



Psychological Stresses and Coping Strategies among Parents with Autistic Children in Khartoum State (Special Education Centers)

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Abstract

Aim: The aim of this research is to investigate the psychological stress and coping strategies among parents of autistics in Khartoum State. The Descriptive research method was applied. **Methods:** Methods of data collection were the Psychological scale for Parents with Autistic Children and in-depth semi structured individual interviews. **Results:** The results indicated that coping strategies of parents enabled them to overcome the psychosomatic symptoms to a large extent while not being able to overcome the problems triggered in other dimensions. Parents adopted strategies for coping demonstrated in Faith and trust in Allah (100%), acceptance and dealing with the child positively showing positive emotions towards their autistic children (46%), gaining knowledge about ASD (38%), involving siblings (42%), and social support (42%). Forty-four percent (44%) of the sample tried to set future plans for their autistic children. The major problems were found to be the financial and educational problems that represented (100%). There is a significant difference in the coping strategies among parents according to parents' gender in favor of males in psychosomatic symptoms (0.001) while significant difference is found in favor of females in autistics' behavior (0.011) future (0.012) and financial and educational burden (0.011) and no significant difference is found between male and female parents in the other dimensions. There is a significant difference in the coping strategies among parents according to autistics' gender in favor of autistic males in all dimensions. There is no significant correlation between coping strategies of autistics parents and their educational level in all dimensions. There is no significant difference in coping strategies among parents according to family type in all dimensions. **Conclusion:** Resilience is highlighted but also there is a need for formal support for families with autistic children as well as a free appropriate public education that meets autistic unique individual needs to lessen the burden they experience.

rience should be offered. Besides, building capacity programs and autism-oriented workshops for various groupings of family members to foster the development of coping skills they need as well as enrich their knowledge and understanding of the condition.

Subject Areas

Psychology

Keywords

Psychological Stresses, Coping Strategies, Parents, Autistic Children

1. Introduction

It has been reported by WHO (2011) [1] in its World Report on Disability that, one of the main challenges to the provision of effective support services for parents of children with autistic disorder in developing countries is the lack of studies to inform about the impacts of raising children with autistic disorder on their parents. In studies of families with ASD, researchers have traditionally examined this interaction by focusing on the parents' effect on the child, not the child's effect on the parents e.g. Kanner, (1943) as quoted by [2] Altieri (2006). More recently, studies have focused on the difficulties that both parents face because of the effects of caring for a child with ASD and the strategies that are employed to cope with the stress (Gray, 2002 & Schall, 2000) [3] [4], which is rare in Sudan; to the best of the researcher's knowledge. Their impact can be profound. Parents need to be offered better, healthier ways to cope and diminish the added stress that ASD brings to them (Schall, 2000) [4], which in turn affects the family as a whole. Turnbull, *et al.* (2010) [5], stated that previous research has shown that raising a child with a disability, such as an ASD, gives parents a unique set of challenges that impact their family including relationships among family members. According to Gona, *et al.* (2016) [6], research on the challenges of raising a child with autism is mostly conducted in Europe, North America and Australia. Thus, virtually no research has been conducted in Africa on this subject. Accordingly, through inquiring and analyzing the situation of parents of autistic children in Khartoum State, this research may—hopefully—add to the global literature on Sudan's context of ASD. Moreover, it will, expectantly, put a cornerstone of an operational system of activities that could facilitate meeting the needs and priorities of these parents. Furthermore, the desired outcome of this research is to create a solid foundation for capacity building programs that target developing skills of adaptation and coping of parents of autistic children. Besides, understanding coping strategies of parents with children suffering from autism spectrum disorder could help caregivers (parents, teachers) and medical professionals develop interventions to reduce these challenges, which could alleviate stress and improve social functioning for these parents as well as the whole

family. It is expected to speed the process of raising the awareness of society which contributes to seeking out solutions and breakthroughs that enable parents, psychologists, social workers, clinicians, educators and policymakers, etc. to work together to make a difference for affected families that urgently needed by autistics and their parents.

- Psychological stress is defined as defined by Lazarus and Folkman, (1984) [7] is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.
- Coping Strategies are 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 [8].

2. Material and Methods

Methods of data collection were scale and in-depth semi-structured individual interviews. The original scales that were used in this research have come into possession through the worldwide web from a study done by Abou-Dagga (2013) [9], who used two scales; 1) the Resilience scale and 2) the Psychological stress scale. The two scales were merged relying on the objectives of the research by including and excluding some questions and names. The Psychological Scale for Parents with Autistic Children. The Psychological Scale for Parents with Autistic Children comprised six dimensions; psychosomatic symptoms, emotions, autistic behavior, autistic family, autistic future, and burden of having an autistic child through applying Cronbach's alpha equation it was found that the reliability of the scale was (0.879) and validity (0.9375). The in-depth interview contained questions about strategies for coping, future plans, support, and burden of autistic child.

3. Results and Discussion

Hypothesis One: This hypothesis postulates that “Autistic children significantly influence the coping strategies of their parents.”

To test this hypothesis the researcher applied T-test for one group to know the coping strategies of parents according to their gender; the result of this application is shown in the following **Table 1**:

It is clear from the above table (**Table 1**), that out of six dimensions of the coping strategies scale, four dimensions indicate statistically significant negative coping (autistic behavior, autistic family, autistic future and burden of autistic child). Regarding the first dimension, (psychosomatic symptoms) the score of parents indicates positive coping strategy while in the second dimension (emotions) the score indicates an average coping strategy. Accordingly, it could be concluded that autistic children significantly influence (negatively) the coping strategy of their parents.

Psychosomatic Symptoms Dimension: One sample t-test showed that the

Table 1. T-test for one group to know the influence of having an autistic child on the coping strategies of parents.

Dimensions	Theoretical Mean	Means	S.D	t-value	Sig.	Conclusion
Psychosomatic symptoms	45	37.6	11.4	12.3	0.003	Statistically positive coping
Emotions	39	42.2	12.3	2.7	0.643	Average
Autistic Behavior	48	60.3	14.2	22.9	0.011	Statistically negative coping
Autistic Family	21	23.7	2.11	23.1	0.013	Statistically negative coping
Autistic future	15	29.2	3.1	24.1	0.001	Statistically negative coping
Burden of Autistic	6	10.2	2.3	29.2	0.001	Statistically negative coping

the theoretical mean is (45). The arithmetic mean value of psychosomatic symptoms among parents of autistic children on the coping strategy scale was (37.6) with a standard deviation of (± 11.4), and the calculated T value was (12.3) with a probability value ($P = 0.003$) at the significant level of (0.05) which indicate significantly positive coping strategy in this dimension.

The study found that parents of autistic children have developed positive coping strategies, preventing the manifestation of psychosomatic symptoms, indicating that they have not revealed these symptoms. Disagreeing with this result was what has been mentioned by the American Psychological Association (2015) and Sincero (2012) [10] [11], who found that overdoing short-term stress could lead to psychological distress, tension headaches, upset stomach and other symptoms that could crop up in their lives. In line with the study results, Pottie, *et al.* (2008) [12] found that some parents consider raising a child with ASD to be psychologically beneficial. Parents view their role as a challenge and an opportunity to learn and improve. Children with autism can enhance positive personal characteristics like patience, compassion, and acceptance, especially toward others with disabilities. This experience is humbling and opens eyes to a previously ignored subgroup of the general population. Likewise, Browne (2010) [13] cited in her study “Although our son causes us more stress and drama than we thought humanly possible he has also taught me many things I could not have learned in any other way. I am much more tolerant, accepting and less judgmental of others. I have rediscovered my spiritual side.” This was confirmed by 24% of mothers who found the fear of the unknown outweighed by the discoveries they made about themselves, their children, and the world. While 52% felt a new purpose and sense of belonging with an autistic child and 60% reported becoming less judgmental and critical, living more peacefully, and 62% focusing on finding faults in themselves and others. It was mentioned by Sabry and Vohra (2013) and Athar (2016) [14] and [15] putting trust in Allah, a believer minimizes the stress by reducing his responsibility and power to control his failures. Moreover, Bashir *et al.* (2014) [16] stated that faith on Allah brings positive attitude among parents and acts as a motivation and coping mechanism while dealing with day-to-day challenges of a disabled child. All participants (100%) reinforced this point by stating no one knows his fate and destiny, Allah

is the one who gives any individual the Ebtilla'a that he the Merciful knows can cope and adjust. As (86%) assured that Allah never forgets an individual he created, they are sure they will be alright. Fifty-four percent (54%) of the participants said that at the beginning of diagnosis, they became confused, disoriented, and disorganized. After a deep reflection, they realized the importance of spiritual clarity, which is easily achieved when the brain is not cloudy and the body is not stressed, leading to Allah's assistance in overcoming their issues.

