IMPACT OF PERSONALITY & PARENTING STYLE ON BEHAVIOURAL OUTCOMES OF CHILDREN WITH AUTISM SPECTRUM DISORDER

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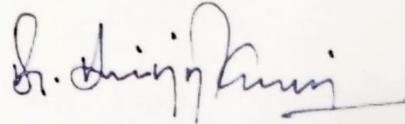
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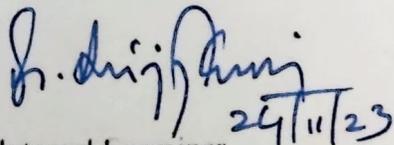
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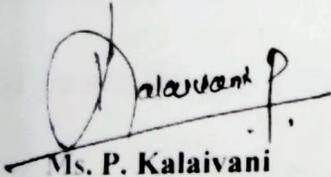
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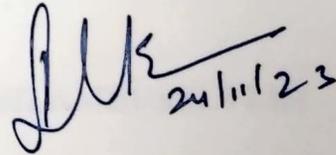
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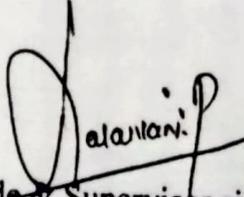
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ABSTRACT

Autism spectrum disorder is a neurodevelopmental and pervasive developmental disorder prevalent since early childhood and continues throughout lifespan; it affects how the individual sees the world and interacts with it. Challenging behaviours are often accompanied with this disorder and it can be intense and can pose physical safety risks to the child and others around them and often negatively impacts the quality of life of the children with ASD and their family members, The Parents often classify their child's challenging behaviours as a primary reason for referral to intervention services. The present study aims at finding the impact of personality and parenting style on behavioural outcomes of children with autism spectrum disorder using correlation design and qualitative method. Samples were selected through purposive sampling technique from service users of NIEPMD in Chennai, consisting of 100 parents of children with autism spectrum disorder. Measures used were Parenting style four factor questionnaires (PS- FFQ), Big five inventory and Child behavioural checklist (CBCL). The statistical techniques used were descriptive statistics of frequency, percentage, mean and standard deviation. Pearson correlation, Independent sample T- test, ANOVA and Structural equation modelling (SEM) analysis was done using software statistical package for social science version 20.0 (SPSS 20.0) and IBM SPSS AMOS version 28. The study concluded that there is a significant relationship in certain dimensions between personality traits (O, C, E, A, N), parenting style (Authoritarian, Authoritative, Permissive and Uninvolved) of parents and problem behaviours (Internalizing, Externalizing and other problem behaviour). This research is expected to have implications in Suggesting appropriate parenting styles and helping caregivers to manage their children and Provision of intervention modules to the parents paves way to manage and cope with their maladaptive behaviours of the children with Autism Spectrum Disorder

Key words: Autism Spectrum Disorder, Parenting Style, Personality, Behavioural outcome

CHAPTER – I

INTRODUCTION

Autism is one of those very prominent, well-known developmental disorders present from birth throughout lifetime. This disorder is characterized by salient features of difficulties in communication, socialization and stereotyped, repetitive behaviours that are most often diagnosed around the age of 3-5 years. There are many studies that focuses on children with autism, only few studies been focused on the parents of children with autism hence this study focuses on the parents of children with autism and their personality and parenting style that might influence the child's behaviour problems

1.1 Autism

Autism refers to a developmental psychopathological condition which is associated with the deviations in neurodevelopment of an individual. This disorder itself is marked with severe deficit in the abilities such as social skills or to socialise, communication (verbal and non-verbal) it includes difficulties in expressing one's basic wants and needs and deviant behaviours that are often maladaptive, problematic and harmful to self or others (Schooler and Mesibov 1987).

It is a neurodevelopmental and pervasive developmental disorder which is prevalent since early childhood and continues throughout lifespan of the individual; basically it affects how the individual sees the world and interacts with it (Butcher, 2016). They also exhibit odd, repetitive, stereotypical behavioural or interest patterns with variations in severity. (Diagnostic and Statistical Manual of Mental Disorders-5)

The disorder is often accompanied by other impairments/deficits in the individual's cognitive functioning and other co-morbid conditions that can be psychological or biological in nature (Milan, 2006)

The origin of the word 'autism' traces back to 1910 coined by Eugene Bleuer. It was initially coined by him with the people with schizophrenia to describe the first mark and primary symptoms of the same. However, the appropriate use of the term 'autism', which is used by the current date, was first by Leo Kanner in the year 1943. He published a paper that was the first paper to be given the description of early infantile autism and concluded it as a neurodevelopmental disorder. In India, the 2015 report by RCI reveals that the prevalence rate of autism is at 0.20% or 21.60,000 and an incidence rate of 1 in 90,666. It also reports that there 2.5 Crore people who are with autism, as of 2015 (RCI, 2016) Within the classification of the psychological disorders in the international classification of disorders, autism falls under the cluster of disorders termed as 'Pervasive Developmental Disorder'. This particular group of disorders includes various other disorders that are clearly marked by qualitative deviations in the individuals with autism's ability to reciprocate the socio-emotional patterns of others in their environment. Further, there is a significant disturbance in their communication and comprehension abilities and problematic behaviour patterns such repeated repertoire of interest of behaviours (WHO, 1992). Such qualitative abnormalities are pervasive characteristic features of the individual's functioning and nature (Volkmar, F.R, 2021).

Almost in every individual with autism, the development is abnormal from infancy and with only in few special cases the symptoms and sign of the disorder become clearly visible to be diagnosed at the age of five years in those individuals which eventually get diagnosed with autism. The disturbance is expressed and can be seen to be present by the individual with autism in all situations (Wing, 2005). However, the intensity or severity with

these disturbances are presented may vary depending on numerous factors. In most cases, there will be a significant impairment in the cognitive development and associated abilities and the behaviours are found to be deviant from what is seen as the characteristics of the individual with mental age. Deviations are significant behaviour irrespective of what is expected in an individual with mental age/ intelligent quotient. ICD places the autism in the category of disorders of pervasive developmental disorders (WHO, 1992).

Challenging behaviours are often intense and can pose physical safety risks to the child and others around them (Matson, Wilkins, & Macken, 2009). All these challenging behaviours are often negatively impacts the quality of life of the children with ASD and their family members, The Parents often classify their child's challenging behaviours as a primary reason for referral to intervention services (Matson & Minshawi, 2006; Matson et al,. 2009) furthermore if it is left untreated, then these challenging behaviours are more likely to continue into adulthood and increase in severity as the child physically grows (Murphy, Beadle-Brown, Wing, Gould, Shah, & Homes, 2005). All these difficulties and challenges has a major barrier in the individuals with autism, not only in availing education/job, but also in accessing various other services like their need of transportation, availing basic human rights, etc. (Matson et al., 2009; Sigafoos, Arthur, & O'Reilly, 2003)

1.2 Personality

A person's personality is generally can defined as a group of psychological traits that has significant influence in their ability to act in meaningfully consistent way (Schofield et al., 2012). Additionally, Studies indicate that a more compact set of overarching trait categories, such as the widely recognized Big Five traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness), could potentially encompass a diverse spectrum of personality traits descriptions (Costa & Mccrae, 1992)

The idea of that the personality has a strong environmental component is supported by a large body of evidences. Various behavioural genetic researches earlier has revealed that the environmental influences the account for 50% or more of the variance in the personality features, in spite of the on-going debate on the extent to which social factors influence personality traits (Bleidorn et al., 2009, Loehlin, 1992) A personality trait is a very distinctive quality of a person's thinking, feelings, or behaviour that often tends to be constant throughout the time and in relevant contexts.

'Personality is a dynamic organization within an individual of those psychological systems which determine their characteristics behaviour and thought' (Allport, 1961. P.28)

"The characteristics or blend of characteristics that makes a person unique" (Weinberg & Gould, 1999 There are various theories that explain all structure of the personality. The Big-Five Factor Model of personality is the most popular model of structure of personality currently. The Big Five domains such as Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience are important variables that create the five-factor model of personality. It was first generated from the research by viewing at the structural model in personality-descriptive language and personality inventories. Since all these five variables can effectively capture a wide range of individual characteristics in personality, this model is the most used structural model in measuring the personality and to study it. Each of the Big Five dimension evolves in an individual in response to biological and environmental stimuli, according to various research that employs the Five Factor Model. The Big Five Measures have demonstrated the highest levels of reliability and agreement amongst ratters, and they can be used to forecast a wide range of significant social, occupational, psychological and health outcomes (Soto et al., 2015). Each and every of the Big Five dimensions is characterised by a number of more particular features, which take many different forms of behaviour in individual.

Extraversion is generally defined as an individual's tendency to be talkative and outgoing in social situations. Its main characteristics are being friendly (as opposed to shyness), assertiveness (as opposed to submissiveness), and activity (vs. lack of energy). On the other hand, introverts feel awkward in social situations and keep their own ideas and feelings within themselves (Soto et al., 2015)

The ability to agree is an essential part of social behaviour. It refers to how well someone treats other person and maintains pleasant, harmonious interpersonal relationship. Compassion (vs. lack of concern for others), politeness (vs. antagonism), and trust are all core aspects of agreeableness (vs. suspicion of others). Those with a most high level of agreeableness are more willing to help and forgive others, and also treat others with respect; those with a low level of agreeableness are to look down on others, starts disputes, and carry grudges (Soto et al., 2015)

Conscientiousness refers to a person's ability to be aware on arranging things, finishing the given tasks and striving towards long-term goals. Its core characteristics are orderliness (as opposed to disorder), self- discipline (as opposed by inefficiency), and dependability (vs. inconsistency). The person with high conscientiousness enjoy order and structure, are effective workers, they tend to obey rules and conventions and are better able to defer pleasure, however those with low conscientiousness struggle with impulse control and are easily diverted from duties (Soto et al., 2015)

Neuroticism (also known as its socially acceptable pole, Emotional stability) can be refers to individual's proclivity to experience the negative feelings and moods. Its primary characteristics are anxiety (as opposed to tranquilly), depression (as opposed to contentment), and emotional volatility (vs. stability). People with high neuroticism have more frequent and powerful negative feelings, such as fear, despair, and irritation as well as mood swings.

However, those with low Neuroticism will stay calm and be positive even in stressful situations, and they will be able to find it simpler to control their emotions (Solo et al., 2015).

The whole depth and breadth of an individual's intellectual, artistic and experiential life is referred to as openness to experience, Aesthetic sensibility (vs. insensitivity), imagination (vs. lack of inventiveness), and intellect are all important aspects of Openness (vs. lack of intellectual curiosity). The person with a high level of openness will have a wide range of interest and love learning and trying new things; those with a low level of openness have restricted interests and prefer familiarity and routine over novelty variation. However, there is less agreement on the concept of openness than there is on the other Big Five aspects. Some academics prefer the alternative name intellect and argue that intelligence, along with intellectual curiosity and hobbies, should be included as a component of this dimension (Soto et al., 2015)

1.3 Parenting style

Baumrind (1978) says, "There is no other way in which a Parental influence can play a significant role in shaping their children's personalities, character, and competence. The way parents fulfil their parenting roles has a substantial impact on children's development. (Arendell, 1997)

Parent has powerful impact on a children's life. The number of studies in the field of parenting reflects its significance in the development of a person's life from childhood. It is a process; the parenting process encompasses all of the actions taken by parents with the intention of promoting their children's well-being. One of the most studied approaches to understanding parental influences on human development is concept of parenting style (Baumrind, 1967). Baumrind proposed parenting styles as correlates to socialization of the children. Then many researches recognized the importance of researching role of parenting

style in child development (Kordi, 2010; Schaffer, Clark & Jeglic, 2009; Kaufmann, et al, 2000; Lim & Lim, 2003). For grouping parents to different styles, Maccoby and Martin suggested a conceptual structure in 1983. They viewed parenting style as combinations of differing levels of parental demandingness and warmth. The styles are thus determined by measuring parental warmth and demandingness. Parental responsiveness, sometimes called parental warmth, supportiveness, or acceptance, pertains to how parents actively encourage their children's individuality, self-regulation, and self-assertion by being attentive, supportive, and responsive to their unique needs and requests (Baumrind, 1971).

On the other hand, parental demandingness, also known as behavioural control, refers to the expectations parents place on their children to become integrated into the family unit by setting maturity expectations, providing supervision, implementing disciplinary measures, and being willing to address disobedience when necessary.

When categorizing parents based on their levels of parental demandingness and responsiveness, a quadrant of parenting styles emerges, including indulgent, authoritarian, authoritative, and uninvolved styles (Maccoby & Martin, 1983). Each of these parenting styles is characterized by distinct, naturally occurring patterns of parental values, practices, and behaviours, as well as a unique balance between responsiveness and demandingness (Baumrind, 1971).

Authoritarian Parenting- Parents following the authoritarian parenting style tend to employ one-way communication, where they establish strict rules that their children are expected to obey without much room for negotiation or explanation. These parents have high expectations for their children, demand obedience, and often resort to punishment when rules are broken. They are typically less nurturing and exhibit limited flexibility in their approach.

Children raised by authoritarian parents often exhibit exemplary behavior due to the fear of consequences for misbehaviour. They are skilled at following precise instructions to achieve goals. However, this parenting style can lead to higher levels of aggression in children, and they may also struggle with shyness, social awkwardness, and difficulty making independent decisions (Masud H. et al., 2019). The aggression may go uncontrolled as they have not received proper guidance on managing their anger. Additionally, these children tend to have low self-esteem, which further hinders their ability to make decisions autonomously.

(Martinez I & Garcia JF., 2007) Frequently, strict parental rules and the use of punishments can lead children to rebel against authority figures as they mature.

Authoritative Parenting- This parenting style is characterized by the development of a close and nurturing relationship between parents and their children. Parents in this style set clear expectations and provide explanations for their disciplinary actions. Discipline is seen as a means of support rather than punishment. Children have the opportunity to contribute to the establishment of goals and expectations, and there is consistent and appropriate communication between the parent and child. Overall, this parenting style tends to result in the most positive outcomes for children, but it does require significant patience and effort from both parents and children.

Authoritative parenting tends to produce confident, responsible children who excel in self-regulation (Masud H. et al., 2019). These children are adept at managing negative emotions, which contribute to improved social outcomes and emotional well-being. Since authoritative parents encourage independence, their children develop a strong belief in their ability to achieve goals independently, leading to higher self-esteem. Additionally, children raised with authoritative parenting often achieve high levels of academic success and perform well in school (Pong SL et al., 2010).

Permissive Parenting- Permissive parents tend to be warm, nurturing and usually have minimal or no expectations. They impose limited rules on their children. Communication remains open, but parents allow their children to figure things out for themselves. These low levels of expectation usually result in rare uses of discipline. They act more like friends than parents.

Having limited rules in permissive parenting can lead to unhealthy eating habits, particularly regarding snacking, which has been associated with increased risks of obesity and other health issues later in a child's life (Lopez NV. et al., 2018). These children often enjoy a high degree of freedom, deciding their own bedtime, whether or when to do homework, and how much screen time to have with computers and television. However, this level of freedom can contribute to the development of negative habits, as parents may not provide adequate guidance on moderation.

Overall, children raised by permissive parents tend to have reasonable self-esteem and decent social skills. However, they may also display impulsive behavior, be demanding, exhibit selfish tendencies, and struggle with self-regulation (Leeman et al., 2014).

Uninvolved Parenting: Uninvolved parents typically grant their children significant freedom and often maintain a hands-off approach. They provide for their child's basic needs but tend to remain emotionally distant and detached from their child's life. Uninvolved parents typically do not employ a specific disciplinary style and have limited communication with their child. They offer minimal nurturing and may have very few or no expectations of their children. Children raised by uninvolved parents often develop resilience and self-sufficiency, possibly out of necessity. However, these skills may come at a cost. They might struggle with emotional control, employ less effective coping strategies, encounter academic challenges, and face difficulties in maintaining and nurturing social relationships (Nijhof et al., 2007).

