

## **CHAPTER II**

### **REVIEW OF LITERATURE**

A literature review is a systematic and critical approach to collect, analyses, and synthesize existing knowledge of a specific research topic. It forms the foundation of any academic inquiry by exploring established theories, key concepts, and empirical findings within the chosen field. Through this process, the researcher comprehensively understands the topic, identifies patterns, contradictions, and gaps in the existing literature, and builds a strong rationale for the current study. By contextualizing the research within the broader academic landscape, the literature review not only informs the study's direction but also highlights areas requiring further exploration. Understanding the complexities of autism spectrum disorder and its impact on the autistic child's journey is vital in creating an inclusive and supportive learning environment. Parents play a crucial role in both their child's development and as well as maintaining their own well-being. As the primary caregivers at home and influential figures in society, they significantly shape the child's future growth, learning, and overall life outcomes.

In this review, the literature is organized thematically under specific headings to ensure clarity, coherence, and a logical progression of ideas that support the research objectives.

1. Developmental perspective of autism
2. Challenges faced by parents of children with autism
3. Pre-requisite skills for autistic children
4. Importance of parents' knowledge, attitude and practices on pre-requisite skills
5. Parents' involvement and role in teaching pre-requisite skills to children with autism spectrum disorder (ASD)
6. Mental health and self-efficacy of parents of children with autism
7. Influence of socio-demographic conditions on parents of children with autism
8. Importance of sensitization/intervention programmes for parents of children with autism
9. Conceptual framework of the study

## 1. Developmental perspective of autism

Autism is primarily characterised by differences and difficulties in social interaction and communication, alongside restricted or repetitive patterns of interests, activities, and behaviors (e.g., stimming), and, in many cases, distinctive reactions to sensory input. The specific presentation of autism varies widely among individuals (Lord *et al.*, 2020; Lai *et al.*, 2014). For many autistic individuals, characteristics emerge during infancy or early childhood and persist across the lifespan (American Psychiatric Association, 2022). Autistic individuals may be significantly impaired in some areas while exhibiting average or even superior abilities in others (Happé and Frith, 2009; Mottron, 2011; Dawson *et al.*, 2007). Clinicians often consider autism assessments when these traits are present especially when they co-occur with challenges in maintaining education or employment, difficulties in forming and maintaining relationships, or a history of neurodevelopmental or psychiatric conditions such as ADHD or learning disabilities (National Institute for Health and Care Excellence [NICE], 2012).

In the social domain, early signs can include limited or absent babbling in infancy (Zwaigenbaum *et al.*, 2005), reduced eye contact and social smiling, delayed language development, and a lack of interest in peers or caregivers (Barbaro and Dissanayake, 2009). Autistic children may also show challenges in reciprocal interactions like peek-a-boo or joint attention activities (Charman *et al.*, 1997). In the area of restricted and repetitive behaviors, common features include echolalia, motor stereotypies, insistence on routines, highly focused interests, and sensory sensitivities (American Psychiatric Association, 2022). These behaviors may manifest as lining up toys, flapping hands, or experiencing distress when routines change (Kim and Lord, 2010).

According to the medical model, autism involves impairments in three key domains of social communication: social-emotional reciprocity, nonverbal communicative behaviors, and relationship skills (APA, 2022). Historically, autistic individuals were described as having a delay or deficit in theory of mind the ability to understand others' perspectives leading to theories such as the empathising, systemising model, which suggests autistic people may struggle with cognitive empathy despite having affective empathy (Baron-Cohen, 2002). This has been associated with social naivety, difficulty interpreting body language, and misunderstanding social norms (Frith, 2001; Goleman, 2006), possibly compounded by co-occurring alexithymia (Bird and Cook, 2013). However, more recent work has challenged these deficit-based views, introducing the double empathy

problem, which posits that communication breakdowns arise from mutual misunderstanding between autistic and non-autistic individuals, rather than a one-sided impairment (Milton, 2012; Crompton *et al.*, 2020; Dinishak, 2016; Bolis *et al.*, 2021).

The developmental perspective underscores that autism is a lifelong, evolving condition, deeply influenced by developmental stage, life experiences, and context. With appropriate supports and inclusive environments, autistic individuals can thrive, develop independence, and contribute meaningfully to society. It also demands a shift from deficit-focused models to strength-based, person-centered approaches that honor neurodiversity and promote human rights. Autism Spectrum Disorder (ASD) is defined in the DSM-5 and ICD-11 as a highly heterogeneous neurodevelopmental condition characterized by difficulties in social communication and interaction, alongside restricted, repetitive patterns of behavior and interests, with manifestations varying widely across individuals (American Psychiatric Association, 2013; World Health Organization, 2023). The spectrum approach replaced earlier subtypes such as Asperger syndrome and childhood autism to address diagnostic overlap and improve clarity, although the new system is more restrictive, potentially excluding individuals previously diagnosed (Volkmar and Reichow, 2013). While the DSM-5 classifies ASD based on levels of support needed (Levels 1–3), the ICD-11 distinguishes it through the presence or absence of intellectual and language impairments (WHO, 2023). Recent critiques highlight the limitations of current behavioral criteria in capturing the full diversity of autism, prompting calls for alternative models such as prototype-based approaches or trans diagnostic frameworks (Happé *et al.*, 2020). Moreover, the neurodiversity paradigm challenges the deficit-based view of autism, advocating for recognition of autism as a natural variation of human neurocognitive functioning rather than a disorder, a shift supported by emerging language guidelines from institutions like the NIH and NHS (National Institutes of Health, 2022; National Health Service, 2023).

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), released in 2022 by the American Psychiatric Association, maintains the unified diagnostic approach to Autism Spectrum Disorder (ASD) first introduced in DSM-5 (2013), which consolidated previous subcategories such as classic autism, Asperger syndrome, childhood disintegrative disorder, and PDD-NOS into a single diagnosis (American Psychiatric Association, 2022). This shift to a dimensional model allows clinicians to assess individuals based on the severity of impairments in two

core domains: (a) social communication and (b) restricted, repetitive behaviors, with separate severity ratings for each domain rather than a general level of functioning. The manual also highlights the influence of associated features such as intellectual disability, language impairment, and co-occurring mental or neurodevelopmental conditions in shaping each individual's presentation. Importantly, the DSM-5-TR retains the broader onset criterion introduced in DSM-5, acknowledging that symptoms may not be fully recognized until later in life when social demands increase, moving away from the previous requirement that symptoms appear before the age of three (APA, 2022). This evolution reflects a more nuanced and flexible understanding of the autism spectrum, aligning with clinical realities and contributing to more individualised assessment and support planning.

## **2. Challenges faced by parents of children with autism**

Families of autistic children experience challenges in understanding the condition and obtaining proper sensitizations because of confusion in education, limited resources, and varying levels of understanding among the public, healthcare educators, and parents of autistic children (Liu, *et al.*, 2016). Autism spectrum has a wide range of symptoms and levels of difficulty in function. Children with autism can execute everyday duties without any help, but others need help with basic tasks. Early diagnosis and treatment can reduce autism symptoms and improve the value of life for children and their families. There is however no diagnosis for autism. Diagnosis is based on monitoring the child's speech and behaviour in comparison to others of similar age. Early diagnosis of ASD is necessary to initiate preventive measures and treat early (Wang, *et al.*, 2020).