According to Holahan and Moos (1987) [17] individuals adopt problem-focused coping strategies, which involve cognitive and behavioral problem-solving, to manage stress sources, and emotion-focused coping strategies, which aim to reduce or manage emotional distress, thereby acquiring active coping strategies to alter the nature of stress or one's thoughts. Grant and Whittell (2000) [18] found that effective problem-solving strategies are most effective when events and challenges can be changed and the person can accomplish them. Lower stress levels among siblings reduce tension in raising an autistic child among normal siblings. Abdat (2007) [19] reported that many siblings of disabled children have a stable emotional and psychological experience of having a disabled child in the family. In addition, half of the interviewees were distinguished, while others displayed compassion, sensitivity, and mercy towards others. They were able to tolerate responsibility and understood the general public better, helping with physical, spiritual, and emotional pains. All participants (100%) clarified that they have informed the children's siblings about the nature of autism since being diagnosed. In addition, they stated that building positive sibling relationships is very important for parents to understand and it enables management of potential problems. Moreover, (56%) of the participants indicated that their children accepted having an autistic sibling/s and they love and care much about, they believe he/she needs them. This enabled better interaction and response from siblings towards their autistic brother/sister. Besides, they became equipped with information concerning autism to explain to their friends and peers when being asked. Seventy-six percent (76%) of the participants clarified that awareness of what is going on facilitates parent-child as well as child-sibling relationships and decreases negative depressing emotions. As a result, there is a way or another spent with the child playing, chatting, and performing domestic issues such as going to the market, etc. This result was not in line with Rivers and Stoneman's (2003) [20] study that found that parents were somewhat less positive about the sibling relationship than were the siblings themselves. In line with, was Orsmond and Seltzer (2007) [21] who found that many studies agree that siblings describe the relationship with the brother or sister with autism in positive terms, although some negative aspects are noted, such as embarrassment or and disruptive behavior by their autistic brother or sister. In *Practical Ways to Help, Plan and Manage - Daily Living with Autism* (2015) [22] it is mentioned that siblings might or not have potential sources of stress, e.g. embarrassment around peers, jealousy regarding the amount of time parents spend with their brother/sister, frustration over not being able to engage

or get a response from their brother/sister, being the target of aggressive behaviors, trying to make up for the deficits of their brother/sister, concern regarding their parents stress and grief and finally, concern over their role in future care-giving. This was true concerning (44%) of participants; who reported that autistic elder siblings experience embarrassment, refusal, jealousy, and frustration when they take them to visits, and they are frustrated with not receiving a response during play time.

Emotional dimension: The theoretical mean is (39), the arithmetic mean value of emotion among parents of autistic children on coping strategy scale was (42.2) with standard deviation of (± 12.3), and the calculated t-value was (2.7) with probability value ($P = 0.643$) at significant level of (0.05) that indicate average coping strategy in this dimension.

Petrongolo (2014) [23] strengthened this fact by stating that child rearing is a challenging and stressful process, even for the parents of typically developing children, which means that parental feelings and emotions have ups and downs. This was emphasized by (54%) of the participants. They indicated that their normal children may have strange behaviors; it is childhood and the individual differences among human beings. In addition, (44%) explained that all children are different typical or atypical and they grow and develop at their own pace. Parents of both encounter challenges and stressors in rearing. Their children develop on their own clock, they learn many skills late and some they will never learn, it is necessary to accept; otherwise, they as well as their children encounter problems. Fifty-two percent (52%) of the participants explained that at the beginning of diagnosis, they were confused and disappointed; their child's behavior was questionable. However, later after reading about autism, they knew that some suffer from sense sensitivity that makes them act differently in a bizarre way. They added the perception of the problem is another important factor involved in adaptation. Accordingly, it appears that participants adopted coping strategies through, which they tried to change their vision of the problem and look upon it in a different way. In turn, their emotional effect will also change. This is an indicator of the possession of normal emotions towards normal and abnormal children. For example, (44%) of the participants indicated they have never experienced negative emotions towards their autistic children. Although it was a shock to hear that one of their offspring was autistic, they with the help of Allah accepted their fate. They are somehow different from others yet normal children differ from each other. Contradicting was Lai *et al.* (2015) [24] who stated that parents of children with ASD reported significantly more parenting stress symptoms (*i.e.*, negative parental self-views, lower satisfaction with parent-child bond, and experiences of difficult child behaviors), more depression symptoms, and more frequent use of Active Avoidance coping, than parents of typically developing children. Nesbit (2014) [25] supported a link between autism symptom severity and parent stress. In addition, Konstantareas and Papa-georggiou (2006) [26] stated that lower-functioning children and those with high activity levels, low flexibility and low mood scores were perceived to be more

stressful. Moreover, mothers of non-verbal children were more stressed than those of verbal.

Breiner et. al (2016) [27] found that parents who receive social support relate better emotionally and engage in interactions that are more positive with their children. Early parent-child relationships have powerful effects on children's emotional well-being, their basic coping and problem-solving abilities, and their future capacity for relationships (Mastergeorge, 2013) [28]. In the National Center on Parent, Family, and Community Engagement: Research to Practice Series (2013) [29] it was clarified that positive parent-child relationships provide the foundation for children's learning. With parents' sensitive, responsive, and predictable care, young children develop the skills they need to succeed in life. Sixty-eight percent (68%) of the participants clarified that it is not reasonable to shut autistics behind doors; they need interaction between them and their society; they need acceptance from society. They added, that otherwise, there would be no improvement in their behavior. Moreover, (52%) stated that early positive and supportive interactions and acceptance of the child are very important because all skills and capacities needed at each age are fostered and developed, which in turn enhances their success in the world at large. Helgeson (2003); Schilling & Schinke (1984) & Tehee *et al.* (2009) [30] [31] and [32], stated that parents who receive higher levels of social support from friends, family, support organizations, and their communities as a whole show lower levels of stress and higher levels of quality of life compared to those who report low levels of social support. Agreeing with, Boyd (2002) [33] found that informal support is influential in protecting from negative effects of stress. Pisula (2011) [34] assured this point when he found that parents notice improvement in their relationship with extended family and significant reduction in stigmatizing towards the child. Moreover, people began to acquire knowledge about ASD. This was assured by (40%) of the participants declared that what makes them overcome the difficulties of having an autistic child is the strong emotional bond they have in their nuclear as well as extended family.

Sabry and Vohra (2013) besides Athar (2016) [14] [15] declared that worrying over such things is of no use but putting trust in Allah lessens stress on individual by reducing his/her responsibility and power to control his failures. All participants (100%) said that they throw all their loads on Allah, they tried to set them a future but they believe that future is already set and planned before their birth. Besides, (48%) clarified that they are sure that when they die, Allah will look after their children with a love greater than theirs. Based on my findings, putting trust in Allah increases acceptance of the autistic child and decreases stress which in turn enables management and handling of the issues concerning him/her successfully.

Autistic behavior dimension: The theoretical mean is (48), the arithmetic mean value of autistic behavior among parents of autistic children on coping strategy scale was (60.3) with standard deviation of (± 14.3), and the calculated T value was (22.9) with probability value ($P = 0.011$) at significant level of (0.05)

which indicate significantly negative coping strategy in this dimension.

Volkmar *et al.* (2005) [35] mentioned that there are wide variations in symptom severity for those disorders. Tilton (2004) and Alshamy (2004a) [36] and [37] mentioned that even though ASD is a complex disorder its symptoms and severity vary from one person to the other. Pozo *et al.* (2011) [38], stated that such behaviors (aggressive and self-injurious behavior) have more influence on parental stress and family adaptation/coping. Moreover, Hastings (2002) [39] has found that child's behavioral problems lead to parent's stress, then parental stress affects the way the parent acts toward the child, and finally the parent's behavior toward the child reinforces the development and persistence of behavior problems. This was emphasized by (86%) of the participants who said that thinking of aggressive and self-injurious behaviors of their children terrifies them. They added that they continuously try to cope with but they could not cope.