1.4 Behavioural outcomes / problem behaviours

Children with autism spectrum disorder are most likely to meet all the criteria for additional mental health disorders (de Bruin et al. 2007; Salazar et al. 2015; Simonoff et al. 2008). These are commonly taken in the form of both internalizing (e.g. anxiety or depressed mood) and externalizing (e.g. conduct problems, oppositional behaviour or hyperactivity) problems. They have also been identified as a main source of particular difficulty and also in unmet need for individuals and their families (Cadman et al. 2012; Kring et al. 2008).

With the addition to the core features of autism spectrum disorder (ASD), children and adolescents with ASD are at risk for developing various maladaptive behaviours and difficulties beyond those defining the disorder. Comorbid or co-occurring (used interchangeably) behaviours commonly include symptoms of hyperactivity, irritability, aggression, oppositional conduct, self-injury, depression, anxiety, and other socially unacceptable behaviours (Howlin,2007; Simonoff et al., 2008)

The behavioural issues related to autism may often be related to the non-functional ones that are useless and meaningless. They are often more of a normal behaviour that is very much exaggerated in terms of the frequency, too sometimes. Sensory issues of behavioural issues in individuals with autism are related to all five major sensory modalities as well as the two special sensations. These often marked by hyper or hypo sensitive behaviours that may result in behaviours that are further are avoiding or seeking in nature. These are manifested in the form strict need for constancy and change free routine, more seeking of lights, sound, a particular taste, smell, texture or movement of external objects or body parts or the whole body or might indulge in avoidance of the same. (Carr, Linehan, O'Reilly, Walsh & McEnvoy, 2016)

Although studies are too few in number to reach firm conclusions, the prevalence of maladaptive behaviours in ASD appears to be greater among children who are younger, more cognitively impaired, and taking psychotropic medications (Estes et al., 2007). some internalizing behaviours, particularly those related to depression and anxiety, may be more common in older children and adolescents (Lecavalier, 2006; Tonge & Einfield, 2003) who are more able in terms of and/or have fewer core symptoms of ASD It is possible that higher rates of internalizing difficulties may be related to increasing awareness of one's disability and higher social expectations from adults and peers as these children enter adolescence and young adulthood compared to those who are younger or less cognitively able (Gadow et al., 2005; Kanai et al., 2004)

Individuals with ASD often experience additional health and mental health conditions and behavioural problems that can impact on their lives and on their families (Dominick et al. 2007; Hurtig et al. 2009). It is likely that the complexity of managing a child's ASD needs together with behaviour and mental health problems contributes to the higher levels of stress and distress seen in families of children with ASD compared to other families (Allik et al. 2006a; Lecavalier et al. 2006; Manning et al. 2010). The co-existing conditions can include a range of symptoms from emotional and behavioural problems (including aggression, temper tantrums, self-injurious behaviour), sleep, feeding and eating problems and sensory sensitivities, and also learning and intellectual disabilities, as well as comorbid health and mental health diagnoses (such as epilepsy, attention deficit hyperactivity disorder (ADHD), anxiety, obsessive compulsive disorder and tic disorders). Many of these are also seen in typically developing children and children with other developmental disorders (Dominick et al. 2007).

However, for parents and caregivers, the co-existing conditions can be of equal or greater concern than the core features of ASD, and have a significant impact on behaviour management, learning acquisition and the development of social relationships (Pearson et al. 2006).

There is an increasing awareness of the importance of recognising co-existing conditions as part of the skills- and needs-based assessment and diagnosis of individuals with ASD and their families, which in turn should inform the child and family intervention care plan (NICE CG128 2011). Hence the current study focuses on the problems behaviours or co-existing behaviours with autism that are influenced by personality and parenting styles of the parents of children with autism.

CHAPTER II
REVIEW OF LITERATURE

A collective body of works which is done by earlier scientists is technically called the literature. Any scientific investigation starts with a review of literature. The main objective of a review of the literature is in identifying relevant variables, avoidance of repetition, synthesis of prior works and determining meaning and relationship among variables.

Reviews are a short article that gives brief information regarding the work done in a particular area over a period of time. It is commonly published in journals, yearbooks, handbooks and encyclopaedias. Reviewers select research articles of their interest, organize them into content-wise, criticize their findings and offer their own suggestions and conclusions. Review articles are best sources for those investigators who wish to have all the relevant area in their articles, review articles also provide the advantage of prior review

There exists number of studies regarding the variables of parent's personality, parenting styles and behavioural problems of children with autism spectrum disorder

Here the studies were classified into:

- Personality variables

- Influence of Parenting style on children autism spectrum disorder

- Studies related to personality and parenting styles of parents of children with autism spectrum disorder

- Parental influence in behavioural outcomes of children with autisms spectrum disorder

2.1 Influence of parenting style on children with autism spectrum disorders

Narueporn L, (2020) conducted a quantitative study investigating parenting style, parental stress and quality of life of caregivers of Thai children with autism in Thailand. This study 61 and 63 caregivers of children with and without autism respectively were taken as sample and were asked to complete the parenting style, parental stress and quality of life questionnaire, out of 124 caregivers those of children with ASD reported lower authoritative scores, but higher permissive parenting style scores than those of children without ASD (p = .01 and p = .02, respectively). Significantly greater parental stress scores (p < .001) and poorer parental quality of life were reported by caregivers in ASD group. Furthermore, higher parental stress correlated moderately with following parenting styles: lower authoritative, higher authoritarian, and higher permissive. A negative correlation was found between the children with ASD's quality of life and some parenting styles, including authoritarian and permissive types. "The study results suggests that promoting appropriate parenting styles and helping caregivers manage their parenting stress could be beneficial for caregivers of children with autism" (Narueporn et al., 2020)

A study conducted by Padma A et al in 2021 to understand parenting style and parental stress influenced by Problem behaviour in children with autism.79 parents of children with autism aged 4 to 12 years participated in the study, Strengths and Difficulties Questionnaire (SDQ) for children and adult, Parenting Stress Index (PSI) for parents and caregivers, and Parenting Styles and Dimensions Questionnaire (PSDQ) for parents. The results showed that parents of children with Autism Spectrum Disorder (ASD) often tend to employ the authoritative parenting style. This style is characterized by a balance of clear expectations and rules, open communication, and emotional support. the study found that pro-social behavior in children was linked to reduced parental stress, and child gender and the quality of parent-child interaction influenced the likelihood of parents adopting an

authoritative parenting style. The Study suggest that a comprehensive understanding of how parental stress and parenting styles relate to the behavior of children with ASD empowers healthcare professionals to offer holistic and personalized support, ultimately improving the quality of life for both parents and children in these families. (Padma et al., 2021)

Nishi Tripathi in 2015 investigated on the parenting style and parent's level of stress having children with autism spectrum disorder. The study focused on exploring the relationship between parenting styles and the levels of stress experienced by parents when raising children with Autism Spectrum Disorder (ASD). A total of 320 parents of children with ASD were intentionally selected to participate in the study, with the majority being mothers (75%) and the remaining 25% being fathers. Data were collected using the Parenting Style Dimension Questionnaire, the Parenting Stress Index-Short Form, and demographic information. Based on these findings, the study recommended that parents receive effective counselling and training to help them adopt more appropriate parenting styles tailored to the unique needs of their children with ASD. Such support can aid parents in managing stress effectively and improving their parenting approaches. Furthermore, the study contributes to a better understanding of the relationship between parenting styles, stress levels, and the challenges of parenting children with Autism Spectrum Disorder. This knowledge can assist parents in navigating the complexities of raising children with ASD more effectively.

In a study conducted by Hadi et al. (2014), the researchers examined a population of 65 parents who had children with Autism Spectrum Disorder (ASD) to investigate how parenting styles and family functioning influenced the psychological adjustment of siblings of children with ASD. They utilized Baumrind's Parenting Style Scale, which consists of 30 items, to assess parenting styles. The study's findings revealed that when parents of children with ASD employed authoritarian and authoritative parenting styles, it had a positive impact on their siblings. Specifically: Authoritarian and Authoritative Styles: Parents who used

authoritarian and authoritative parenting styles contributed to a reduction in behavioural problems among the siblings of children with ASD. Increase in Pro-social Behaviours: These parenting styles also led to an increase in pro-social behaviours among the siblings. Pro-social behaviours include actions that benefit others, such as empathy, cooperation, and helping. These results suggest that the choice of parenting style by parents of children with ASD can influence the psychological well-being and behavior of their other children. The use of authoritative and authoritarian parenting styles appears to have a beneficial effect in terms of reducing behavioural problems and promoting pro-social behaviours among siblings in this context.

The study conducted by Zhou et al. in 2014 explored the relationship between parenting styles and parents' perspectives on how their own emotions affect the functioning of children with Autism Spectrum Disorder (ASD). They interviewed 32 parents of children with ASD in mainland China, with the interviews conducted by clinical psychologists and trained family therapists. The researchers employed a grounded theory approach and analysed verbatim transcripts of tape-recorded interviews, Key findings from the study include: Parental Emotions Impact Parenting: The study revealed that the emotions experienced by parents were closely linked to their parenting beliefs and behaviours concerning children with ASD. In other words, how parents felt influenced how they interacted with and raised their children with ASD. Parental Emotions Influence Child Behavior: Both positive and negative emotions exhibited by parents appeared to have an impact on the behavior of their children with ASD. This suggests that a parent's emotional state can affect how their child behaves, potentially exacerbating or mitigating certain ASD-related challenges. Positive Mind-set and Tolerance: The study suggests that if parents can adjust their mind set and cultivate a more positive perspective, they are more likely to have positive perceptions of their child and greater tolerance for the child's ASD symptoms. Maintaining a positive attitude allows the child to

experience unconditional love from their parents, which can be instrumental in reducing the impact of autism on the child's well-being. In summary, the study underscores the significant role of parental emotions and attitudes in shaping the experiences of children with Autism Spectrum Disorder. It highlights the potential benefits of parents adopting a positive mind set and providing unconditional love to their children with ASD, ultimately contributing to improved outcomes for these children.

2.2 personality influence on children with autism spectrum disorders

Netta et al (1984) studies the Intelligence, and personality characteristics of mothers, the primary nurturing adults, were investigated as related to early infantile autism. The sample consisted of 51 parents of children with autism in Israel. All parents were tested for intelligence and personality was tested using Human Figure Drawings and Eyesenck's Personality Inventory. The study suggests that mothers with higher neuroticism may have difficulties in providing love, warmth, and security to their children, potentially finding the caregiving role more draining in terms of attention and energy. However, the study also cautions against drawing direct causal links between maternal neuroticism and autism. While there may be an interaction effect, it is not sufficient to consider maternal neuroticism as the sole cause of autism. Instead, future research should delve into how neurotic tendencies in mothers may influence their interactions with their infants and, subsequently, the child's development. In essence, the study highlights the importance of understanding parental characteristics, such as neuroticism, and their potential impact on child development, particularly in the context of autism. It encourages further investigation into the nuanced dynamics between maternal neuroticism and autism without oversimplifying the relationship.

Malgorzata et al in (2022) studies about the relationship between maternal burnout and the mother's subjective reporting of difficulty in childcare, family function, and

personality traits. A total of 410 mothers of children with autism were taken as sample and completed four questionnaires: Parental Burnout Measure (PBM-12), International Personality Item Pool—Big Five Markers (IPIP-BFM-20), Flexibility and Cohesion Evaluation Scales (FACES-IV), and a survey on childcare difficulties. The study's results indicate that higher levels of maternal emotional instability (Neuroticism) and conscientiousness are associated with increased family communication problems. This, in turn, leads to mothers feeling dissatisfied with their family life and an elevated risk of experiencing maternal burnout. The link between neuroticism and burnout appears evident. Neuroticism is characterized by traits like negative emotionality and heightened reactivity. According to research by Alarcon et al. (2009), these negative emotions can be detrimental to the development and maintenance of a positive relationship with one's child. In summary, the findings suggest that maternal emotional stability and conscientiousness play a role in family dynamics, with high levels of neuroticism being associated with communication issues and an increased risk of maternal burnout due to its connection with negative emotions and strained parent-child relationships.

2.3 personality and parental influence on children with autism spectrum disorders

Harshiwi et al in 2021 investigated on the effect of personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness) on health behaviour for children with autism, mediated by parenting in the COVID-19 pandemic. The study participants were 31 mothers who have children with Autism aged 6-12 years, scale of health behavior, parenting scale, and Big Five Inventory (BFI) scale was used as study tool. The results shows that there is a significant correlation at the 5% level between the mother's extraversion personality and parenting (r = 0.379), agreeableness of mothers and healthy behaviour of autistic children show a significant correlation at the level of 1% (r = 0.422). The results show that there was a significant correlation at the 1% level between parenting

and healthy behaviour of autistic children (r= 0.449). The mother's personality has an important role in providing child care. The mother's personality influences the way in which a mother feels, thinks and acts in providing care (Prinzie, 2009). The study's results demonstrate a connection between a mother's extraversion personality trait and her parenting style. These findings align with the conclusions of a study by Amalia (2019), which also found that extraversion is linked to parenting behaviours. Specifically, extraversion is associated with characteristics such as increased interpersonal interactions, higher activity levels, and greater sociability. This positive influence stemming from extraversion is reflected in how parents interact with their children and the behaviours they exhibit during these interactions. In essence, both the current study and Amalia's research suggest that extraversion as a personality trait can impact parenting dynamics, fostering more active and sociable interactions between parents and children.

2.4 Personality and parenting style influence on behavioural problems

In a study conducted by Patricia et al in 2020, they investigated the relationships among parenting style, parenting stress, and behavioural outcomes in children with Autism spectrum disorder using 70 primary caregivers of children ages 3 to 18 years diagnosed with ASD, mean age of the parents were between 36 to 45 age and for the children between 3- 18 age. Completed a self-report measure of The Gilliam Autism Rating Scale, The Parenting Stress Index-Short and the Child Behavior Checklist (CBCL), Pearson correlation analyses were conducted to examine the relationship between the level of parenting stress and each of the parenting styles subgroups the result indicated that there were no statistically significant relationships between parenting stress and any of the three parenting styles. In hierarchical regressions Child age displayed a significant positive relationship to internalizing behaviours ($\beta = .30$, $p < .05$). Also parenting style did not have a significant contribution to internalizing behaviours ($p = .78$). Age of diagnosis displayed a significant positive relationship to

externalizing behaviours ($\beta = .40$, $p < .05$). The three parenting styles, permissive, authoritative and authoritarian, styles resulted in an overall statistically significant increase in Externalizing behaviour ($p = .04$). The study recommends that future research should consider increasing the sample size and exploring alternative methods of data collection. This expanded research effort aims to provide parents and clinicians with a deeper understanding of the factors that influence behavioural outcomes in children with Autism Spectrum Disorder (ASD). By enhancing our empirical understanding of how parenting styles relate to the behavior of children with ASD, clinicians can develop more effective parent training programs. These programs can offer parents valuable insights and strategies to support their children's development and well-being. Ultimately, the goal is to provide better support and resources to families navigating the challenges of raising children with ASD.

Oliver P.H., et al. in 2009 conducted a longitudinal, prospective study with 111 adolescent's parents. The study focused on the direct links between parent personality, parenting behaviours, and adolescent behavior problems were examined, as well as the potential mediating influence of parenting behaviours on links between parental personality and child adjustment. The project started in 1979 with 130 children of 1 year age and their parents who averaged approximately 30 years of age. NEO Five-Factor Inventory (NEO-FFI), Parent–Child Relationship Inventory (PCRI), Child Behavior Checklist (CBCL) and Youth Self-Report (YSR) tools were measured using descriptive statistics, correlation and test of mediation. Results show that parental conscientiousness is inversely related to behavior problems and directly related to parenting behaviours, also there is a significant mediation effect of maternal conscientiousness associated with reduced levels of externalizing behavior problems, provides insight Conscientiousness in mothers may result in enhanced behavioural outcomes for adolescents, also mothers and fathers who were higher in Extraversion also indicated they were more involved and communicated more with their

adolescents. These findings provide valuable insights into how parental personality traits, such as conscientiousness and extraversion, can impact both behavior outcomes in children and the quality of parent-child interactions. Understanding these relationships can inform strategies for fostering positive parent-child dynamics and potentially improving adolescent behavioural outcomes.

