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Review

# Relationship Between Parenting Educational Styles and Well-Being in Families with Autistic Children – A Systematic Review

Elena Benseny Delgado <sup>1,2,\*†</sup>, Wenceslao Peñate Castro <sup>3†</sup> and Alicia Díaz Megolla <sup>4†</sup>

<sup>1</sup> Department of Psychology, Sociology and Social Work, Universidad de Las Palmas de Gran Canaria, Campus de Tafira, Gran Canaria, Spain.

<sup>2</sup> PhD student at the Universidad of La Laguna, Faculty of Psychology and Logopedy, Tenerife, Spain.

<sup>3</sup> Department of Clinical Psychology, Psychobiology and methodology, Universidad de La Laguna, Campus de Guajara, Tenerife, Spain; wpenate@ull.edu.es

<sup>4</sup> Department of Education, Universidad de Las Palmas de Gran Canaria, Campus del Obelisco, Gran Canaria, Spain; alicia.diaz@ulpgc.es

\* Correspondence: elena.benseny@ulpgc.es

† “These authors contributed equally to this work”.

**Abstract:** The prevalence of diagnosed cases of autism has increased rapidly, which raise interest in studying the variables related to the well-being of these families. The purpose of this paper is to review recent literature on other variables related to family well-being such a parenting styles. We conducted a systematic review using PRISMA check list and bias assessment ESTROBE with the aim of analyzing if the concepts of autism, well-being and parenting style are related. We screened 753 references, 16 full text articles and abstracts were read. It was identified that authoritative parenting style, those based on warmth, establishing relationships and emotional bonding, and low expressed emotion were positively related to family well-being. On the other hand, authoritarian, permissive and overprotective styles, as well as critical, punishing and training-based were negatively associated with well-being and quality of family life.

**Keywords:** Autism spectrum disorder; parenting styles; family well-being; quality of life; satisfaction with the parental role

## 1. Introduction

The growing increase in the prevalence of Autism Spectrum Disorders (ASD) in recent years has become a topic of research including primary research, meta-analyses, and systematic reviews (Alcantud et al., 2016) [1]. Among the highlights of these studies is the presence of high levels of stress in parents (Abidin, 1995 [2]; Dabrowska & Pisula, 2010 [3]; Hayes & Watson, 2013 [4]; Huang et al., 2014 [5]); and the need to identify the variables that contribute to family well-being as facilitators of the proper development of these children (Hickey et al., 2020) [6]. Estress-resilient attributes of parents with children with developmental disorders are considered one of the factors that have a decisive influence on the behavior of parents related to raising their children and that affect greater well-being and life satisfaction (Gavín-Chocano et al., 2024)[7]. Parents raising a child with ASD face daily challenges in meeting their specific needs (Karst & Van Hecke, 2012) [8]. The unique demands of autism require parents to reorganize their parenting responsibilities and roles (Hock et al., 2012) [9], which can affect family life (Gau et al., 2012)[10]. Families are a key factor in inclusive education because their children can play an important role in the inclusion of other children with ASD (Gómez-Marí et al., 2022) [11]. Likewise, the sense of parental competence in these cases is related to their expectations and family support needs (Arellano et al., 2019) [12].

There is little literature that studies family well-being in the ASD population. Satisfaction with parental role and parenting styles are related to the management of stressors, which may benefit the harmonious development of children with ASD in a healthy family environment (May et al., 2015 [13]; Ventola et al., 2017 [14]; Zhou & Yi, 2014 [15]). The temperament of children can be conditioned

by maturation and environmental aspects (Shirley, 1933) [16], hence the importance of contemplating a transactional model that emphasizes the interaction of the child with his/her environment, in a relationship of mutual influence (Sameroff, 2009) [17]. Moreover, some tendencies direct their attention towards prenatal pedagogy, in view of the possibility that the mother, with her thoughts, feelings and way of life, is educating the child before birth (Verny & Kelly, 1988) [18]. Such evidence makes research into parental satisfaction and parenting styles more than reasonable.