Kandolkar and Kenchappanavar, (2014) [40] stated that many parents experience periods of disbelief, deep sadness and depression and self-blame and guilt whereas others experience helplessness, feelings of inadequacy, anger, shock and guilt. Moreover, Doui (2015) [41] declared that the feeling of guilt is very common among parents and has to do with the tendency of parents to blame them for the situation of the child. This was emphasized by (60%) of the participants who explained that they blame themselves several times a day, they feel guilty about making the decision on their own; they are confused. Are they right or wrong? Ninety-two percent (92%) of the participants said that it was not easy to accept the fact that their children are somehow different from their siblings. Sixty-two percent (62%) of the participants declared that having a child with bizarre behavior diminishes the relationship with the outer world. Near relatives may accept her presence, while strangers may stare at and say rude things. This makes them feel sad and depressed. They added they love their children much but it hurts much. Five mothers (20%) explained that they have collapsed after knowing the diagnosis because they have known that autistic children exhibit bizarre behaviors that are annoying. They added; that it was hard; they wanted a perfect life and did not want to be sad all the time, or see the worst in everything around them. They wanted to be happy and feel free. While Lickenbrock, *et al.* (2011) [42] reached the fact that mothers low in marital adjustment had a positive association between negative maternal perceptions of the child and negative maternal affect. Bou Sharaya and Tahir (2017) [43] results showed that there is no significant relationship between parental stress and marital adjustment for autistic children's parents. This was de-emphasized by (52%) of the participants who explained that their marital life is gradually collapsing; they live together but apart. They have no much time for their personal life. They find themselves falling back on traditional role responsibilities; each carries his duty as a parent. In line with this, Bolman (2006) [44], declared that marital relationship time disappeared and with it went the sharing, mutuality, and working out of joint issues that promote marital survival.

Besides were the findings of Estes, *et al.* (2013) [45]. They stated that the child's behavioral problems and daily living skills were a source of parenting-related stress and psychological distress. Gorsky (2014) [46] found that parents need help to increase levels of physical and psychological self-care. Thus, alleviating high stress levels associated with caring for autistic children. All participants (100%) emphasized this by clarifying that any kind of help/support from friends, relatives, etc. makes their lives easier. Dunning and Giallo (2012) [47] stated that parental stress led to symptoms of fatigue and subsequent decreases in parental self-efficacy and parenting satisfaction in a sample of typically developing young children aged 0 - 6 years. Therefore, when having children with special needs, parents have increased stress levels (Hilliard, *et al.* 2011; Quittner *et al.* 2010) [48] [49]. Browne (2010) [13] cited that parents declared that they suffer from social stigma attached to different behaviors their autistic children have which in turn prevent them from community involvement including; going on vacation, completing activities of daily living such as super-market shopping, or even visiting friends Lam, *et al.* (2010) [50]. Fifty-two percent (52%) of the participants assured these points by stating that they feel that they cannot socialize and relate to others, and experience a sense of isolation from their friends, relatives and community as a whole in view of the fact that, their autistic children exhibit bizarre behaviors. Moreover, (12%) clarified that it is a very distressing issue; these children keep them away from engaging and enrolling in many social events. Parallel to, were Gray and Holden, 1992; Konstantareas and Homatidis, 1989; Sanders and Morgan, 1997 [51] [52] and [53] declared that a scarcity of social support is related to higher levels of stress, anxiety, depression and pessimism and less social participation. These negative effects on mothers directly influence the family as a whole as well as the parenting and socialization of the autistic child.

Autistic family dimension: The theoretical mean is (21), the arithmetic mean value of autistic family among parents of autistic children on coping strategy scale was (23.7) with standard deviation of (± 2.11), and the calculated T value was (23.1) with probability value ($P = 0.013$) at significant level of (0.05) that indicate significantly negative coping strategy in this dimension.

Kissel and Nelson (2016) [54] found that parents of children with more severe autistic behaviors reported higher levels of parental stress and poorer ratings of their personal functioning in the family than parents of children with less severe autistic behaviors and typically developing children. Besides, Pisula (2011) [34] mentioned that severe stress experienced by parents of children with autism has profound consequences for their health, well-being, interactions with the child and family life. In addition, it was mentioned that parental stress affects aspects of family life as spending time together, capacity for spontaneous and flexible planning and marital relationships. Eighty percent (80%) of the participants indicated that one of them stays at home while the other participates in ceremonies, weddings, funerals, etc. They added, they could not share as a whole family, which is frustrating and annoying. In addition, all mothers (100%) indicated that

they are the ones who most of the time take care of the autistic children, which is stressful. When their fathers come back from work, they feel less stressed. This was assured in Practical Ways to Help, Plan and Manage Daily Living with Autism (2015) [22]. It was stated that like parents, grandparents can suffer over the loss of the normal grandchild they expected to have. In addition, grandparents are concerned about the stress and difficult situations they see their children experiencing. Sixty percent (60%) of the participants explained that their parents experience sorrow, disappointment and frustration when they see their atypical children. Moreover, they experience pain and distress because their own children suffer a long life burden of having autistic children.

Autistic future dimension: The theoretical mean is (15), the arithmetic mean value of autistic future among parents of autistic children on coping strategy scale was (29.2) with standard deviation of (± 3.1), and the calculated T value was (24.1) with probability value ($P = 0.001$) at significant level of (0.05) which indicate significantly negative coping strategy in this dimension.

Regarding the issues of autistic children's future, the findings of this study proved that the parents of autistic children reported statistically negative coping strategy, in other words they had maladaptive coping strategies. Mann (2013) [55] found in her study that the mothers' vision of the future for their child varied greatly including hope for independence, for them to learn a skill, for better communication, and becoming able to live a normal life. All participants (100%) explained that they are doing their best to equip their autistic children with skills that enable them to lead a normal somehow lively independent life. However (48%) of the participants indicated that their progress in training cannot be mentioned. But they are doing their best to make them independent and manage to live without them (when they pass).

Whereas, McDonald (2014) [56] found that parents search for mainstreaming their autistic children in formal schooling programs as well as offering them supplementary programs, which indicates hope of maximizing the development and future independence of their child. They have to be a driving force behind any successful transitions to the adult world that need to occur. However, parents found that their children were seen by schools as students who need extra resources and are therefore much less desirable when such support is not readily available. They found that some schools reject their child outright or demand specific diagnoses and external financial support in the form of aide time before they will accept their child for enrolment. With were all participants (100%) clarified that it is important to educate their children as well as strengthen the points of power they have. They stated that educating the child increases the opportunities to have a future career, while special education enables them to cope and adjust to the external world. Ninety percent (90%) of them said that the type of formal/regular education does not matter but the consequences are the aim, the education enhances the opportunities to gain a future career, while special education enables them to cope and adjust with the external world, that world other than theirs. In spite of that (96%) have dropped their children out of

regular schools, because they were treated unfairly, and in a discriminatory manner, which increased their psychological suffering. They struggled with their teachers as well as their classmates that is burdening. They added, high expense of special education centers plus scarce knowledgeable teachers as well as poor programs adds stress on them so they decided to home educate their children; mainly on daily routines, which is to some extent a heavy burden.

Scott and Chris (2015) [57] assured that parents are concerned over their role in future care giving. They mentioned that people with ASD usually continue to need services and support as they get older but many are able to work successfully and live independently or within a supportive environment. This was assured by (76%) of the participants who clarified that the critical problem was the residential future planning; *i.e.* where would their children reside in the future, in case they pass and who would care for them. Thus, one of the most stressful issues was future caregiving.

While Kheir, *et al.* (2012) [58] in Qatar, found that around 40% of caregivers said, they will encourage their autistic child to get married and become a parent when she/he grows up, none of the participants in this study mentioned that they are looking forward for marrying their autistic children when they grow up.

According to my experience, parents are responsible for not only their typical parenting and household duties, but also training, organizing, planning and educating of their children; that is considered a mental load. All participants (100%) assured this point by clarifying that one role a parent of a child with a disability—that is burdening—is the long life collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services in order to care for their child. In line with was what Sabry and Vohra (2013) and Athar (2016) [14] and [15] stated that only Allah knows their future and worrying over such things is of no use.

Autistic burden dimension: The theoretical mean is (6), the arithmetic mean value of burden of autistic among parents of autistic children on coping strategy scale was (10.2) with standard deviation of (± 2.3), and the calculated T value was (29.2) with probability value ($P = 0.001$) at significant level of (0.05) which indicate significantly negative coping strategy in this dimension.

