

Family resilience and parental stress: the effects on marital relationship in the context of a child diagnosed with an autism spectrum disorder

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Abstract: This study aims to investigate family resilience and parenting stress – in the context of raising a child diagnosed with an autism spectrum disorder (ASD) – and their influence on certain variables specific to marital relationship: dyadic adjustment and dyadic coping. The research included a sample of 100 people (50 women and 50 men) aged between 27 and 53 years ($M= 42.8$), each of them parents of a child diagnosed with autism. The participants were asked to fill in a series of scales concerning the variables of this study: family resilience, parenting stress, dyadic adjustment and dyadic coping. The results show that dyadic adjustment correlates positively with some subscales of family resilience, but its correlation with parenting stress is negative, while dyadic coping correlates positively with some subscales of family resilience but also with a subscale specific to parenting stress. Furthermore, findings have underscored which subscales of family resilience and parenting stress are predictors for dyadic adjustment and dyadic coping. Moreover the results show that family resilience and parental stress influence dyadic adjustment according to the child's age. Family resilience and parenting stress may also represent important factors to be explicitly considered within intervention paradigms for the therapy of families with children diagnosed with Autism Spectrum.

Keywords: family resilience, parenting stress, dyadic adjustment, dyadic coping.

1. Introduction

The systemic perspective on families argues that they represent an interactive and independent system in which the life events of one single family member will influence all the other members of the system (Goldenberg & Goldenberg, 2003). Thus, the disability of a child will most likely affect the entire family he / she is part of. Compared to families with non-disabled children, families with disabled children are supposed to face specific challenges and problems. A series of negative effects has been reported concerning these types of families: high levels of stress, low well-being, negative feelings related to parenting, low marital satisfaction, financial strain (Baker, Blacher & Olsson, 2005; Blacher & McIntyre, 2006; Hatton & Emerson, 2003; Hunfeld, Perquin, Duivenvoorden, Hazebroek-Kampschreur, Passchier & van Suijlekom-Smit, 2001; Maes, Broekman, Dosen &

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Nauts, 2003; McIntyre, Blacher & Baker, 2002; Wilkinson, Newman, Shytle, Silver, Sanberg & Sheehan, 2001). Nevertheless, there are studies that support the existence of some positive effects upon those families with a disabled child, among which we would like to mention: better parent/child interactions, strong family cohesion and significant life goals (Flaherty & Glidden, 2000; Glidden, Bamberger, Turek & Hill, 2010; Green, 2007; Hastings & Taunt, 2002; Kearney & Griffin, 2001; Taanila, Jarvelin & Kokkonen, 1999).

2. Theoretical reference points

2.1. Family resilience and parenting stress in the families of children diagnosed with ASD

The American Psychiatric Association's (APA, 2000) *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR) defines autism spectrum disorders (ASD) as a group of disorders that include autistic disorders and pervasive developmental disorders - not otherwise specified (PDD-NOS), and Asperger's Disorder. Autism spectrum disorders (ASD) can be defined by a spectrum of complex neurological and developmental disorders characterized by a break in mutual social interaction and communication, associated with the presence of restricted, repetitive and stereotypical interests and behaviours (APA, 2000). These deficits manifest in early development and are pervasive in nature, affecting individuals throughout their life. The problems related to ASD do not only affect the diagnosed individuals but also their caregivers, family, teachers and community (Karst & Van Hecke, 2012). Once the parents are informed about the diagnosis of autism and realize the implications, they become part of an extremely stressful process, similar to hearing the news of somebody's death (Dale, Jahoda & Knott, 2006). Along with their loss of hopes and dreams for their child, parents experience a very strong period of grief when being informed about such a diagnosis (Ariel & Naseef, 2006). Moreover, the parents of children diagnosed with ASD report a high level of secondary stress, which is associated with the difficult behaviour and social problems experienced by their child. After being told the diagnosis, the ambiguity and uncertainty related to the diagnosis becomes sources of stress for the parents. For instance, in a study dealing with the impact of perceived uncertainty on caregivers, the authors found out that perceived uncertainty in the existence of the illness becomes a significant predictor of a specific stress related to the future (Sanders-Dewey, Mullins & Chaney, 2001). Researchers suggest that parenting distress results from factors like: intensity, magnitude, duration and unpredictability of the child's disorder (Noh, Dumas, Wolf & Fisman, 1989). Dunn, Burbine, Bowers & Tantleff-Dunn (2001) examined the relationship between stressors, social support, locus of control, coping styles and negative consequences, such as (depression, social isolation, spousal relationship problems) among parents of children diagnosed with