Although we cannot establish a causal relationship between the symptomatology of autism and parenting styles, as it is a complex disorder with a neurobiological basis (Silver & Rapin, 2012) [19], the influence of the lack of reciprocal relationships and communication of children with ASD on the parenting styles of their parents has been studied. A decrease in warmth and more protective and controlling behaviors towards their children was observed (Baumrind, 1996 [20]; Sameroff, 2009 [17]). In addition, positive parenting and the quality of parent-child interaction have been linked to higher social competence in children with ASD (Dyches et al., 2012) [21].

Taking into account the above, our objective is to identify, through a systematic review, the relationships of parenting style with the well-being of families with children with ASD. In this review, we will analyze the concepts of parenting styles, educational styles, and/or parenting styles interchangeably. We consider the diagnostic change of the last 10 years produced by the publication of DSM 5 (American Psychological Association, 2013) [22].

## 2. Materials and Methods

This systematic review is based on the PRISMA checklist (Page et al., 2020) [23]. First, the identification, selection, eligibility, inclusion and evaluation of biases were carried out to obtain relevant articles and then the references were analyzed using the Mendeley bibliographic manager.

### 2.1. Participants

Participants were parents, primary caregivers of children with and without ASD. The age of the children ranged from 2 to 22 years. The samples belong to different countries: USA, India, Indonesia, Thailand, Japan, Italy, Portugal, Greece, Belgium, Netherlands, China, Hong Kong and United Kingdom. The age of parents is described in averages in 11 of the studies, older than 18 years in the study by Likhitweerawong et al. (2022) [24], and the Dieleman et al. (2018) [25] is the only study where both the age of the parents and the diagnosis of the children are specified. Parental age is not specified in the studies by Walsh et al. (2013) [26], Charman et al. (2021) [27] and Tripathi (2016) [28]. Other studies included siblings without a diagnosis.

### 2.2. Diagnosis

Of the 16 studies, 5 were based on the DSM 5 (2013) [22] diagnostic criteria for ASD and another 3 on the ADOS assessment instrument, using the DSM-IV [22] diagnostic criteria as a reference. In all cases, the diagnosis was made by a mental health professional.

### 2.3. Selection Criteria

#### 2.3.1. Inclusion

- Studies that relate parenting style to the well-being, satisfaction and/or quality of life of families with children with ASD.
- Published in the last 10 years including the diagnostic change from DSM IV to DSM 5 (2013) [22].
- Written in Spanish or English.
- Empirical articles (qualitative and/or quantitative).

#### 2.3.2. Exclusion

- Articles that referred to disability but did not specify ASD.
- Those that did not include all three variables (family well-being, parenting style, and ASD).
- Those that considered child satisfaction or marital satisfaction; and those that included only satisfaction with social or medical services were eliminated.

#### 2.4. Identification and Selection of Studies

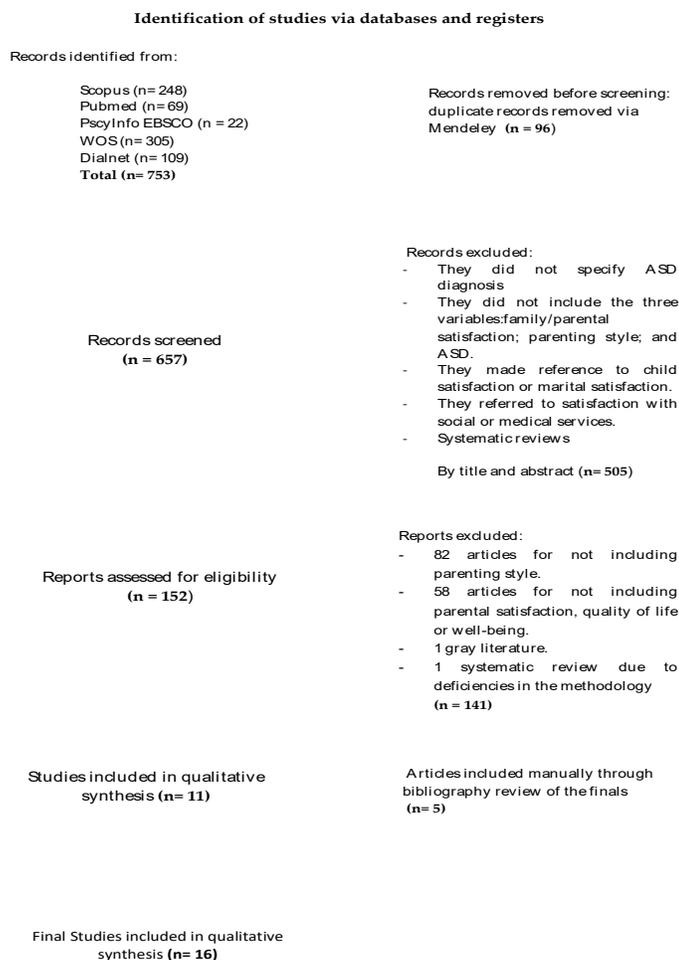
The search was conducted on the following search engines: Scopus (248 articles), Pubmed (69), PsycInfo (EBSCO) (22), Web of Science (WOS) (305) and Dialnet (109). Different keywords were introduced as "Autism" can include terms such as "ASD" (Autism Syndrome Disorder), "Asperger's", "Autistic Disorder". Parenting styles or parenting styles "teaching style" and satisfaction with the parental role. The last search date was in April 2023. Finally, a final search was performed manually. For the application of the selection criteria, the first author performed the initial screening. In case of doubt, the other authors were consulted, and the decision was made by consensus.