As shown in **Table 1**, the coping strategy exhibited by the parents in this study was statistically negative. Agreeing with the results were the issues concerning expenses. Moneywise, having a child with autism can drain a family's resources due to expenses such as evaluations, home programs, and various therapies. Bashir *et al.* (2014) [16] indicated that the majority of parents in their study suffered due to over expenditure on treatment of child due to which other expenses did not meet-up and affect the overall family. Because one parent might give up his/her job because of the care giving demands of raising a child with autism, financial strains may be worsened by only having one income to support all of the families' needs. Seventy-six percent (76%) of the mothers stated that they have given up their jobs because of the personal care of their children which in turn resulted in less household income. Whereas, (28%) stated that they still work but

at home. They teach 3rd-year students mathematics in the evenings after their husbands come back from work and take care of the children. They said that they need every single SDG. To overcome this problem, (36%) of the fathers indicated that they used to work one shift, but now two; to offer expenses of the child. In spite of that, (72%) of the participants explained that even though the money spent on the autistic children is more or less greater in amount than that spent on their siblings; they deserve it to manage and overcome some difficulties they suffer from. Helgeson, 2003; Schilling & Schinke, 1984; Tadema & Vlaskamp, 2010) [30] [31] and [32] stated that formal support is related to funded initiatives that help lessen parental stress and caregiver burden through providers contracted with the government. Besides, Meral and Cavkaytar (2012) [59] found that high income helps to have more choices in terms of marriage satisfaction and coping strategies. In addition, it was found that having a high income aids families in terms of adapting to disability and meeting health and daily life demands that were brought by an individual who has developmental disability. It was seen that marriage satisfaction increases as family income increases. Socio-economic status has been found to act as a moderator between quality of life for caregivers and problem behaviors in children (Hatton & Emerson, 2009) [60]. As per, formal support in Sudan is not mentioned and letting go of a job or working for more hours adds more pressure and burden to parents with autistic children. Mitra, et. al (2011) [61] found that poor families who have a child with developmental disability are affected by poverty more than poor families with a normally developed child and wealthy families who have a child with a development disability.

Another type of burden was what Mann (2013) and McDonald (2014) [55] and [56] found. They verified a number of stressors (appropriate educational settings and coping with the tremendous financial schooling burden). The struggle between mainstream education and its drawbacks that affect the child (on-going negative socialization (bullying), insufficient academic progress and the failure of schools to understand their child's academic and social profile or the nature of their disability as reasons for their decision to home educate their child) and between expensive special educational services which are sometimes not suitably provided to those children. Thus, some prefer home education which in turn is moneywise expensive. This was emphasized by all participants (100%). They explained that the source of worrying about our children is composed of two; formal support and education; their children need special educational services, some need medicines, and others need special types of nutrition. While there is no formal support provided. They added they wish there were formal services; as in foreign countries where special needs families receive help that enables them to continue successfully and reach their goals without burden experiencing. Furthermore, planning for the future through educating their children in mainstream schooling is a very burdensome process. The child suffers from the teachers as well as from colleagues. Teachers are not equipped with special education trainings or skills that hinder the educational program of the

child. Moreover, not coping with their colleagues worsens the situation, which increases maladaptive behaviors.

In accordance I ascertain that it is a heavy weight and it narrows the future opportunities of these children. Educational quality and equality opportunities for autistic children are critical issues.

Hypothesis Two: This hypothesis postulates that “There is significant difference in the coping strategies among parents with autistic children according to the parents’ gender.”

Psychosomatic symptoms dimension: As shown in **Table 2** independent variables t-test shows that the mean degree of male parent (fathers) on the first dimension was (27.3 ± 3.2), while the mean score of female parents (mothers) on the same dimension was (44.0 ± 16.2). The calculated T value was (7.3) with a probability value of ($P = 0.001$) at significant level (0.05). Accordingly, significant difference was found between males and females in this dimension, where females showed a negative coping strategy and males showed a positive coping strategy.

Pozo *et al.* (2011) [38] stated that since the child has less personal autonomy and is more dependent on his/her mother, they have to spend much of their time and energy caring for their child. In line with, was what was cited in Neeley-Barnes and Dia (2008) [62] that mothers of children with disabilities work fewer hours and have lower earnings than mothers of typically developing children. In addition, mothers spend more time caring for the child with the disability than fathers and the caregiving demands associated with the child’s disability lead to increased work absenteeism. Although both parents (72%) said that taking care of an autistic child is stressful and adds pressure to them, all mothers (100%) indicated that enormous problems could be encountered when raising a normal child; it is tripled when raising an autistic child.

Table 2. t-test for independent group to test the difference in the coping strategies among parents with autistic children according to the parents’ gender.

Dimensions	Gender	No	Means	S. D	T-Value	Sig	Conclusion																																																								
Psychosomatic symptoms	Male	100	27.3	3.2	7.3	0.001	There is a significant difference in favor of males																																																								
	Female	100	44.0	16.2				Emotions	Male	100	41.9	9.1	0.433	0.352	There is no significant difference between two groups	Female	100	37.6	10.5	Autistic Behavior	Male	100	64.1	11.1	4.2	0.011	There is a significant difference in favor of females	Female	100	42.2	17.3	Autistic Family	Male	100	23.2	1.9	1.322	0.131	There is no significant difference between two groups	Female	100	26.1	2.8	Autistic future	Male	100	19.5	3.4	4.228	0.012	There is significant difference in favor of females	Female	100	28.1	1.5	Burden of Autistic	Male	100	8.7	1.6	4.642	0.011	There is significant difference in favor of females
Emotions	Male	100	41.9	9.1	0.433	0.352	There is no significant difference between two groups																																																								
	Female	100	37.6	10.5				Autistic Behavior	Male	100	64.1	11.1	4.2	0.011	There is a significant difference in favor of females	Female	100	42.2	17.3	Autistic Family	Male	100	23.2	1.9	1.322	0.131	There is no significant difference between two groups	Female	100	26.1	2.8	Autistic future	Male	100	19.5	3.4	4.228	0.012	There is significant difference in favor of females	Female	100	28.1	1.5	Burden of Autistic	Male	100	8.7	1.6	4.642	0.011	There is significant difference in favor of females	Female	100	7.1	2.9								
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Autistic Family	Male	100	23.2	1.9	1.322	0.131	There is no significant difference between two groups																																																								
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Autistic future	Male	100	19.5	3.4	4.228	0.012	There is significant difference in favor of females																																																								
	Female	100	28.1	1.5				Burden of Autistic	Male	100	8.7	1.6	4.642	0.011	There is significant difference in favor of females	Female	100	7.1	2.9																																												
Burden of Autistic	Male	100	8.7	1.6	4.642	0.011	There is significant difference in favor of females																																																								
	Female	100	7.1	2.9																																																											

Parenting a special need child is not an easy issue it needs a lot from them; they face a lot of problems. Besides, (52%) of the mothers stated that since early morning, they begin their day rushing all-round the house trying to finish cooking, washing, cleaning, etc. before their child wakes up. They said that from the time when their children wake up their exhausted day begins which is stressful. Adding to this, (68%) of mothers clarified that they are the ones responsible for the child from the time he/she wakes up till bedtime (personal care, training, educating, supervising, etc.); it is true that this is a typical role the mother has but in their case, it is heavy-duty. They need their husbands' cooperation in order to carry the burden as a team.

One potential rationale for the adoption of negative coping strategies among females may stem from the fact that mothers typically serve as the primary caregivers and spend more time at home with children than fathers do. As a typical parenting role, mothers work hard with their children to get the most out of their children and prepare them for an autonomous future while most of the fathers are only breadwinners. Keeping in mind, children who have positive relationships with their fathers tend to have higher achievement, motivation, cognitive competence, and better social skills that enhance the integration of the child into society. Moreover, fathers who interact with their children positively also encourage mothers in their childcare activities. All in all, when having an autistic child without spouse support is considered stressful and burdening.

Emotion dimension: The mean degree of male parent (fathers) on the second dimension was (41.9 ± 9.1), while the mean score of female parent (mothers) on the same dimension was (37.6 ± 10.5). The calculated T value was (0.433) with probability value of ($P = 0.352$) at significant level (0.05). Accordingly, no significant difference was found between males and females in this dimension.

This result is in line with what Neely-Barnes and Dia, (2008) [62] reached. The found no significant differences on measures of stress, family support, family harmony, marital adjustment, or family quality of life. Forty-eight percent (48%) of the participants emphasized that it is important to be able to live in presence of imperfection; their children are somehow different but still gifted.

Both parents of autistic children experience a great deal of stress due to their children's disturbed sleep (Eyuboglu, and Eyuboglu, 2018) [63], agitation and cries, stereotypy and self-injury, difficulties in feeding and toilet training, and other unusual behaviors (Benson, 2006 & Hastings, 2003) [64] and [65]. Agreeing with this, was Dardas (2014) [66] who claimed that both fathers and mothers of children with autistic disorder experienced significantly high levels of parenting stress. Both showed similar patterns of poor physical, psychological, and social. On the other hand, Neely-Barnes and Dia (2008) [62] found that what reduces stress for fathers was their acceptance of the child with the disability and family harmony. While mothers may develop stress if there was no family harmony, experienced lower socioeconomic status and the child needs greater care demands. This was strengthened by (60%) of the participants who indicated that

it is their job as a parents to hold their children's hand and pull them out of the deep dark hidden future. However, it is very difficult an exhausting since the child is suffering a lot from many difficulties and has a limited chance to develop normally. Thus, it demands to be as strong as possible. On the contrary, Soltanifar *et al.* (2015) [67] assured that mothers of children with ASD had higher levels of parental stress than fathers. And Allik *et al.* (2006) and Hastings *et al.* (2005) [68] and [69] confirmed that mothers experience higher levels of stress, and depression and lower levels of quality of life and wellbeing than fathers. As Allah clarified, Allah does not change the condition in which people are until they change that which is in them, thus, it is crucial to conceptualize the situation precisely.

