between child-related emotional behavioral problems and maternal protective variables to determine their effect in relation to psychological distress in mothers. The psychometric characteristics of the instruments were initially checked in order to make the results robust. The reliability analysis indicated good internal consistency of all scales as the values of Cronbach alpha were between 0.65 and 0.92 in Table 4.2, suggesting that the scales applied to the current group of mothers (Kessler Psychological Distress Scale, Brief Resilience Scale, and Strengths and Difficulties Questionnaire) were reliable. Test of normality was done to determine distributional characteristics of data. Kolmogorov Smirnov test and Shapiro Wilk test, and observation of histograms showed that, the study variables had reasonably normal distributions. The values of the skewness and kurtosis were within reasonable ranges, making the assumption of the normality accurate.

These findings warranted the application of parametric statistical tests. Accordingly, parametric techniques such as Pearson's correlation and multiple regression analysis were employed to examine the relationships and predictive roles of the

study variables. Pearson's correlation provided insights into the strength and direction of associations among maternal resilience, psychological distress, and children's emotional behavioral problems. Furthermore, multiple regression analysis was used to assess the predictive contribution of maternal resilience and children's EBPs on maternal psychological distress while also accounting for demographic variables, including family system (nuclear vs. joint) and maternal education.

Overall, this study aimed to investigate the dual role of child-related challenges and maternal coping resources in shaping mothers' psychological distress. By employing robust parametric methods, the study provides valuable insights into the interplay between psychological distress, resilience, and family context in families of children with ASD.

5.1 Discussion on Research Questions

5.1.1 Research Question 1

What is the association between emotional and behavioral problems of children with ASD, maternal resilience, and psychological distress?

The findings showed a significant positive link between children's EBPs and maternal psychological distress, meaning higher EBPs were associated with greater distress in mothers. Resilience did not show a significant negative association with distress, though it may provide some buffering. Overall, EBPs emerged as a key factor affecting maternal mental health, while resilience alone was not enough to counter this impact.

5.1.2 Research Question 2

To what extent do EBPs and resilience predict psychological distress in mothers of children with ASD?

Results from regression analysis showed that EBPs significantly predicted maternal psychological distress, with higher EBPs linked to greater strain. Resilience, however, was

not a significant predictor, suggesting it may function more as a protective factor rather than a direct influence on psychological distress.

5.1.3 Research Question 3

How do demographic variables such as the family system and maternal education level affect maternal resilience and psychological distress?

Findings showed no significant differences in resilience or psychological distress based on family system or maternal education. Mothers in joint families reported higher resilience, while psychological distress was somewhat higher among nuclear families, but these differences were not statistically significant.

5.2 Discussion Hypothesis 1

The first hypothesis (H1) proposed that there would be a significant positive association between children's emotional–behavioral problems (EBPs) and maternal psychological distress. The correlation analysis supported this prediction, revealing a statistically significant positive relationship between EBPs and maternal psychological distress ($r = .175,\ p < .01$). This finding suggests that mothers of children with ASD who report higher levels of child behavioral and emotional difficulties are also more likely to experience heightened psychological distress. The direction and significance are consistent with existing research demonstrating that the behavioral challenges of children with ASD are a key driver of parental psychological distress, anxiety, and depressive symptoms. Prior studies indicate that it is not merely the presence of ASD symptoms but rather the intensity of disruptive or externalizing behaviors, such as tantrums, aggression, or hyperactivity, that most strongly predicts maternal distress (Totsika et al., 2017). A recent

study by Miranda et al. (2022) supports the present findings, reporting a significant positive association between children's emotional–behavioral problems and maternal psychological distress. Their results indicated that higher levels of internalizing and externalizing behaviors were linked to increased maternal stress, anxiety, and depressive symptoms, with behavioral dysregulation emerging as a stronger predictor than core ASD severity. These findings reinforce the view that emotional–behavioral problems in children with ASD are a critical source of maternal psychological distress (Miranda et al., 2022).