#### 2.5. Bias Assessment

The first author carried out the initial screening and the second authors carried out the criteria of safety, inclusion, exclusion and the doubts that arose. The methodological evaluation was carried out by applying the STROBE bias analysis scale (González de Dios et al., 2012) [29]. In the case of qualitative studies, the items were analyzed when applicable.

### 3. Results

A total of 657 references were initially identified after removing duplicates. Of these, 16 were finally selected. Figure 1 shows the flow chart with the selection process followed.





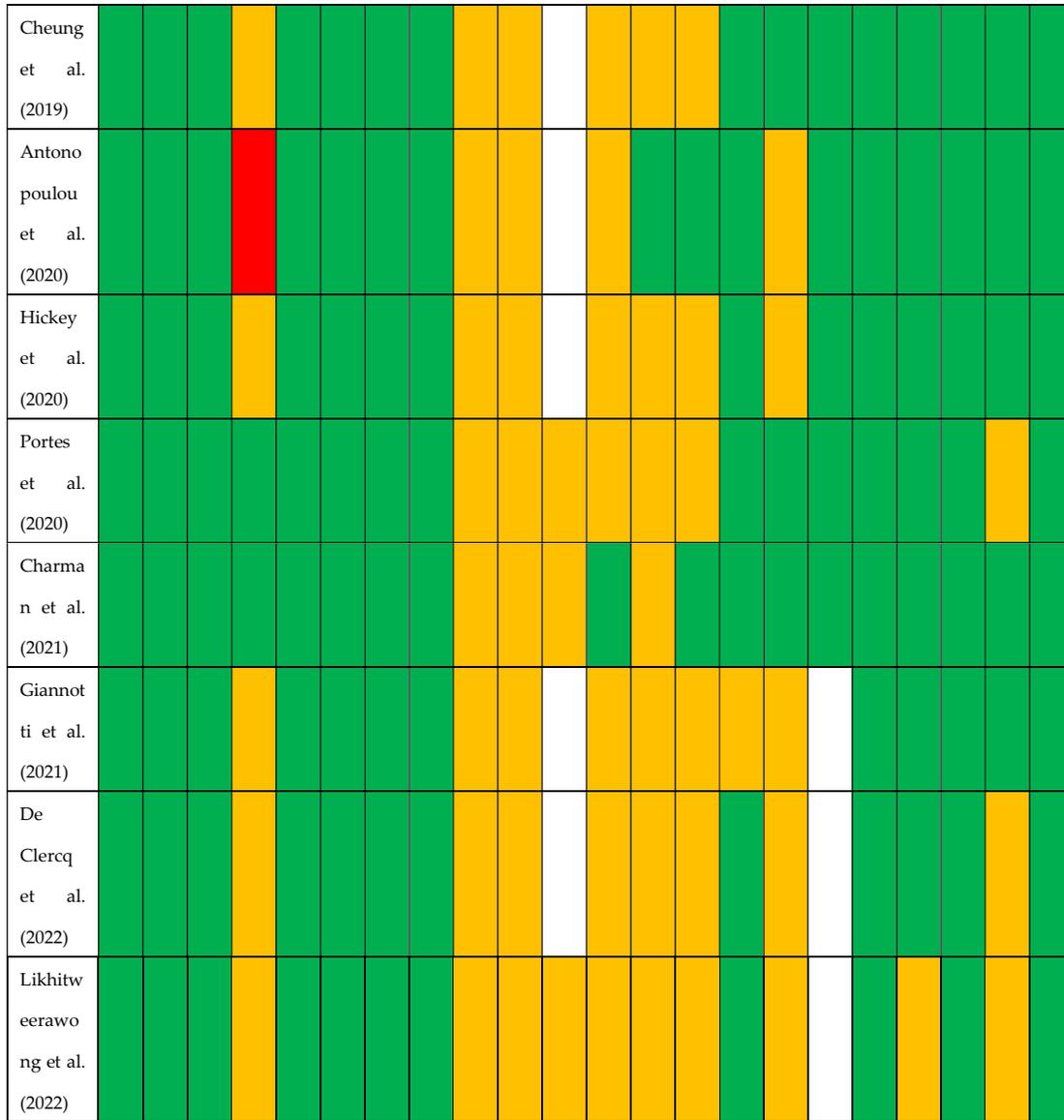


Figure 2. ESTROBE Bias Analysis.

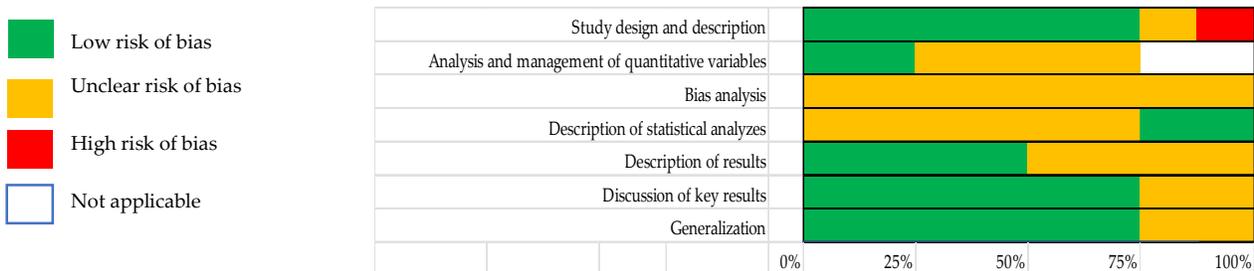


Figure 3. Risk of bias graph of included studies.

Making a specific analysis and taking into account the limitations pointed out in the studies, the main methodological problems are based on not being able to establish causal relationships because they are descriptive and associative observational studies. Thus, the works of Antonopoulou (2020) [30], Cheung (2019) [31], Dieleman (2018) [25], Riany (2017) [32] and Zhou and Yi (2014) [15], are

qualitative case studies with limitations to establish causal relationships. In the study by Van Steijn et al. (2013) [33], the objective speaks of influence and its design (correlation analysis and post hoc analysis) does not allow it. Another example of problems when it comes to establishing the effect can be found in de Clercq et al. (2022) [34], as it is not clear whether parental stress drives Expressed Emotion (EE) or whether EE is a determinant of stress.

Studies that have shown shortcomings in defining participants or failing to explain the loss of participants were those by Charman et al. (2021) [27], Cheung et al. (2019) [31], De Clercq et al. (2022) [34], Dieleman et al. (2018) [25], Giannotti et al. (2021) [35], Hickey et al. (2020) [6], Likhitweerawong et al. (2022) [24], Portes et al. (2020) [36]), Van Steijn et al. (2013) [33].

In the studies by Antonopoulou et al. (2020) [30] and Tripathi (2016) [28], they do not explicitly report on design. None of the studies explicitly identified a source of bias identification. In general, the limitations of except are described in that of Likhitweerawong et al. (2022) [24] and Tripathi (2016) [28].