Susan et al in 2010 conducted a study on parenting style and behavioural problems among parents of children with autism and their siblings in Taiwan. In this study total of 151 children diagnosed with autism according to DSM-IV criteria, aged 3–12, 134 siblings without autism, and 113 normally developing controls were recruited. Both parents reported their parenting styles and psychological status and mothers also reported children's behavioural problems. Child behaviour checklist (CBCL), Chinese version of parent bonding instrument and Brief Symptom Rating Scale (BSRS) was used. The result showed that the children with autism had significantly more severe behavioural problems, obtained less affection, more overprotection and authoritarian controlling from their parents than the other two groups. Compared to the controls, the unaffected siblings showed only some behavioural problems, and obtained less maternal care. Fathers had a greater degree of significantly decreased parental affection and care toward their children with autism than mothers did. Therefore, the study suggests that parental counselling should involve not only mothers but fathers as well.

CHAPTER III

METHODS

Research methodology is a systematic approach to solving research problems. It can be thought of as the science of studying how research is carried out systematically. This discipline encompasses the principles, techniques, and procedures that guide the entire research process, from formulating research questions to collecting and analyzing data, drawing conclusions, and sharing findings. In essence, research methodology provides a structured framework for conducting research effectively and rigorously (Kothari C.R, 1993). As such it is very crucial that the success of any research depends on the method adopted and the measures, techniques employed for data collection and analysis. The guiding principle of the method selection is that it must be detail enough for the researchers to read it and be able to replicate the study (American Psychological Association, 1994). This chapter presents the difference stages of the research. It includes methods of sample selection and data collection, tool for data collection and its, description and method of analysis.

3.1 Aim

To find out the impact of personality and parenting style on behavioural outcomes of children with autism spectrum disorder

3.2 Objective

- To understand and explore the relationship between parent's personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness) and parenting styles (Authoritarian, Authoritative, Permissive and uninvolved)

- To find out the impact of personality traits of parents on behavioural problems of children with autism spectrum disorder

- To find out the impact of parenting style of parents on behavioural problems of children with autism spectrum disorder

- To explore the effective parenting style of parents in reducing behavioural outcomes of children with autism spectrum disorder

- To find out the relationship between the demographical variables on parenting styles and behavioural outcomes

3.3 Hypothesis

1. H_1- there will be a significant relationship between personality and parenting style of the parents of children with Autism Spectrum Disorder

2. H_1 - There will be a significant relationship between personality and parenting style of the parents on Behavioural Problems of children with autism spectrum disorder

3. H_1 – There will be a significant relationship between the demographical variables and parenting styles

4. H_1 – There will be a significant relationship between the demographical variables and behavioural outcomes of children with autism spectrum disorder.

5. H_1 – There will be a significant difference among the in parenting styles of the parents and behavioural outcomes of Children with Autism Spectrum Disorder

6. H_1 – There will be a significant impact of personality (O, C, E, A, N) on behavioural outcomes

7. H_1 – There will be a significant impact of parenting styles on behavioural outcomes

8. H_1 - There will be an effective Parenting style when compared with other style on its subgroups (Authoritarian, Authoritative, Permissive and Uninvolved).

3.4 Research Design

This study is an explorative and correlation research design. Exploratory research is described as research conducted to address an issue that is not yet well understood. It is carried out to gain a deeper comprehension of the current issue. When doing such study, the researcher begins with a broad concept and uses the research tools to pinpoint potential research topics. It is crucial that the researcher be open to altering course in response to the discovery of fresh information or insight. Such research is typically conducted when the issue is still in its early stages (Exploratory Research, 2018)

3.5 Method

A Quantitative method of study has been adapted in this study.

Quantitative methodology is the dominant research framework. It refers to a set of strategies, techniques and assumptions used to study psychological, social and economic processes through the exploration of numeric patterns. Quantitative research gathers a range of numeric data. Some of the numeric data is intrinsically quantitative (e.g. personal income), while in other cases the numeric structure is imposed (e.g. on a scale of 1 to 10, how depressed have you felt last week?). The collection of quantitative information allows researchers to conduct simple to extremely sophisticated statistical analyses that aggregate the data (e.g. averages, percentages), show relationships among the data (e.g. Students who have lower grade point averages are more likely to achieve lower scores on a depression scale).

Quantitative research includes methodologies such as questionnaires, structured observations or experiments and stands in contrast to qualitative research (Coghlan. D., 2014)

3.5 Study variable

Independent variable – Personality and Parenting styles

Dependent variable – Behavioural outcomes

Demographical variables – Family type, Socio-economic status, Age, Income and occupation

3.6 Sample

A sample is a representative group of the population under study. The sample for the study was selected from target population within National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD), Department of clinical psychology, Tamil Nadu. The method of sampling used for the study was Non- probability sampling - Purposive sampling and included a total of 100 individuals who are the parents of children diagnosed with autism spectrum disorder with behavioural problems.

3.7 Sampling Criteria

Inclusion criteria

1. Parents of children with autism spectrum disorder who is willing to participate in the study

2. Parents of children with mild to moderate level of autism spectrum disorder

3. Parents of children with autism spectrum disorder age range between 20 to 50 years

4. Children with autism spectrum disorder age range between 6 to 16 years

Exclusion criteria

1. Parents who are not primary care takers

2. Parents diagnosed with chronic physical and psychological disorders

3. Parents who are not willing to participate in the study

4. Single parents are excluded

3.8 Tools used in the study

This study used the following tools to measure the personality and parenting style of parents of children with autism spectrum disorder and behavioural outcomes of children with autism spectrum disorder. Consent forms as well as socio-demographical profiles were also included.

- Parenting style four factor questionnaire (PS- FFQ)

- Big five inventory

- Child behavioural checklist (CBCL)

3.8.1 Consent form

A consent form explaining the research procedure was provided to the participants. It had information on purpose of the research, the participant's role in the research process, ethics of confidentiality and rights of the subject as a participant during the data collection and anonymity in coding data.

3.8.2 Socio- demographic details

A profile constructed by the researcher to collect the demographic information of the participants were used, it includes parent Age, parent's gender, Child's age, Child's gender and socio-economic status.

3.8.3 Parenting Style Four Factor Questionnaire (PS-FFQ)

Parenting Style Four Factor Questionnaire (PSFFQ) a rating scale constructed for measuring different parenting styles. PSFFQ was proved as a good test for measuring four parenting styles having high reliability and validity. The scale was developed by Shyny and Velayudhan (2018) to measure the style of parenting. The reliability by Cronbach's Alpha test is 0.92 for the PSFFQ. It consists, a total of 32 descriptive statements to assess parenting

styles which are classified into four categories authoritarian, authoritative, permissive and uninvolved parenting styles.

In this 5-point Likert-type scale the response options are 1 = never, 2 = rarely, 3 =some time, 4 = most of the time and 5 = all of the time. The scale does not have any negative items. Depending on each parent's response the score of each item was computed and then through the sum of all items the overall score of each parent was calculated. The test yields four separate scores for authoritarian, authoritative, permissive, and uninvolved parenting style for each participant.

3.8.3 Big Five Inventory (BFI)

The Big Five Inventory (BFI) was developed by John & Srivastava (1999), This is a self-report questionnaire designed to evaluate the Big Five personality dimensions. Despite being a multidimensional personality inventory, it is relatively concise and uses easily understandable language. The assessment covers the following five domains of the Big Five Model of personality (often referred to as OCEAN): Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). The Big Five Inventory comprises 44 brief descriptive statements, each rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The final scores for each of the five factors range from 0 to 40, with higher scores indicating a greater presence of that specific personality trait. This assessment demonstrates good reliability, with a coefficient of 0.83, and validity, with a coefficient of 0.81 (Pervin & John, 1999). The questionnaire includes the following five subscales: The assessment includes five subscales, each with a specific number of items:

• Openness to experience (10 items)

• Conscientiousness (9 items)

• Extraversion (8 items)

• Agreeableness (9 items)

• Neuroticism (8 items)

These subscales help measure the corresponding personality traits within the Big Five Model.

3.8.4 Child Behaviour Check List (CBCL)

The Child Behavior Checklist (CBCL) is a caregiver-reported questionnaire commonly utilized to identify problematic behaviours in children. It holds significance in both research and clinical contexts and is an integral part of the Achenbach System of Empirically Based Assessment (ASEBA), devised by Thomas M. Achenbach. The CBCL comprises a total of 113 questions, and respondents rate each item using a three-point Likert scale, where 0 indicates the behavior is absent, 1 suggests it occurs occasionally, and 2 indicates it occurs frequently. The checklist yields raw scores, which can be transformed into age-adjusted t-scores when necessary to provide standardized comparisons.

The CBCL/6-18 (used with children 6 to 18), is made up of eight syndrome scales:

• Anxious/depressed

• Depressed

• Somatic complaints

• Social problems

• Thought problems

• Attention problems

• Rule-breaking behaviour

• Aggressive behaviour.

The CBCL/6-18 is grouped into 11 problem scales consisting of 118 items. The internal consistencies of the Externalizing and Total Problems scales fell in the .92 to .96 range, while the reliability of the Internalizing scale fell in the .88 to .92 range (Patricia, 2020). The CBCL is a widely used well validated measure that has adequate internal consistency (Cronbach's alpha =.75 to .97) and an adequate reliability r=.90 (Achenbach, 2001)

3.9 Process of Data collection

The individual who met the inclusion criteria were approached in person. They were clearly educated about the aim of the study and purpose of the study. For the participants who are eligible for the study group (parents of children with ASD). They were initially psycho-educated about the background of the study and how the study implication can be useful.

To all the participants all the three questionnaire was administered. It took almost 20-30 minutes for each participant to respond to the questionnaire. The data collection was during the month of April and completed in July 2023.

All of the responses were collected in person, in the overall process of data collection, the participant were very cooperative, however in the study group some of the participants were very concerned about the confidentiality of the data.

3.10 Ethical consideration and informed consent

Confidentiality, informed consent, right to withdraw, role of the participant, nature of the study was explained to the participant. The participants were properly oriented and given information about the purpose of the research and its implication. The study result will be shared with the participants if intimated for their reference and understanding.

The proposal of the dissertation was presented to the Institute Ethical Review Board and was approved by them. The collected data was kept highly confidential and used only for

research purposes. Anonymity of the participants was maintained throughout the research procedure.

3.11 Analysis of Data

The data was subjected to descriptive statistics of frequency, percentage, mean and standard deviation. Pearson correlation, Independent sample T- test, ANOVA and Structural equation modelling (SEM) analysis was done using software statistical package for social science version 20.0 (SPSS 20.0) and IBM SPSS AMOS version 28.

CHAPTER IV

RESULTS & DISCUSSION

Analysis and interpretation are essential steps in any research program. According to Baddeley (1996), Analysis of data refers to the process of examining and making sense of information presented in a structured format, typically in tables, graphs, or other organized data sets. The goal of data analysis is to uncover inherent patterns, trends, or insights within the data. This involves several key steps such as Simplification, Reorganization, Interpretation and Inference. Data analysis is a crucial step in research, as it allows researchers to extract valuable information from raw data and draw meaningful conclusions that can inform decision-making, support hypotheses, or contribute to a better understanding of the subject under investigation. Analysis is the key of any research work and it is the way to test hypothesis formulated by the investigator. This chapter deals with the analysis and interpretations of results and discussions.

The present study aimed to find out the impact of personality and parenting style on behavioural outcomes of children with autism spectrum disorder. The objectives of the study were as follows:

- The aim of this study is to investigate and explore the connection between parents' personality traits, including Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, and their parenting styles, which encompass Authoritarian, Authoritative, Permissive, and Uninvolved approaches. This research seeks to understand how specific personality traits in parents may influence the way they interact with and raise their children,

ultimately shedding light on the relationship between parental characteristics and parenting styles.

- To find out the impact of personality traits of parents on behavioural problems of children with autism spectrum disorder

- To find out the impact of parenting style of parents on behavioural problems of children with autism spectrum disorder

- To explore the effective parenting style of parents in reducing behavioural outcomes of children with autism spectrum disorder

- To find out the relationship between the demographical variables on parenting styles and behavioural outcomes

RESULTS

Frequency Distribution for Demographical Variables:

Frequency distribution is an organized tabulation/graphical representation of the number of individuals in each category on the scale of measurement. It allows the researcher to have a glance at the entire data conveniently.

The table 4.1 shows the socio-demographic profiles of the sample that was taken under study. So, in the above table states that the count of an individual samples (i.e: Frequency) in the data and its relevant corresponding percentage. Also, we calculate the mean and the standard deviation of some variables in the data.

Table 4.1 show the frequency, percentage, mean, standard deviation (SD) of the Socio-demographic variables

Variable		Freq.	Percentage	Mean	SD
Gender of the child	Female	46	46	-	-
	Male	54	54		
Age group of the parent	25 years to 35 years	22	22	40.56	7.237
	35 years to 45 years	54	54		
	45 years and above	24	24		
SES	Upper Class	28	28	-	-
	Middle Class	52	52		
	Lower Class	20	20		
Gender of the parent	Female	55	55	-	-
	Male	45	45		
Age of the child	6 years to 12 years	64	64	11.64	3.164
	12 years and above	36	36		

In child gender out of the 100 samples, 46 were female and 54 were male, also 55% of them are female and 45% of them are male in the parents are taken under study. Moreover, 22% of them belongs to 25 to 35 years, 54% of them belongs to 35 to 45 years and 24% of them are belongs to more than 45 years age group of parents in the study. In child ages, 64% of them are from 6 to 12 years, 36% of them are from 12 years and above. In the Socio-economic Status, Upper Class groups are 28%, 52% belongs to Middle class and 20% belongs to Lower Class groups.

Pearson Correlation Coefficient:

It is the test statistics that measures the statistical relationship, or association, between two continuous variables. It is known as the best method of measuring the association between variables of interest because it is based on the method of

covariance. It gives information about the magnitude of the association, or correlation, as well as the direction of the relationship.

Correlation between Personality and Parenting style of the parents:

Null Hypothesis H$_{0(1)}$: There will be no relationship between personality (O, C, E, A, N) and parenting styles of the parents of children with autism spectrum disorder.

Alternative Hypothesis H$_{1(1)}$: There will be a significant relationship between personality (O, C, E, A, N) and parenting styles of the parents of children with autism spectrum disorder.

Table 4.2 shows the correlation for personality traits and parenting style of the parents of children with Autism Spectrum Disorder

		Authoritarian	Authoritative	Permissive	Uninvolved	Parenting Style
Openness	Correlation	-.142	.041	-.159	-.344**	-.082
	Sig. (2-tailed)	.158	.685	.114	.000	.418
Conscientious	Correlation	-.069	-.034	.014	-.185	.199*
	Sig. (2-tailed)	.497	.739	.892	.065	.048
Extraversion	Correlation	-.102	.068	.003	-.141	.213*
	Sig. (2-tailed)	.313	.501	.979	.160	.034
Agreeableness	Correlation	-.074	.090	-.072	-.300**	-.061
	Sig. (2-tailed)	.466	.375	.476	.002	.547
Neuroticism	Correlation	.133	-.082	.034	.133	-.182
	Sig. (2-tailed)	.188	.415	.736	.188	.069

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

From the table: 4.2 imply that the correlation coefficient value of personality (subgroups) and parenting styles (subgroups).