Brown *et al.*, (2016) stated that parents may be overwhelmed by the diagnosis of their kid and have difficulty finding appropriate therapy decisions. Parents of children with ASDs have obstacles at home and in the wider society. Autism families are more likely to face economic challenges, poor mental and physical wellness, and greater frequency of divorce than non-autistic parents. Individuals in society may need to make payments for facilities themselves or travel substantial distances for care. As a result, some families are forced to move or switch careers to afford assistance. Medical providers should be conscious of these concerns considering that they may affect a parent's capacity to provide treatment for their child with ASD. Proper diagnosis of autistic children helps parents to find out their child's needs and allows focusing on their progress, as each child's learning capacity is unique. Rogge and Janssen (2019) reported that parents who have no

knowledge and education regarding autism could damage diagnosis and care, resulting in poor outcome for their children. Parental knowledge influences their practices. Enhancing parental skills and habits leads to better adaptation, decreased stress, and greater attention for children.

Rfat *et al.*, (2023) bring out that families of autistic children mostly experience parental psychological problems, bonding issues in the family structure, financial barriers, and community-related ones. The diagnosing of ASD may distress the parents, and they may also relate to the family members through forcing the child to sit for sessions of treatment, educational support, and assistance with various transitions in life. There is a high co morbidity of anxiety disorder and obsessive-compulsive disorder, and depression among the parents of children diagnosed with ASD. Families of children diagnosed with ASD may believe that their interactions with others will deteriorate and take proactive measures to isolate themselves from them, creating a self-fulfilling loop, and they keep hiding their child's diagnosis from others. Families who don't have the support of their social network may grow more vulnerable and alone.

A child diagnosed with ASD will need increased parental attention. One of the parents, usually the mother, must provide that attention at the cost of her personal care. The more the mother pays attention to the autistic child, the more autistic siblings feel neglected by the attention. They may also develop anxiety or shyness in public as they care for their autistic brothers or sisters (Critchley *et al.*, 2021). Such experiences may result in a negative family profile. Families categorized under the low-income class face much pressure while sourcing funding to sustain the cost of some of the resources like social activities, speech, occupational, and allied therapies, education, and therapy.

Griffiths *et al.*, (2020) specified that mothers of autistic children become disappointed, drained, susceptible, and depressed. Fathers often keep themselves away from the family and stop supporting their needs. In some cases, a diagnosis of ASD may cause friction between the spouses and guilt feelings, leading to divorce. Most families have stress over their child's future, as well as chronic depression over the "loss" of a "normal" child, and misconceptions about ASD as an illness. Families have different coping strategies, though; some become stronger and closer after discovering their child's neurocognitive identity.

### 3. Pre-requisite skills for autistic children

Autism spectrum disorder is a development disorder, characterised by difficulties in social communication and repetitive behavior. This causes children with autism to have difficulty mastering functional or pre-requisite skills. Therefore, children with ASD need social skills training so that they can help them participate in the community. Additionally, individuals with ASD experienced lower academic performance, maladaptive behavioral issues, deficits in imitation skills, issues with expressiveness, deficits in self-care skills, and receptive and pragmatic language. The lack of ability to perform functional skills can negatively impact independence and quality of life, and also make families who have an individual with ASD in their family experience difficulty (Dijkhuis *et al.*, 2020).

Pre-requisite skills are frequently demanded in domestic, vocational, and community environments. These skills are not limited to performances that affect the actual survival or physical well-being of an individual, but also include a variety of skills that influence an individual ability to perform as independently, productively as possible in every environment (LaRue *et al.*, 2016). It allows us to take care of ourselves and function independently in our natural environment (Storey and Miner, 2011). To teach functional skills requires instructional programmes that involve skills of immediate usefulness like the self-care skills, domestic skills, and community skills, to the individual and employ teaching materials that are real rather than simulated, so that the skills must be immediately useful (Alodat *et al.*, 2020, LaRue *et al.*, 2016, Mumpuniarti and Pujaningsih, 2016).

Pre-requisite skills are important to learn because they are vital for independent living for a child with autism. Without that skill, an individual's potential to progress in educational, vocational, and domestic settings is limited, and continued reliance on parents or caregivers for such tasks can stress those individuals (Estes *et al.*, 2009; Pierce and Schreibman, 1994; Shrestha *et al.*, 2021). Performing independently plays a critical role in the successful inclusion of individuals in the community and workplace environment, and children with autism may feel more empowered or more in control in their lives (Carnahan *et al.*, 2009).

Research conducted by Blackwell and Stockall (2021) showed that conversational skills of individuals with ASD could be improved by using incidental teaching as the intervention, incidental teaching can be implemented by following the RACTF (Recruit,

Assess, Cueing, Teach, and Fade) process. Edwards *et al.*, (2018) conducted research about improving functional skills of individuals with ASD by using backward chaining, and these skills shown improvement according to the data. Law *et al.*, (2018) indicated that the communication skills of individuals with ASD could be improved by using an application that was developed for parents of children with ASD.

Munandar *et al.*, (2021) demonstrated that an individual with ASD could improve their storytelling ability in job interviews by using a video-based intervention. Patterned behavior description interview (PBDI) questions were used in mock job interviews. McKissick *et al.*, (2013) researched that computer-assisted explicit instruction was used to improve map-reading skills of individuals with ASD and showed an increase based on the data.

Cho *et al.*, (2021) indicated that teacher-implemented video-enhanced activity schedules could be used as interventions to improve mathematical skills and decrease collateral behaviors of individuals with ASD; however, visual analysis indicates there was no functional relationship between the intervention package and collateral behaviors. Robot-based play-drama was used as an intervention in research conducted by So *et al.*, (2020) to improve joint attention and functional play behaviors skills of individuals with ASD. These skills showed an improvement after using the intervention.

Bradshaw *et al.*, (2017) used parent-mediated intervention to improve functional language and social motivation skills of individuals with ASD, and according to data, these skills showed an improvement. Kurt and Kutlu (2019) examined the effect of social stories on abduction-prevention skills of individuals with ASD, it showed that all participants were able to learn the target skills and able to maintain their learning.

Alaniz *et al.*, (2017) used aquatic group therapy as an intervention to improve water safety and social interaction skills of individuals with ASD, although water safety skills showed an improvement, but social interaction skills didn't improve.

Hutchinson *et al.*, (2019) examined the efficacy of acceptance and commitment therapy (ACT) and behavioral skills training (BST) to improve interview skills of individuals with ASD. The result showed that, by using ACT, there were some improvements, but BST was required for all participants to master the skills. Wilson (2013) used in vivo modeling to improve social communication skills of individuals with ASD, and according to data, these skills showed an improvement. Research conducted by

Sansi *et al.*, (2021) showed that inclusive physical activity could be used to improve motor skills, social skills, and positively affect the attitudes of individuals with ASD.