The studies that have the most shortcomings in showing descriptive data in the results are those of Cheung et al. (2019) [31], De Clercq et al. (2022) [34], Dieleman et al. (2018) [25], Giannotti et al. (2021) [35], Hickey et al. (2020) [6], Likhitweerawong et al. (2022) [24] and Portes et al. (2020) [36]).

Studies that do not dispute the generalizability of their results are those by De Clercq et al. (2022) [34], Likhitweerawong et al. (2022) [24], Portes et al. (2020) [36], and Tripathi (2016) [28]).

Taking into account the above, it seems that the studies with the most methodological strengths are those of Walsh et al. (2013) [26] and Conti (2015) [37], and those with the most weaknesses are those of Dieleman et al. (2018) [25], Likhitweerawong et al. (2022) [24] and Tripathi (2016) [28].

### 3.3. Summary of Extracted Data

Table 1 shows the summary of the articles reviewed, classified by citation, participants, objectives, and results. Results related to the objective of this review are noted.

**Table 1.** Main Characteristics of the Selected Studies (Appendix B2)

### 3.4. Relationships between Study Variables

Responding to our objective (relationship between well-being and parenting style in ASD), we can determine that family well-being is positively related to authoritative style, warmth, relationship building, affective bonding, priority in relationship building, and low EE. Likewise, styles based on overprotection, permissiveness, criticism, authoritarianism, punishing, training-based and high EE are related to poorer family satisfaction and well-being, frustration, stress and anxiety in parents that is reflected in children and aggravate the symptoms of ASD. This relationship is present in all studies except that of Xu et al. (2014) [38].

Family well-being was negatively associated with anxiety and stress, with parents of children with ASD experiencing significantly higher levels of stress (Antonopoulou et al., 2020 [30]; Likhitweerawong et al., 2022 [24]), less personal freedom, and more social isolation (De Clercq et al., 2022 [34]; Dieleman et al., 2018 [25]), compared to parents of children without ASD (Riany et al., 2017) [32]. When the mother's level of parenting stress is high, this stress can spill over into the couple's relationship and result in fathers being less involved and less warm with their children, while when it is low, the mother facilitates the father's warmth by planning family activities (Hickey et al., 2020) [6].

Stress was related to parenting styles, the more protective parents were, the more stress they experienced and vice versa (Walsh et al. 2013) [26]. In addition, more permissive and less authoritative styles were associated with higher levels of stress (Tripathi, 2016) [28]. Similarly, an authoritative and conscious parenting style is related to lower levels of parental stress, less perceived discrimination for having a child with ASD (affiliation stigma), and fewer behavioral problems of their children (Cheung et al., 2019) [31].

Parents of autistic children tended to express more criticism and less warmth towards their children, which was associated with frustration and stress in key psychological areas, such as autonomy, relationship, and competence (De Clercq et al., 2022) [34]. Parents who prioritized training showed more stress and frustration if they did not observe remission of ASD symptoms in their children (Zhou & Yi., 2014) [15]. Family stress levels are associated with high EE, which, in turn, is

related to insensitive parenting behaviors that cause challenging behaviors in their children (De Clercq et al., 2022) [34].

Lower levels of stress are associated with more sensitive, responsive, and affectionate parenting by both mothers and fathers (Cheung et al., 2019) [31]. A negative association between anxiety and authoritative parenting style is observed in parents of children with high-functioning autism (Antonopoulou et al., 2020) [30].

On the other hand, parents' parenting styles seem to be influenced by factors related to their children's behavior and the stress that this behavior can generate (Walsh et al., 2013 [26]; Tripathi, 2016 [28]). These factors include overprotective parenting styles and manifestations of grief on the part of children.

It is suggested that the child's pathology may lead parents to adopt a permissive parenting style rather than other styles (Van Steijn et al., 2013) [33]. This style may be related to cognitive and social development problems in children with ASD and ADHD (Van Steijn et al., 2013) [33]. The severity of the disorder and adolescence were associated with permissive and authoritarian parenting styles (Tripathi, 2016) [28]. Overall, we highlight the complex interplay between children with ASD, parenting styles, and the severity of autism, which can have a significant impact on parenting and the family well-being.