For considering the parenting styles as overall subgroups, it states that the correlation values of all the Personality groups -0.082, 0.199*, 0.213*, -0.061 and -.0182 respectively.

Also, noticing its corresponding p-values in Conscientious and Extraversion (0.048 and 0.034) is lower than the level of significance 0.05. So, null hypothesis is rejected. Hence the alternative hypothesis is accepted. Conversely, for extracting all individual subgroups in parenting styles, it is inferred that

(i)   For Openness the correlation value of its parenting style groups is -0.142, 0.041, -0.159, -0.344** (i.e.: if openness is increases/decreases and uninvolved also decreases/increases {which is inversely proportional}) and in all other p-values (except **uninvolved** has 0.000) which all are greater than 0.05 level of significance. So, we do not reject our null hypothesis $H_{0\,(1)}$ for the three subgroups. But in **Uninvolved** the p-value is less than the level of significance 0.05. Thus, we conclude that there is a relationship between Openness and uninvolved comparing to the other subgroups of the parenting style.

   (ii)   For Conscientious the correlation value of its parenting style groups is -0.069, -0.034, 0.014, -0.185 which doesn't have strong relationships between each other except Uninvolved. Also, its corresponding p-values 0.497, 0.739, 0.892, 0.065 which is greater than the level of significance 0.05. So, we do not reject our null hypothesis $H_{0\,(1)}$. Thus, we conclude that there is no relationship between parenting styles and behavioral groups.

   (iii)   For Extraversion the correlation value of its parenting style groups is -0.102, 0.068, 0.003, -0.141 which is not a strong relationship among the groups and in those p-values 0.313, 0.510, 0.979, 0.160 which all are greater than 0.05 level of significance. So, we do not reject our null hypothesis $H_{0\,(1)}$. Thus, we conclude that there is no relationship between Extraversion and parenting style groups.

(iv)   For Agreeableness the correlation value of its parenting style groups is -0.074, 0.090, -0.072, -0.300[**](i.e.: if Agreeableness is increases/decreases and uninvolved also decreases/increases in inversely proportional manner) except this all are not having a strong relationship to Agreeableness and in those p-values 0.466, 0.375, 0.476, 0.002 which all are greater than 0.05 level of significance except **Uninvolved**. So, we do not reject our null hypothesis $H_{0(1)}$. In **Uninvolved** parenting style, we do reject our null hypothesis $H_{0(1)}$. Thus, we conclude that there is a relationship between Agreeableness and Uninvolved parenting style group.

(v)   For Neuroticism the correlation value of its parenting style groups is 0.133, -0.082, 0.034, 0.133 are not having a strong relationship to Neuroticism except Authoritarian and Uninvolved and those p-values 0.188, 0.415, 0.736, 0.188 which all are greater than 0.05 level of significance. So, we do not reject our null hypothesis $H_{0\,(1)}$. Thus, we conclude that there is no relationship between Neuroticism and the parenting style subgroups.

Correlation between Personality and Parenting style of the parents on behavioral problem of child:

Null Hypothesis $H_{0\,(2)}$: There will be no significant relationship between personality (O, C, E, A, N) and parenting style of the parents on Behavioural Problems of children with autism spectrum disorder.

Alternative Hypothesis $H_{1\,(2)}$: There will be a significant relationship between personality (O, C, E, A, N) and parenting style of the parents on Behavioural Problems of children with autism spectrum disorder.

(i) For Internalizing Behaviour:

Alternative Hypothesis H$_1$ $_{(2.1)}$: There will be a significant relationship between personality subgroups (O, C, E, A, N) and internalizing behavioural problems of the children.

Alternative Hypothesis H$_1$ $_{(2.2)}$: There will be a significant relationship between parenting styles and internalizing behavioural problems of the children.

 (ii) **For Externalizing Behaviour:**

Alternative Hypothesis H$_1$ $_{(2.3)}$: There will be a relationship between personality subgroups (O, C, E, A, N) and externalizing behavioural problems of the children.

Alternative Hypothesis H$_1$ $_{(2.4)}$: There will be a relationship between parenting styles and externalizing behavioural problems of the children.

(iii) For Other Behaviour:

Alternative Hypothesis H$_1$ $_{(2.5)}$: There will be a relationship between personality subgroups (O, C, E, A, N) and other behavioural problems of the children.

Alternative Hypothesis H$_1$ $_{(2.6)}$: There will be a relationship between parenting styles and other behavioural problems of the children.

From the table: 4.3 implies that the correlation coefficient value of personality (subgroups) and parenting styles (subgroups) on Behavioral outcomes of children

Table 4.3 shows the correlation between Personality, Parenting style of the parents and

behavioural outcomes of children with Autism spectrum Disorder

		Internalizing Behaviour	Externalizing Behaviour	Other Behaviours
Openness	Correlation	-.040	-.146	-.119
	Sig. (2-tailed)	.694	.148	.239
Conscientious	Correlation	.116	-.168	-.192
	Sig. (2-tailed)	.251	.094	.056
Extraversion	Correlation	-.267**	-.336**	-.245*
	Sig. (2-tailed)	.007	.001	.014
Agreeableness	Correlation	-.024	-.330**	-.247*
	Sig. (2-tailed)	.811	.001	.013
Neuroticism	Correlation	-.123	.299**	.109
	Sig. (2-tailed)	.221	.002	.278
Authoritarian	Correlation	-.206*	.222*	-.003
	Sig. (2-tailed)	.040	.026	.976
Authoritative	Correlation	0.445	-.136	.030
	Sig. (2-tailed)	.659	.179	.765
Permissive	Correlation	.058	.289**	.235*
	Sig. (2-tailed)	.563	.004	.019
Uninvolved	Correlation	-.027	.188	.107
	Sig. (2-tailed)	.791	.061	.287

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

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

For Internalizing behavior, the correlation coefficient of the independent subgroups in personality are -0.040, 0.116, -0.267**, -0.024, -0.123 and its significant p-values are 0.694, 0.251, 0.007, 0.811, 0.221 respectively. By noticing the above values, we can infer that apart from Extraversion variable subgroup all other variables are greater than the level of significance 0.05. So, we do not reject our null hypothesis $H_{1(2.1)}$ (excluding extraversion). In Extraversion subgroup, the correlation is inversely proportional to Internalizing behavior (i.e: if Extraversion is increases or decreases then the internalizing behavior is also decreases/increases). Thus, we conclude that in Extraversion, there is a relationship with Internalizing behavior.

For Internalizing behavior, the correlation coefficient of the independent subgroups in Parenting style are -0.206*, 0.445, 0.058, -0.027 and its significant p-values are 0.040, 0.659, 0.563, 0.791, 0.315 respectively. By noticing the above values, we can infer that apart from Authoritarian variable subgroup all other variables are greater than the level of significance 0.05. So, we do not reject our null hypothesis $H_{1(2.2)}$ (excluding Authoritarian). In Authoritarian subgroup, the correlation is inversely proportional to Internalizing behavior (i.e.: if Authoritarian is increases or decreases then the internalizing behavior is also decreases/increases). Thus, we conclude that in Authoritarian, there is a relationship with Internalizing behavior.

For Externalizing behavior, the correlation coefficient of the independent subgroups in personality are -0.146, -0.168, -0.336**, -0.330**, 0.299** and its significant p-values are 0.48, 0.094, 0.001, 0.001, 0.002 respectively. By noticing the above values, we can infer that apart from Openness and Conscientious variable subgroups all other three variables are lesser than the level of significance 0.05. So, we do reject our null hypothesis $H_{1(3.1)}$ (excluding Openness and Conscientious). In Extraversion & Agreeableness subgroups, the correlation is inversely proportional to Externalizing behavior (i.e: if Extraversion and Agreeableness is increases or decreases then the internalizing behavior is also decreases/increases). Also in Neuroticism, the correlation is directly proportional to Externalizing behavior (i.e. if Neuroticism is increases or decreases then its externalizing behavior are also increases/decreases). Thus, we conclude there is a relationship between Extraversion, Agreeableness and Neuroticism in externalizing behavior.

For Externalizing behavior, the correlation coefficient of the independent subgroups in Parenting style are 0.222*, -0.136, 0.289**, 0.188 and its significant p-values are 0.026, 0.179, 0.004, 0.061 respectively. By noticing the above values, we can infer that only authoritative variable subgroups, the p-value is greater than the level of significance 0.05.

So, we do not reject our null hypothesis $H_{1(4.1)}$. In Authoritarian, Permissive & Uninvolved subgroups, all the correlation is directly proportional to Externalizing behavior (i.e: if all the mentioned variables are increases or decreases then its externalizing behavior is also increases/decreases). Thus, we conclude there is a relationship between Authoritarian, Permissive and Uninvolved in externalizing behavior.

For Other behaviors, the correlation coefficient of the independent subgroups in personality are -0.119, -0.192, -0.245^*, -0.247^*, 0.109 and its significant p-values are 0.239, 0.056, 0.014, 0.013, 0.278 respectively. By noticing the above values, we can infer that apart from Extraversion and Agreeableness variable subgroups all other three variables are greater than the level of significance 0.05. So, we do not reject our null hypothesis $H_{1\,(5.1)}$ (excluding Extraversion and Agreeableness). In Extraversion & Agreeableness subgroups, the correlation is inversely proportional to other behaviors (i.e: if Extraversion and Agreeableness is increases or decreases then the internalizing behavior is also decreases/increases). Thus, we conclude there is a relationship between Extraversion, Agreeableness in other behaviors.

For other behaviors, the correlation coefficient of the independent subgroups in Parenting style are -0.003, 0.030, 0.235^*, 0.107 and its significant p-values are 0.976, 0.765, 0.019, 0.287 respectively. By noticing the above values, we can infer that apart from Permissive variable subgroup, all the other p-values are greater than the level of significance 0.05. So, we do not reject our null hypothesis $H_{1(6.1)}$. In Permissive, the correlation is inversely proportional to other behaviors (i.e: if permissive is increases or decreases then its other behaviors are also decreases/increases). Thus, we conclude there is a relationship between Permissive in other behaviors.

Correlation between the demographical variables, Personality traits and parenting styles:

Null Hypothesis $H_{0(3)}$: There will be no relationship between the demographical variables and parenting styles.

Alternative Hypothesis $H_{1(3)}$: There will be a significant relationship between the demographical variables and parenting styles.

From the table: 4.3 implies that the correlation coefficient value of personality (subgroups) and parenting styles (subgroups) on Behavioral outcomes of children

Table.4.4 shows the correlation between parenting style of the parent and demographical variables

		Child Gender	Child Age	Parent Gender	Parent Age	SES
Authoritarian	Correlation	.170	.003	.130	.061	.095
	Sig. (2-tailed)	.091	.980	.199	.550	.345
Authoritative	Correlation	-.098	-.097	.000	-.075	.095
	Sig. (2-tailed)	.331	.005	.108	.183	.069
Permissive	Correlation	-.004	.959	.285	.068	.496
	Sig. (2-tailed)	.965	.194	.510	.121	.000
Uninvolved	Correlation	.102	-.043	.092	-.102	.147
	Sig. (2-tailed)	.314	.668	.360	.311	.143

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

For Authoritarian, the correlation between all the demographical variables is 0.170, 0.003, 0.130, 0.061, 0.095 and its respective p-values are 0.091, 0.980, 0.199, 0.550 and 0.345. From the p-values of all these variables we can suggest that the values is greater than the level of significance 0.05. So, we do not reject our null hypothesis H_{03} in Authoritarian.

For Authoritative, the correlation between all the demographical variables is -0.098, -0.097, 0.000, -0.075, 0.095 and its respective p-values are 0.331, 0.338, 0.995, 0.461 and 0.345. From the above p-values except child age of all these variables is greater than the level of significance 0.05. So, we do not reject our null hypothesis H_{03} in Authoritative (excluding child Age).

In child Age, the correlation is inversely proportional to Authoritative (i.e. if the Child age is increases/ decreases and the Authoritative values is also decreases/increases). So, there is only a relationship between Authoritative and the child age.

For Permissive, the correlation between all the demographical variables is -0.004, -0.005, 0.108, 0.183, 0.069 and its respective p-values are 0.965, 0.959, 0.285, 0.068 and 0.496. From the above p-values except SES of all these variables is greater than the level of significance 0.05. So, we do not reject our null hypothesis H_{03} in Permissive (excluding SES). In SES, the correlation is inversely proportional to Permissive (i.e: If the SES is increases/ decreases and the Permissive values is also decreases/increases). So, there is only a relationship between Permissive and the SES.

For Uninvolved, the correlation between all the demographical variables is 0.102, 0.043, 0.092, -0.102, 0.147 and its respective p-values are 0.314, 0.668, 0.360, 0.311 and 0.143. From the p-values of all these variables we can suggest that the values are greater than the level of significance 0.05. So, we do not reject our null hypothesis H_{03} in Uninvolved.

Thus, we conclude that there is a relationship between Child age and SES on Authoritative and Permissive.

Correlation between demographical variables and the behavioural outcome of the child:

Null Hypothesis H$_{0\,(4)}$: There will be no relationship between the demographical variables on children's behavioural outcomes.

Alternative Hypothesis H$_{1\,(4)}$: There will be a relationship between the demographical variables on children's behavioural outcomes

Table 4.5 shows correlation between demographical variables and behavioural outcomes of children with Autism Spectrum Disorder

		Internalizing Behaviour	Externalizing Behaviour	Other Behaviours
Child Gender	Correlation	-.224*	.084	-.064
	Sig. (2-tailed)	.025	.406	.524
Child Age	Correlation	.332**	.124	.356**
	Sig. (2-tailed)	.001	.218	.000
Parent Gender	Correlation	-.335**	.064	-.002
	Sig. (2-tailed)	.001	.529	.986
Parent Age	Correlation	.029	.137	.228*
	Sig. (2-tailed)	.778	.173	.022
SES	Correlation	.051	-.024	-.077
	Sig. (2-tailed)	.616	.811	.449

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

From the table: 4.5 implies that the correlation coefficient value of and Behavioral outcomes (subgroups) on Demographical variables.

For Internalizing Behaviour, the correlation values between all the demographical variables are -0.224*, 0.332**, -0.335**, 0.029, 0.051 and its respective p-values are 0.025, 0.001, 0.001, 0.778, 0.616. From the above p-values except parent age and SES of all these variables is greater than the level of significance 0.05. So, we do not reject our null hypothesis H$_{0(4)}$ in Internalizing behavior in parent age and SES.

In child Age, the correlation is directly proportional to Internalizing behavior (i.e: If the Child age is increases/ decreases and the Internalizing values is also decreases/increases). So, there is only a relationship between Internalizing behavior and the child age. In Child gender and parent gender the correlation is inversely proportional to Internalizing behavior (i.e: If the parent gender and child gender is increases/ decreases and the Internalizing behavior values is also increases/decreases). Thus, we conclude that there is a relationship between child age, child gender and parent gender to internalizing behavior.

For Externalizing Behaviour, the correlation values between all the demographical variables are 0.084, 0.124, 0.064, 0.137, -0.024 and its respective p-values are 0.406, 0.218, 0.529, 0.173, and 0.811. From the above p-values we can inferred that all the variables are greater than the level of significance 0.03. So, we do not reject our null hypothesis $H_{0(4)}$. Thus, we conclude that there is no relationship between demographic variables and externalizing behaviour.

For Other Behaviours, the correlation values between all the demographical variables are -0.064, 0.356[**], -0.002, 0.228[*], -0.077 and its respective p-values are 0.524, 0.000, 0.986, 0.022, 0.449. From the above p-values except child age and parent age of all the other variable subgroups is greater than the level of significance 0.05. So, we do not reject our null hypothesis H_{04} in other behaviors (excluding child age and parent age).

In child Age and parent age, the correlation is directly proportional to the other behaviors (i.e.: If the Child age is increases/ decreases and the other behaviors value is also increases/decreases). Thus, we conclude that there is a relationship between child age and parent age to other behaviors.