Chang *et al.*, (2018) indicated that to improve the play skills of individuals with ASD, symbolic play could be used as an intervention. Based on research conducted by Leaf *et al.*, (2016) cool versus not cool procedure could be used to improve the social game-play skills of individuals with ASD, and seven of the eight participants mastered each of the games taught in the research. Kamps *et al.*, (2015) indicated comprehensive peer network intervention could be used as an intervention to improve social communication skills of individuals with ASD. Finn *et al.*, (2015) used Watch Minder to improve on-task behavior skills of individuals with ASD, and this skill showed an improvement by using that intervention. Research conducted by Kim *et al.*, (2018) about narrative story comprehension and task engagement skills of individuals with ASD could be improved by using a shared reading intervention.

#### **4. Importance of parents' knowledge, attitude, and practices on pre-requisite skills**

Pre-requisite skills refer to essential life skills that enable individuals to manage daily activities independently. These include communication, self-care, social interaction, the ability to follow a schedule, problem-solving, and basic academic competencies. For parents, particularly those raising children with developmental disorders such as Autism Spectrum Disorder (ASD), a thorough understanding of these skills is crucial for fostering their child's growth toward autonomy. While teaching these skills can present several challenges, the long-term benefits substantially outweigh the initial difficulties. Parents serve a vital role in guiding their children toward acquiring these competencies, enabling them to navigate life with greater confidence and independence. When equipped with the appropriate support and resources, parents can effectively promote their child's development and enhance their overall quality of life.

Salih *et al.*, (2022) conducted a study to assess the general population's knowledge of autism and related skills in Turkey and explored implications for public training and education. The sample comprised 874 participants from five cities. The study's findings indicated that the participants demonstrated low levels of knowledge about autism and its related skills. Interestingly, the study also found that individuals who had family members with autism exhibited significantly lower levels of knowledge. These results suggest an

urgent need for targeted educational initiatives and public awareness campaigns to address knowledge gaps, even among those directly affected by autism.

Waddah *et al.*, (2023) examined parental knowledge of autism and its associated characteristics. Their findings showed that overall parental knowledge was limited, with only 5% of participants demonstrating a satisfactory level of understanding. These outcomes were consistent with those of Alsehemi *et al.*, (2017), reinforcing the need for intensified health campaigns to enhance awareness among both families of children with autism and the broader public. Notably, Waddah *et al.* also reported that mothers and individuals with university-level education exhibited higher levels of knowledge, underscoring the role of education in fostering informed caregiving. The researchers recommended implementing educational interventions to improve parents' knowledge and practices, ultimately facilitating better developmental outcomes for children with ASD.

Kausar *et al.*, (2019) discussed how every family member typically harbors an idealized concept of a "dream child," expecting a future filled with happiness and good health. These expectations are often disrupted when a child is diagnosed with autism, leading to feelings of loss and disappointment among family members. Consequently, parents may develop negative attitudes toward their child due to the complexities associated with the condition. To facilitate acceptance and adequate support for children with autism, it is essential for both parents and the wider community to gain comprehensive knowledge about the disorder. Such awareness can enable parents to understand their child's unique needs and equip them with the prerequisite skills to support their development effectively. Moreover, community education can help foster a more inclusive environment that allows autistic individuals to acquire pre-requisite skills and live more independently.

Fang *et al.*, (2022) emphasized that parental attitudes and behaviors play a significant role in shaping knowledge about autism. The study highlighted the importance of family members' alignment in perceptions regarding the autism diagnosis, stating that this alignment forms a critical part of the family ecosystem. The study found that such attitudes had a direct impact on parental knowledge levels (Odds Ratio = 1.18). As a result, the authors emphasized the importance of considering this factor in family intervention training programs. Additionally, the study revealed substantial gaps in parental efficacy, with 53.3% of parents lacking direction regarding training programmes and 70.3% reporting inadequate knowledge about how to address behavioral challenges in

their children. Parenting self-efficacy (PSE), which reflects caregivers' confidence in their ability to raise their children effectively, has been shown to influence parenting behaviors and perceptions of competence (Karst and Van Hecke, 2012). By addressing and reshaping negative parental attitudes, families can become more empowered in supporting children with ASD. This empowerment not only fosters competence and independence but also reduces dependence on external service providers (Graves and Shelton, 2007).

Kim (2021) conducted a study using a sample of 1,530 individuals in the United States to examine parents' attitudes and knowledge regarding autism. The study collected data through an online survey that assessed participants' prior contact with autistic individuals, demographic details, and levels of knowledge and attitudes. Findings revealed that both the quality of interactions with autistic individuals and the education level of parents significantly influenced openness and acceptance toward autism. The study also identified that social distance toward autistic individuals was affected by various factors, such as the quality and frequency of contact, knowledge levels, and whether the institution was public or private. These findings highlight the importance of promoting educational programmes and meaningful interactions to cultivate accepting attitudes toward autism.

Sandra *et al.*, (2021) explored community attitudes toward autism in Australia and gathered the perspectives of autistic individuals and their families. The study included two groups: 2,424 non-autistic individuals who completed a survey assessing autism-related knowledge and attitudes, and 1,353 parents and caregivers of autistic individuals who shared their experiences. The findings showed that while awareness of autism was relatively limited, significant misconceptions and knowledge gaps persisted in the general population. Parents and caregivers reported that this superficial awareness did not necessarily lead to effective support or understanding of autistic individuals' needs. These results reinforce the need for comprehensive public education efforts aimed at bridging the gap between awareness and actionable understanding.

Rahman (2016) conducted a significant parent-mediated intervention study for autism spectrum disorders in India and Pakistan, specifically in Rawalpindi and Goa. This intervention involved training parents from high-income communities and yielded positive outcomes in children, with high levels of participant adherence. Another study by Rahman (2016) assessed parent-child interactions using the Dyadic Communication Measure for Autism. The findings demonstrated that when parents were trained in specific

communication strategies, children's language development significantly improved, reinforcing the effectiveness of parent-focused training programs.

Smith, Buch, and Gamby (2000) carried out a study that involved providing training to both parents and professionals. Participants attended six one-day workshops over a five-month period, where they were taught to apply Applied Behavior Analysis (ABA) principles with children diagnosed with ASD. The study found that five out of six children rapidly developed communication and self-care skills. Follow-up assessments conducted two to three years later indicated that some children continued to show significant improvements, highlighting the long-term benefits of structured parental training.

Jones *et al.*, (2017) discovered a positive correlation between parental knowledge of self-help skills in children with ASD and overall parenting satisfaction. Parents with a greater understanding of autism felt more confident in their caregiving role, better accepted their child's condition, and employed more effective reinforcement strategies. Similarly, Ijaz *et al.*, (2021) observed a significant increase in the mean scores of trained mothers, suggesting that behavior therapy training enhanced their knowledge and communication skills. These improvements also translated into better communication abilities among their children.

