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Parental Coping Styles of Individuals with Autism Spectrum Disorders: A Report from Iran

Sayyed Ali Samadi

Abstract

Coping with challenges associated with caregiving for a child with autism spectrum disorders (ASD) could be a parental stressful task. The present study is aimed at exploring the coping styles adopted by parents to handle the demands of this diagnosis for their children. To understand the parental coping style of Iranian parents who are caregiving for their offspring with ASD, a mixed-method approach is considered in which deep interview and self-report questionnaires were used. In all, 43 parents were recruited from different services for individuals with ASD across Tehran. The finding showed that ASD had multiple impacts on Iranian parents' general well-being. They also used less effective coping styles to meet the associated demands of caregiving for a child with ASD. These impacts were similar to reported findings for parents in other countries, but there were some special features of parenting that might be rooted in the Iranian culture or special contexts such as limitation of the formal and informal supports and services.

Keywords: coping style, autism spectrum disorders (ASD), parental general well-being, autism parenting, Iran

1. Introduction

As it is defined by the American Psychiatric Association, individuals with autism spectrum disorders (ASD) exhibit qualitative impairments in communication and social interaction along with restricted and repetitive behavioural patterns [1]. These features mostly negatively impact the parents, resulting in poor general health as a consequence, impacts such as lower levels of family functioning [2] and a lower level of satisfaction with caregiving [3]. In a study on Middle Eastern mothers' reaction after the diagnosis of developmental disabilities for their children in the United Arab Emirates (UAE) [4], it was reported that giving birth to a child with disabilities was a real threat to their marital stability and their general well-being and it was a source of stress and challenge for them. It is also found that when mothers managed to adjust with the imposed position within the family and to fulfill their maternal duties, the results will be strengthening and centralizing the position of both mother and the child with a developmental disability in the family context. Similar findings reported among parents of children with a developmental disability (DD) such as cerebral palsy (CP) in Iran [5].

From the available data on comparison of parents of children with different conditions of development, it was reported that parents of children with ASD experience higher levels of challenges such as stress and general well-being problems compared to parents of typically developing children and parents of children with other developmental disabilities (i.e. intellectual disability, ADHD and cerebral palsy) [2, 6, 7].

The wealth of data has examined factors associated with adverse impacts on the general well-being of parents bringing up a child with ASD. Hastings and colleagues [8] have found that a positive linear relationship exists between the severity of the child's ASD symptoms and boosting mothers' stress level. From a literature review, it is concluded that a lack of social support as an important factor predicts maternal general well-being problems. These impacts can be in different ways; on the one hand, there are reports [9] on existing negative correlations between the level of parental stress and the degrees of available social support for mothers, and on the other hand, it is reported that some types of formal support might be considered as a stressor which forces parents to adopt negative coping styles.

As an example, professionals might place extra demands on parents to accomplish prescribed tasks with their children. These groups of parents are in contact with many different professionals and they can often be confused as to what each person's role and demand is in the care and rehabilitation and training their child [10, 11]. Consequently, interactions with professionals might prove to be stressful as well as supportive experiences [10]. The importance of developing and employing a well-functioning coping style for the parents of children with ASD has been stressed by Sivberg [12] and has been replicated more recently by other professionals in the field of mental health and resilience [13]. Coping style is an action, a series of actions, or a thought process used in meeting a stressful or unpleasant situation or in modifying one's reaction to such a situation. Based on the American Psychological Association (APA) [14] online dictionary, coping style typically involves a conscious and direct approach to problems, in contrast to defence mechanisms. As an example of coping strategy, the parent might decide to be careful not to expect extra assistance in caregiving for his/her child with ASD and starting to adopt a consistent and mutually beneficial approach with the child with ASD, which is classified as a 'problem-focused' or positive coping strategy. While the wealth of findings supports the applicability of positive coping style and its correlation with better adjustment to different challenging situations such as caregiving for an offspring with chronic illnesses or disabilities [15], findings by Higgins and colleagues [16] revealed that such positive adopted coping style did not necessarily appear to be related to other family qualifications such as family functioning, marital quality, marital happiness and parental self-esteem. Their justification regarding this unexpected finding was that the particular stresses and coping style associated with caregiving for a child with ASD, or that the reality of living with a child with ASD was not facilitated by the adopted coping style employed by parents. Altieri and Kluge [17] found that parents who use positive coping styles tended to consider their family as a highly integrated and joined unit. This may mean that as the levels of cohesion increases among the family members, they tend to use more positive coping strategies such as rational style.