INDEPENDENT SAMPLE T – TEST:

The independent-samples t-test (or independent t-test, for short) compares the means between two unrelated groups on the same continuous, dependent variable. For example, you could use an independent t-test to understand whether first year graduate salaries differed based on gender (i.e., your dependent variable would be "first year graduate salaries" and your independent variable would be "gender", which has two groups: "male" and "female"). Alternately, you could use an independent t-test to understand whether there is a difference in test anxiety based on educational level (i.e., your dependent variable would be "test anxiety" and your independent variable would be "educational level", which has two groups: "undergraduates" and "postgraduates").

Independent Sample t-test for Behavioural outcomes with child & parent gender

Null Hypothesis H$_{0\,(5)}$: There will be no significant difference between child gender and parent gender on the behavioural outcomes of children.

Alternate Hypothesis H$_{1\,(5)}$: There will be a significant difference between child gender and parent gender on the behavioural outcomes of children.

Table 4.6 shows the independent sample t- test of demographical variable and behavioural outcome of children with Autism Spectrum Disorder

	Child Gender			Parent Gender		
	t	df	Sig. (2-tailed)	t	df	Sig. (2-tailed)
Internalizing Behaviour	2.280	98	.025	3.517	98	0.001
Externalizing Behaviour	-.835	98	.406	-.632	98	0.529
Other Behaviours	.639	98	.524	0.17	98	0.986

The Table: 4.6 implies that the independent sample t – test for child gender and parent gender on the behavioural outcomes. From the above table we can see that the for internalizing behaviour, the estimated p – value of child gender and parent gender is 0.025 and 0.001 which is less than the level of significance (α) 0.05. So, we do reject our null hypothesis $H_{0(5)}$. For externalizing and other behaviours all the values of the parent gender and child gender is greater than the level of significance (α) 0.05. So, we do not reject our null hypothesis $H_{0(5)}$.

Thus, we conclude that there is a significant difference between child gender and parent gender in Internalizing behaviour.

ANALYSIS OF VARIANCE (ANOVA):

One-Way ANOVA ("analysis of variance") compares the means of two or more independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. One-Way ANOVA is a parametric test.

One-Way ANOVA for Parenting styles and Behavioural outcomes:

Null Hypothesis $H_{0\ (6)}$: There will be no significant difference among the parenting styles and behavioural outcomes. i,e: $\mu_1 = \mu_2$.

Alternate Hypothesis $H_{1\ (6)}$: There will be a significant difference among parenting styles and behavioural outcomes. i.e. $\mu_1 \neq \mu_2$

Table 4.7 shows the ANOVA test results for personality traits and parenting style of the

parents of children with Autism Spectrum Disorder

Variable	O		C		E		A		N	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Internalizing Behaviour	45.02	0.00	44.60	0.00	3.002	0.00	94.32	0.00	142.4	0.000
Externalizing Behaviour	11.77	0.00	4.38	0.00	15.46	0.00	9.22	0.00	4.17	0.000
Other Behaviours	16.46	0.00	14.25	0.00	7.82	0.00	20.31	0.00	20.54	0.000

From the table: 4.7 implies that the estimated F-values of the variable's subgroups are

45.02, 11.77, 16.46, 44.60, 4.38, 14.25, 3.002, 15.46, 7.82, 94.32, 9.22, 20.31, 142.4, 4.17

and 20.54 and all the p – values is less than the level of significance 0.05. So, we do reject

our null hypothesis $H_{0(6)}$. Thus, we conclude that there is a significant difference among

the mean of the variables in the behavioural outcomes with Personality.

4.3 STRUCTUTAL EQUATION MODELLING (SEM):

Structural equation modelling is a statistical technique for testing and estimating causal

relations using a combination of statistical data and qualitative causal assumptions.

Structural Equation Modelling has two main goals:

(i)   To understand the patterns of correlation/covariance among a set of variables and

(ii) Explaining as much of their variance as possible with the model specified.

Definition:

Structural equation modelling may also be defined as a multivariate statistical analysis

technique that is used for analysing structural relationships. This technique may better be

explained as a combination of factor analysis and multiple regression analysis.

Structural Equation Modelling is used to analyse the structural relationship between

measured variables and latent constructs. Largely preferred by the researchers Structural

Equation Modelling estimates the multiple and interrelated dependence in a single analysis. To explain in simpler words, two types of variables are used: endogenous variables and exogenous variables. Endogenous variables are equivalent to dependent variables and are equal to the independent variable.

Structural equation models are inclusive of both confirmatory and exploratory modelling. Confirmatory modelling usually starts out with a hypothesis that gets represented in a causal model. The concepts used in the model must then be operationalized to allow testing of the relationships between the concepts in the model.

Structural Equation Model Types

Structural Modelling falls into four broad categories. These structural equation models are

- Path Analysis

- Latent Variable Structural Model

- Growth Curve Model

- Latent Growth Model.

Assumptions:

Hypothesis testing procedures, confidence intervals and claims for efficiency in maximum likelihood or generalized least squares estimation by Amos depend on certain statistical distribution assumptions. First, observations must be independent. For instance, the forty young people in the Attig study have to be picked independently from the population of young people. Second, the exogenous variables must meet certain distributional requirements. For instance, if the exogenous variables have a multivariate normal distribution, that will suffice. Otherwise, there is one other, general situation under which maximum likelihood estimation can be applied. If some exogenous variables are random

while others are fixed, i.e., they are either known beforehand or measured without error, then the fixed variables may have an arbitrary joint distribution, provided that

1. For any value pattern of the fixed variables, the remaining (random) variables have a (conditional) normal distribution.

2. The (conditional) variance-covariance matrix of the random variables is the same for every pattern of fixed variables.

3. The (conditional) expected values of the random variables depend linearly on the values of the fixed variables.

SEM analysis of Personality and the parenting style on behavioural outcomes:

Null hypothesis $H_{0\ (7)}$: There will be no significant impact of personality (O, C, E, A, N) on behavioural outcomes.

Alternate hypothesis $H_{1\ (7)}$: There will be a significant impact of personality (O, C, E, A, N) on behavioural outcomes.

Null hypothesis $H_{0\ (8)}$: There will be no significant impact of parenting styles on behavioural outcomes.

Alternate hypothesis $H_{1\ (8)}$: There will be a significant impact of parenting styles on behavioural outcomes.

Table 4.8 shows the SEM analysis of personality and parenting style of parents of children with autism spectrum disorder

Maximum Likelihood Estimates Regression Weights: (Group number 1 - Default model)			Estimate	S.E.	C.R.	P
INT	<---	Openness	-.268	.072	-3.740	***
EXT	<---	Openness	.274	.072	3.830	***
OTH	<---	Openness	.219	.111	1.975	.048
INT	<---	Conscientious	.481	.090	5.355	***
EXT	<---	Conscientious	.568	.090	6.330	***
OTH	<---	Conscientious	-.031	.139	-.221	.825
INT	<---	Extraversion	-.489	.052	-9.371	***
EXT	<---	Extraversion	-.131	.052	-2.521	.012
OTH	<---	Extraversion	-.183	.081	-2.277	.023
INT	<---	Agreeableness	.162	.081	1.996	.046
EXT	<---	Agreeableness	-.639	.081	-7.910	***
OTH	<---	Agreeableness	-.346	.125	-2.771	.006
INT	<---	Neuroticism	-.304	.070	-4.349	***
EXT	<---	Neuroticism	.438	.070	6.273	***
OTH	<---	Neuroticism	-.006	.108	-.057	.955
INT	<---	Authoritarian	-.241	.053	-4.542	***
EXT	<---	Authoritarian	.098	.053	1.848	.065
OTH	<---	Authoritarian	-.098	.082	-1.192	.233
INT	<---	Authoritative	-.062	.071	-.878	.380
EXT	<---	Authoritative	.113	.071	1.599	.110
OTH	<---	Authoritative	.129	.109	1.182	.237
INT	<---	Permissive	.145	.076	1.904	.057
EXT	<---	Permissive	.247	.076	3.248	.001
OTH	<---	Permissive	.396	.117	3.373	***
INT	<---	Uninvolved	.024	.061	.390	.697
EXT	<---	Uninvolved	-.022	.061	-.366	.715
OTH	<---	Uninvolved	.039	.095	.416	.677
*** denotes the significance level is very less than the level of significance 0.05						

The Table: 4.9 implies that the Structural eruptional modelling of Personality, parenting styles on each behavioural outcome. From the above table gives the picture that for Internalizing behaviour in personality the estimated p – value of Agreeableness is less than the level of significance 0.05. So, we do reject our null hypothesis $H_{0\,(7)}$. Also, in parenting styles, the p – value of permissive is less than the level of significance 0.05. So, we do reject our null hypothesis $H_{0(7)}$.

Thus, we conclude that Agreeableness in personality and permissive in parenting style has a significant impact on the Internalizing behaviour.

From the above table understands that for Externalizing behaviour in personality the estimated p – value of Extraversion is less than the level of significance 0.05. So, we do reject our null hypothesis $H_{0\,(8)}$.

Also, in parenting styles, the p – value of permissive is less than the level of significance 0.05. So, we do reject our null hypothesis $H_{0\,(8)}$.

Thus, we conclude that Extraversion in personality and permissive in parenting style has a significant impact on the Internalizing behaviour.

From the above table tells us that for other behaviours in personality the estimated p – value of Extraversion and Agreeableness is less than the level of significance 0.05. So, we do reject our null hypothesis $H_{0\,(8)}$. Thus, we conclude that Extraversion and Agreeableness has a significant impact on the other behaviours.

The above interpretation is representing briefly in a graphical form for standardised and unstandardized estimates in the below diagrams:

Figure: 1 Unstandardized estimates

Figure: 2 Standardised Estimates

SEM Analysis for parenting style groups within the dimensions:

Table 4.9 shows the SEM analysis of Parenting style and its dimensions of parents of children with autism spectrum disorder

Maximum Likelihood Estimates						
Regression Weights: (Group number 1 - Default model)			**Estimate**	**S.E.**	**C.R.**	**P**
Parenting styles	<---	Authoritarian	-.088	.012	-7.484	***
Parenting styles	<---	Authoritative	.019	.015	.206	.048
Parenting styles	<---	Permissive	.074	.014	5.117	***
Parenting styles	<---	Uninvolved	.084	.013	6.324	***

The above interpretation is representing briefly in a graphical form for standardised and unstandardized estimates in the below diagrams:
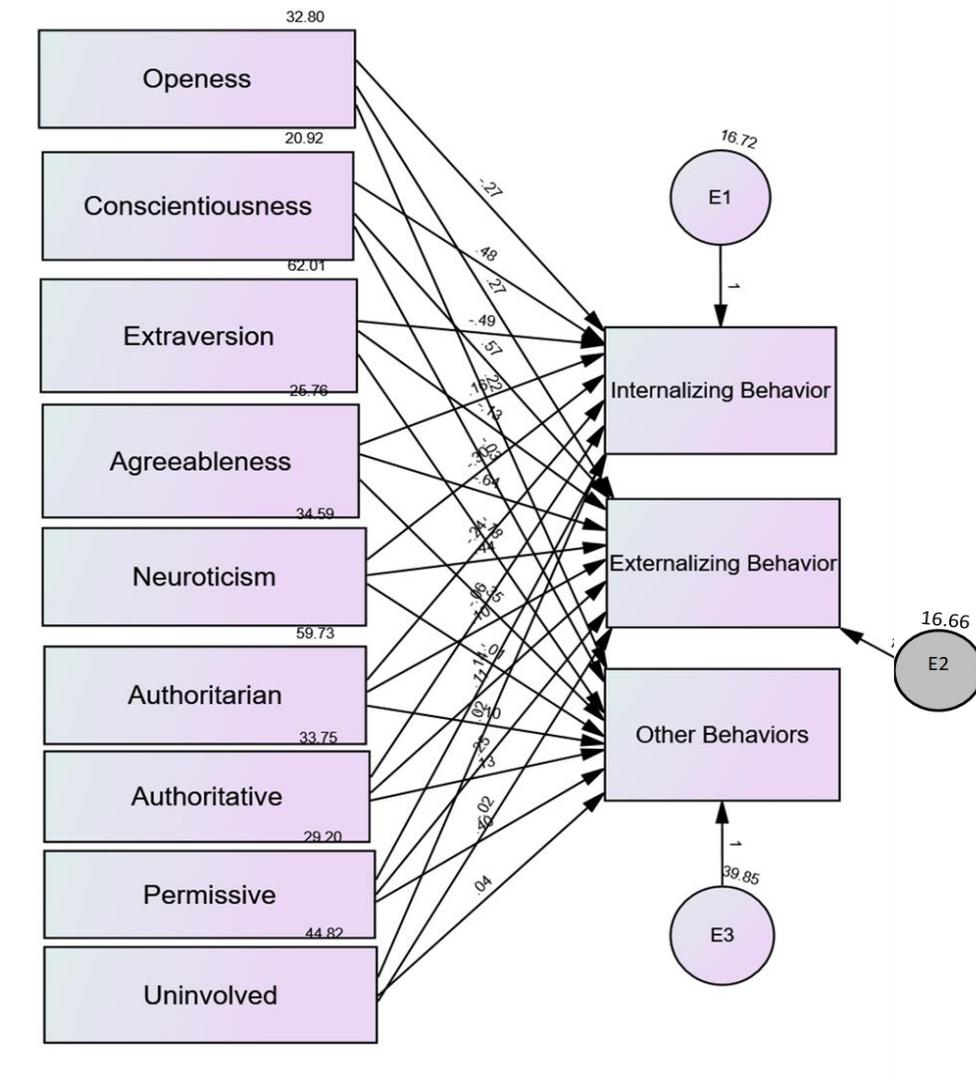