Keshk *et al.*, (2020) conducted a study involving 60 mothers and their children with Autism in Saudi Arabia. The study reported significant improvements in maternal knowledge about autism following an educational programme. Fawzya *et al.*, (2023) similarly found statistically significant differences before and after the implementation of an educational programme in teaching personal hygiene and clothing skills. Before the programme, nearly half the parents demonstrated incompetent practices. Post-intervention, the majority effectively taught their children essential hygiene practices such as brushing teeth and maintaining cleanliness after toileting. Clothing-related skills, including dressing in the correct order and removing clothing independently, also improved. Furthermore, advancements were observed in sleeping-alone skills, which included using bedtime stories, reducing physical support, and speaking in a gentle tone. These improvements were attributed to the practical and essential nature of daily living tasks, which motivated parents to invest significant effort in teaching their children.

Collectively, these studies underscore the critical importance of enhancing parental knowledge, reshaping attitudes, and promoting effective practices in the development of

pre-requisite skills for children with ASD. Interventions or sensitization that targets these areas not only empower parents but also contribute significantly to the child's overall development, independence, and quality of life.

## **5. Parents' involvement in teaching pre-requisite skills to their children with autism spectrum disorder (ASD)**

Individuals with Autism Spectrum Disorder (ASD) often experience challenges in acquiring everyday skills, which are crucial for promoting independence and reducing maladaptive behaviours (Center for Autism Research, 2020). Teaching pre-requisite skills, such as making choices and communicating needs, can significantly decrease frustration and reduce the likelihood of challenging behaviours, such as self-injury or aggression. Selecting developmentally appropriate and prerequisite skills that are meaningful to both the child and their family is critical. It is equally important to distinguish between essential skills and those that are merely beneficial (Center for Autism Research, 2020). Repeated practice opportunities and the use of reinforcement strategies, such as incorporating motivating items or activities, have been found effective in increasing skill retention. Visual supports, including picture schedules, video modeling, and choice cards, also aid in comprehension and task execution (Center for Autism Research, 2020).

Ravindranadan and Raju (2008) emphasised that most children with autism require parental support in mastering pre-requisite skills. Teaching these skills not only contributes to greater independence in self-help and daily living activities but also fosters reduced problem behaviours and improved quality of life at home and school. However, the demands of raising a child with ASD can significantly affect parents' well-being and overall life satisfaction.

The World Health Organization (WHO, 2017) reported that individuals with ASD often face difficulties in performing daily activities and social interactions, which can hinder their educational and future employment outcomes. These difficulties are frequently linked to deficits in social communication, emotional regulation, organizational ability, and maintaining routine skills that are essential for autonomy in everyday life. While some individuals with ASD may attain independence, others may require lifelong care, placing considerable emotional and financial strain on their families. Therefore, identifying the specific academic and self-care skills that children with ASD can perform is essential to guide parental support throughout various developmental transitions (WHO, 2017).

Masten and Powell (2007) defined transition as the process of adapting to developmental changes, each accompanied by new expectations shaped by cultural and societal norms. For children with ASD, transitions may include physical and psychological development, academic progression, and eventual entry into employment. Parents must guide and support their children through these stages, ranging from preschool to higher education or vocational placements, ensuring the development of essential life skills.

According to Begeer *et al.*, (2017), parental involvement is critical during transitional phases, providing children with emotional security and consistency. Despite the stress associated with these transitions, parental support facilitates successful adaptation. However, many parents feel inadequately prepared for these changes, partly due to insufficient communication with professionals. Educators and therapists may overlook parental insights, and a lack of formal guidance often leaves parents feeling overwhelmed. However, parental advocacy remains vital in addressing the evolving social, academic, and behavioural needs of their children.

Kourkoutas *et al.*, (2015) conducted a review of 1,500 studies focusing on parent involvement in interventions for children with ASD aged 1 to 6 years. The analysis revealed significant benefits of parent training, with improvements noted in children's language development and maternal understanding of autism. Intensive interventions involving parents demonstrated positive outcomes, including enhanced behavioural skills in children and increased implementation of effective strategies by parents.

Diggle (2003), using questionnaires and interviews with 15 families, found that parents valued communication support most in parent-training interventions. Many parents reported that improved language and communication skills enabled their children to integrate more effectively into family routines and social interactions. Similarly, Schreibman (2000) reviewed 15 studies involving 484 children with ASD (mean age = 23.26 months) and their parents. The findings indicated that parents trained in intervention techniques successfully applied these strategies and reported high satisfaction with the programmes. However, results regarding children's communication and socio-emotional development, parent-child interactions, and parental well-being were mixed.

Overall, the literature underscores the pivotal role of parents in fostering pre-requisite skills in children with Autism Spectrum Disorder (ASD). Parental involvement has consistently been shown to enhance the development of foundational skills such as

communication, self-help, and social interaction, which are essential for promoting independence in children with ASD (Kourkoutas, Georgiadi, and Xypolytas, 2015). When parents are actively engaged in the teaching and reinforcement of these skills, children show improvements not only in functional behaviours but also in their ability to manage transitions across developmental stages, such as moving from early childhood to school environments and eventually into adolescence and adulthood (Begeer *et al.*, 2017). Moreover, training programmes that equip parents with effective strategies such as visual supports, structured routines, and reinforcement techniques have demonstrated positive outcomes in both child behaviour and parental confidence (Schreibman, 1991). Parental support also serves as a buffer against the stress associated with transitions, providing emotional stability and continuity for children facing changes in routine or environment (Masten and Powell, 2007). Furthermore, as emphasized by the World Health Organization (2017), fostering independence in individuals with ASD not only benefits their personal development but also reduces the long-term care burden on families and society. Thus, empowering parents through knowledge, training, and involvement is critical in shaping better long-term outcomes for children with ASD.

## **6. Mental health and self-efficacy of parents of children with autism**

### **(i) Mental health status of parents having autistic children**

Every family member envisions an ideal child, shaping their expectations and attitudes toward the unborn baby. However, reality does not always align with these expectations. The birth of an autistic child can shatter these dreams, bringing unexpected challenges. Caring for an autistic child requires significant effort, and parents often grapple with concerns about their child's uncertain future, leading to psychological distress. Studies conducted in various countries have shown that raising an autistic child can negatively impact parents' mental well-being compared to those with non-autistic children. Mothers, in particular, tend to experience greater emotional strain than fathers (Zablotsky *et al.*, 2013; Kim *et al.*, 2016; Kousha *et al.*, 2019).

Due to its diagnostic characteristics, an autistic child demands special and specific attention, which generates changes in family dynamics and impacts the daily lives of people who live with them (Sprovieri and Assumpção Jr., 2001). As it presents itself as a fundamental part of child development, especially for children with a disorder, the families, and especially caregivers, are seen as indispensable partners in treatment and

development, and it is necessary to include them in this process (Volkmar and Wiesner, 2021). Identifying the quality of the practices of parents or caregivers regarding the task of caring, for example, of an autistic child becomes a significant part of this work, since not only stress, anxiety, and depression, among other emotional changes, are found in their lives (Lindsey and Barry, 2018; Karst and Van Hecke, 2012)

Ashworth *et al.*, (2019) conducted a comprehensive comparative study aimed at understanding the stress levels experienced by parents of children diagnosed with Autism Spectrum Disorder (ASD). In addition to measuring general stress levels, the researchers explored a range of individual and contextual factors that contribute to parental stress and overall life satisfaction. The study was grounded in the hypothesis that parents of children with ASD would report higher stress levels and lower life satisfaction compared to parents of children with other developmental disorders. Surprisingly, the results revealed no statistically significant differences in the overall stress levels among the parental groups. Parents of children with ASD reported that accessing professional services was particularly stressful, most likely due to the lengthy waiting periods for assessments and interventions in the UK's healthcare system. Furthermore, these parents frequently encountered systemic barriers in obtaining a timely diagnosis and support. Additionally, a significant source of stress for these parents was the perceived lack of medical and professional knowledge about ASD among healthcare providers. This lack of informed guidance contributed to feelings of frustration, helplessness, and isolation.