Petrongolo, (2014) [21] stated that child rearing is a challenging and stressful process, even for the parents of typically developing children. This was emphasized by (42%) of the participants the stated that rearing a typical or atypical child is more or less the same in encountering continuous demands. These little people's safety and health (physically, emotionally, spiritually) falls on their shoulders; it is on us, which is no small thing.

In line with, was Doui (2015) [41] who said that positive emotions help foster a positive attitude and generate positive image, negative emotions lead to corresponding strengthening of a negative attitude and image for both the parent and the child. Fifty-six percent (56%) of the participants explained that they had to deal with their autistic child positively to cease developing problems for both themselves and their poor child. Ten percent (10%) indicated that they accept that their child is unique and has his/her own individual strengths and weaknesses. In addition, accepting the child and not comparing him/her with normal children enables them to live happily and overcome problems successfully. Besides, all participants (100%) indicated that those children are poor and unlucky because they have senses totally different than other people; they smell anything, do not tolerate any clothes (textiles), some are very sensitive to high voices and sounds whereas several seem that they hear nothing, some taste things and prefer certain flavors.

Autistic behavior dimension: The mean degree male parent (fathers) in coping strategy scale was (64.1 ± 11.1) , while the mean score of female parent (mothers) on the same dimension was (42.2 ± 17.3) . The calculated T value was (4.2) with probability value of $(P = 0.011)$ at significant level (0.05). Accordingly, significant difference was found between males and females in this dimension, where females showed positive coping strategy while males showed negative coping strategy.

Disagreeing with the results in **Table 2** were Neely-Barnes and Dia, (2008) [62], who found that mothers with children with developmental disabilities experienced increased stress, weaker sense of coherence, and poorer health than their husbands while the comparison group (with children without DD) experienced no mother-father differences. Adding to this was the study results of

Samadi and McConkey (2012) [70]. They concluded that mothers had significantly higher scores than fathers on measures of stress and emotional well-being. Mothers and fathers may also differ in what contributes to their stress. It has also come to my attention that mothers spend almost all day long with these children accompanying their problematic life issues. In the long run, routines may make mothers feel at ease and in control, which means developing coping strategies appropriate to the circumstances they live within. Thus, makes them familiar with and accustomed to autism-related behaviors more than fathers do.

Contradicting this result was the result of Padden *et al.* (2017) [71]. They found no differences between mothers and fathers in relation to quality or quantity of social support, significant group differences were found in relation to the use of a number of coping strategies. Higher use of adaptive coping strategies, including emotional support, by parents of children with ASD could act as a buffer to the negative impact of parenting stress, suggesting a health-protective effect of these adaptive coping strategies. Additionally, for gender, mothers have reported employing more social support, problem-focused coping, and spiritual coping strategies than fathers of the same children; whereas fathers reported more emotional coping (e.g., suppressing frustrations and avoiding family problems by going to work) than mothers in the same family. This was assured by all mothers (100%) and (88%) fathers who explained that what helps to manage problems are social support and spiritual coping strategies.

Moreover, Bristol and Schopler (1983), Koegel *et al.* (1992) and Sharpley *et al.* (1997) [72] [73], and [74] stated that when mothers are embedded in high-stress situations, they tended to seek social support as a strategy to help them cope. All mothers (100%) (88%) fathers stated that at the beginning, it was hard to talk it out, but Allah eases every difficulty with great care. Agreeing with the results was Sharpley *et al.* (1997) [74] who cited in Boyd (2002) [33]. They maintained that what leads mothers to seek support is the amount of stress they experience because of rearing their children. When mothers are embedded in high-stress situations, they tend to seek social support as a strategy to help them cope.

This agrees with Bristol and Schopler, 1983; Koegel *et al.* 1992; Sharpley *et al.* (1997) [72] [73] [74]. They found an association between challenging child characteristics and a mother's tendency to seek social support. In other words, whenever the disorder was severe the tendency to seek social support was high. In line with, was Padden *et al.* (2017) [71]. They mentioned that mothers seek social support more than fathers do. In line with was Altieri and Von Kluge (2009) [75] who stated that mothers perceive more social support from their family and friends than fathers do.

Disagreeing with was Neely-Barnes and Dia (2008) [62] who found that for fathers, acceptance of the child with a disability and family harmony reduced stress. While mothers were also affected by family harmony, lower socioeconomic status and greater care demands predicted stress. These differences may represent important differences in the way practitioners should intervene with

mothers versus fathers. Browne, (2010) [13] sustained that social support for families of autistic children when available and accessible has a noticeable effect on their lives.

This contradiction may be due to the fact that females (mothers) express their innermost thoughts and feelings to their family members, friends, and neighbors and thus bounce back after being fully supported, unlike males. The way we Sudanese socialize boys turns their ability to deal with emotions systematically undermined. Males should be taught, point-by-point, not to feel, not to cry, and not to find words to express themselves. Thus, they may convert stereotypically feminine feelings, such as sadness or vulnerability, into feelings like anger and aggression feelings that are more socially acceptable for them to experience. Moreover, what makes fathers show negative coping strategies may be because of the mother-child relationship; mothers are more alert to the child's experience and understands and respond to a child's needs in a sensitive successful manner due to the fact that they spent almost all the daylong with their children. Fathers spent half of the day at work and some may even return at night fully exhausted and worn out expecting to find a calm comfortable noiseless home to rest in. But unfortunately, it is not found.

Autistic family dimension: The mean degree of male parents (fathers) on the fourth dimension in the coping strategy scale was (23.2 ± 1.9), while the mean score of female parents (mothers) on the same dimension was (26.1 ± 2.8). The calculated T value was (1.322) with a probability value of ($P = 0.131$) at significant level (0.05). Accordingly, no significant difference was found between males and females in this dimension.

Inagaki and Orehek (2017) [76], assured that people who are socially integrated and have strong social ties live happier, longer lives. Seventy-six percent (76%) of the mothers and (48%) of the fathers indicated that sharing a burden can lighten the load, and knowing that one has someone to talk with and discuss his worries promotes positive feeling. Burden of having an autistic child was to great extent diminished as soon as they poured out their hearts to spouses, parents, sisters, brothers, cousins, aunts or friends).

Tarakeswahr and Pargament (2001) [77] found that religion has a great role in fostering coping strategies in families of children with autism. Faith in Allah and trust eases life and in turn, they have developed peace of mind which is a gift. Our Prophet Mohamed (Salla Alluhu Alihi wa Salam) described the community as a single body; The parable of the believers in their affection, mercy, and compassion for each other is that of a body. When any limb aches, the whole body reacts with sleeplessness and fever. This indicates the crucial role of social support.

Thereupon, siblings of autistic children may have got one-on-one time with each parent. Parents divide the children's care time for example, the mother may take over a behavioral therapy session for the child with autism one day, and the father will take the other children out. Then they will switch roles the next time.

Moreover, the siblings really do love their autistic brother or sister. They can sometimes get siblings to do things that others cannot.

Autistic future dimension: The mean degree of male parents (fathers) on the fifth dimension was (19.5 ± 3.4), while the mean score of female parents (mothers) on the same dimension was (28.1 ± 1.5). The calculated T value was (4.228) with probability value of ($P = 0.012$) at significant level (0.05). Accordingly, significant difference was found between males and females in this dimension, where females showing positive coping strategies while males show negative coping strategies in accordance with future planning.

Autistic burden dimension: The mean degree of male parents (fathers) on the sixth dimension was (8.7 ± 1.6), while the mean score of female parents (mothers) on the same dimension was (7.1 ± 2.9). The calculated T value was (4.642) with probability value of ($P = 0.011$) at significant level (0.05). Accordingly, significant difference was found between males and females in this dimension, where females showed positive coping strategy while males showed negative coping strategy.