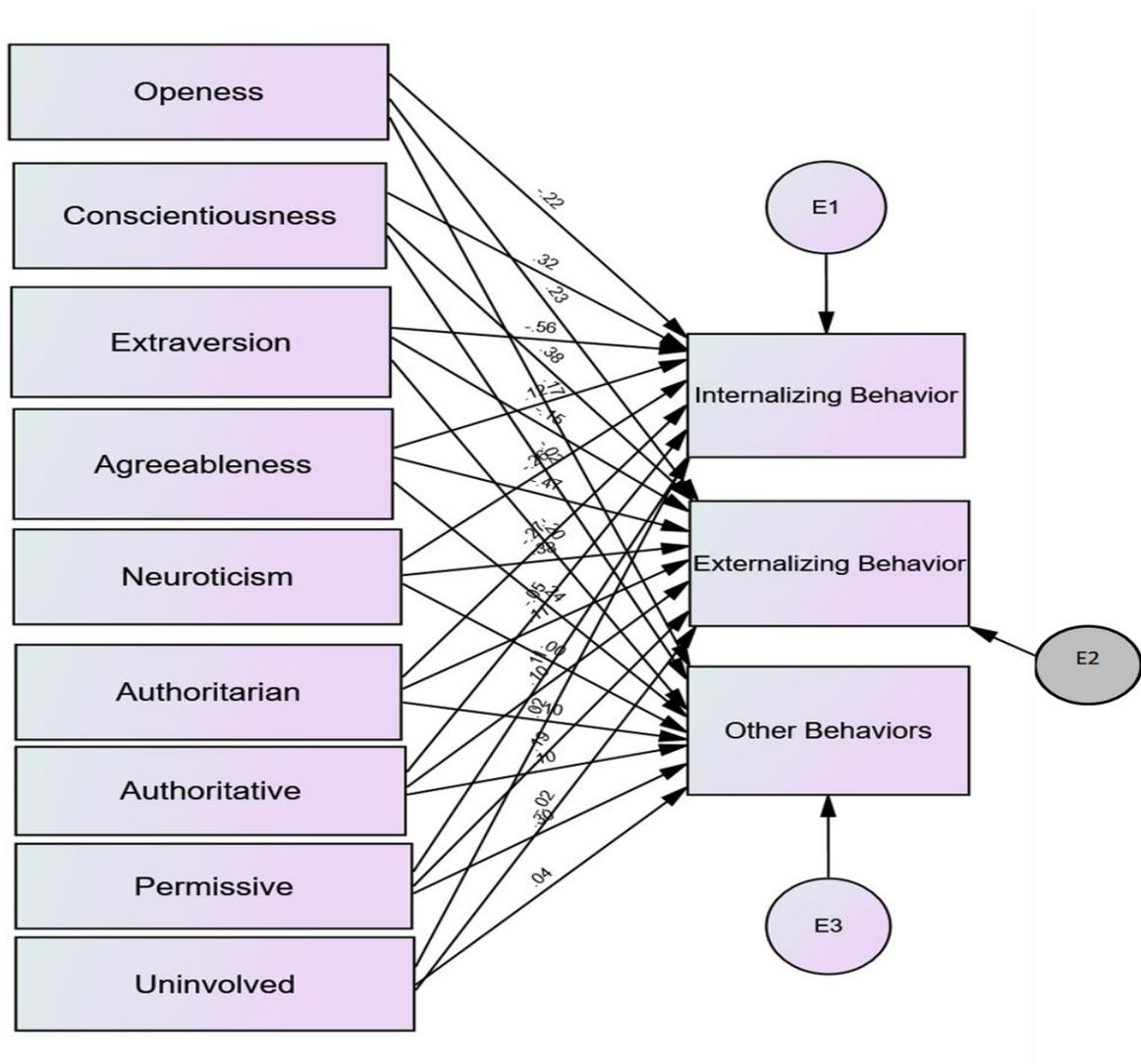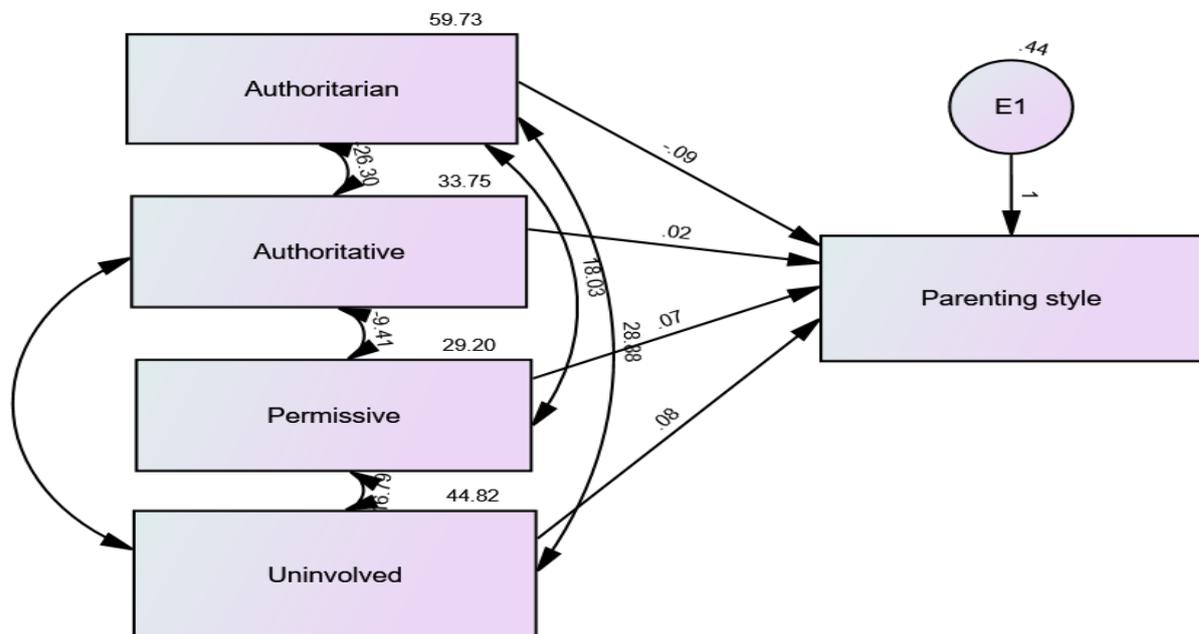**Figure: 3 unstandardized estimates**
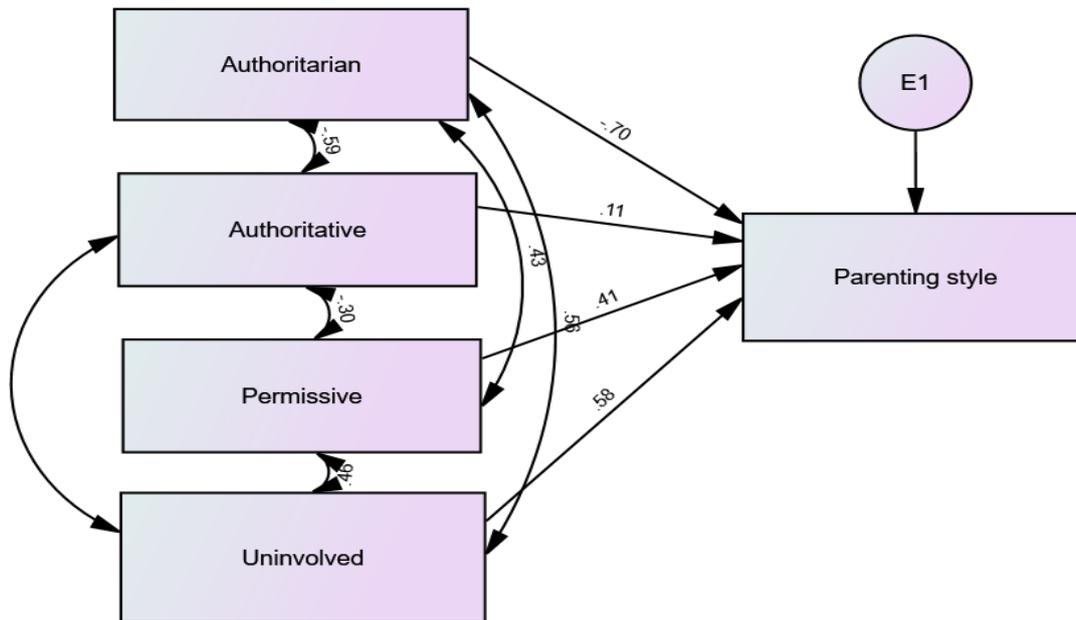
Figure: 4 Standardised estimates

From the table: 4.9 the p – value of Authoritative 0.048 is less than the level of significance 0.05. Thus, we conclude that the Authoritative subgroups has the significant impact among the parenting styles.

Discussion

The main aim of the study was to understand the impact of personality and parenting style of parents of children with Autism Spectrum Disorder and its outcome on their behavioural problem. This section presents the discussion based on study findings and existing literature. The discussion with regards to the results is as follows.

The primary objective of this study is to explore the relationship between the personality traits and parenting styles of parents who have children with Autism Spectrum Disorder (ASD). Through an analysis of the variables encompassing the Big Five Personality (BFI) traits and parenting styles within this specific group (parents of children with ASD exhibiting behavioral problems), the research has unveiled significant connections.

Particularly, there is a notable correlation between parenting style and the conscientiousness and extraversion personality traits of parents.

These findings suggest that parents of children with ASD, despite the challenges presented by their children's condition, exhibit commitment, foresight regarding their child's future, assertiveness, and emotional expressiveness. These qualities contribute positively to the development and functioning of the child. This aligns with the results of a study by Erica et al. in 2014, which identified a strong correlation between extraversion and conscientiousness personality traits and parenting style. Parents with these traits tend to expect their children to take on more responsibilities and encourage organized behavior in various aspects of life. Additionally, research by John & Srivastava in 1999, as well as Belsky & Barends in 2002, supports these findings. They both highlight a longitudinal relationship between personality traits and parenting styles, particularly emphasizing the role of extraversion and conscientiousness in promoting authoritative parenting characterized by high levels of support and control.

Similarly, a study by Losoya et al. (1997) found that the conscientiousness personality trait in parents was associated with increased levels of supportive parenting and reduced negative control. Conscientious mothers of infants were also observed to be more responsive to their child's behavior, as indicated by research conducted by Clark, Kochanska, & Ready in 2000

The study's findings have revealed a noteworthy relationship between parents' personality traits, specifically openness and agreeableness, and the parenting style known as "uninvolved." This correlation is negative, meaning that as openness and agreeableness in parents increase, the likelihood of adopting an uninvolved parenting style decreases, and vice versa. These findings suggest that, despite the social communication and interpersonal

challenges faced by children with Autism Spectrum Disorder, parents who exhibit traits such as openness to new situations, a willingness to teach their children to interact with others, self-awareness, and an ability to adapt their parenting style to suit their child's needs are more likely to engage in more effective and positive parenting. Additionally, parents who accept their children's limitations are also more likely to be involved in their parenting in a constructive manner. This finding aligns with a prior study by Prinzie et al. in 2004, which found that higher levels of parental openness and agreeableness were associated with reduced compulsion and fewer expectations regarding children's behavior. These personality traits were found to be effective in promoting lasting positive behavior in children. It's worth noting that, in this current study, all other personality traits, except for openness and agreeableness, either exhibited weak correlations or no correlations with the parenting style under investigation. This underscores the unique significance of openness and agreeableness in influencing parenting behaviours, particularly in the context of raising children with Autism Spectrum Disorder.

The results of this study indicate a significant negative correlation between the parent's extraversion trait and the occurrence of internalizing behavior in their children. In simpler terms, when a parent exhibits more extraverted characteristics, the likelihood of their child displaying internalizing behaviours decreases, and vice versa. This finding suggests that when parents are extraverted, their emotions and connections are more apparent and expressive, which can foster a stronger bond between them and their children. As a result, children may feel more comfortable expressing themselves to their parents without hesitation. This improved communication and emotional connection may be a crucial factor in reducing internalizing behaviors in children. These findings align with prior research conducted by Belsky & Barends in 2002. Their study reported that extraverted parents tend to be more supportive, and individuals with extraverted personalities are less likely to adopt authoritarian

parenting styles. Extraverted individuals are often found to raise their children in a more positive and supportive manner.

The study's findings also highlight an inverse relationship between the personality traits of extraversion and agreeableness and the occurrence of externalizing behavior in children. In simpler terms, when a parent's extraversion and agreeableness increase or decrease, the likelihood of externalizing behavior in their children also decreases or increases accordingly. Parents who exhibit extraversion and agreeableness share common characteristics such as assertiveness, outgoingness, and talkativeness. These traits contribute to a positive attitude among parents when addressing behavioural problems in their children. Parents with these personality characteristics tend to connect well with their children and have a better understanding of their difficulties compared to individuals with other personality traits. These findings align with prior research conducted by Belsky & Barends in 2002. In their study, they reported that aspects of a parent's personality related to interpersonal interaction, specifically extraversion and agreeableness, were associated with supportive parenting. Additionally, emotional stability was linked to the exertion of strict control. They explained that extraverted, agreeable, and emotionally stable individuals were more likely to adopt authoritative parenting styles, which are characterized by positivity and support in raising children.

The study has also revealed a direct relationship between the personality trait of neuroticism in parents and the occurrence of externalizing behavior in their children. In simpler terms, when the neuroticism traits in a parent increases or decreases, externalizing behavior in their children also increases or decreases, Neuroticism is characterized by tendencies such as anxiety, self-doubt, depression, and other negative emotions. These traits may have an adverse impact on child rearing and children's behaviours. Parents with higher levels of neuroticism might be more prone to experiencing subjective distress and overall

dissatisfaction, potentially venting their negative emotions onto their children through increased strict control or other negative parenting behaviours. Additionally, feelings of inadequacy often accompany neurotic tendencies, which can further complicate parenting dynamics. These findings are consistent with prior research conducted by Costa & McCrae in 1992. Their study revealed that emotionally unstable individuals are more likely to experience subjective distress and dissatisfaction. These parents may express their negative emotions in their parenting practices, potentially exerting stricter control over their children. Feelings of inadequacy among emotionally unstable individuals can also contribute to these dynamics.

The study has identified a negative correlation between the authoritarian parenting style and the occurrence of internalizing behavior in children. In simpler terms, as the authoritarian parenting style becomes more pronounced, there is a decrease in internalizing behavior in children, and vice versa. These findings are in line with a prior research study conducted by Querido J. G. in 2002. Querido study also emphasized the effectiveness of the authoritative parenting style in predicting positive child outcomes. This suggests that strict and authoritarian parenting, while generally not encouraged as an effective parenting style, has shown a reduction in internalizing behavior in children with Autism Spectrum Disorder and behavioural problems in the current study.

In the subgroups of Authoritarian, Permissive, and Uninvolved parenting styles, all correlations have been found to be directly proportional to externalizing behavior. This means that as these mentioned variables, such as the strict and demanding nature of authoritarian parenting, the permissiveness of permissive parenting, and the lack of emotional responsiveness in uninvolved parenting, increase or decrease, the likelihood of externalizing behavior in children also increases or decreases accordingly.

- Authoritarian parenting is characterized by low parental responsiveness and high parental demandingness. Parents in this style are not very emotional or affectionate and tend to be critical of their children if they fail to meet their expectations.

- Permissive parenting involves very few demands on the child, and parents struggle to assert authority or say "no." They also avoid using punishment.

- Uninvolved parenting is marked by low emotional responsiveness, a lack of supervision, and minimal support for the child's needs. It is often considered the most detrimental parenting style and has a significant negative impact on child development (Mahapatra, 2016).

Similar findings were also reported in another study conducted by Braza in 2013. In that study, it was revealed that the combination of authoritarian mothers and permissive fathers increased both physical and indirect aggression in both girls and boys. Overall, these findings are consistent with the existing body of research, which has consistently shown that negative parenting styles have adverse effects on the development of internalizing and externalizing problem behaviours in children. The findings of the study have established a negative correlation between permissive parenting and problem behaviours. In simpler terms, as permissiveness in parenting either increases or decreases, the occurrence of problem behaviours in children also decreases or increases accordingly. Permissive parenting is characterized by warmth and nurturing but a reluctance to impose limits or set boundaries for children. Parents adopting this style tend to be undemanding and allow their children to have few responsibilities. Children in permissive households often have considerable freedom to behave without strict regulation and make their own choices. As a result, these children may become impulsive, prone to aggression, and lack independence and personal responsibility due to the absence of clear boundaries. The lack of appropriate parental guidance regarding

boundaries can contribute to the development of externalizing behavior problems in these children. These findings are consistent with prior research that highlights the impact of permissive parenting on children's behavior. One study mentioned in the current research suggests that a combination of permissive maternal and paternal parenting styles can contribute to the development of physically aggressive behavior in children. Children raised by permissive parents may struggle to develop the ability to control their negative emotions because their behavior is not adequately monitored. Consequently, they may have difficulty controlling aggressive impulses, leading to higher levels of aggressive behavior when they experience anger (Rubin et al., 1995).

Permissive parenting style has a significant impact on internalizing behavior. When examining the influence of specific parenting styles on internalizing behavior, permissive parenting emerges as a key factor. When children lack boundaries in their behavior towards others, face minimal or no demands on their behavior, and encounter parents who struggle to say no to unwanted behaviours, it can have negative consequences on their development, particularly in terms of internalizing behavior problems. Negative parenting practices, including permissiveness, can lead to the development of behavioural problems, and in this study, the focus is on internalizing behavior problems. This finding is consistent with previous research conducted by Baumrind (1969; 1978; 1991), which revealed that permissive parents are characterized by a lack of demandingness. Permissive parents are generally averse to control and authority over their children. They do not guide their children in regulating their behavior and allow them to make decisions independently. Consequently, their children may exhibit passive and unresponsive characteristics in their interactions with others. They may become dependent, lack social responsibility, and exhibit lower cognitive development. Therefore, it is presumed that the permissive parenting style is positively associated with children's behavioural problems, whether they manifest as internalizing or

externalizing behaviours. The absence of boundaries and parental guidance in permissive parenting can contribute to the development of these internalizing behavior issues, aligning with previous research in the field.