Thullen and Bonsall (2017) explored the relationship between parenting stress and feeding difficulties among children with Autism Spectrum Disorder (ASD). The findings revealed a significant association between heightened parenting stress and problematic feeding behaviors. Parents reported greater stress levels when they perceived their child's feeding behaviors as disruptive and when these behaviors occurred more frequently. Furthermore, high parenting stress was correlated with lower co-parenting support, increased conflict, and dissatisfaction with the division of parenting responsibilities. The study underscores the need to address feeding issues not only as a behavioral concern for the child but also as a key contributor to parental stress, particularly in households where co-parenting quality is compromised.

Stanojevic *et al.*, (2017) studied the variable of stress responses exhibited by children diagnosed with autism spectrum disorder and their impact on the parents and extended family. The purpose of this research was to determine the degree of stress

experienced by parents of children with autism spectrum disorder in connection to their gender, education, age, child's age, and speech and language abilities. The findings revealed that there are no statistically significant differences in stress levels based on parental sex, age, kid's age, or expressive language development of the child. Parental education level, child's receptive language development, and child's verbal communication development all had statistically significant effects on parental stress levels. Parental stress can be exacerbated by a parent's lower educational level, the child's incapacity to grasp speech, and the child's immature verbal communication. Parental stress can significantly complicate and slow down the child's rehabilitation process.

Khan and Alam (2016) did a review article on the regular trends of coping strategies used by parents having children diagnosed with various forms of developmental disabilities. Some of the conclusions of the review of papers include the impact of disability on health and well-being, which can range from physical ailments to depression; effect of severity of symptoms of disabilities on perceived stress; maladaptive coping of parents having children with disabilities; and other psychological impact like low self-esteem, pessimistic attitude, lack of belief in the child etc. Gender differences were markedly present in most of the research reviewed, such that mothers tend to feel more burdened by the presence of the child with disability; they also tend to seek and rely on social support and family support, unlike their male counterparts. The authors also highlight the fact that if positive coping strategies like realistic appraisal, optimism, etc. are used, then parents tend to feel less stress.

Amireh (2019) studied the parental stress and psychological adjustment in parents of children with intellectual disability and cerebral palsy. The researchers looked into the relationship between psychological adjustment, parental stress, and anxiety in parents of children with Intellectual Disability (ID) and Cerebral Palsy (CP) and their children. Results showed that there was a statistically significant negative association between parental stress and anxiety, and psychological adjustment. The findings also demonstrated that parental stress and anxiety were both significantly negative predictors of psychological adjustment among parents of intellectual disability and cerebral palsy. When compared to parents of cerebral palsy, parents of intellectual disability were more likely to experience parental stress, anxiety, and psychological adjustment problems. The findings also demonstrated that there was no statistically significant difference between genders, indicating that both parents (mothers and fathers) of ID and CP children were equally agitated and

apprehensive. Family tension and worry are harmful states that are experienced by parents of 72 children with ID and cerebral palsy, and they harm their children's psychological adjustment.

Russa *et al.*, (2015) mentioned in their study on families having a child with autism spectrum disorder, reported that the family's ability to socialize was severely affected by the child's condition. Interactions within and outside the family were distorted, leading to conflict. Perception of being negatively judged by society was very high, and lower psychological wellbeing and feelings of inadequacy were displayed by most families. Most of the participants reported feeling anxious and stressed most of the time due to their child's behaviors.

Muhamaad *et al.*, (2020) investigated the mental health of parents having autistic and non-autistic children in terms of demographic variables. Results of this study indicated that parents with autistic children had significantly higher depression, anxiety, and life stress than parents without autistic children. Results also revealed that mothers with autistic children had poorer mental health status (i.e., higher depression, anxiety, and life stress) than fathers with autistic children. But no significant differences were found among parents of autistic children in terms of different levels of education and income.

Maintaining better mental health is crucial for living an enthusiastic life (Ferdous *et al.*, 2018). Mental health may include an individual's ability to enjoy life and create a balance between life activities and efforts to achieve psychological resilience. Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community (WHO 2004). Parents having children with autism may be at a greater risk due to their beloved child's condition. In addition, different factors of their own, like sex, age, level of education, employment status, family income, social support etc., may also play a crucial role in their mental state. Prior researches suggest that there is a strong and positive relationship between an individual's level of education and mental health (Cutler and Lleras-Muney 2012). Higher levels of education can ensure better mental health as education is considered to enhance people's knowledge, reasoning, effectiveness, problem-solving skills, and empower better coping mechanisms (Halpern-Manners *et al.*, 2016) and open access to different necessary resources through enhancing employment prospects.

Khan and Alam (2016) conducted a peer review study of 41 research articles on coping strategies employed by parents of children with developmental disabilities, mainly children on the autism spectrum. In their study, they looked at the various coping strategies parents employed: problem-focused versus emotion-focused coping, engaged versus disengaged coping, and proactive versus reactive coping. It was seen that parents, due to their personal preferences or depending upon the environmental needs, used either positive ways of coping or negative ways of coping. Positive coping helped parents to deal with the child's disability, whereas negative or poor coping skills by the parents had an adverse effect on them physically as well as psychologically. The various factors that affected coping strategies in parents were income levels, education levels, and social support. Social support, whether actual or perceived, was seen as the greatest contributor to positive coping mechanisms. This review brought out the importance of establishing social supports for parents of children with developmental disabilities in the form of support groups, professional interactions, and community support.

Felizardo *et al.*, (2016) compared parents of children with intellectual disability with parents of children with motor issues and parents of children with autism spectrum disorder, the aim being to find if there were differences in the stressors and coping strategies in these three groups. The results showed significantly higher levels of stress in parents of children with autism spectrum disorder in comparison to the other two groups of parents. The stressors were directly related to symptom severity and maladaptive behaviors of the child.

Dardas and Ahmad (2013) reported that parents of children with autism spectrum disorder experienced relatively higher levels of negative emotions coupled with anxiety and depression. The impact was felt on their daily life and physical health, and they perceived lower emotional support from family and friends, and it also impacted marital relations.

Benjamin Zablotzky, *et al.*, (2013), opined that raising a child with an autism spectrum disorder (ASD) can be a stressful experience for parents. When left unmanaged, high stress levels can lead to the development of depressive symptomatology, highlighting the importance of coping supports. The current paper examined the stress level and psychological well-being of mothers with a child with ASD in a national survey. After adjusting for child, mother, and family level characteristics, it was determined that mothers of children with ASDs were at greater risk for poor mental health and high stress levels compared to mothers of children without ASDs. The presence of maternal coping strategies, in the form of emotional

and neighborhood social supports, as well as strong coping skills, reduced these risks between models.