Another related variable was parents' mental health and family well-being. Parental depression has been linked to behavioral problems in children and decreased quality of family relationships (Xu et al., 2014) [38]. The study by Van Steijn et al. (2013) [33] related parenting styles to the pathologies of both parents and children. We concluded that children with ASD or ADHD benefited most when their parents shared similar symptoms of these disorders. However, studies do not provide solid evidence on how parents' pathology affects empathy and closeness in the relationship with their children (De Clercq et al., 2022 [34]; Hickey et al., 2019 [6]; Van Steijn et al., 2013) [33].

Age can influence parenting styles, with a significant increase in stress observed for parents of school-aged children with ASD (Likhitweerawong et al., 2022) [24]. Parents encountered more educational challenges at adolescent ages, which was related to a more permissive parenting style and behavioral problems in their children, who benefited from a structured environment (Tripathi, 2016) [28]. At an early age, parents used a parenting pattern that oscillated between the role of "coach" and "caregiver," but as their children grew older, they prioritized "relationships" more (Zhou & Yi, 2014) [15]. Despite the fact that ASD is more common in boys than in girls, no differences were found in relation to the gender of the boys. However, differences were observed in the parenting styles of fathers and mothers. Having high ADHD in fathers and high ASD in mothers was associated with a predominance of the permissive style in relation to the unaffected child (Van Steijn et al., 2013) [33]. In general, fathers were less affectionate and warm with their children than mothers (Giannotti et al., 2021) [35]. It was also observed that many mothers had a more permissive style than their male partners, and within the group of mothers, those who had children with ASD scored higher on positive parenting compared to mothers of children without ASD (Tripathi, 2016) [28].

Culture seems to play an important role. Thus, Japanese fathers present higher levels of stress related to parental competence than Italian fathers, who were more receptive and affectionate. Equally, parents who support a collectivist approach might be more likely to minimize the expression of unpleasant effects or inappropriate childhood initiatives, being perceived as competent by the community (Giannotti et al., 2021) [35]. In Indonesia, parents of children with ASD tend to use reasoning less compared to typically developing parents, possibly due to the verbal comprehension difficulties associated with ASD (Riany et al., 2017) [32]. Cultural beliefs, such as the idea that having a child with ASD is a punishment for past actions, can limit the support parents of these children receive (Riany et al., 2017) [32]. The study by Likhitweerawong et al. (2022) [24] suggests that, although there are differences between Thai and Western cultures, the finding of less authoritative and more permissive parenting in children with ASD is similar in both cultures. This may be related to the lack of social relationships due to children's disruptive behaviors and the stigmatization of having an autistic child, especially in Asian culture.

#### 4. Discussion

Our initial objective was to analyze the state of the question of the relationship between the well-being of families with children with ASD and its relationship with parenting styles. We found few

studies that considered these three variables (ASD, parenting styles, and family satisfaction or well-being). However, it was observed that quality of life and parent-child satisfaction are positively related to authoritative style, warmth, relationship building, affective bonding, priority in relationship building, and low EE.

In view of the results, it seems more than advisable to take care of the mental health and well-being of parents of children with ASD for the benefit of family well-being and even the reduction of symptoms. Take into account the comorbidity of ASD and ADHD of parents and children. High EE in parents is associated with increased ASD symptoms, which creates a negative cycle (De Clercq et al., 2022 [34] & Cheung et al., 2019 [31]).

The results indicate the need for greater social support, avoiding social isolation, positive feedback on their work as parents, including the rest of the family in the evaluation of well-being and family respite. Cheung et al., (2019) [31], suggest a link between well-being and prosocial behaviors, such that parents who reported greater well-being were more likely to engage in prosocial behaviors. At the same time, children whose parents demonstrated more prosocial behaviors showed more prosocial behaviors (Bandura, 1977) [39]), and these could serve as a mediating variable for parents' mental well-being. Illias et al., (2018) [40] argue that single parents have even more difficulties in their social relationships. Likewise, couples who did not recognize the partner's good practices had more problems as a couple and their children showed more behavioral problems (Portes et al., 2020) [36].