Conversely, Dunn and colleagues [18] found that avoidant coping styles, such as distancing and escape, significantly correlated with depression in parents of children with ASD. Further research suggests that elevated stress levels, lack of social support, and ineffective coping styles are among the most dominant predicting factors of psychologically problematic outcomes among parents of children with ASD [19, 20]. Hence, there are reports on the positive side of caregiving for a child with ASD, and Hastings and Taunt [21] found that the positive perception of

parents about children with different severe forms of disabilities such as ASD could help parents to cope with high levels of stress and serve as an adaptive functioning. This aspect might be worth exploring further with parental caregiving to a child with ASD globally.

1.1 The situation of the children with developmental disabilities in Iran

To assess suitability for registration in the first grade of primary school, all Iranian 6-year-old children are required to go through a national screening system administered annually. The evaluation procedure is done under the supervision of the Iranian Special Education Organization (ISEO). The program is extensive and consists of a physical check-up and mental screening undertaken by a general physician and other health professionals. The mental evaluation of the children is done by checking their communication level and readiness for education by an educational counsellor using a nationally devised scale. Every child is individually assessed by different evaluators. Those children who do not pass the screening are referred for a professional evaluation. The outcomes are documented in the children's 'Health Identification Booklet' separately for girls and boys, which are given to their parents and are necessary for registration in the first elementary grade. Based on the results of this evaluation, children are referred to public or special schools for children with special needs such as schools for visual impairment, hard of hearing or intellectually disabled. For children with physical and motor disabilities and high-functioning autism or mild level of disabilities, there are inclusive schools in which children are admitted in public school classes with an appointed assistant (called a shadow trainer) to help the child to adjust to the situation through meeting their individual needs. Children with special needs in some areas due to the absence of special schools might refer to the mainstream schools which are educational centres that have special classes inside a public school. The situation for preschoolers with special needs is different. Kindergartens, preschool, and daycare centres are under the supervision of the Iranian State Welfare Organization (ISWO), and the registration of children with special needs depends on the administrator's decision based on the services available in each centre.

2. The present study

2.1 The rationale for the present study

The rationale for utilizing this study was a dearth of information on the impact of caregiving for a child with ASD on parents' coping style to adjust themselves with associated challenges and demands in less affluent countries with limited support and service. The survey study had the following research objectives:

- i. to understand the different impacts of ASD on parental coping styles based on their explanation obtained from the parents' answers to the interview questions;
- ii. to understand the relationship between parental coping style and children with ASD features, that is, the severity of ASD symptoms; and
- iii. to understand the relationship between parental coping style and other parental qualifications related to their general well-being, particularly family functioning and parental satisfaction with caregiving.

A mixed-method approach is adopted in which both qualitative and quantitative data were used to attain the aims and objectives of the present study based around standardized, self-completed parental rating scales and semi-structured interviews.

The combined approach research method involves integrating quantitative and qualitative approaches to generating new knowledge. Combining methods activates their complementary strengths and helps to overcome their discrete weaknesses [22]. In this type of research, different information will be brought together [23]. The basic presumption is that qualitative and quantitative approaches are compatible with a pragmatist paradigm perspective. The pragmatist paradigm has been gaining popularity since the 1980s [24].

3. Method

3.1 Procedure and participants

A total of 43 parents caring for 43 children with a confirmed diagnosis of ASD were recruited from two different sources in Tehran. The children were officially diagnosed as having ASD based on the psychiatrist who approved a report that is necessary for admission in special schools and clinical service deliveries. All the recruited children from special schools were registered with ISEO, and the children from preschool, kindergartens and daycare centres officially were registered in the ISWO.

- Recruiting parents from schools: three public and private special schools (two public and one private) for children with ASD were approached.
- Recruiting parents from the public and private preschools and daycare centres which provide rehabilitation and educational services on daycare bases: three public and private schools (one public and two private) were approached.

The heads of the special schools and daycare centres were contacted in person with an official letter from the Iranian Ministry of Science, which approved the study and the researcher's identity to explain the study and to get permission to participate in the weekly or biweekly parental sessions at the centre and to distribute announcements and brochures about the study to recruit volunteer parents. Participants in this study had to meet the following criteria:

- parents of children with a confirmed and registered diagnosis of ASD as their main diagnosis;
- parents of children with ASD in an age range between 3 and 17 years;
- parents who were the residence of Tehran; and
- parents who were caring for their child with ASD at the time of the study.

Families had two visits each. They were interviewed by the researcher about the way that they are dealing with the challenges associated with receiving the diagnosis of ASD for their children. Although both parents were invited and allowed to participate in the study, only a small group of couples accepted to participate; therefore, for each child, only one parent's information was considered. When both parents participated, only data of fathers were considered, because internationally there is a dearth of information regarding fathers of children with ASD. Two 90-min

sessions were considered. In the first session, parents were provided with the consent form, the information sheet and data collecting questionnaires and the aims of the study were discussed. In the second session, the interview was performed and the previously provided questionnaires which were completed by them were checked and collected. Therefore, the main aim of the first session was focused on informing parents about the study and resolving any possible queries and handing the self-completed questionnaires. The second session devoted to the qualitative interview that took 45–60 min with a 45–30 min fluctuation to cover the parental questions, reception and hospitality that they culturally obligate themselves to do.