Khatun *et al.*, (2019) conducted a study on parents with ASD children and parents without ASD children from different areas of Dhaka City of Bangladesh, and found a significant negative correlation between parental stress and life satisfaction among parents with ASD children. They also found a significant difference in stress and life satisfaction between parents with and without ASD children. Karim *et al.* (2017) found that mothers having autistic children reported higher depression as compared to mothers of normal children.

### **(ii) Self-efficacy of parents of children with autism**

Self-efficacy is generally defined as an individual's belief in their ability to complete a task or achieve a specific outcome. This sense of confidence is often derived from past experiences of mastery in a particular field or domain (Usher & Pajares, 2009). According to Bandura's (1997) model, self-efficacy beliefs play a crucial role in shaping behavior, influencing decision-making, goal-setting, and the level of persistence individuals demonstrate, especially when faced with challenges (Bandura, 2001). Individuals with high self-efficacy are more likely to set ambitious goals, persist longer in the face of difficulties, and remain composed under stress compared to those with lower self-efficacy (Bandura, 2001). Consequently, self-efficacy beliefs contribute to positive psychosocial adjustment and overall well-being across various life circumstances and functional domains (Bandura, 1997; Maddux, 2009).

Glatz and Trifan (2019) mentioned that parental self-efficacy refers to the degree to which parents or primary caregivers feel competent and confident in performing parenting-related tasks and responsibilities. In the context of autism spectrum disorder (ASD), this construct is particularly significant, as it provides insight into parental perceptions and their associations with other parenting related factors, such as quality of care and coping with challenges related to raising a child with ASD (Smart, 2016 and Weiss *et al.*, 2013). Additionally, parental self-efficacy is linked to caregivers' mental health and personal well-being (Çattik and Aksoy, 2018; García-Lopez *et al.*, 2016; Burke and Heller, 2016). It can also serve as a key component in evaluating intervention or training programmes designed for parents of children with ASD, as well as in guiding professionals who provide clinical support to these families (Solish and Perry, 2008).

Consequently, the development and use of assessment tools for measuring parental self-efficacy in ASD can be a valuable resource in both treatment and intervention processes for families navigating an ASD diagnosis.

Dai *et al.*, (2023) examined parenting self-efficacy among mothers and fathers of children with autism spectrum disorder (ASD). The findings indicated that both mothers and fathers demonstrated significantly higher levels of parenting self-efficacy but expressed lower levels of interest in the parenting role. Despite elevated parenting self-efficacy, both parents exhibited higher levels of depression compared to normative populations, with mothers also reporting increased stress and anxiety. Additionally, there was a moderate trend suggesting that lower socioeconomic status was associated with higher levels of depression, stress, and anxiety among fathers, although no significant relationship was found between their child's ASD symptom severity or functioning.

Mostafa (2019) highlights that raising a child with autism significantly impacts families, requiring them to reassess their plans, goals, and relationships while managing the challenges associated with the child's disability. These challenges contribute to parental stress and influence their self-efficacy. The study aimed to evaluate stress levels and coping strategies among parents of children with autism. The findings revealed that parents experienced moderate levels of stress. Additionally, more than half of the participants in the study reported utilizing coping strategies such as seeking information, avoidance, and denial. The study also found a strong positive and significant correlation between stress levels and parental self-efficacy, coping strategies, suggesting a predictive relationship between these factors. In conclusion, children with autism require ongoing care, management, and coordinated services to support both their development and the well-being of their families.

Román-Oyola *et al.*, (2017) conducted a study to examine parental self-efficacy among parents of children with autism as well as parents of typically developing children. The findings indicated that parental self-efficacy levels were similar between parents of children with autism and parents of typically developing children. This suggests that having a child with autism does not necessarily determine parental self-efficacy, highlighting the importance of assessing other parent and child characteristics. However, the study had certain limitations. The use of a convenience sample restricted the generalizability of the findings.

Kim *et al.*, (2017) conducted a cross-sectional study utilizing baseline child-parent survey data collected in 2009 and follow-up data collected in 2012. After thorough data screening, a total of 1,224 children and 1,205 parents were included in the study. The study employed measures assessing self-efficacy, socio-demographics, personal attitudes and behaviors, and environmental perceptions. The findings indicated that parents with high self-efficacy exhibited more favorable attitudes toward physical activities, such as walking to school, which also contributed to improved self-efficacy in children. Additionally, parents with high self-efficacy perceived more supportive built and social environments. Furthermore, the study identified that these parents demonstrated 56% more encouraging and permissive attitudes regarding their children's walking-to-school behavior.

Similarly, Peterson *et al.*, (2016) conducted a longitudinal case-controlled study to examine the effects of universal parent-focused interventions, specifically Parent Training Programmes (PTPs), on parents' perceived competence in terms of parental efficacy and satisfaction. The sample included parents from Northern Sweden who participated in PTPs between 2010 and 2013, along with a matched comparison group, with children ranging in age from 0 to 17 years. Results indicated that parents in the intervention group reported a statistically significant improvement in parental competence compared to the comparison group. Additionally, parents who completed the PTP reported higher levels of parental satisfaction than the comparison group, both immediately following the intervention and at the six-month follow-up.

Pinto *et al.*, (2016) aimed to evaluate fathers' parenting self-efficacy and examine the impact of anxiety, depression, and co-parenting support from the first trimester of pregnancy to six months postpartum. The results indicated that during the first trimester of pregnancy, fathers with higher levels of anxiety exhibited lower parenting self-efficacy. Additionally, an interaction effect between anxiety symptoms and time was identified, suggesting a moderating effect of anxiety on the developmental trajectory of fathers' parenting self-efficacy. Specifically, fathers with higher anxiety levels demonstrated a slower increase in parenting self-efficacy from the first trimester of pregnancy to six months postpartum.

Frascarolo *et al.*, (2015) conducted a longitudinal study examining parental self-efficacy, self-esteem, and co-parenting in both mothers and fathers. The findings revealed that mothers reported a higher sense of efficacy than satisfaction at each measurement point. Satisfaction levels were positively correlated across time, though only moderately.

Similarly, fathers' efficacy scores demonstrated a moderate positive correlation over time. Additionally, fathers reported a higher sense of efficacy than satisfaction at each measurement point. Repeated measures indicated significant correlations in both paternal satisfaction and efficacy across all time points. A comparable pattern was observed in mothers, where the relationship between satisfaction and sense of efficacy increased from 3 to 18 months, suggesting that as time progressed, maternal satisfaction and efficacy became more closely linked. The study concluded that at the initial time point, mothers may have reported a higher sense of efficacy than fathers because they were often on maternity leave and had spent full-time care with their infants for three months, leading to greater direct caregiving experience.