5.3 Discussion Hypothesis 2

The second hypothesis proposed that there would be a significant negative association between maternal resilience and psychological distress in mothers of children with Autism Spectrum Disorder (ASD). However, the findings of this study did not support this expectation. Pearson correlation analysis revealed non significant between maternal resilience and psychological distress ($r = -0.078,\ p > .05$), which was statistically nonsignificant. This indicates that, in the current sample, higher levels of resilience among mothers were not reliably associated with lower levels of psychological distress.

Halstead et al. (2018) investigated resilience and well-being in mothers of children with autism spectrum disorder and other developmental disabilities. Although the study found that maternal resilience had a main (compensatory) effect on well-being outcomes, it specifically reported that there was no longitudinal association between resilience and maternal well-being outcomes over time, and it found little evidence that resilience acted as a protective factor between child behavior problems and maternal well-being. This indicates that higher resilience levels were not consistently linked with lower psychological distress across time in that sample (Halstead et al., 2018).

The non-significant results observed in this study may be explained by contextual and methodological factors. First, the intensity of emotional behavioral problems

in children (EBPs) appears to be a stronger determinant of maternal psychological distress than maternal resilience, as demonstrated in regression analyses where EBPs significantly predicted distress while resilience did not. This suggests that in the face of serious challenges related to caregiving demands, individual resilience may not be sufficient to protect mothers from elevated levels of stress. Second, in the cultural context of Pakistan, resilience could operate differently. In collectivist societies, resilience is often closely tied to external supports such as extended family participation, community networks, and institutional resources. However, limited ASD services, low public awareness, and stigma have been shown to exacerbate parental distress in Pakistan, indicating that mothers may lack the structural support necessary for resilience to effectively reduce psychological distress (Aftab et al., 2024).

5.4 Discussion Hypothesis 3

The third hypothesis proposed that there would be a significant negative association between maternal resilience and emotional behavioral problems (EBPs) in children with Autism Spectrum Disorder (ASD). However, the findings of the present study did not support this expectation. The results of the Pearson correlation revealed non-significant negative relationship between maternal resilience and EBPs ($r = -0.079,\ p > .05$). This suggests that higher levels of resilience among mothers were not significantly associated with lower levels of EBPs in their children.

This outcome differs from much of the existing literature, which often emphasizes resilience as a protective factor in families of children with developmental disabilities. A study has the results that maternal resilience can improve family adaptation and coping strategies, potentially leading to more positive child outcomes. Similarly, resilience as a dynamic process of adapting successfully despite adversity, which in family systems can foster an environment that supports healthier child development. In the context of ASD, Bayat in 2009 also suggested that

resilient families were better able to find meaning in adversity and sustain positive interactions, which may indirectly buffer against worsening behavioral outcomes (Lai et al., 2015).

The non-significant findings in this study may be explained by several contextual factors. Emotional behavioral problems (EBPs) in children with ASD are strongly influenced by neurodevelopmental and biological factors, which may not be easily modified by maternal resilience alone. While resilience can help mothers cope with psychological distress and manage caregiving demands, it may not directly reduce the severity or frequency of EBPs without access to structured interventions, such as behavioral therapies or specialized educational programs.

Furthermore, research has shown that adaptive resources related to resilience do not necessarily buffer the impact of child behavior challenges on parental psychological outcomes when contextual support is limited (Higgins et al., 2022).

In the Pakistani context, where ASD services are scarce and social stigma is high, the protective role of resilience can therefore be constrained, as even resilient mothers may lack the external supports required to translate their coping abilities into observable reductions in child EBPs and maternal psychological distress.

5.5 Discussion Hypothesis 4

The fourth hypothesis proposed that emotional behavioral problems (EBPs) in children with Autism Spectrum Disorder (ASD) would significantly predict psychological distress in their mothers. The findings of this study strongly supported this hypothesis. Results from the regression analysis revealed that EBPs were a significant positive predictor of maternal psychological distress (B = .169, = .161, t = 2.562, p = .011). This means that as the severity of EBPs increased, mothers reported correspondingly higher levels of distress. Among the predictors tested, EBPs explained the unique variance in maternal distress, highlighting their central role in influencing mothers' psychological well-being.