The interview consisted of three open questions on the challenges of diagnosis, their most challenges with their child, and the way that they cope with the demands on them. Each main question had some probes to help parents to explain more and provide more detailed information.

The interview started by reminding the parents that the session would be recorded as they consented in the form they received in the first session. Therefore, all interviews were recorded and transcribed verbatim.

In sum, a group of 43 volunteer parents of children with ASD who consented to be participating in the study was contacted and interviewed. The group consisted of 16 (37.2%) fathers and 27 (62.8%) mothers.

3.2 Parental information

Parental demographic data in this study are presented in the following table (**Table 1**).

3.3 Children information

Parents in this study were caregiving 11 (26%) girls and 32 (74%) boys. The children ranged from 3 to 17 years (mean = 8.2, SD = 2.9). About 39 (91%) children were living with both parents, and 4 (9%) were living with their mothers (**Table 2**). Sixteen children (37%) were the only child and 26 (60.5%) had one or two sibling(s) and there was one child (2%) who had over three siblings. **Table 3** (see below) shows more information about the ASD symptoms severity in children based on their parents' reports and understanding.

3.4 Measures

The five parental scales covered parental general health, reported stress, family functioning, coping style and parental satisfaction with caring for a child with a developmental disability. A specially devised socio-demographic questionnaire was used to collect data about parents' and children's demographic information (i.e. parents and child's gender, living places, parental level of education, profession, ethnicity and families' main wage earner, etc.; see **Tables 1** and **2**). The three scales used to collect data about children's ASD severity were well-validated parent-report instruments that had been used in the past research internationally.

3.4.1 Parental scales

3.4.1.1 Scales with Iranian norms

1. General health questionnaire [25]: this is a 28-item questionnaire recommended for screening the assessment of psychiatric morbidity [26] with calculated reliability through test-retest of 0.80. The calculated Cronbach's α for the present study was 0.93. The reported tests re-test reliabilities in other

Variable	Mothers	Fathers
	N = 27 (%)	N = 16 (%)
Parents' education		
Middle school level	2 (7%)	2 (13%)
High school graduate	15 (56%)	5 (31%)
University education	10 (37%)	9 (56%)
Parents' job		
Education	3 (11%)	6 (37%)
Technical	—	5 (19%)
Commercial	2 (7%)	3 (18%)
Medical	1 (4%)	2 (13%)
Unemployed	21 (78%)	—
Parents' ethnicity		
Fars	18 (67%)	13 (82%)
Turkish	8 (30%)	1 (6%)
Kurdish	—	1 (6%)
Other Iranian	1 (3%)	—
Armenian	—	1 (6%)
Parents' age		
under 30	2 (8%)	—
30–39	16 (59%)	6 (37%)
40–49	8 (29%)	7 (44%)
50–59	1 (4%)	3 (18%)
Single parents		
Yes	3 (11%)	—
No	24 (89%)	16 (100%)
Parents family relationship (marriage between family members)		
Yes	5 (22%)	3 (19%)
No	21 (77%)	13 (81%)
Child primary caregiver		
Mothers	25 (93%)	1 (6%)
Fathers	—	9 (56%)
Both	2 (7%)	6 (38%)
Main wage earner of the family		
Mothers	1 (4%)	—
Fathers	20 (74%)	11 (69%)
Both	6 (22%)	5 (31%)

Table 1.
Parental demographic information, frequencies and percentage based on their gender.

studies ranged from 0.51 to 0.90 and split-half reliability was shown to be 0.95. The reported Cronbach’s α for the Iranian population (calculated on a 751 member sample) was 0.85.

Variable	Frequency	Percentage
Children's age		
3–7	19	44%
8–17	24	56%
Children's gender		
Girls	11	30%
Boys	32	70%
Birth order		
First child	24	56%
Second child	12	28%
Third child	6	14%
Fourth child	1	2%
Type of the schooling which children attend		
Special school	19	44%
Special unit (Clinic)	19	44%
Mainstream school	5	12%
Homeschooling		
Yes	26	60.5%
No	17	39.5%
Verbal communication of children		
Yes	26	60.5%
No	17	39.5%

Table 2.
Demographic data (frequencies and percentages) on children with ASD (N = 43).

Scale	Mean	Standard deviation	Maximum score	Minimum score	Number (%) of children above the cut-off score	Number (%) of children under the cut-off score
Social communication questionnaire (SCQ)	28.11	5.30	39	15	43 (100%)	0
Gilliam autism rating scale (ASD)	80.58	17.8	116	48	32 (74%)	11 (26%)
Autism behavior checklist (ABC)	92.09	21.48	160	54	40 (93%)	3 (7%)

Table 3.
Descriptive statistics (mean, standard deviation, maximum and minimum scores) of the children's scales (frequencies (and percentage) of the children who scored above and below the cut-off scores for ASD based on parental report).