The personality traits of extraversion and agreeableness in parents play a crucial role in their ability to understand and effectively handle children with autism and behavioural issues. Parents who possess these traits are better equipped to comprehend their child's needs and accept that their limitations can contribute to their emotions and behaviours. Such understanding parents are more effective in their parenting approach, as supported by the findings of this study. These findings align with previous research that has highlighted the importance of certain personality traits in parenting. Specifically, two aspects of a parent's personality—extraversion and agreeableness—have been linked to higher levels of supportiveness in parenting. In contrast, emotional stability tends to be associated with stricter control. Parents who are extraverted, agreeable, and less emotionally stable are more likely to adopt an authoritative parenting style, which is characterized by a balance of support and control (Huver, 2010).

In comparison to other parenting styles observed in parents of children with Autism Spectrum Disorder, authoritative parenting stands out as having a significantly positive impact on children. This finding is consistent with earlier studies that have emphasized the benefits of authoritative parenting on adolescent behavior and development. Adolescents raised in an authoritative parenting environment tend to exhibit healthier behaviors, such as consuming more fruits, smoking less, consuming less alcohol, and having a reduced likelihood of using marijuana (Jackson et al., 1998; Kremers et al., 2003; Radziszewska et al., 1996). Authoritative parenting has consistently shown to have positive effects on adolescent lifestyles and development (Jackson et al., 1998).

CHAPTER V

SUMMARY AND CONCLUSION

The previous chapter presented the results of the study and discussed the same. This present chapter summarizes the study and presents the conclusions drawn from it. It also includes the limitations, implications of the study and suggestion for future research

5.1 Summary

The current study titled, "Impact of personality and parenting style on behavioural outcomes of children with Autism spectrum Disorder" is an attempt to look into how the personality traits and the parenting styles of the parents could possibly influence the behavioural problems of children with Autism Spectrum Disorder. The objectives of the study are as follows

1. To understand and explore the relationship between parent's personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness) and parenting styles (Authoritarian, Authoritative, Permissive and uninvolved)

2. To find out the impact of personality traits of parents on behavioural problems of children with autism spectrum disorder

3. To find out the impact of parenting style of parents on behavioural problems of children with autism spectrum disorder

4. To explore the effective parenting style of parents in reducing behavioural outcomes of children with autism spectrum disorder

5. To find out the relationship between the demographical variables on parenting styles and behavioural outcomes

The hypothesis of the study included

1) *H₁*. there will be a significant relationship between personality and parenting style of the parents of children with Autism Spectrum Disorder

2) *H₁* - There will be a significant relationship between personality and parenting style of the parents on Behavioural Problems of children with autism spectrum disorder

3) *H₁* – There will be a significant relationship between the demographical variables and parenting styles

4) *H₁* – There will be a significant relationship between the demographical variables and behavioural outcomes of children with autism spectrum disorder.

5) *H₁* – There will be a significant difference among the in parenting styles of the parents and behavioural outcomes of Children with Autism Spectrum Disorder

6) *H₁* – There will be a significant impact of personality (O, C, E, A, N) on behavioural outcomes

7) *H₁* – There will be a significant impact of parenting styles on behavioural outcomes

8) *H₁* - There will be an effective Parenting style when compared with other style on its subgroups (Authoritarian, Authoritative, Permissive and Uninvolved).

An exploratory and correlation research design was used in the study. It involved a quantitative approach. The data was collected using questionnaire for the study variables; the tools used included consent form, socio-demographical profile, Big Five Inventory (BFI), Parenting Style Four Factor Questionnaire (PSFFQ) and Child Behaviour Check List (CBCL).

The sample for the study was selected from target population within National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD), Department of clinical psychology, Tamil Nadu. The method of sampling used for the study was Non- probability

sampling - Purposive sampling and included a total of 100 individuals who are the parents of children diagnosed with autism spectrum disorder with behavioural problems.

The data obtained was subjected to descriptive statistics of frequency, percentage, mean and standard deviation. Pearson correlation, Independent sample T- test, ANOVA and Structural equation modelling (SEM) analysis was done using software statistical package for social science version 20.0 (SPSS 20.0) and IBM SPSS AMOS version 28. The test findings revealed that:

- There is a significant relationship between Conscientiousness and Extraversion the personality trait and parenting style of parents.

- There is a significant relationship between Openness and Agreeableness personality trait and uninvolved parenting style of the parents

- There is a significant relationship between Extraversion personality trait of parents and internalizing behaviour of children with Autism Spectrum Disorder

- There is a significant relationship between Authoritarian parenting style of the parents and internalizing behaviour of the children with Autism Spectrum Disorder.

- There is a significant relationship between Extraversion, Agreeableness and Neuroticism personality traits of parents and externalizing behavior of children with Autism Spectrum Disorder.

- There is a significant relationship between Authoritarian, Permissive and Uninvolved parenting style of the parent and externalizing behavior of children with Autism Spectrum Disorder.

- There is a significant relationship between Extraversion, Agreeableness of personality traits of parents and other problem behaviors of children with Autism Spectrum Disorder.

- There is a significant relationship between Permissive parenting style of the parent and other problem behaviors of children with Autism Spectrum Disorder.

- There is a significant relationship between child age, child gender and parent gender of the demographical variables and internalizing behavior of children with Autism Spectrum Disorder.

- There is a significant relationship between child age, parent age and other problem behaviors of children with Autism Spectrum Disorder

- There is a significant difference between child gender and parent gender in Internalizing behaviour of children with Autism Spectrum Disorder.

- There is a significant impact of Agreeableness personality trait and permissive parenting style of the parents on the Internalizing behaviour of children with Autism Spectrum Disorder.

- There is a significant impact of Extraversion personality trait and permissive parenting style of the parents on Internalizing behaviour of children with Autism Spectrum Disorder.

- There is a significant impact of Extraversion and Agreeableness personality traits of parents on the other problem behaviours of children with Autism Spectrum Disorder.

- There is an effective parenting style (Authoritative) when compared to the other parenting style.

5.2 Conclusion

The objective of this study was to investigate the personality traits and parenting styles of parents and their potential influence on the behavioural problems and outcomes observed in children with Autism Spectrum Disorder (ASD). The research results indicate that there exists a noteworthy relationship in specific dimensions between the parents' personality traits

(Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism), their chosen parenting styles (Authoritarian, Authoritative, Permissive, and Uninvolved), and the occurrence of problem behaviours in children, including Internalizing, Externalizing, and other problem behaviours.

5.3 Implication of the study

- This study underscores the need for empirical research to further investigate the relationships between parents' personality traits, their parenting styles, and the behavioural problems exhibited by children with Autism Spectrum Disorder. Such research can provide valuable insights into this specific population, offering a more comprehensive understanding of how parental characteristics influence child behavior. Ultimately, this empirical research can contribute to better support and interventions for children with ASD and their families..

- Since, the parents of the study are often part of the therapy delivery, it is important that the professionals provide an adequate guidance to the parents, based on their need.

- Provision of intervention modules to the parents paves way to manage and cope with their maladaptive behaviours of the children with Autism Spectrum Disorder.

- Suggesting appropriate parenting styles and helping caregivers to manage their children could be beneficial for caregivers of children with Autism.

- These findings are of benefit to researchers who seek to study this variables and its effects using a variety of methodological approaches.

- Finally, this present study is a novel research on the personality traits, parenting style of the parents and behavioural outcomes of children with Autism Spectrum Disorder in the context of Indian population. This adds to the literature and closes the research

gap, bridging relationship between the same, as well as countering the low number of published Indian literature exploring these variables together.

5.4 Limitations of the study

Despite the mentioned findings and careful planning of the methodology with which the research was carried out, there are few limitations in the study that could be addressed in future studies.

- The study was limited to a niche population of those availing services in NIEPMD, Chennai.

- Absence of a control group with healthy population could be used to explore the difference in the variable further with clinical population and typical population.

- The study did not include the severity and cognitive levels of Autism Spectrum Disorder, which might differentiate the result of parenting styles

- The relations between self-reports and observations on parenting have generally been found to be rather modest and, therefore, the self-report on parenting could be described as parental preference measures rather than measures of actual parental behaviour. They might have over- reported or under- reported their good and bad parenting styles. Subjective bias could have been possible.

- The limited sample size could not discriminate between all dimensions of personality traits (O, C, E, A, N), parenting style (Authoritarian, Authoritative, Permissive, Uninvolved) and problem behaviours (Internalizing, Externalizing, Other problem behaviour).

- Owing to the relatively small sample size, the study may have suffered from the problem of limited statistical power. This might have resulted in an inability to detect

subtle links between personality traits and parenting style. Therefore, larger samples

sizes should preferably be used in future studies.

- The field of the study is limited to a very small sample size; hence the study result

  cannot be generalized.

- The sampling technique used (Purposive Sampling), may have limitations in giving a

  representative sample of the population.

5.5 Suggestion for Future research.

- The current study can be extended to a large sample, with better representation with

  the domains of each variable, might make the test findings more reliable as well as

  generalized.

- Incorporating a longitudinal study method can give a better clarity on the results. Also

  involving a qualitative method, based on an in-depth interview, can give help the

  researcher understand the variables much better

- Having a control group with typical population could be used to explore the

  difference in the variable further in a clinical population and a typical population.

- Multiple variables that could additionally cause the rise of behavioural problems

  could be measured.

- Initiating a group therapy towards the end of the assessments could help act as a

  support system, considering that the individual taken a lot of commonalities in terms

  of parenting style.

REFERENCE

Ahmad, M. S., Cho, K. W., Fakhr, Z., & Masud, H. (2019). Parenting Styles and Aggression among Young Adolescents: A Systematic Review of Literature. *Community Mental Health Journal, 55*(6), 1015-1030.

Carr, A., Linehan, C., McEvoy, J., O'Reilly, G., & Walsh, P. N. (2016). *The Handbook of Intellectual Disability and Clinical Psychology Practice* (2nd ed.). Routledge Publications.

de Bruin, E., Ferdinand, R., Meester, S., de Nijs, P., & Verheij, F. (2007). High rates of psychiatric co-morbidity in PDD-NOS. *Journal of Autism and Developmental Disorders, 37*(5), 877–886.

Dominick, K. C., Davis, N. O., Lainhart, J., Tager-Flusberg, H., & Folstein, S. (2007). Atypical behaviors in children with autism and children with a history of language impairment. *Research in Developmental Disabilities, 28*(2), 145–162.

Estes, A. M., Dawson, G., Sterling, L., & Munson, J. (2007). Level of intellectual functioning predicts patterns of associated symptoms in school-age children with autism spectrum disorder. *American Journal on Mental Retardation, 112*(6), 439–449.

Gadow, K. D., Devincent, C. J., Pomeroy, J., & Azizian, A. (2005). Comparison of DSM-IV symptoms in elementary school-age children with PDD versus clinical and community samples. Autism, 9(4), 392–415.

Howlin, P. (2007). The outcome in adult life for people with ASD. In F. Volkmar (Ed.), Autism and Pervasive Developmental Disorders (pp. 269–306). Cambridge University Press.

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), Handbook of Personality: Theory and Research (Vol. 2, pp. 102–138). Guilford Press.

Kanai, C., Koyama, T., Kato, S., Miyamoto, Y., Hirokazu, O., & Kurita, H. (2004). Comparison of high-functioning atypical autism and childhood autism by Childhood Autism Rating Scale - Tokyo Version. Psychiatry and Clinical Neurosciences, 58, 217–221.

Kring, S. R., Greenberg, J., & Seltzer, M. M. (2008). Adolescents and adults with autism with and without co-morbid psychiatric disorders: Differences in maternal well-being. Journal of Mental Health Research in Intellectual Disabilities, 1(2), 53–74.

Leeman, R. F., Patock-Peckham, J. A., Hoff, R. A., Krishnan-Sarin, S., Steinberg, M. A., Rugle, L. J., & Potenza, M. N. (2014). Perceived parental permissiveness toward gambling and risky behaviors in adolescents. Journal of Behavioral Addictions, 3(2), 115-123.

Lecavalier, L. (2006). Behavioral and emotional problems in young people with pervasive developmental disorders: Relative prevalence, effects of subject characteristics, and empirical classification. Journal of Autism and Developmental Disorders, 36, 1101–1114.

Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behavior problems on caregiver stress in young people with autism spectrum disorders. Journal of Intellectual Disability Research, 50(3), 172–183.

Lopez, N. V., Schembre, S., Belcher, B. R., O'Connor, S., Maher, J. P., Arbel, R., Margolin, G., & Dunton, G. F. (2018). Parenting styles, food-related parenting practices, and children's healthy eating: A mediation analysis to examine relationships between parenting and child diet. Appetite, 128, 205-213.

Manning, M. M., Wainwright, L., & Bennet, J. (2010). The double ABCX model of adaptation in racially diverse families with a school-age child with autism. Journal of Autism and Developmental Disorders, 41, 320-331.

Martinez, I., & Garcia, J. F. (2007). Impact of parenting styles on adolescents' self-esteem and internalization of values in Spain. Span J Psychol, 10(2), 338-348.

Masud, Hamid, et al. (2019). Parenting styles and aggression among young adolescents: A systematic review of literature. *Community Mental Health Journal, 55*, 1015-1030.

Mesibov, G. B., Shea, V. (1996). Full inclusion and students with autism. *Journal of Autism and Developmental Disorders, 26*, 337–346. [DOI: 10.1007/BF02172478]

Milan, Letitia Naigles, Diana L. Robins, Marianne L. Barton, Lauren B. Adamson, & Deborah A. Fein (2022). Symptoms of autism spectrum disorder and developmental delay in children with low mental age. *The Clinical Neuropsychologist, 36*(5), 1028-1048. [DOI: 10.1080/13854046.2021.1998634]

Murphy, G. H., Beadle-Brown, J., Wing, L., Gould, J., Shah, A., & Holmes, N. (2005). Chronicity of challenging behaviours in people with severe intellectual disabilities and/or autism: A total population sample. *Journal of autism and developmental disorders, 35*(4), 405-418.

Nijhof, K. S., & Engels, R. C. (2007). Parenting styles, coping strategies, and the expression of homesickness. J Adolesc, 30(5), 709-720.

National Institute for Clinical Excellence. (2011). CG128 Autism in children and young people: NICE guideline. Retrieved March 14, 2012.

Netta Kohn Dor-Shav & Zelda Horowitz (1984). Intelligence and Personality Variables of Parents of Autistic Children. The Journal of Genetic Psychology, 144(1), 39-50.

Oliver, P. H., Guerin, D. W., & Coffman, J. K. (2009). Big five parental personality traits, parenting behaviors, and adolescent behavior problems: A mediation model. Personality and Individual Differences, 47(6), 631–636.

Pearson, D. A., Loveland, K. A., Lachar, D., Lane, D. M., Reddoch, SL., Mansour, R., et al. (2006). A comparison of behavioral and emotional functioning in children and adolescents with autistic disorder and PDD-NOS. Child Neuropsychology, 12(4), 321–333.

Pong, SL., Johnston, J., & Chen, V. (2010). Authoritarian Parenting and Asian Adolescent School Performance: Insights from the US and Taiwan. Int J Behav Dev, 34(1), 62-72.

Querido, J. G., Warner, TD., & Eyberg, SM. (2002). Parenting Styles and Child Behavior in African American Families of Preschool Children. Journal of Clinical Child & Adolescent Psychology, 31(2), 277.

Salazar, F., Baird, G., Chandler, S., Tseng, E., O'Sullivan, T., Howlin, P., et al. (2015). Co-occurring psychiatric disorders in preschool and elementary school-aged children with autism spectrum disorder. Journal of Autism and Developmental Disorders, 45(8), 2283–2294.