These results are consistent with a large body of research showing that child behavioral challenges are among the strongest determinants of mothers psychological distress. Hayes and Watson (2013), in their meta-analysis, concluded that emotional behavior problems in children with ASD were more strongly related to parental psychological distress than core autism symptoms such as communication deficits or restricted interests (Hayes and Watson, 2013).

Similarly, Davis and Carter (2008) found that aggression, tantrums, and social withdrawal significantly increased maternal psychological distress and reduced mothers psychological well-being (Davis and Carter, 2008). Lecavalier et al. (2006) also emphasized that EBPs exacerbate caregiver burden and directly contribute to higher levels of distress in families of children with ASD (Lecavalier, 2006).

Therefore the present findings, reinforce the broader literature and confirm that EBPs are a robust predictor of maternal psychological distress, even in the cultural context of Pakistan.

The high levels of maternal psychological distress observed in this study can be understood within the context of caregiving challenges specific to Pakistan. Parents of children with ASD report elevated stress, anxiety, and depression, which has been linked to limited availability of specialized interventions, low public awareness, social stigma, and insufficient institutional support (Touheed et al., 2025).

These contextual constraints place mothers in the role of primary, often sole, caregivers, requiring constant monitoring of children's emotional behavioral problems (EBPs), which are frequently intense, unpredictable, and persistent. Such continuous vigilance and responsibility contribute directly to heightened maternal psychological distress, as predicted in Hypothesis 4.

5.6 Discussion Hypothesis 5

The fifth hypothesis proposed that maternal resilience would significantly predict psychological distress among mothers of children with Autism Spectrum Disorder

(ASD). However, the findings of the present study did not support this hypothesis. Pearson's correlation analysis revealed non-significant negative relationship between maternal resilience and psychological distress ($r = -0.079,\ p > .05$). Furthermore, regression analysis confirmed that resilience did not significantly predict distress levels when included alongside children's emotional and behavioral problems (EBPs) as predictors. This indicates that, within this sample, higher maternal resilience among mothers did not directly translate into lower psychological distress.

This outcome differs from previous literature that has frequently emphasized resilience as a protective factor for parental mental health. Resilience has been described as the ability to adapt positively despite adversity, using coping strategies and emotional regulation to maintain psychological well-being. Empirical studies such as Horton and Wallander have shown that resilience reduces distress among caregivers of children with chronic conditions, while Bayat (2007) argued that resilient families of children with ASD were better able to maintain hope and manage caregiving demands (Lai et al., 2015). Similarly, Suzuki et al. (2018) highlighted that family resilience can buffer the relationship between child disorder severity and maternal distress (Suzuki et al., 2015). The non-significant results in the current study may be explained by several factors. First, child EBPs, as indicated in the regression analysis, had a much stronger predictive power for maternal distress than resilience. This suggests that the direct demands of managing frequent and intense behavioral difficulties overshadow the potential protective role of resilience. Second, cultural factors may limit the impact of resilience in the Pakistani context. While resilience may help mothers cope internally, the lack of institutional support, limited awareness about ASD, and high levels of stigma in Pakistani society may reduce its effectiveness in lowering overall distress. In collectivist cultures, resilience is often linked with family and community support; without consistent external resources, individual resilience alone may not be enough to mitigate the psychological burden (Aftab et al., 2024).

It is also possible that resilience plays an indirect role rather than a direct predictive effect. For example, resilience may buffer the impact of stress by moderating

the relationship between child EBPs and maternal distress, or by influencing how mothers interpret and respond to stressors over time. Since the present study used a cross-sectional design, it may not have captured such dynamic or longitudinal effects.

5.7 Discuss Hypothesis 6

The sixth hypothesis proposed that demographic variables, specifically family system (nuclear vs. joint) and maternal education, would play an important role in shaping maternal resilience and psychological distress. However, the findings of the present study did not support this hypothesis. Independent-samples t-tests revealed no significant differences in resilience or distress between mothers from nuclear and joint families. Similarly, maternal education did not produce significant differences in either resilience or distress scores. Although mothers in joint families reported slightly higher resilience and mothers in nuclear families reported slightly higher distress, these differences were not statistically significant, suggesting that family structure and education level did not exert a strong influence on maternal outcomes in this sample. These findings contrast with prior studies that have highlighted the importance of demographic factord and contextual factors in

influencing caregiver well-being. The study reported that joint family living in Pakistan could buffer maternal stress by providing shared caregiving and emotional support. Similarly, previous research has found that higher maternal education often predicts better coping, better resilience, and lower psychological distress, as education improves knowledge, problem solving skills, and access to services. However, the current study suggests that, in the context of raising children with ASD, these demographic variables may not be as impactful as child-related behavioral difficulties (Sajjad, 2011).