## **7. Influence of socio-demographic conditions on parents of children with autism**

The socio-demographic conditions of parents, including factors such as gender of parents, education level, occupation, income and area of residence, significantly influence the early identification and intervention processes for children with Autism Spectrum Disorder (ASD). Families living in rural or underserved areas often face limited access to specialized healthcare providers and diagnostic services, resulting in delayed assessments and interventions. Likewise, parents with lower literacy or health literacy levels may struggle to recognize early signs of autism or navigate the often-complex healthcare system to seek appropriate care. These disparities contribute to inequities in the timing and quality of early intervention services, which are crucial for improving developmental outcomes in children with ASD. Early diagnosis and timely interventions are critical, as they have been shown to enhance communication skills, reduce behavioural challenges, and support adaptive functioning. Stahmer *et al.*, (2019) emphasized the importance of equitable and timely access to diagnostic and therapeutic services for families of children with ASD, noting that systemic barriers disproportionately affect families with fewer resources, ultimately limiting their children's potential for developmental progress.

Parental education level is a significant factor influencing the awareness, diagnosis, and management of Autism Spectrum Disorder (ASD). Educated parents are more likely to recognize early developmental signs and pursue timely assessments and interventions, which are essential for improving outcomes for children with ASD (Daniels & Mandell, 2014). Studies show that higher education levels are associated with greater health literacy, allowing parents to understand clinical information, communicate effectively with professionals, and advocate for their child's needs (Zuckerman *et al.*,

2017). Parents with higher educational attainment also tend to have better access to resources and support systems, including specialized services, educational accommodations, and behavioural therapies. They are more likely to navigate complex healthcare systems and utilize early intervention programmes, which are critical during the early developmental years. On the other hand, lower levels of education may be linked to limited awareness of autism symptoms, delayed diagnosis, and reduced participation in interventions (Thomas *et al.*, 2007). Moreover, parental education has been found to influence the type and quality of interventions selected. For example, educated parents may prefer evidence-based treatments such as Applied Behavior Analysis (ABA) and speech therapy, while those with limited education may rely more on community advice or non-specialized care (Magaña *et al.*, 2013). Additionally, higher education levels are often correlated with lower levels of parenting stress, possibly due to increased confidence and knowledge in handling the challenges associated with autism (Karst & Van Hecke, 2012).

Parental occupation plays a pivotal role in shaping the experiences, resources, and stress levels of families raising children with Autism Spectrum Disorder (ASD). The nature of a parent's job, including income level, work flexibility, job demands, and access to benefits, can significantly influence how effectively parents support their child's development and manage daily challenges associated with autism. Occupations that offer flexible schedules, remote work options, or family leave benefits enable parents to attend therapy sessions, medical appointments, and school meetings, which are essential for consistent intervention. Conversely, parents engaged in low-paying, rigid, or labor-intensive jobs may find it difficult to balance work and caregiving responsibilities, often leading to missed appointments or reduced involvement in therapeutic activities (Bourke-Taylor *et al.*, 2010).

Research shows that occupational stress can exacerbate parenting stress, especially when coupled with the demands of raising a child with ASD. According to Kuhlthau *et al.*, (2005), parents of children with autism are more likely to reduce work hours or even leave their jobs altogether, especially mothers, due to caregiving demands. Such decisions often result in financial strain, which can further limit access to quality health services and specialized interventions. Moreover, parents employed in professional or healthcare-related fields tend to have higher health literacy and access to information, which can lead to earlier diagnosis and better navigation of support services (Zuckerman *et al.*, 2014). In

contrast, those in less information-accessible occupations may struggle to recognize signs of autism or understand complex healthcare systems, resulting in delayed interventions. In dual-income families, disparities in work schedules can also affect co-parenting dynamics and shared caregiving, impacting not only the child's development but also the mental health of both parents (Derguy *et al.*, 2015). Therefore, parental occupation not only affects economic resources but also influences time availability, emotional well-being, and the ability to advocate for the child.

Research highlights several socio-economic factors that impact children with Autism Spectrum Disorder (ASD) and their families. Studies indicate that ASD prevalence is higher in communities with economic deprivation, unemployment, immigrant populations, and single-parent households (Beck *et al.*, 2014). Families with low income often struggle to meet the therapy needs of their children, engage with essential services, or overcome misconceptions about autism. Additionally, maintaining structured home or treatment schedules is especially difficult for low-income families who face financial hardships, have multiple children, and may have limited education (Kuhlthau *et al.*, 2005).

Similarly, limited financial resources also create barriers to accessing essential support services (Robert *et al.*, 2011). Children in rural and underserved areas experience longer waiting periods for ASD diagnosis, often exceeding 13 months, due to a lack of diagnostic centers and healthcare infrastructure. This results in underreporting of cases, leading to an inaccurate representation of autism prevalence. In contrast, families with higher incomes have greater access to specialized professionals, including educational psychologists, speech therapists, occupational therapists, and special educators (Malika *et al.*, 2015).

Cultural differences also shape how ASD is identified. In the United States, parents often first recognize delays in expressive language as a sign of developmental concerns, while in India, parents are more likely to notice challenges in social interaction as an early indicator. Several factors contribute to the marginalization of individuals with ASD and their families, including education levels, economic background, geographical location, religious beliefs, and cultural traditions (Nowell *et al.*, 2015). Research has shown that mothers with higher education levels are twice as likely to have their child diagnosed with ASD, whereas children of less-educated mothers are more likely to remain undiagnosed. However, no clear link has been found between income status and ASD diagnosis (Kendall, 2014). Families who are socially vulnerable or live in rural regions

continue to face significant challenges in accessing autism-related services and support resources.

## **8. Sensitization or intervention for parents of children with autism**

An autism spectrum disorder has been proven to have a significant influence on families, especially on the parents of children who are impacted by the disorder. This also results in feelings of worry, despair, and a lack of contentment with life. In order to develop effective intervention programmes, it is essential to have a solid understanding of the elements that influence the mental health and self-efficacy of parents. Parent-assisted interventions focus on leveraging the positive influence of parents in facilitating social interaction skills in children with autism. These interventions provide training to parents, enabling them to support their child's social development. Social interaction training emphasizes parent-child interactions, which help children engage more effectively with others. A review of related studies highlights the effectiveness of parent-assisted interventions in enhancing social interaction skills in children with autism. Manohar *et al.*, (2019) examined the effectiveness of a parent home-based intervention in improving joint attention, imitation, social, and adaptive skills in children with autism spectrum disorder (ASD). The intervention, based on a naturalistic developmental behavioral approach, was delivered through five outpatient sessions over 12 weeks. Findings indicated that parents in the intervention group reported significant improvements in their children's joint attention, imitation, social, and adaptive skills compared to the control group.

Ridderinkhof *et al.*, (2018) conducted a longitudinal study to evaluate the impact of a mindfulness-based intervention on both parents and children with Autism Spectrum Disorder (ASD). The intervention programme featured separate mindfulness training sessions for parents and children, encouraging participation by either one or both parents. A booster session was conducted nine weeks after the final session, which included continued meditation exercises to promote long-term engagement and skill retention. An important aspect of this study was the substantial involvement of fathers, who comprised approximately 60% of participating parents. The authors emphasized the importance of actively involving fathers in family-based interventions, as their engagement is often underrepresented in autism research. The study concludes that encouraging paternal participation in mindfulness-based parenting programmes can enhance both parental outcomes and child development in families affected by ASD.