It is also important to direct our attention towards prenatal pedagogical education, bearing in mind that the mother influences the education and care of her child before birth (Verny & Kelly, 1988) [18]. As Rodrigo et al. (2015) [40] state, positive parenting promotes a new attitude by highlighting the importance of educating from affection, having a positive perspective of their parental role, recognizing that children need a structured, stimulating and empowering environment, and away from the use of violence to fully develop. This approach identifies parents' support needs for positive parenting and works with families to strengthen their capacities to achieve appropriate developmental goals.

The limitations of our review focus on the few studies found with a common criterion in the diagnosis of ASD following the diagnostic criteria of the DSM 5 that included the three main concepts (ASD, parental satisfaction and parenting style). Our interest was to include articles from the last ten years, coinciding with the conceptual diagnostic change of ASD of the DSM 5, however, some articles, despite being published after this diagnostic update (2013), continued to use previous criteria. Another difficulty was the definition of "parenting style" and the variability of this concept in the existing literature, as well as the concept of satisfaction with the parental role, which was expanded with family well-being and quality of life, although there may be conceptual differences between them.

In short, raising awareness and training parents in more effective and healthy parenting styles could be a line of work for the future. Adopting an authoritarian parenting style with excessive use of punishment and little affection can increase behavioral problems. It seems that the adjustment of parents' emotional expression, their expectations, perceptions and frustrations, is related to a better perception of their children and they will be more tolerant to their symptoms, which in turn favors the development of their children, the improvement of their symptoms and the affections in the parent-child relationship. Adopting an authoritative parenting style based on warmth, relationship with children, conscious and compassionate parenting is associated with lower levels of family stress and greater family well-being.

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## Appendix 2

**Table A1.** Main Characteristics of the Selected Studies.

Author	Participants	Purpose	Results
Shor et al. (2013)	mothers of autistic children (2-18 years old)	evaluate pain and problematic behavior of autistic children as a predictor of parenting behavior, and parenting style and stress interaction with pain and behavior.	After pain in children increases problematic behavior and It implies more stress in parents and a more overprotective style. pain is combined with overprotective style, parental stress is higher.
Steijn et al. (2013)	Fathers and 96 mothers with possible ASD and/or ADHD. 96 children with ASD + ADHD (2-20 years), siblings not diagnosed with a disability.	measure the effect of the diagnosis of ASD or ASD+ADHD on undiagnosed children in parenting styles.	More permissive parents with children with ASD. ADHD in fathers and ASD in mothers leads to more permissiveness with non-autistic children.
St et al. (2014)	Parents. 24 boys and 9 girls ASD (2.5-5 years old).	examine the correlation between parental depression and child behavior problems and parenting style mediation in families with children with ASD.	Permissive style correlated with more behavioral problems and depression than authoritarian and permissive style. Authoritarian and permissive styles alternate, but they do not correlate with behavioral problems in children or depression in parents.
Hu and Yi (2014)	Fathers and mothers. 27 boys and 1 girl ASD (6.75 mean years)	Understand parenting styles of parents with ASD children and discuss parenting experiences on how to manage symptoms.	Relationship-based style are warmer, less stressed, more emotionally regulated, and more tolerant of the symptoms of children with ASD, as opposed to training-based style, alternation, or self-isolation.
Li (2015)	mothers of autistic children and 46 mothers of non-autistic children (5-18 years)	Comparison of compassionate parenting goals and self-image in the experience of mothers of children with ASD.	Compassionate parenting is more beneficial than self-image-based parenting. Mothers of autistic children showed greater compassionate parenting but lower life satisfaction than mothers of non-autistic children.
Mathi (2016)	Parents and 320 children with ASD (5-22 years old).	Analyze parenting style of parents with different levels of stress and children with ASD	Fathers are more permissive than mothers. Mothers and fathers are more authoritarian the greater the severity of symptoms. More permissive style in pre-adolescence and higher stress in adolescence.
Wang et al. (2017)	mothers, 71 fathers and 247 sons and 212 daughters non-autistic children. 86 mothers, 14 fathers and 71	compare parenting styles, parent-child relationships, and social support in parents of	Parents of autistic children are more authoritarian, less warm, less relational parenting, and more assertive power in front of a group of non-autistic children.