The severity and persistence of emotional behavioral problems (EBPs) in children with ASD overshadow the protective effects of demographics. While joint family systems and higher education can provide some advantages, the day-to-day

demands of managing EBPs may overwhelm mothers regardless of their family structure or educational background. Furthermore, cultural dynamics in Pakistan may complicate the role of joint families. While extended families can provide support, they may also impose additional stressors such as stigma, criticism, or lack of understanding about the child's condition (Kiran et al., 2025). Similarly, education may equip mothers with awareness, but without adequate institutional services, this knowledge may not fully translate into improved resilience or reduced distress.

5.8 Implications

5.8.1 Theoretical Implications

The present study carries several important theoretical implications for developmental and clinical psychology, particularly in the areas of resilience, psychological distress, and emotional behavioral problems (EBPs) of children with Autism Spectrum Disorder (ASD). First, the findings contribute to the refinement of Resilience Theory by Masten in 2001, which conceptualizes resilience as the ability to adapt positively in the face of adversity. While resilience has often been described as a protective factor that reduces psychological distress, the current study challenges this assumption. Specifically, the results indicated that maternal resilience did not significantly predict levels of psychological

distress, despite showing a non significant. This suggests that maternal resilience, in the context of mothers raising children with ASD, may not operate as a direct determinant of mental health outcomes. Instead, resilience may play a more complex role, functioning as a conditional, moderating, or mediating factor that influences how mothers cope with the ongoing demands of caregiving.

The results further suggest that the overwhelming impact of children's EBPs on maternal distress may overshadow the protective influence of resilience. In regression analyses, EBPs emerged as a strong predictor of maternal psychological

distress, while resilience failed to reach significance. This pattern implies that when mothers are faced with frequent tantrums, aggression, withdrawal, or other intense EBPs, their coping resources may become exhausted regardless of their resilience levels. In this way, resilience may provide mothers with emotional endurance but cannot fully counterbalance the heavy and persistent demands of ASD-related caregiving.

The findings also highlight the importance of considering resilience within the cultural and contextual realities of Pakistani society. In collectivist contexts, resilience is not just an individual attribute but is shaped by family, community, and institutional supports. Yet in this study, demographic factors such as family system and maternal education did not show significant effects on resilience or distress, suggesting that broader contextual supports may not be operating as protective buffers. This may be due to cultural stigma, lack of awareness, or limited ASD-specific services in Pakistan, which restrict mothers from translating personal resilience into tangible reductions in psychological distress.

Thus, the present results encourage a more dynamic and context-sensitive understanding of resilience in ASD caregiving. Rather than being viewed as a universal protective shield, resilience should be theorized as an adaptive process that interacts with child demands, cultural norms, and external resources. This refinement is crucial for developing theoretical models that more accurately reflect the lived realities of mothers in low-resource, high-stigma environments, where resilience may help mothers endure stress but cannot, in isolation, prevent psychological distress when EBPs are severe and systemic supports are lacking. This study highlights the importance of incorporating cultural perspectives into theory-building, particularly when examining resilience and psychological distress in mothers of children with ASD. In collectivist societies such as Pakistan, resilience is often conceptualized not only as an individual capacity but as something deeply embedded within family and community networks.

Traditionally, the joint family system provides opportunities for shared caregiving, emotional support, and collective coping, which in theory should enhance maternal

resilience and reduce psychological distress. However, the findings of this study showed that demographic variables such as family system (nuclear vs. joint) and maternal education did not significantly predict resilience or distress. This suggests that the expected protective effects of collectivist structures may not materialize in the context of ASD caregiving. Several contextual realities may explain this.