2. Coping styles questionnaire (CSQ) [27]: this scale is a 60-item Likert scale questionnaire assessing coping style of four primary dimensions: rational, emotional, avoidance and detached coping. Rational style is determined by a

16-item scale that assesses the active problem-solving type of coping. Detached coping style evaluated by 15 items' sub-scale assesses participants viewing the problem in a realistic light but with not identifying the problem logically. Emotion-oriented style of coping is determined by 16 items that denote a focus on the negative emotions associated with the subject and one's helplessness to solve the problem. The avoidant coping was evaluated by 13 items that deal with behaviours such as pretending that the problem does not exist and trying to ignore it. In the present study, the reported reliability through Cronbach's α was 0.88 for the rational style of coping style and 0.71 for the emotional style of coping. This amount for avoidant coping was 0.56, and for the detached style, it was 0.42. The obtained reliability through the test-retest correlation was 0.93. This correlation for the emotional style of the coping strategy was 0.96%. The reported internal consistency (range from 0.69 to 0.85) and good test-retest reliability over 3 months (range from 0.70 to 0.80) are reported for the scale. The avoidant and emotion-oriented coping factors are also interdependent. The reported reliability for the Iranian population was 0.81 [28].

3. Parental satisfaction with caring for a child with developmental disability index (PSCDDI) [29]: a 12-item scale was derived from the literature reviews and pilot testing in two subscales of "Personal Satisfaction" and "Child Satisfaction" in Iran. The internal consistency across the six items in each factor was assessed using Cronbach's α . For personal satisfaction, it was 0.88, and for child satisfaction, it was 0.83. These results suggest a high degree of consistency across the items in each factor. Test-retest reliability was assessed by correlating a subsample of the parents' scores ($n = 70$) on the PSCDDI measures calculated on their first and second administration of the scale. Across all 12 items, the Pearson product-moment correlation was $r = 0.82$ ($p < 0.001$).

3.4.1.2 Non-Persian scales without Iranian norms

1. Family functioning [30]: this scale of the general functioning is taken from the McMaster Family Assessment Device. It consists of 12 items: 6 items describe unhealthy functioning and 6 healthy functioning (such as the way that family members deal with a problem inside the family). A high score is an indicative of good family functioning. Parents are asked to give answers to the questions and express their agreement with how well an item described their family by selecting among four alternative responses. For the present study, Cronbach's α was 0.82. A test-retest reliability coefficient was 0.76. The reliability index of this scale by the developers was reported to be Cronbach's α 0.92.
2. The Short Form of the Parenting Stress Index (PSI-SF) [31]: this is a 36-item short version of the full PSI [32]. The Total Stress score on the PSI-SF indicates the overall level of parenting stress a parent is experiencing. In this study, Cronbach's α was 0.87, and a test-retest reliability coefficient was 0.98.

3.4.2 Children's measures

Three different parent-reported measures were chosen to assess the variation in ASD symptoms in children based on parental understanding, and the relationship between the severity of the ASD symptoms and parental measures. These three scales were internationally used for evaluating or screening of ASD and mainly

focused on a single aspect of ASD core symptoms. Three following scales were chosen:

1. Autism Behavior Checklist (ABC) [33]: this scale (57 items) is described as a series of typical behaviours common in children with ASD and aims to assess the presence of these behaviours in an individual. Scores between 54 and 67 points are considered with a moderate probability of the disorder, inconclusive scores range between 47 and 53 points, and scores below 47 points discard ASD. In the current study, the calculated Cronbach's α ($N = 43$) was reported to be 0.82. Volkmar et al. [34] found a split-half reliability of 0.70 for this scale. These authors investigated the discriminating validity of ABC using 94 children with ASD and 63 clinically non-ASD children. The rate of diagnoses was reported to be 78%.
2. Gilliam autism rating scale (GARS2) [35]: this is a behaviour checklist developed for use in people aged 3–22 years. The scale consists of 42 items, each describing a feature of individuals with ASD. The Iranian norm was obtained from 658 children with age ranged from 3 to 22 years (mean age of 11.7 years and SD 4.1); Cronbach's α of 0.95 was reported for all the 42 items; and a cut-off score of over 30 yielded the best balance between sensitivity (0.96) and specificity (1.00) [36]. In this study, Cronbach's α was 0.84.
3. The Persian version of the social communication questionnaire (SCQ) [37] translated by Sasanfar and Ghadami [38]: this is a 40-item, parent-report questionnaire that rates the child on characteristic autistic behaviours derived from the Autism Diagnostic Interview-Revised (ADI-R) [39]. The reported Cronbach's α coefficient for the Iranian sample was 0.82 (based on a sample of 712 children aged 6–13) which is acceptable but lower than α of 0.90 reported for the English scale. In this study, Cronbach's α was 0.82 ($N = 43$ obtained on a sample of 43 members).