	mother of autistic sons and 30 autistic daughters (3-10 years).	autistic and non-autistic children.	nts of autistic children have less social support than the group non-autistic children.
eman et al. (2018)	mothers, 5 fathers, 11 boys and 7 girls with ASD (6-17 years).	raction between parenting styles and experiences of parents and how ASD affects the child.	ual influence: parenting style (based on autonomy, structure and support in relationships) and feedback from children. The style depends on the needs of the parents.
ung et al. (2019)	mothers, 25 fathers and 111 sons and 25 daughters with ASD (mean 9.39 years).	ge of stress in parental characteristics (disposition to conscious parenting, stigma and mental well-being) and behavioral adjustment of children with ASD.	stress promotes mindful parenting, higher quality relationships, greater well-being, fewer behavioral difficulties, and more prosocial behaviors in children with ASD.
onopoulou et al. (2020)	mothers and 16 fathers with ASD; 40 mothers and 10 fathers without ASD (4-12 years).	relation between anxiety, expression of emotions, coping strategies, and parenting styles of parents of children with and without ASD.	nts with ASD had greater negative emotional expression, higher levels of anxiety, permissive style and less authoritative than parents of children without ASD. Positive emotional expression predicts coping strategies and supportive parenting styles in both groups of parents.
key et al. (2020)	stable couples with children with ASD (5-12 years).	assess whether parental stress and depressive symptoms in parents predict the emotional quality of the relationship between parents and children with ASD	thers had more stress and depression than fathers, who predicted more criticism. Greater stress in mothers influences the father's self-perception of warmth. Increased stress in parents is related to criticism.
es et al. (2020)	athers and 45 mothers, 39 sons and 44 daughters with ASD (3-7 years).	relation between behavior of children with ASD, parenting styles and co-parenting, as a function of the behavior of children with ASD.	nts of children with behavioral problems present more authoritarian/permissive parenting and negative impacts on co-parenting. Parents of more prosocial children have more authoritative parenting and better quality of co-parenting. Couples who do not recognize good practices in their partners, more relationship and behavior problems in children.
rman et al. (2021)	mothers, 3 fathers and 2 grandmothers with	ibility and efficacy of parental behavioral	and hyperreactive practices are associated with increased

	children with ASD (4 - 8.11 years).	intervention for emotional and behavioral problems in children with ASD.	stress and lower parental well-being.
Montotti et al. (2021)	Sample: 47 mothers, 45 fathers, 40 boys and 7 girls ASD. Japan Group: 47 mothers, 42 fathers, 38 boys and 9 girls with ASD (mean 8.9 years).	Differences in parental stress and parenting style between Italian and Japanese mothers and fathers of children with ASD; and the predictive role of culture, sociodemographics, and child characteristics on parental stress and predictors of parenting style.	These fathers (not mothers) have more stress and less commitment in parenting style than Italians. In both cultures: mothers have more social interaction with their children than fathers, and more severe ASD and more stress in parents. Japanese culture, male gender, and stress are related to dysfunctional interaction and predict parenting style.
Clercq et al. (2022)	Parents: 67 children with Cerebral Palsy (CP) (mean 12.4 years), 54 children with Down syndrome (DS) (mean 13.12 years), 159 children with ASD (mean 10.8 years) and 167 children without disabilities (mean 13.3 years).	Examine the family's emotional climate and relationship with stress and parental behaviors in ASD, CP, DS and without disabilities.	Parents without disabilities, less Emotion Expressed. Parents of children with disabilities, more responsive parenting. Parents with ASD have more Expressed Emotion, more stress, and hyper-reactive parenting than DS and CP (more critical and less warmth). With and without disabilities, parental warmth is related to children's well-being.
Witweerawong et al. (2022)	Caregivers of children with ASD and 63 boys and 12 girls with ASD, 43 boys and 20 girls without ASD (6-12 years).	Assess parenting style, stress, and quality of life of caregivers of children with and without ASD.	For caregivers: more stress, depression, anxiety, and lower quality of life; parenting style that is more permissive and authoritarian, and less authoritative than without ASD. Negative correlation between quality of life of children with ASD and authoritarian and permissive parenting styles. More stress with school-age ASD children.

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