Ilg *et al.*, (2018) developed and assessed a parent-training program among young children diagnosed with ASD on the principles of ABA. The parents continued to learn behavioural intervention methods to handle disruptive behaviors from their children, as well as to improve the adaptive and communication skills of their children. The constructs measured were the parenting stress, level of knowledge regarding ASD and behaviour interventions possessed by the parents, depressive symptoms of parents, adaptive functioning of the children, and their problem behaviours. In addition, parents were also asked about their perception of the social validity of the programme in terms of the methods and their acceptability, adequacy of objectives, and satisfaction. The results demonstrated that parents showed a rise in their knowledge regarding ASD and behaviour interventions when assessed in the post-test phase.

Stahmer *et al.*, (2017) studied the perspective of parents and the perception of feasibility regarding parent training provided by community providers. The data illustrated that parent training given by community providers was received positively by them and was also a feasible method. The parents found the intervention useful and also understood the benefits it had on their children.

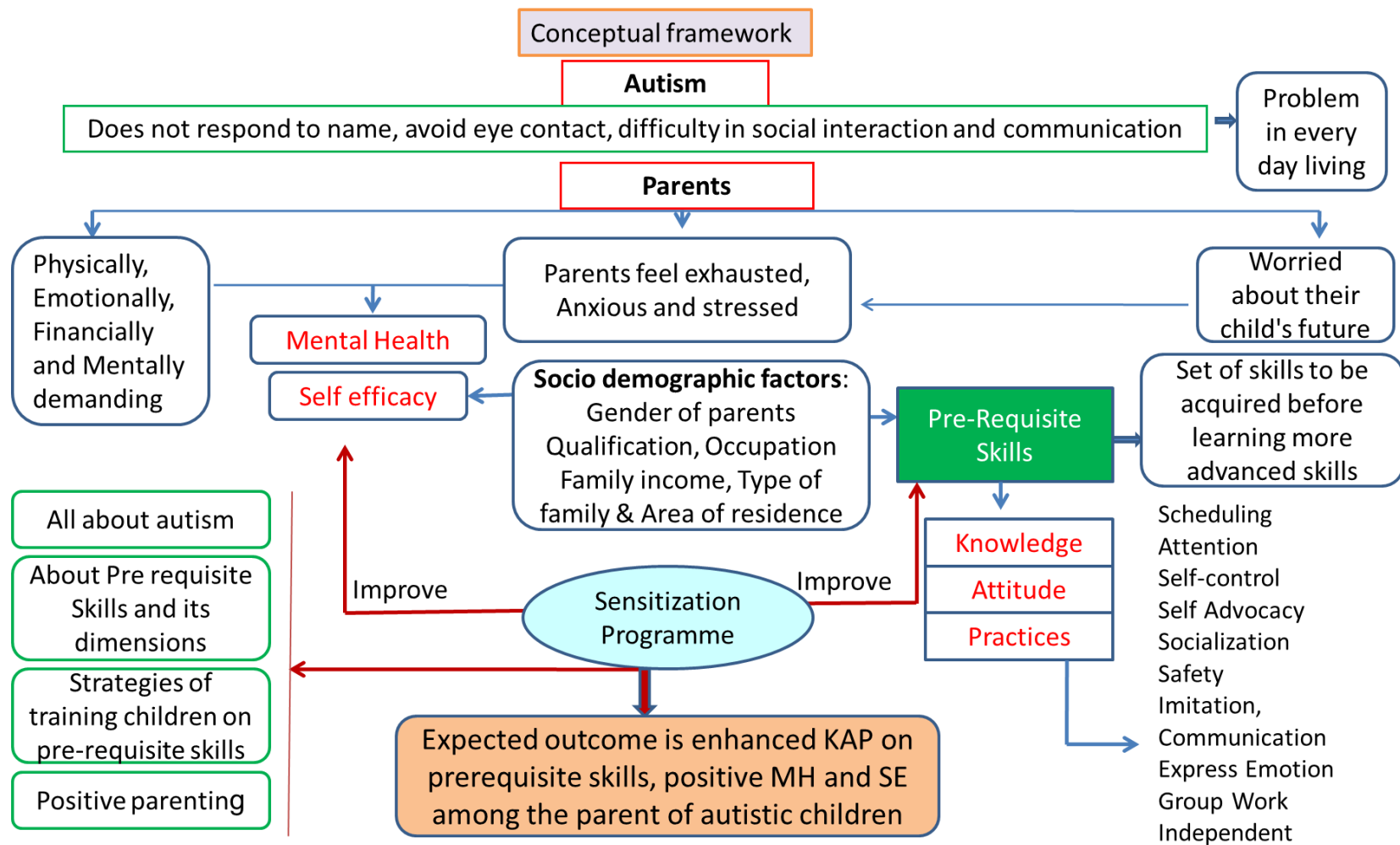
Rollins (2017) investigated the Pathways Early Autism Intervention, which is a translational parent-mediated NDBI mainly for toddlers who have ASD. A pathway fits the service delivery model and principles of Texas' state-funded Early Childhood Intervention (ECI) programmes. Pathways proved to have higher effectiveness than other ECI programmes in terms of enhancing early foundational social communication skills, as well as in lessening parental stress among culturally and economically diverse toddlers with ASD. Therefore, Pathways demonstrated promising results in being an effective intervention for ASD, with the possibility of even being implemented in ECI programmes funded by the public.

Brown and Woods (2016) explored the relationship of triadic nature that exists between parent, child, and the interventionist in a parent-implemented communication specific to toddlers with Down syndrome (DS), ASD, or developmental delays (DD). Through time-window sequential analysis, it was observed that parents were more inclined to implement communication methods during or after coaching methods that prompted the active role of parents. Children were also more inclined to utilize targeted communication skills right after responsive parent interactions. Intervention took place in similar frequencies across play and non-play routine contexts.

It has been established that parents' education and parent training programmes may increase the positive well-being of parents while also reducing the number of negative developmental outcomes that occur for the child.

## **9. Conceptual framework of the study**

With a backdrop of the facts reviewed in the literature survey, the present study focuses on the challenges faced by autistic children and their parents, emphasizing the importance of prerequisite skills in improving their lives. Autistic children often struggle with social interaction, communication, and daily living tasks, leading to difficulties in their everyday lives. Parents raising a child with autism face physical, emotional, financial, and mental challenges, often experiencing exhaustion, anxiety, and stress, which negatively impact their mental health (MH) and self-efficacy (SE). Additionally, parents worry about their child's future, but these concerns can be reduced by introducing prerequisite skills. Assessing parents' knowledge, attitude, and practice (KAP) regarding these skills is essential, as their KAP, MH, and SE can be influenced by various socio-demographic factors. It is important to determine whether these factors have an impact, as this knowledge will guide the development of a sensitization programme for parents. This programme aims to enhance their understanding of prerequisite skills, improve mental health, and strengthen self-efficacy. Through training and awareness sessions, parents will gain the necessary skills to support both their child's development and their own well-being. The expected outcome is improved KAP on prerequisite skills, better mental health, and increased self-efficacy among parents of autistic children



**Figure No. I Conceptual Framework of the Study**