First, while joint families can provide practical and emotional support, they may also perpetuate stigma, criticism, or misunderstanding of the child's condition, which undermines maternal coping. For instance, mothers may be blamed for their child's difficulties or pressured to conceal the diagnosis due to fear of "shame" for the family. This dynamic could neutralize or even reverse the potential protective benefits of extended family living. Second, although maternal education is often assumed to empower mothers by increasing knowledge and access to services, in Pakistan the limited availability of ASD-specific resources and therapies may prevent education from translating into reduced distress. Even highly educated mothers in this sample still reported considerable psychological strain, suggesting that systemic barriers outweigh individual resources. These findings imply that Western-based resilience and stress models, which often assume that family and educational resources function as buffers, may not fully capture the lived realities of families in low-resource, collectivist contexts. Therefore, context-specific models are needed to better understand and address the psychological needs of caregivers in these settings. In Pakistan, resilience may not operate solely at the individual level but is shaped and constrained by societal factors such as stigma, lack of institutional infrastructure, and low public awareness of ASD. Theoretically, this calls for models of resilience that are culturally adapted that integrate both the protective potential and the potential risks embedded in collectivist systems.

5.9 Limitations

This study is not without limitations, which should be considered when interpreting the findings. The cross-sectional design restricts the ability to make causal

inferences about the relationships among maternal resilience, psychological distress, and children's emotional behavioral problems (EBPs).

While EBPs were found to significantly predict maternal distress, it is also possible that mothers experiencing higher distress perceive or report more difficulties in their children, indicating a potential bidirectional relationship. In addition, the study relied entirely on self-report measures, which, although reliable, are susceptible to biases such as social desirability and subjective interpretation. Mothers' perspectives may not always align with objective clinical assessments of child behavior.

Another limitation concerns the sample, which was limited to mothers in Rawalpindi and Islamabad whose children were enrolled in therapy centers and special education institutes. This focus reduces the generalizability of the findings to fathers, caregivers in rural areas, or families who lack access to services. Moreover, resilience was assessed using the Brief Resilience Scale, which captures the ability to "bounce back" but may not reflect other culturally relevant dimensions of resilience, such as social, familial, or spiritual coping.

It is also important to note that demographic variables such as family system and maternal education did not emerge as significant predictors in this study, which may partly be explained by the limited variability in the sample, as many participants shared similar backgrounds. Finally, the study did not account for other potential influences such as social support, stigma, or coping strategies, which may help to clarify why resilience did not significantly predict psychological distress in this context.

5.10 Recomendations

Future research should build on the present findings by addressing its methodological and contextual limitations. A priority should be the use of longitudinal research designs to capture the dynamic interplay between maternal resilience,

psychological distress, and children's emotional behavioral problems (EBPs) over time. Such approaches would allow researchers to examine whether resilience functions more as a moderator or mediator in the relationship between EBPs and distress, rather than as a direct predictor, as suggested by the present findings. It would also be valuable to incorporate multiple sources of data beyond maternal self-reports. Objective clinical assessments of children's EBPs, teacher ratings, or observational methods could reduce potential bias in reporting and provide a more comprehensive picture of child functioning. Similarly, including standardized measures of maternal stress and resilience alongside qualitative interviews could capture the nuances of coping strategies and lived experiences that may not be reflected in quantitative scales alone.

Future studies should aim for greater diversity in samples, both geographically and demographically. Expanding beyond Rawalpindi and Islamabad to include rural areas and diverse socioeconomic groups would improve the generalizability of findings and highlight how social and cultural contexts shape maternal resilience and distress. In addition, including fathers, grandparents, or other caregivers could provide a full understanding of family resilience in the Pakistani context, particularly given the collectivist nature of the society. Given that demographic factors such as family system and maternal education did not emerge as significant predictors, it is recommended that future studies explore more nuanced contextual factors, such as stigma, family dynamics, social support networks, and availability of services.

Examining these variables could provide a clearer picture of why resilience failed to predict distress in this sample and highlight mechanisms that either amplify or buffer maternal stress.