3.4.3 Translation of measures

The Persian translation of four scales that had been used in Western countries was identified (see below). Persian translations were also available for two other scales that were used—General health questionnaire and Coping Styles Questionnaire—and these also have Iranian norms. However, for two scales (i.e. Family functioning and the Parenting Stress Index), the translation from English into Persian was done by the researcher with back-translation that was checked by a native English speaker experienced in learning disability to check on the accuracy. In sum, the following scales were used:

1. two parental scales (general health questionnaire and coping styles questionnaire) and two child diagnosis scales (GARS2 and SCQ) were the western scales with Iranian norms which have already been translated and used in Iran;
2. one parental scale was originally developed and standardized in Iran (parental satisfaction with caring for a child with developmental disability index, PSCDDI); and
3. one parental scale (family functioning) and one child diagnosis scale (ABC) was translated by the author into Persian without previous Iranian norms.

4. Results

4.1 Qualitative analysis

4.1.1 Parental coping style based on their explanations

Parental answers to the questions on their coping styles were transcribed verbatim and their answers were categorized according to the four types of coping styles (rational, avoidance, emotional and detached). An independent rater re-categorized the parental responses on 10 randomly selected responses of the parental transcribed answers to the interview questions, and 95% of consensus between the researcher and the independent rater was revealed. **Table 4** shows the frequencies and percentages of each style of coping strategy which parents use to face the problems in their lives.

In reporting parent’s responses, F stands for the fathers and M for the mothers with their given numbers to keep their privacy.

Sixteen parents’ responses (37%) were categorized as ‘avoidance style’:

[F.8] ‘I will take it easy! Similar to Scarlet O’Hara’s personality in the movie ‘Gone with the Wind’ ‘I will think about it later’ I say.

[M.33] ‘I will cover myself in loads of daily routine and duties and keep myself engage with them. There will be no time to think about the problem! I think this is my trick jump in the river of troubles to avoid being engaged with the problem and to forget about it. I think that my method is to be cautious and patient instead of challenging the problems’.

Thirteen responses made by parents (30%) were categorized as having the ‘rational style’ of coping:

[M.28] ‘I try to keep the problem private and to myself and do all my best to deal with it by myself, and not to expose it to the outsiders. My method is being patient and enduring. I am sure that praying won’t solve my problems’.

[F.34] ‘I know the patient person is the winner. I become quiet but pensive in time of trouble. I do not make any decisions or taking any actions, I just try to understand the situation think precisely and make plane my reaction. I pray for getting the power of changing those things that can be changed and to accept those things that are firm and cannot be changed’.

Eleven (26%) parents’ answers were categorized under the ‘emotional style’ of coping, and religious answers were placed in this category as well; 7 parents (16%) mentioned religious behaviours as a method of coping with the situation:

[M.3] ‘Except for over-eating nothing can calm me down’.

[M.35] ‘Feeling helpless and defeated. No one can help me. I must suffer this is what my destiny wants for me’.

[M.12] ‘I pray and recite Quran to calm me down’.

[F. 6] ‘We must find a solution. We have to do our best and then God will help us. I know that my son will be healed. Jesus healed many severely ill people he can heal my son as well. I just need to strengthen my faith’.

Style of coping	N	%
Avoidance	16	37%
Rational	13	30%
Emotional	11	26%
Detached	3	7%

Table 4.
The frequencies and percentages of the coping styles that parents use to face their problems (N = 43).

Three (7%) parents' answers were categorized under the 'detached style' of coping strategy:

[F.40] 'I let things happen as it is not my problem. This is my motto "let the things happen the way it has to happen; we are helpless'.

[M.9] 'I reject things at the beginning and then I accept and surrender'.

4.2 Quantitative analysis

To analyse quantitative data and to test the relationships between different variables, descriptive statistics (e.g. mean, standard deviation, etc.) and inferential statistics in both parametric, correlations, regression analysis) and non-parametric (Chi-square test) measures were used. Children's descriptive statistics based on parental reports are shown in **Table 3**.

Although the functioning level and the severity profile of the children's symptoms in this study were previously determined by professionals at the admission stage in the clinics and special schools based on the different scales they use. Based on the research aims, parental understanding of the severity of ASD symptoms was considered in this study. The data showed that all the children regardless of their age level passed the cut-off score on the SCQ scale based on their parents' reports, but the proportion was less on the two other scales. ABC that emphasizes the behavioural aspects of ASD diagnosed higher rates of ASD compared to GARS that emphasizes the communication, social and developmental aspects of ASD in children. On all three scales, the children's scores varied widely which are not uncommon in ASD. It may mean that the impact on families will not be so great if the extent of their ASD is not so marked.