Liu (2012) [78], in his study, found that parents show high levels of worrying and stress regarding the future plans of their children with ASD. All participants (100%) assured this by explaining that although no one knows what will happen tomorrow for typical offspring a lot of burden is experienced when thinking about their autistic child's future. Forty percent (40%) of the fathers indicated that they are working on providing their children with sources of financial support such as accounts in banks, shops, etc. Whereas, two mothers (8%) stated that their children love studying English and/or Arabic languages and they will focus on this point and develop it. They added that they are sure they will have an incredible future. Another two mothers (8%) clarified that their children love drawing. They draw in keen manner, paint perfectly and beautifully. They give attention to providing them with pencils, crayons, oil paint and papers. They will have a great future. One mother (4%) stated that her child loves taking pictures by cell phones, which are really amazing shots. She added, they hope he will become a famous photography. Another mother (4%) said that her child has a strong ability to remember places, routes and streets (visual memory); when they go out he looks around, then draws exactly what he has seen. She thinks he will be a cartographer. On the other hand, (56%) of the fathers stated that avoidance of talking about the future is the best way to lessen stress concerning future. They avoid talking about the children's future with their wives because it adds pressure on them; they are doing their best to develop the children's skills and integrate them in society.

Based on the evidence, traditional gender roles could influence coping strategies. For instance, fathers intentionally avoid caregiver responsibilities by referring to their role as a main source of income and focusing their time on work only. Moreover, they may feel pressure, as they are the single breadwinners in their families. Besides, they worry a lot about maintaining their position at work.

Future issues, such as career, residence, etc., (*i.e.* far future plans) interrupt fathers a lot. Since securing a long term future and ensuring quality of life is not an easy matter for it requires a lot from fathers. Whereas, mothers bear responsibilities concerning fostering the developmental areas of the child to enable him/her adjust and survive among family as well as his community. However, fathers are as important as mothers are in their respective roles as caregivers, protectors and financial supporters. Their role in training their children in daily self-care activities is not mentioned. Mothers tend to spend more quality time with their children. Consequently, the quality of plans set and fulfillment affects each parent. Mothers concentrate on short-term plans like managing the child to be self-independent in personal issues such as eating, dressing, bathing, etc. even though progress in training is slow, they learn. Mothers tend to have high hopes are more flexible in coming up with different ways of reaching a goal, which could be a protective factor in acquiring negative coping strategies as fathers do. One study cited in Neely-Barnes and Dia, (2008) [62] reported that mothers have more positive perceptions of care giving than fathers. This was assured by (52%) of the mothers while only (8%) of the fathers said that they may have it demanding and exhausting, but in many ways, they feel really blessed. Furthermore, as cited in Boyd (2002) [33] one of the things that lead mothers to seek support is the amount of stress they experience as a result of rearing their child. Mothers of children with autism have less depression and worry if they get more social support. Contradicting, was the result of Bou Sharaya and Tahir (2017) [43] there were significant differences between mothers and fathers in the level of stress in favor of autistic children's mothers who showed higher stress than father.

Liu (2012) [78] found in his study that parents have high expectations on their children with ASD. Moreover, parents show high levels of worrying and stress regarding the accessibility and availability of services that enhance planning for their children. Consequently, financial burden can have long-term effects on the financial security, quality of life, and future well-being of the entire family, including the siblings of the affected child. The financial burden and long-term plans emerge as a significant concern at a time when these families are already consumed with other challenges concerning the autistic child. As a result, fathers cope negatively.

Hypothesis Three: this hypothesis postulates that “There is a significant difference in the coping strategies among parents with autistic children according to the autistics’ gender.”

Psychosomatic symptoms dimension: As shown in **Table 3** independent variables t-test shows that the mean degree of parents of male autistic children on the first dimension (psychosomatic symptoms) was (32.3 ± 10.1) , while the mean score of parents of female children on the same dimension was (42.2 ± 15.2) . The calculated T value was (2.4) with a probability value of $(P = 0.017)$ at significant level (0.05). Accordingly, significant difference was found between

Table 3. T-test for independent group to test whether there is a significant difference in the coping strategies among parents with autistic children according to the autistics' gender."

Dimensions	Gender	No.	Means	S. D	T-Value	Sig.	Conclusion
Psychosomatic symptoms	Male	62	32.3	10.1	2.4	0.017	There is a significant difference in favor of autistic males
	Female	38	42.2	15.2			
Emotions	Male	62	36.1	11.4	3.6	0.016	There is a significant difference in favor of autistic males
	Female	38	44.9	8.5			
Autistic Behavior	Male	62	52.3	14.2	4.1	0.014	There is a significant difference in favor of autistic males
	Female	38	64.9	13.7			
Autistic Family	Male	62	20.2	4.1	4.7	0.021	There is a significant difference in favor of autistic males
	Female	38	35.5	3.9			
Autistic future	Male	62	18.2	4.1	6.8	0.001	There is a significant difference in favor of autistic males
	Female	38	25.2	2.9			
Burden of Autistic	Male	62	6.1	2.5	5.7	0.013	There is a significant difference in favor of autistic males
	Female	38	10.3	0.9			

parents of male and parents of female autistic children in this dimension, where parents of females showing positive coping strategies while parents of males showing negative coping strategies.

Emotion dimension: The mean degree of parents of male autistic children on the second dimension "emotions" in the coping strategy scale was (36.1 ± 11.4), while the mean score of parents of female children on the same dimension was (44.9 ± 8.5). The calculated T value was (3.6) with probability value of ($P = 0.016$) at significant level (0.05). Accordingly, significant difference was found between parents of male and parents of female autistic children in this dimension, where parents of females showing positive coping strategies while parents of males showing negative coping strategies.

Autistic behavior dimension: The mean degree of parents of male autistic children on the third dimension "issues of autistic behaviors" in coping strategy scale was (52.3 ± 14.2), while the mean score of parents of female children on the same dimension was (64.9 ± 13.7). The calculated T value was (4.1) with probability value of ($P = 0.014$) at significant level (0.05). Consequently, significant difference was found between parents of male and parents of female autistic children in this dimension, where parents of females showing positive coping strategies while parents of males showed negative coping strategies.

Autistic family dimension: The mean degree of parents of male autistic children on the fourth dimension "issues of autistic family" in coping strategy scale was (20.2 ± 4.1), while the mean score of parents of female children on the same dimension was (35.5 ± 3.9). The calculated T value was (4.7) with probability value of ($P = 0.021$) at significant level (0.05). Therefore, significant difference was found between parents of male and parents of female autistic children in this dimension, where parents of females show positive coping strategies while parents of males show negative coping strategies.

Autistic future dimension: The mean degree of parents of male autistic children on the fifth dimension “issues of autistic future” in coping strategy scale was (18.2 ± 4.1) , while the mean score of parents of female children on the same dimension was (25.2 ± 2.9) . The calculated T value was (6.8) with probability value of $(P = 0.001)$ at significant level (0.05). Accordingly, significant difference was found between parents of male and parents of female autistic children in this dimension, where parents of females show positive coping strategies while parents of males show negative coping strategies.

Autistic burden dimension: The mean degree of parents of male autistic children on the sixth dimension “burden of autism” in coping strategy scale was (6.1 ± 2.5) , while the mean score of parents of female children on the same dimension was (10.3 ± 0.9) . The calculated T value was (5.7) with probability value of $(P = 0.013)$ at significant level (0.05). Accordingly, significant difference was found between parents of male and parents of female autistic children in this dimension, where parents of females showing positive coping strategies while parents of males showing negative coping strategies. Thus, there is a significant difference in the coping strategies among parents of autistic children according to autistics’ gender, in favor of female gender.

Results revealed that there is a significant difference in favor of autistic males in the coping strategies among parents in relation to psychosomatic symptoms, emotions, autistic behavior, autistic family, autistic future and autistic burden dimensions. This means that positive coping strategies are more common among parents of female autistic children than parents of male autistics are.

The study conducted by Van Wijngaarden-Cremers *et al.* (2014) [79] could justify the results in **Table 3**. They found that boys showed more repetitive and stereotyped behavior from the age of six, but not below the age of six. Males and females with ASD showed similar symptom severity in communication and social behavior, but girls showed less restricted interests, behaviors, and stereotypes than boys. Three families (12%) participating in the interview assured this by clarifying that the amount of stress they experience is somehow less than that among parents with autistic boys. Whereas all participants (100%) clarified that behaviors of boys are rather unlike behavior of girls. They said if one has normal children of both genders, it is likely to recognize that there are some significant differences between the behaviors of both genders. This is true among autistics. Zamora *et al.* (2014) [80] results were opposing to these results. They found that parenting stress was higher for parents of girls than for parents of boys.

As a member of Sudanese society, I can explain this by stating that males in Sudanese families are generally preferred over females and are regarded as the family’s future; they support their families financially, physically, and emotionally as adults; and they carry the family’s name through marriage and having children. The majority of Sudanese people believe that a family is not complete without a male. For example, some comments made like “you have finally gotten a boy, now you can stop having children.” Therefore, presence of male autistic

child may negatively affect the psychological and emotional status of the family than presence female child with the same problem and in turn affects planning for his/her future that is to great extent burdening. Three couples (12%) explained that prior to having an autistic girl they had as many responsibilities as they had after their birth; they are not a burden.