5.11 Conclusion

The present study set out to examine the associations between maternal resilience, psychological distress, and children's emotional behavioral problems (EBPs) in

families of children with Autism Spectrum Disorder (ASD), while also exploring the predictive role of resilience, EBPs, and demographic variables such as family system and maternal education. Drawing upon established frameworks such as Resilience Theory, the study aimed to contribute to the understanding of how maternal protective factors and child-related challenges interact to shape caregiver outcomes in the cultural context of Pakistan. The findings revealed that EBP in children was a significant positive predictor of maternal psychological distress, highlighting the central role of child behavioral difficulties in shaping caregiver well-being. Mothers whose children exhibited more severe EBP reported significantly higher levels of distress, which is consistent with the international literature that emphasizes the demanding and disruptive nature of these behaviors. These results confirm the importance of addressing BP as a priority in both research and intervention, as they constitute a primary source of maternal strain.

Contrary to expectations, maternal resilience did not significantly predict psychological distress, although it demonstrated a weak negative association. This suggests that resilience, while conceptually important, may not function as a direct buffer in the face of high caregiving demands and limited external support. Instead, resilience may operate more indirectly, perhaps as a moderator or mediator, shaping how mothers respond to stressors under certain conditions. This finding refines theoretical perspectives by suggesting that resilience is not a universal protective factor but rather a dynamic, context-dependent construct.

Similarly, demographic factors such as family system and maternal education did not emerge as significant predictors of either resilience or distress. Although mothers in joint families showed slightly higher resilience and those in nuclear families reported slightly higher distress, these differences were not statistically significant. This indicates that in the context of caring for ASD in Pakistan, demographic advantages can be overshadowed by the more immediate and persistent challenges posed by EBP for children. It also highlights that structural supports and cultural resources, while potentially protective in theory, may lose their efficacy in environments where stigma, lack of awareness, and inadequate institutional services persist.

Together, these findings are of both theoretical and practical significance. Theoretically, they challenge static assumptions about resilience and emphasize the overwhelming influence of child EBPs on caregiver well-being.

In practice, they underscore the urgent need for interventions that target child behavior management, as well as programs that provide mothers with psychological support and coping resources. The study also highlights the importance of developing culturally sensitive frameworks that recognize the influence of stigma, limited services, and collectivist family structures on the shaping of caregiver experiences.

Furthermore, these results contribute to a growing body of research indicating that child emotional behavioral difficulties exert a stronger influence on caregiver outcomes than many individual or familial characteristics. The centrality of child EBPs in predicting maternal distress implies that behavior management should remain a cornerstone of both clinical intervention and family support.

Interventions that equip caregivers with practical behavior-management skills may be more effective at reducing psychological distress than those that solely focus on maternal internal resources.

In addition, the absence of significant predictive effects for demographic variables suggests that contextual and systemic factors — such as access to services, stigma, and cultural norms — may play a more critical role in shaping caregiver well-being than socioeconomic or family structure variables alone.

This aligns with research from low-resource settings, where formal support systems are limited and caregivers often rely on informal networks that may be strained by the demands of ASD caregiving. As such, future research in Pakistan and similar contexts should prioritize the identification of community-level supports and culturally relevant coping strategies that complement individual resilience.

Finally, the present study's findings underscore the need for integrated service models that simultaneously address child emotional behavior problems (EBP) and maternal psychological distress in mothers of ASD children.

Programs that facilitate early identification of EBPs, provide parent training, and increase access to psychosocial support — while also challenging stigma and building awareness — may yield more substantial benefits for family functioning than interventions that target only one aspect of the caregiving experience. Longitudinal research is also recommended to examine how the interplay between child behavior, caregiver resilience, and distress evolves over time, and how interventions may alter these dynamics.

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Consent Form

I am a MS student at the *Capital University of Science and Technology, Islamabad*. I am conducting research titled association of maternal resilience and psychological distress with emotional behavioral problems of children with autism spectrum disorder. There is no right or wrong answer; you have to choose an answer that suits you the most. The information asked will be kept confidential and your identity will not be revealed in any publications resulting from this study. Your participation in this research study is voluntary. You may choose either to participate or withdraw your consent to participate at any stage of the research. If you agree to fill out the questionnaires, please provide your consent by endorsing the signatures in the prescribed space. If you have any query, you can contact me at email MSP233012@cust.pk.