Five scales on general health, sources of stress, family functioning, satisfaction with the caring role and coping style were used to understand the impact of child ASD on parental general well-being. Parental scores on the scales used were also calculated and their statistical description (standard deviation, mean, maximum and minimum scores) on each scale was obtained. Parental scales' statistical information for mothers and fathers separately is presented in **Table 5**.

Table 6 shows the Pearson's product-moment (r) correlation coefficients between the parental scales used in this study.

Coping style scales and parental scores in each style of coping indicated parental tendencies to use that style as a coping approach they consider to deal with the situation. Finding of the coping style scale and considering the scales scoring system indicated that 24 parents (56%) were using the rational style of coping and only 1 parent (2%) was considered to use the detached style of coping as a way to confront the associated challenges (**Table 7**).

Statistical analysis showed that there was no statistical difference between mothers and fathers in adopting rational [$\chi^2(1) = 6.51, p = 0.12, N = 43$] and emotional coping [$\chi^2(1) = 6.32, p = 0.69, N = 43$]. But regarding parental coping style, there was a significant relationship between the age of mothers and their rational coping style. To be able to compare parents based on their age, they were divided into two young (under 40) and old groups (40 and over). Compared to the younger mothers, the older mothers showed more tendencies towards using the rational style of coping style [$\chi^2(1) = 3.90, p < 0.05, N = 27$].

Intercorrelation among parental measures and parental understanding of the severity of ASD symptoms using three standardized scales about ASD features are presented in **Table 8**. Parents' styles of coping were also correlated (see **Table 6**). Parents who used rational styles were less inclined to use emotional styles of coping. However, parents who used emotional coping tended to have poorer general health, which might be an indicator of psychiatric problems with parents who are using the

Scale	Mean	Standard deviation	Maximum score	Minimum score
General health questionnaire	12.2	8.1	28	0
Mothers	15	7.5	28	2
Fathers	8.1	7.1	23	0
Parental stress index	113.5	17.4	146	79
Mothers	120.3	17.6	151	91
Fathers	111.1	18.6	140	78
Family functioning	27.4	5.6	43	17
Mothers	28.2	5.6	43	19
Fathers	25.2	4.6	32	17
Parental Satisfaction	33.5	10.4	70	17
Mothers	34.4	11.4	70	17
Fathers	32.3	8	46	22
Coping style:				
1. Rational coping	41.8	6.8	57	29
Mothers	39.6	6.9	57	29
Fathers	45	5.6	55	32
2. Emotional coping	34.2	6.6	52	20
Mothers	40.9	6.5	57	25
Fathers	36.6	5.4	50	28

Table 5.
Descriptive statistics (mean, standard deviation, maximum and minimum scores) of the parental scales (N = 43).

	Parental stress	Family functioning	Parental satisfaction	Rational coping	Emotional coping
General health	0.66**	0.009	0.31*	-0.58**	0.67**
Parental stress		0.05	0.27	-0.56**	0.53**
Family functioning			0.23	0.11	0.01
Parental satisfaction				-0.19	0.25
Rational coping					-0.66

*p < 0.05.
**p < 0.01.

Table 6.
The correlations coefficients between parental measures scales.

emotional style of coping. A similar correlation is seen with adopting the emotional coping style and parental stress, whereas those parents who used rational coping styles had better health and less stress.

There was also a significant negative correlation between parental tendencies towards using a rational style of coping style and a child’s ABC score (see **Table 8**). This indicated that parents whose children with ASD showed fewer behavioural problems showed more tendencies towards using the rational style of coping style.

Coping style questionnaire	Frequencies of the responses	Percentage of the responses
• Rational coping style (total)	(26)	(60%)
Mothers	17	39.5%
Fathers	9	21%
• Emotional coping style (total)	(12)	(28%)
Mothers	10	23%
Fathers	2	5%
• Avoidant coping style (total)	(4)	(10%)
Mothers	4	10%
Fathers	0	0
• Detached coping style (total)	(1)	(2%)
Mothers	1	2%
Fathers	0	0

Table 7.
 Frequencies of the coping style scale based on the scales scoring system.

	Total ABC scores	Total SCQ score	Total GARS2 all the subscales
General health total score	0.37 [*]	0.01	−0.12
Emotional coping s	0.21	0.04	0.06
Rational coping	−0.35 [*]	−0.04	0.05
Family functioning	0.04	0.16	0.13
Parental stress	0.47 ^{**}	0.15	0.25
Parental satisfaction	−0.01	−0.22	−0.06

^{*}p < 0.05.
^{**}p < 0.01.

Table 8.
 The correlations between the parental measures and indicators of ASD in children (N = 43).