In my opinion, how come parents of autistic children regardless of their gender do not experience burden. They may exhibit poor expressive communication skills, which in turn trigger anger, aggression and bizarre behaviors such as making odd noises, repeating phrases over and over, and closing and opening doors in a repetitive manner, sequentially stress develops. Besides, these children may require long-term care well beyond the typical child-raising years, as these parents remain in the caregiver role longer and are continually required to sacrifice their own needs over the child's needs. They, therefore, may experience caregiver burden because of increased stress raising. This could influence all family affairs.

Hypothesis Four: This hypothesis postulates that “There is a significant correlation between coping strategies of autistics parents and their educational level.”

Pearson co-efficient factor between educational level of the parents and psychosomatic symptoms, emotion, autistic behavior, effect of autistic on family, effects on autistic future and burden of autism dimensions in (Table 4) was 0.028, -0.069, 0.047, 0.028, 0.019, and 0.018, respectively. With probability values of 0.122, 0.622, 0.098, 0.122, 0.118, and 0.221 respectively, indicating no significant correlation between two variables.

The above conclusion goes in the same line with Abou-Dagga (2013) [9] who found that educational level has no significant difference on psychological

Table 4. Pearson correlation coefficient to test the correlation between coping strategies of autistics' parents and their educational level

Dimensions	Correlation with educational level	Significance	Conclusion
Psychosomatic symptoms	0.028	0.122	There is no significant correlation between two variables.
Emotions	-0.069	0.622	There is no significant correlation between two variables.
Autistic Behavior	0.047	0.098	There is no significant correlation between two variables.
Autistic Family	0.028	0.122	There is no significant correlation between two variables.
Autistic future	0.019	0.118	There is no significant correlation between two variables.
Burden of Autistic	0.018	0.221	There is no significant correlation between two variables.

stress's level in parents of children with ASD. Opposing was the study of Gorsky (2014) [46]. The study found that the higher the level of education completed by the parent the greater the likelihood that self-care strategies were utilized. He identified the content of educational curricula and whether it addresses autism or not. Regardless of the educational qualification of parents, (20%) of the mothers claimed that parents' education guides them to discovering strengths and hidden talents in their child that could be fostered and developed. In accordance was Luthra and Perry (2011) [81] results. They found that one means of coping used by parents is seeking out information and training in order to become knowledgeable about their child's disorder and relevant treatment. Moreover, they found a positive correlation between parents' perceived knowledge about autism and intensive behavior intervention and their self-efficacy. This was true with (44%) of the participants, for they said before diagnosis the behavior of their autistic child was found to be odd and abnormal. Diagnosis sheds the light on differences these children have, thus making them accept them with all their negatives and positives. They added, the positivity of knowing what is going around through accurate diagnosis and acquiring the right information and knowledge concerning the issue, lessened to great degrees stress among parents of autistic children.

On the other hand, Allred, (2013) [82] stated that education is associated with the level of psychological stress. Specifically, educated mothers are more likely to seek help and provide appropriate and timely treatment for their child, which decreases the likelihood of medical crises. However, parents who have low education levels are much more dependent on medical staff and have little confidence in their ability to provide for their children with disabilities and therefore, may experience more caregiver burden. Agreeing with, was Liu (2012) [78] whom study found that the parents' education levels influences their stress levels as well as their expectations on their children's potential friendships in the future. This may be true in accordance of the participants; (31%) of the participants were university graduates, while (10%) postgraduates.

Disagreeing with, were Ahmad and Dardas (2015) [83]. They did not find a significant correlation between the parents' level of education and their quality of life levels. Although the logical expectation was that higher levels of education can broaden individuals' knowledge and equip them with better support services. Thus, education here is not meant to be regular educational system but autistic related education. Besides, opposing to those results was the findings of Bou Sharaya and Tahir (2017) [43]. Concerning level of education, they found that there are no significant differences between fathers and mothers' stress in and level of education. Ahmad and Dardas (2015) [83] results of the study showed that family income, child's age, and parent-child dysfunctional interaction were not significant predictors for the quality of life of fathers of children with ASD. However, the remainder of the variables added significantly to the explained variance of quality of life.

In my opinion, there is no significant correlation between parent's educational

level and the other dimensions of the scale since the behavior of their autistic child is part and parcel of the disorder and is an integral part of the condition. In consequence, they need to know all about their autistic's child disorder (its types, symptoms, behaviors, management etc.) which could be achieved through self-education and/or with the help of specialists, which in turn, helps in controlling, managing their child as well as accepting him/her positively and with no stress. Moreover, learning about children's problems and needs eases offering neighbors, friends, relatives, etc. with adequate information that in turn eases interaction. Whenever they educate themselves about autism-related-behaviors obstacles may diminish. Increased understanding, perception and awareness of ASD, decreases negative emotions towards their children and simultaneously the behaviors that used to annoy them such as tantrums decreases. As a result, the parental bond will be strengthened between. Therefore, it is obvious that education contributes to human resources by developing a range of skills and traits, such as cognitive skills, problem solving ability, learned effectiveness, and personal control. Moreover, searching about the disorder and acquiring information about management lessens stress. Any abnormal behavior could be peculiar if one does not know what triggers it. Consequently, one cannot control the conditions, however caring of one's body, soul and mind prompts ideal levels of administration of stress and facilitates management and overcoming obstacles in life. Over and above is trust in Allah, which is the only way for defeating any failure in life. This was emphasized by Fransen and Fransen (2015) [84], whom stated that maintaining a balanced diet is the healthiest thing to do; it is an option that should be considered. Most experts concur that the earlier the intervention, the better. A few youngsters with autism grow up to lead typical or close-to-ordinary lives. If parents were not equipped with the information of managing self-injurious behavior (head banging, hand biting, and excessive self-rubbing and scratching) by applying a diet program, they would have suffered a lot. This point was affirmed by (40%) of the participants who said that they have learned to plan diet programs for their children and that it was very successful; with great pleasurable outcomes.

From my perspective, education concerning ASD is a matter of building bridges (choices); life of parents of autistic children is rather unpredictable but at the same time, they should almost always have several options for what they might face and do next in order not to be stuck or confused. Through this kind of education parents know different ways and means of communication that were invented to help autistic children connect and exchange information, express their emotions, etc. (sign language, symbol systems/pictures) which is essential in helping them reach their full potential. They know that even those who are fluently verbal, some are not free of language challenges. Furthermore, Posar and Visconti (2018) [85] claimed that they recognize that many people with ASD have an increased sensitivity to sound, smells, touch, taste, and visual stimulation. Thus, it was worthy considered.

Hypothesis Five: This hypothesis postulates that "There is significant

difference in the coping strategies among parents of autistic children according to family type (extended, nuclear).”

Psychosomatic symptoms dimension: As shown in **Table 5** independent variables t-test shows that the mean degree parents with extended family on the first dimension was (32.8 ± 11.6), while the mean score of parents with nuclear family on the same dimension was (40.2 ± 13.7). The calculated T value was (2.8) with probability value of ($P = 0.123$) at significant level (0.05). Consequently, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level positive coping strategies.

Emotion dimension: The mean degree of parents with extended family on the second dimension was (41.7 ± 11.2), while the mean score of parents with nuclear family on the same dimension was (38.4 ± 9.6). The calculated T value was (0.641) with probability value of ($P = 0.411$) at significant level (0.05). Therefore, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level coping strategies.

Autistic behavior dimension: The mean degree of parents with extended family on the third dimension was (62.3 ± 12.2), while the mean score of parents with nuclear family on the same dimension was (55.4 ± 16.7). The calculated t value was (0.825) with probability value of ($P = 0.326$) at significant level (0.05). Accordingly, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level coping strategies.

Autistic family dimension: The mean degree of parents with extended family on the fourth dimension was (23.3 ± 2.8), while the mean score of parents with nuclear family on the same dimension was (26.7 ± 2.9). The calculated T value

Table 5. T-test for independent group to test whether there is significant difference in the coping strategies among parents of autistic children according to family type.