I am graciously thankful for your valuable time and highly appreciate your cooperation in sharing valuable information. I would be obliged to you for your kind support in my research.

If you willing to participate in this study please sign.

Signature of the Participant

_____

Demographics

	Characteristics of Child:
	Age: _____ Gender: _____

Qualification of Mothers _____

Socio-economic Status: ☐ Lower class ☐ Middle class ☐ High class

Family system: ☐ Nuclear ☐ Joint

SCALE- 1

Kessler Psychological Distress

Read each statement carefully and choose which one of the five possible responses. There are no right and wrong answers. Each question asks how often you felt a certain way during the past 4 weeks. We are just intended in your view. Using the scale below, please indicate the extent to which you choose the following statement by writing the number that correspond to your opinion in the space next to each statement.

Please tick the answer that is correct for you:	All of the time (score 5)	Most of the time (score 4)	Some of the time (score 3)	A little of the time (score 2)	None of the time (score 1)
1. In the past 4 weeks, about how often did you feel tired out for no good reason?					
2. In the past 4 weeks, about how often did you feel nervous?					
3. In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?					
4. In the past 4 weeks, about how often did you feel hopeless?					
5. In the past 4 weeks, about how often did you feel restless or fidgety?					
6. In the past 4 weeks, about how often did you feel so restless you could not sit still?					
7. In the past 4 weeks, about how often did you feel depressed?					
8. In the past 4 weeks, about how often did you feel that everything was an effort?					
9. In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?					
10. In the past 4 weeks, about how often did you feel worthless?					

SCALE- 2

Brief Resilience Scale

Read each statement carefully and choose which one of the five possible responses. There are no right and wrong answers. Each question asks how often you felt a certain way. We are just intended in your view. Using the scale below, please indicate the extent to which you choose the following statement by writing the number that correspond to your opinion in the space next to each statement.

Sr No.		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I tend to bounce back quickly after hard times					
2.	I have a hard time making it through stressful events.					
3.	It does not take me long to recover from a stressful event.					
4.	It is hard for me to snap back when something bad happens.					
5.	I usually come through difficult times with little trouble.					
6.	I tend to take a long time to get over set-backs in my life.					

SCALE- 3

Strength and Difficulties Questionnaire

Read each statement carefully and select whether it is "Not True," "Somewhat True," or "Certainly True" for child with Autism spectrum disorder. There are no right and wrong answers. We are just intended in your view. Using the scale below, please indicate the extent to which you choose the following statement by writing the number that correspond to your opinion in the space next to each statement.

		Not True	Somewhat True	Certainly True
1.	Considerate of other people"s feelings	○	○	○
2.	Restless, overactive, cannot stay still for long	○	○	○
3.	Often complains of headaches, stomach-aches or sickness	○	○	○
4.	Shares readily with other children, for example toys, treats, pencils	○	○	○
5.	Often loses temper	○	○	○
6.	Rather solitary, prefers to play alone	○	○	○
7.	Generally well behaved, usually does what adults request	○	○	○
8.	Many worries or often seems worried	○	○	○
9.	Helpful if someone is hurt, upset or feeling ill	○	○	○
10.	Constantly fidgeting or squirming	○	○	○
11.	Has at least one good friend	○	○	○
12.	Often fights with other children or bullies them	○	○	○
13.	Often unhappy, depressed or tearful	○	○	○
14.	Generally liked by other children	○	○	○
15.	Easily distracted, concentration wanders	○	○	○
16.	Nervous or clingy in new situations, easily loses confidence	○	○	○
17.	Kind to younger children	○	○	○
18.	Often lies or cheats	○	○	○
19.	Picked on or bullied by other children	○	○	○
20.	Often volunteers to help others (parents, teachers, other children)	○	○	○
21.	Thinks things out before acting	○	○	○
22.	Steals from home, school or elsewhere	○	○	○
23.	Gets along better with adults than with other children	○	○	○
24.	Many fears, easily scared	○	○	○
25.	Good attention span, sees chores or homework through to the end	○	○	○