Variable	B	SE B	β	t	p
Parental stress	0.141	0.058	0.306	0.393	.002
Child’s gender	−7.461	2.136	−0.403	−3.493	.027
Parents’ gender	1.395	0.587	0.266	1.604	.023
Mothers’ job	−1.721	0.633	0.312	−1.940	.010
Emotional coping	0. 119	0.047	0.297	3.457	.015
ASD severity (ABC score)	0.219	0.101	0.587	−1.034	.005

Table 9.
 Summary of regression analysis for parent and child variables predicting parent’s general health.

Based on McDonald [40], because of the application of a large number of statistical tests in the present study analyses, there is a probability of an increased level of reporting the statistical significance merely on chance. Regression analysis was used not only to reduce this problem but also to control the multivariate relationships among the data. However, this analysis should be considered as exploratory, and for



Figure 1.
Variables predicting parental general well-being resulting from regression analysis.

aiding the development of hypotheses, further research might be considered because of the relatively small sample of the participants in this study.

The chosen dependent variable for this analysis was parental general health, and the possible predictor variables included child characteristics (such as their age and considering 7 as the mean and coding 7 and under 1 and 8 and a above 2, gender ‘as employed and unemployed coded 1 for employed and 2 for unemployed’). The results of the Enter model of regression showed that six variables contributed to the model as significant predictors ($R^2 = 0.864$, [N = 43], $p = 0.005$, $F = 14.79$). The result of regression analysis is shown in **Table 9**.

The above figure (**Figure 1**) displays the relationship between the predictor variables and also draws on the correlation analyses previously reported.

5. Discussion

The increasing prevalence rates for ASD globally [41] draw the attention of the researchers to impact caregivers who are mainly parents who experience unique challenges resulting in a variety of psychological outcomes which are generally classified as negative. These outcomes are issues such as elevated levels of poorer general well-being and adopting a dysfunctional coping style. The main aim of the service providers is to understand the challenges associated with caregiving to a child with ASD. However, this is not an easy task to perform. The findings of the present study showed that ASD impacts differently on parents and there is no common response among them.

ASD based on present knowledge is a life-long disorder that impacts the entire family, yet there is a dearth of studies sought to address family dynamics and parental challenges. There are correlations between factors such as behavioural challenges of the child with ASD and general parental well-being. As an example, Hastings and colleagues [8] reported that the maladaptive behavior of the child with ASD impacted on the coping styles of parents. This finding was replicated in the present study. It is also reported that the functional level of the child with ASD impacted the level of stress in mothers which is resulting in paternal stress boosting [9].

5.1 Impacts of ASD on parental coping styles based on their explanation

The parental coping style in the present study was evaluated by the CSQ questionnaire for which Iranian norms were available. It had already been used with different groups of Iranians in different studies [42, 43]. However, the findings of this study would suggest that the scale was not sufficient enough to identify Iranian parental coping style of parents who were taking care of children with ASD. There was poor Cronbach's α on two subscales (Avoidant = 0.56 and Detached = 0.42), which may indicate that CSQ does not capture the specific difficulties that Iranian parents who are caring for a child with ASD may experience and the types of style they would use.

Most of the available studies in the field of parental caregivers for children with ASD were categorized into the qualitative or quantitative methods and there is a dearth of studies using mixed methods. A mixed method enables comparisons of data collected from both a qualitative and quantitative perspective. Therefore, one of the strengths of the present study is adopting a mixed method to answer the research questions. Analysis of the interviews in the qualitative part of study showed that only 13 (30%) parental responses to a question on style that they use to cope with problems in their family were categorized under the 'rational style' of coping and a larger number (N = 16, 37%) were categorized under the 'avoidance style'. Based on CSQ questionnaire responses, for the rational style, the number of parents was 26 (60%), and for the avoidance style of coping, it was 4 (10%), which indicates an inconsistency between the findings of the interview and the questionnaire in this study. It indicates that parents echoed a more realistic perspective of their behavior when dealing with challenges associated with caregiving for a child with ASD. But there was a consistency between the interview and questionnaire regarding the detached style of coping style, which was the least used method among parents in this study and the emotional style was reported to be used as a method of coping for almost 1/3 of parents (N = 11, 26% in interview, N = 12, 28% in questionnaires).

It was also found that 7 parents (16%) were using the religious style. In this study, this type of coping style was put under the emotional style of parental coping although Tarakeshwar and Pargament [44] presented data to suggest that religious coping may help to reduce stress and some symptoms of the general health indicators such as depression in parents of children with ASD. But the finding of the present study showed that adopting emotional coping correlated with a higher level of stress and poorer general health conditions.