Dimensions	Family type	No.	Means	S. D	T-Value	Sig.	Conclusion																																																								
Psychosomatic symptoms	Extended	58	32.8	11.6	2.8	0.123	There is no significant difference between two groups																																																								
	Nuclear	42	40.2	13.7				Emotions	Extended	58	41.7	11.2	0.641	0.411	There is no significant difference between two groups	Nuclear	42	38.4	9.6	Autistic Behavior	Extended	58	62.3	12.2	0.825	0.326	There is no significant difference between two groups	Nuclear	42	55.4	16.7	Autistic Family	Extended	58	23.3	2.8	1.267	0.139	There is no significant difference between two groups	Nuclear	42	26.7	2.9	Autistic future	Extended	58	18.6	4.1	0.278	0.713	There is no significant difference between two groups	Nuclear	42	19.9	4.0	Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups
Emotions	Extended	58	41.7	11.2	0.641	0.411	There is no significant difference between two groups																																																								
	Nuclear	42	38.4	9.6				Autistic Behavior	Extended	58	62.3	12.2	0.825	0.326	There is no significant difference between two groups	Nuclear	42	55.4	16.7	Autistic Family	Extended	58	23.3	2.8	1.267	0.139	There is no significant difference between two groups	Nuclear	42	26.7	2.9	Autistic future	Extended	58	18.6	4.1	0.278	0.713	There is no significant difference between two groups	Nuclear	42	19.9	4.0	Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups	Nuclear	42	8.1	2.1								
Autistic Behavior	Extended	58	62.3	12.2	0.825	0.326	There is no significant difference between two groups																																																								
	Nuclear	42	55.4	16.7				Autistic Family	Extended	58	23.3	2.8	1.267	0.139	There is no significant difference between two groups	Nuclear	42	26.7	2.9	Autistic future	Extended	58	18.6	4.1	0.278	0.713	There is no significant difference between two groups	Nuclear	42	19.9	4.0	Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups	Nuclear	42	8.1	2.1																				
Autistic Family	Extended	58	23.3	2.8	1.267	0.139	There is no significant difference between two groups																																																								
	Nuclear	42	26.7	2.9				Autistic future	Extended	58	18.6	4.1	0.278	0.713	There is no significant difference between two groups	Nuclear	42	19.9	4.0	Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups	Nuclear	42	8.1	2.1																																
Autistic future	Extended	58	18.6	4.1	0.278	0.713	There is no significant difference between two groups																																																								
	Nuclear	42	19.9	4.0				Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups	Nuclear	42	8.1	2.1																																												
Burden of Autistic	Extended	58	7.9	1.9	0.918	0.214	There is no significant difference between two groups																																																								
	Nuclear	42	8.1	2.1																																																											

was (1.267) with probability value of ($P = 0.139$) at significant level (0.05). Thus, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level coping strategies.

Autistic future dimension: The mean degree of parents with extended family on the fifth dimension was (18.6 ± 4.1), while the mean score of parents with nuclear family on the same dimension was (19.9 ± 4.0). The calculated T value was (0.278) with probability value of ($P = 0.713$) at significant level (0.05). Accordingly, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level coping strategies.

Autistic burden dimension: The mean degree of parents with extended family on the sixth dimension was (7.9 ± 1.9), while the mean score of parents with nuclear family on the same dimension was (8.1 ± 2.1). The calculated T value was (0.918) with probability value of ($P = 0.214$) at significant level (0.05). Accordingly, no significant difference was found between extended and nuclear families in this dimension, where the two types showing the same level coping strategies.

According to above results, no significant differences found between extended and nuclear families of autistic children in all dimensions of the scale. Explanation of these results (**Table 5**) is that in Sudan in most cases there is no clear-cut between nuclear and extended families, and there is strong social bonds between the families in any given area, with mutual support that in turn decreases the differences in response to presence of autistic children between the nuclear and extended families. In Sudan, the nuclear family (mother, father, and their children) is not only those residing in the household, but those members of the extended family (grandmother/grandfather, aunt/uncle, cousins) who may or may not reside nearby; their significant relationships with the members of the nuclear family, they act as a resilient foundation that enables each other to withstand stress. In line with the result was Hasenecz (2010) [86] whom stated that grandparents indicated that they have aided a grandchild with autism or the child's family in at least one of the following ways: identifying the condition, participating in treatment decisions, providing emotional support, providing financial support, caregiving, and advocating. He found that (57%) of grandparents surveyed said they contribute financially to a grandchild's autism-related needs. This was assured by (76%) of the participants who clarified that they receive a monthly amount of money from their parents that helps a lot, more than one can imagine. Moreover, he found that 49% of grandparents surveyed said they play a small role in treatment decisions regarding their grandchild. It was emphasized by (82%) of the participants that their parents read about autism and follow news concerning autism, its management, methods of behavior modification, diet, etc. Thus, the extended family is very important in supporting the family of the autistic child. Eighty-eight percent (88%) of the participants explained that their families show empathy, understanding when they take their

children to visit them; once they arrive, all things the children love are prepared for them, they welcome them in a big room where they can watch their children playing. They added, they feel stress free when visiting them because they know how to deal with the children without panicking. Eighty-three percent (38%) of the participants explained that their brothers and sisters cooperate with them and lend them a helping hand. Bristol and Schopler (1983) [72] confirmed the results by defining informal support as a network that may include the immediate and extended family, friends, neighbors, and other parents of children with disabilities. One mother (4%) indicated that her mother acts as a petrol station, whenever she runs out of power she fills her with strength, hope that lasts for months before returning back. Forty percent (40%) of the mothers and (64%) of the fathers stated that they extend power from their fathers. They motivate them to enroll in training their autistic children. In addition, they tell them that Allah knows that they can bear this enormous responsibility. Three mothers (12%) indicated that their cousins live nearby, every day they visit them. Their children love them a lot. They play, sing, and tell stories, draw, paint, chat, etc. They added this is their precious free time in which they accomplish household duties and then join them; Allah loves them.

Agreeing with what Samadi et. al (2012) [87] found that lower stress was associated with mothers and fathers who were joint caregivers and when the family lived with relatives. This was de-emphasized by (12%) of the participants whom stated that people stare, make comments and fail to understand any behaviors that may occur. Consequently, they often feel uncomfortable taking their children to the homes of relatives.

From my perspective, living in an extended family or a nuclear family requires from both parents cooperation, patience, hope, wide minds, flexibility to overcome together obstacles of having an autistic child. This was clear when (56%) of the participants clarified that they and their spouses have on a daily basis a conversation about how is their autistic child doing, his progress, achievements and even failures. They explained that it helps them a lot to spell things out and share with people who love the child; lessens the stress they experience; even though they gain no benefit but sharing feelings of sadness, fear, hope, etc. This was emphasized by Kersh, *et al.* (2006) [88] who found that for both mothers and fathers, greater marital quality predicted lower parenting stress and fewer depressive symptoms above-and-beyond socio-economic status, child characteristics.

4. Conclusion and Recommendations

4.1. Conclusion

In conclusion, this thesis underscores the profound impact of having an autistic child on the coping strategies of Sudanese parents in Khartoum State. This problem is significant as it sheds light on the challenges faced by these parents in a specific cultural context. A sample of 100 families (total sampling technique) contributed in fulfilling the scale developed by me and 50 were interviewed. Em-

ploying both quantitative (SPSS) and qualitative (thematic content analysis) methods ensured a thorough analysis of the data collected. The study reveals a spectrum of coping mechanisms, including faith, acceptance, and social support, with significant gender differences in coping effectiveness. While males (fathers) showed better coping in psychosomatic symptoms, females (mothers) demonstrated greater resilience in managing the child's behavior, future planning, and perceived burden. The analysis also highlighted the absence of significant differences in coping strategies based on educational level and family type, though autistic males' parents exhibited more effective coping across all dimensions. These findings emphasize the necessity for tailored support systems and resources to aid parents in managing the multifaceted challenges associated with raising autistic children.

4.2. Recommendations

1) Government should offer formal support for families with autistic children to lessen the burden they experience.

2) Government should provide a free appropriate public education that meets autistic unique individual needs.

3) Organizations and governmental ministries should shed more light on this sector, formally offering building capacity programs and autism-oriented workshops for various different groupings of family members to foster the development of coping skills they need as well as enrich their knowledge and understanding of the condition.

4) It is important to build networks and social support systems for parents of children with ASD, which can help the parents cope with issues related to their children's disabilities.

5) Effective programs and social policies are tremendously helpful for parents in planning for their children's future.

6) Parents should be given the opportunity to meet others facing similar issues in relation to the diagnosis of ASD *i.e.* social support groups. The main benefits in meeting people in similar situations as oneself makes one no longer feel alone; being given practical tips and advice for coping.

7) Training courses for personnel in kindergartens to enhance knowledge about autism and the intervention strategies that are effective in assisting autistic children to achieve their full potential.

8) Home-based visits should be conducted to develop a consistent communication system, to develop the child's ability to cooperate for teaching and the teaching of new skills, to develop the child's comprehension of environments, especially at home; and to develop parental skills in behavior management and strategies to promote learning outcomes.

Conflicts of Interest

The author declares no conflicts of interest.

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