Simonoff, E., Pickles, A., Charman, T., Chandler, S., Loucas, T., & Baird, G. (2008). Psychiatric disorders in children with autism spectrum disorders: Prevalence, comorbidity, and associated factors in a population-derived sample. Journal of the American Academy of Child and Adolescent Psychiatry, 47(8), 921–929.

Soto, Christopher J., & Jennifer L. Tackett. (2015). Personality traits in childhood and adolescence: Structure, development, and outcomes. *Current Directions in Psychological Science, 24*(5), 358-362.

Tonge, BJ., & Einfeld, SL. (2003). Psychopathology and intellectual disability: The Australian child to adult longitudinal study. International Review of Research in Mental Retardation, 26, 61–91.

Volkmar, Fred R. (Ed.). (2021). *Encyclopedia of Autism Spectrum Disorders*. Cham: Springer International Publishing.

Wing, L., Gould, J., Shah, A., & Holmes, N. (2005). Chronicity of challenging behaviors in people with severe intellectual disabilities and/or autism: A total population sample. *Journal of Autism and Developmental Disorders, 35*(4), 405-418.

Wilkins, Jonathan, & Johnny L. Matson. (2009). A comparison of social skills profiles in intellectually disabled adults with and without ASD. *Behavior Modification, 33*(2), 143-155

Zhou, T., & Y., C. (2014). Parenting style and parenting perspective on how their own emotions affect the functions of children with autism spectrum disorder. Family Process, 53(1), 67-79.

APPENDICES

INFORMED CONSENT FORM

Title of the study: *Impact of personality and parenting styles on behavioural outcomes of children with autism spectrum disorder*

I Silambuselvi K, pursuing my MPhil in Clinical Psychology from Department of Clinical Psychology, As a part of my course, I am planning to carry out a research study titled, "Impact of personality and parenting styles on behavioural outcomes of children with autism spectrum disorder", under the supervision of Ms P. Kalaivani, Assistant Professor, Department of Clinical Psychology, National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD), Muttukadu, Chennai.

STUDY INFORMATION SHEET

In this research, I plan to explore the behavioural outcomes influenced by the personality and parenting styles of Parents of children with autism spectrum disorder in a period of 2 month.

Does this study involve any expenses?

No, it does not have any fees.

Is it legally enforceable?

No, this is not a legally binding document. It is a research document.

Will there be any negative consequences if I participate?

No, this study procedure will not have any negative effects for the participant. If there are any emotional / psychological repercussions, psychological help will be ensured.

Voluntary Participation:

Your participation in this study is completely voluntary and you can refuse to part of the process. You will be interviewed alone and adequate privacy will be ensured during the interview. This study involves a clinical interview by the researcher which takes around 40 minutes. This study does not involve any laboratory tests or any invasive procedure. If you feel any uneasiness during the interview it can be rescheduled.

Withdraw from the study:

You are free to choose whether or not you want to be a part of this study. Saying "NO" will not affect your relationship with the researcher or the institute.

Confidentiality:

The personal information given by you will be kept confidential. Only members of the research team will know your name and details. Your name will not appear in any report or publication. However, the overall results of the study will be published in the research journals.

Undertaking by the researcher

Your consent to participate in the above research by Ms SILAMBUSELVI, II MPhil Clinical Psychology, NIEPMD, and Chennai is sought. You have the right to refuse consent or withdraw the same during any part of the research without giving any reason. If you have any doubts about the research, please feel free to clarify the same. Even during the research, you are free to contact either the researcher (Ms Silambuselvi) or guide (Ms Kalaivani) for clarification if you so desire

The information provided by you will be kept strictly confidential.

Consent to participate in research study

	YES/NO
I confirm that I have had adequate explanation and have clearly understood the information sheet of the study and have had the opportunity to ask questions.	
I understand that my participation is voluntary and that I am free to withdraw from the study at any time without giving a reason.	
I understand that trained researcher will conduct the interview which will take about 40 minutes duration.	
I understand that all personal information I share will be kept confidential and will not be shared with anyone other than those involved in the research study.	
I agree to take part in the above study voluntarily	
I have received a copy of the study information sheet and consent form	

Name of the Participant   :   Signature:

Name of the researcher: Signature:

Date:

The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Sl.no	STATEMENT	Strongly disagree	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	I see myself as someone who is talkative					
2	I see myself as someone who Tends to find fault with others					
3	I see myself as someone who Does a thorough job					
4	I see myself as someone who Is depressed, blue					
5	I see myself as someone who Is original, comes up with new ideas					
6	I see myself as someone who Is reserved					
7	I see myself as someone who Is helpful and unselfish with others					
8	I see myself as someone who Can be somewhat careless					
9	I see myself as someone who Is relaxed, handles stress well					
10	I see myself as someone who Is curious about many different things					
11	I see myself as someone who Is full of energy					
12	I see myself as someone who Starts quarrels with others					
13	I see myself as someone who Is a reliable worker					
14	I see myself as someone who Can be tense					
15	I see myself as someone who Is ingenious, a deep thinker					
16	I see myself as someone who Generates a lot of enthusiasm					
17	I see myself as someone who Has a forgiving nature					
18	I see myself as someone who Tends to be disorganized					
19	I see myself as someone who Worries a lot					
20	I see myself as someone who Has an active imagination					
21	I see myself as someone who Tends to be quiet					
22	I see myself as someone who Is generally trusting					
23	I see myself as someone who Tends to be lazy					
24	I see myself as someone who Is emotionally stable, not easily upset					
25	I see myself as someone who Is inventive					
26	I see myself as someone who Has an assertive personality					
27	I see myself as someone who Can be cold and aloof					

Sl. no	STATEMENTS	Strongly disagree	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
28	I see myself as someone who Perseveres until the task is finished					
29	I see myself as someone who Can be moody					
30	I see myself as someone who Values artistic, aesthetic experiences					
31	I see myself as someone who Is sometimes shy, inhibited					
32	I see myself as someone who Is considerate and kind to almost					
33	I see myself as someone who Does things efficiently					
34	I see myself as someone who Remains calm in tense situations					
35	I see myself as someone who Prefers work that is routine					
36	I see myself as someone who Is outgoing, sociable					
37	I see myself as someone who Is sometimes rude to others					
38	I see myself as someone who Makes plans and follows through withthem					
39	I see myself as someone who Gets nervous easily					
40	I see myself as someone who Likes to reflect, play with ideas					
41	I see myself as someone who Has few artistic interests					
42	I see myself as someone who Likes to cooperate with others					
43	I see myself as someone who Is easily distracted					
44	I see myself as someone who Is sophisticated in art, music, orliterature					

PS-FFQ
(Parenting Style Four Factor Questionnaire)

Instructions: Read the following statements carefully and indicate your single response by putting a "tick" mark inthe appropriate box.

Sl. no	STATEMENT	All of the time	Most of the time	Some times	Rarely	Never
1	I want my child to follow my instructions because I am the authority to decide whatto do or what not to do					
2	I would like to be a friend, Philosopher and guide to my child.					
3	I am very soft with my child so that I cannot correct him/her at proper time bypunishment					
4	I do not have any demand or control on my child and I give total freedom					
5	I have little patience to tolerate any misbehaviour of my child or to listen to theexcuses in any kind of mistakes.					
6	I used to understand the feelings of my child in any situation and always try to getthe opinion of my child whenever I buy something for him/her.					
7	Whenever the child comes with low marks, I will not give any punishments rather Ifeel he/she will become better next time.					
8	As I am very sad and depressed I cannot show much care and deep emotional tie upwith my child.					
9	I strongly believe that my child's future is in my hand and so there is a strict timetable for my child to follow					
10	Important decisions of the family are done together and I give full freedom to mychild to share everything with me.					
11	I give valuable reward to my child for obeying me or behaving well.					
12	As I am very busy with my household and office duties, I get less time to involve my child's studies or to listen his/her needs and wishes.					
13	I have clear expectations regarding my child's behaviour and I am not muchbothered about the likings of my child regarding his/her future.					
14	As I understand the strength and weakness of my child, I set some appropriate rulesfor him/her and give friendly corrections whenever necessary.					
15	Though I have definite goal and planning about my child's future I cannot follow itstrictly because of my leniency.					
16	I have enough stress and strain myself and hence I cannot take care of my child'swelfare.					
17	I usually like to give physical punishment than giving advices to my child because Iam sure he/she will not listen to it.					
18	I will not force my child in any of his/her future career and I also help him/her toset a realistic goal.					
19	As I was brought up by strictly disciplined parents, I am very liberal with my child					
20	I usually give more important to my own likes and wishes but not bother muchabout needs or misbehaviours of my child.					
21	I believe that only through punishment a child can be corrected and I also do notlike to give any financial freedom to my child					
22	Whenever my child fails to follow the time table given to him/her, I remind theconsequences with a touch of love and affection.					
23	I like to be a very affectionate parent towards my child and also I take theresponsibility of my faulty parenting on my child.					

Sl. no	STATEMENT	All of the time	Most of the time	Some times	Rarely	Never
24	As I am busy and get little time to care my child, he/she is quite free to move ownway to take decisions.					
25	The punishment I give to my child depends upon my mood.					
26	My child talks with me out of being punished after he/she has done somethingwrong.					
27	I always threaten my child with punishment but do not actually doing it because ofmy leniency.					
28	As I am bounded with severe life problems, I ignore my child's misbehaviour and Ihave no idea about his/her life outside the home.					
29	Whenever my child shows disobedience, I scold and criticise him/her with burstinganger					
30	Even though I am busy I have enough time to visit my child's school & to meetteachers to know his/her progress.					
31	Because of excessive love and sympathy I have showing towards my child, he/shehas no self-discipline					
32	I never like to tell my child where I am going or why I am late					

C. B. C. L. SCALE

Below is a list of items that describe children & youth. For each item that describes your child now or within the past 6 months. Please answer all items as well as you can, even if some do not seem to apply to our child.

0 = Not True (as far as you know). 1 = Somewhat or Sometimes True. 2 = Very True or Often True.

0 1 2	1. Acts too young for his/her age	0 1 2	32. Feels he/she has to be perfect
0 1 2	2. Drinks alcohol without parents' approval (describe):	0 1 2	33. Feels or complains that no one loves him/her
		0 1 2	34. Feels others are out to get him/her
0 1 2	3. Argues a lot	0 1 2	35. Feels worthless or inferior
0 1 2	4. Fails to finish things he/she starts	0 1 2	36. Gets hurt a lot, accident-prone
0 1 2	5. There is very little he/she enjoys	0 1 2	37. Gets in many fights
0 1 2	6. Bowel movements outside toilet	0 1 2	38. Gets teased a lot
0 1 2	7. Bragging, boasting	0 1 2	39. Hangs around with others who get in trouble
0 1 2	8. Can't concentrate, can't pay attention for long	0 1 2	40. Hears sound or voices that aren't there (describe):
0 1 2	9. Can't get his/her mind off certain thoughts; obsessions (describe):	0 1 2	41. Impulsive or acts without thinking
0 1 2	10. Can't sit still, restless, or hyperactive	0 1 2	42. Would rather be alone than with others
0 1 2	11. Clings to adults or too dependent	0 1 2	43. Lying or cheating
0 1 2	12. Complains of loneliness	0 1 2	44. Bites fingernails
0 1 2	13. Confused or seems to be in a fog	0 1 2	45. Nervous, highstrung, or tense
0 1 2	14. Cries a lot	0 1 2	46. Nervous movements or twitching (describe):
0 1 2	15. Cruel to animals		
0 1 2	16. Cruelty, bullying, or meanness to others	0 1 2	47. Nightmares
0 1 2	17. Daydreams or gets lost in his/her thoughts	0 1 2	48. Not liked by other kids
0 1 2	18. Deliberately harms self or attempts suicide	0 1 2	49. Constipated, doesn't move bowels
0 1 2	19. Demands a lot of attention	0 1 2	50. Too fearful or anxious
0 1 2	20. Destroys his/her own things	0 1 2	51. Feels dizzy or lightheaded
0 1 2	21. Destroys things belonging to his/her family or others	0 1 2	52. Feels too guilty
0 1 2	22. Disobedient at home	0 1 2	53. Overeating
0 1 2	23. Disobedient at school	0 1 2	54. Overtired without good reason
0 1 2	24. Doesn't eat well	0 1 2	55. Overweight
0 1 2	25. Doesn't get along with other kids		*56.* Physical problems *without know medical cause:*
0 1 2	26. Doesn't seem to feel guilty after misbehaving	0 1 2	a. Aches or pains (*not* stomach or headaches)
0 1 2	27. Easily jealous	0 1 2	b. Headaches
0 1 2	28. Breaks rules at home, school, or elsewhere	0 1 2	c. Nausea, feels sick
0 1 2	29. Fears certain animals, situations, or places, other than school (describe):	0 1 2	d. Problems with eyes (*not* if corrected by glasses) (describe):
		0 1 2	e. Rashes or other skin problems
0 1 2	30. Fears going to school	0 1 2	f. Stomachaches
0 1 2	31. Fears he/she might think or do something bad	0 1 2	g. Vomiting, throwing up
		0 1 2	h. Other (describe):

0 1 2	57. Physically attacks people	0 1 2	84.	Strange behavior (describe):
0 1 2	58. Picks nose, skin, or other parts of body(describe):	0 1 2	85.	Strange ideas (describe):
		0 1 2	86.	Stubborn, sullen, or irritable
0 1 2	59. Plays with own sex parts in public	0 1 2	87.	Sudden changes in mood or feelings
0 1 2	60. Plays with own sex parts too much	0 1 2	88.	Sulks a lot
0 1 2	61. Poor school work	0 1 2	89.	Suspicious
0 1 2	62. Poorly coordinated or clumsy	0 1 2	90.	Swearing or obscene language
0 1 2	63. Prefers being with older kids	0 1 2	91.	Talks about killing self
0 1 2	64. Prefers being with younger kids	0 1 2	92.	Talks or walks in sleep (describe):
0 1 2	65. Refuses to talk	0 1 2	93.	Talks too much
0 1 2	66. Repeats certain acts over and over;compulsions (describe):	0 1 2	94.	Teases a lot
0 1 2	67. Runs away from home	0 1 2	95.	Temper tantrums or hot temper
0 1 2	68. Screams a lot	0 1 2	96.	Thinks about sex too much
0 1 2	69. Secretive, keeps things to self	0 1 2	97.	Threatens people
0 1 2	70. Sees things that aren't there (describe):	0 1 2	98.	Thumb sucking
0 1 2	71. Self-conscious or easily embarrassed	0 1 2	99.	Smokes, chews, or sniffs tobacco
0 1 2	72. Sets fires	0 1 2	100.	Trouble in sleeping (Describe)
0 1 2	73. Sexual problems (describe):	0 1 2	101	Truancy or skip school
0 1 2	74. Showing off or clowning	0 1 2	102	Underactive, slow moving, or lacks energy
0 1 2	75. Too shy or timid	0 1 2	103	Unhappy, sad or depressed
0 1 2	76. Sleeps less than most kids	0 1 2	104	Unusually loud
0 1 2	77. Sleeps more than most kids during dayand/or night (describe):):	0 1 2	105	Uses drugs for nonmedical purposes
		0 1 2	106.	Vandalism
0 1 2	78. Inattentive or easily distracted	0 1 2	107.	Wets self during the day
0 1 2	79. Speech problem (describe):	0 1 2	108	Wets the bed
0 1 2	80. Stares blankly	0 1 2	109.	whining
0 1 2	81. Steals at home	0 1 2	110	Wishes to be of opposite sex
0 1 2	82. Steals outside the home	0 1 2	111	Withdrawn, doesn't get involved with others
0 1 2	83. Stores up too many things he/she doesn'tneed (describe):	0 1 2	112	Worries
		0 1 2	113	Please write in any problems that has not listed above