5.2 Relationship between parental coping style and other children with ASD features

There was a statistically significant negative correlation between parental rational coping style and the severity of ASD symptoms (ABC scores) in their children, which suggests that lower levels of behavioural challenges of the child will increase the probability of adopting a rational style of coping. Although mothers were the majority of the participants in the present study, the number of fathers compared to previous studies was considerable (N = 16, 37%). Contrary to Hastings and colleagues [8] findings on the difference between mothers and fathers of children with ASD and their coping styles, no difference was seen in the present study. Hence, in the interview, parents showed an inconsistency between coping styles of mothers and fathers in the way that they are dealing with the demands of caregiving on factors such as gender roles connected to work and child-rearing in most cultures [45]. Fathers according to Iranian culture are supposed to be strong and less emotional to be able to cope and handle different challenges for the family. Based on the

regression analysis, the second predicting parental general well-being reported to be child's gender, and in this study, parents of female children with ASD were more prone to health problems. This finding was opposite to what Hastings and Brown [46] reported on the child's gender and parental anxiety and depression in the UK in which no significant relationship reported between parental general well-beings and their own and child gender. The difference here may root from Iranian cultural beliefs, which indicate that compared to boys, girls are more fragile and need more protection and help. Any type of disability may, therefore, increase the need for caring and supervision of the girls and place extra pressure on parents. Sabih and Sajid [47] reported similar findings in their study of Pakistani parents.

The difference between the mother's age and the adopted coping style was interesting. It was found that older mothers in the present study used a more rational style of coping strategy compared to younger mothers. This might indicate that mothers were able to use more problem-focused and rational styles of coping through the passing of time and the probable experiences or training they might have gained on dealing with their child with ASD. Hastings and colleagues [8] believe that factors like smaller social support networks affect the development of coping efforts in parents of children with ASD. There appears to be that parents of children with ASD use a verity of coping styles and there is no particular common coping strategy style among caregivers of children with ASD [48] regardless of the common features and core symptoms of this diagnosis. Although there is a difference between parents of children with and without ASD regarding the coping style they use [8] within families because family circumstances are heterogeneous.

5.3 Relationship between parental coping style and other parental qualification related to their general well beings

The present study found a statistically significant positive correlation between parental emotional style of coping style and their impaired general health, and between emotional coping style and higher levels of parental stress. Hastings and colleagues [8] also found that an emotional-focused coping style was an unhelpful approach to cope with demands associated with taking care of a child with ASD. In their study on a sample consisting of 74 mothers and 61 fathers of preschool and school-age children with ASD, they found that the religious style of coping was related to more mental health problems in mothers and fathers of children with ASD. In the present study, those parents who used a rational style of coping style showed statistically significant negative correlations with parental general health and an increased level of stress. This indicates that parents who used a rational style of coping style were more satisfied with their health and they also showed lower levels of parental stress.

Parents may adopt unproven theories of false beliefs regarding the causes of ASD [49]. Although these beliefs and search could be considered as a necessary part of the coping style process [50], but when these supposed treatments prove inadequate or if parents receive conflicting advice, this could increase parental stress, with impact on their health, family functioning and their satisfaction with the caring role and it may force them to use less rational styles of coping with the situation. The parental coping style was correlated. Parents adopting rational styles were less inclined to adopt emotional styles of coping.

Finally, parents adopting emotional coping reported poorer health and more stress, whereas those who used rational coping had more improved general well-being. An available wealth of data in the field of impacts of caregiving on parents generally echoes the ideas and coping styles of over 30 Caucasian female caregivers [51]; therefore, another positive point of the present study is that ideas of this group

are rarely being heard from a society with limited resources and support. Hence, there are some shortcomings with the present study, and the presented findings should be considered in the shade of these limitations. Firstly, the data reflected the ideas and approaches of urban parents who are better educated. Secondly, parents in this study are volunteers who agreed to participate in this study and the presented finding does not necessarily echo the ideas of all Iranian parents. Thirdly, Iran is a diverse society consisting of different ethnic and socioeconomic classes and the presented finding might not cover the ideas of all these groups. The findings of the present study might serve as a preliminary insight into the coping style adopted by Iranian parents to deal with challenges associated with ASD diagnosis for their child. It should be pointed out that the interpretation of the interview transcriptions and notes from the interviews were not checked with parents to receive their approval and to ensure the validation of the judgments.

6. Conclusion

ASD had multiple impacts on Iranian parents. In the sample of Iranian parents in this study, a majority of them experienced a considerable amount of problems with their general well-being. They also used less effective coping styles to face the associated demand of caregiving for a child with ASD.

These impacts were similar to the reported finding on caregiving challenges and parental coping style in other countries, but there were some differences regarding parental age and gender of the child and also the adopted coping style that might be explained in the light of Iranian culture or the limitations of available support and services from both formal and informal aspects.

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Conflict of interest

The author declares no conflict of interest.

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Author details

Sayyed Ali Samadi
Institute of Nursing and Health Research, Ulster University, UK

*Address all correspondence to: s.samadi@ulster.ac.uk

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