autism. Results indicated that social support and coping styles could moderate the relationship between stressors and the negative outcomes of caregivers.

Whereas most studies assessed disorders from the perspective of the health status of caregivers, lately, research has also focused on the positive adjustment to their care-giving situation. In this context, some caregivers show abilities of coping effectively with the stress of providing care: this phenomenon is described as resilience (Cohen, Colantonio & Vernich, 2002; Gaugler, Kane & Newcomer, 2007). Conceptually, family resilience builds on the development of a competence-based and strength-oriented family paradigm to help gain an understanding of how families display resilience when challenged by adversity (Walsh, 1998; Walsh, 2003). To Patterson, family resiliency is seen as “the capacity of a family system to successfully manage their life circumstances, while family resilience could be used to describe the processes by which families are able to adapt and function competently following exposure to significant adversity or crises” (Patterson, p. 352, 2002). The use of the term “resilience” in the context of an autism spectrum disorder starts with studies that discuss aspects of family stress that explain the situation which occurs when one of the family members is affected by a disease or by chronic incapacity. Hence, whereas certain studies claim that the presence of an autistic child has a negative effect upon the family (Holroyd & McArthur, 1976; Rodrigue, Morgan & Geffken, 1990; Bouma & Schweitzer, 1990; Dumas, Wolff, Fishman & Culligan, 1991; Konstantareas, Homatidis & Plowright, 1992; Koegel, Schreibman, Loos, Dirlich-Wilhelm, Dunlap, Robbins & Plienis, 1992), there are also studies suggesting that one should not generalize such negative consequences regarding all families. Other studies even indicate that the presence of a child diagnosed with autism may bring about positive consequences (Sanders & Morgan, 1997; Tway, Connolly & Novak, 2007; Bayat, 2007). Plumb (2011) tested the relationship between family resilience and parental stress for 50 family members/caregivers of individuals diagnosed with ASD. The results of this study indicate that a strong negative relationship between *family resilience* and *parenting stress* exists. This suggests that increased parental stress, unrelated to direct parenting, correlates with less family resilience. In other words, it is the parent’s own feelings of distress that correlate with a decreased sense of family resilience. The most significant correlations between family resilience and parental distress refer to family communication and problem solving, family connectedness, and family spirituality (Plumb, 2011).

2.2. Dyadic adjustment and dyadic coping among couples with an autistic child

Marital or dyadic adjustment is a popular topic among studies on families, probably because this concept is closely related to marital stability. Hence, it is expected from couples where marital adjustment is solid to have a longer relationship, compared to couples with lower marital adjustment, prone to higher rates of divorce or separation (Spanier, 1976). Locke and Wallace (1959, p. 251)

defined marital adjustment as accommodation of a husband and wife to each other at a given time. More recently, Dimkpa (2010) stated that marital adjustment refers to a couple's ability of being satisfied and happy and of successfully accomplishing a set of tasks specific to marriage. Thus, several marital problems have to be overcome in order to reach and improve marital adjustment, satisfaction and happiness in a couple (Ebenuwa-Okoh, 2010).

The parents of disabled children experience higher levels of marital stress and stronger disagreements than parents with non-disabled children. In other words, marital and family functioning are influenced by a child who has been diagnosed autism, and this very fact may affect not only the relationship between spouses but also their personal idea of parenthood and parental roles (Lickenbrock, Ekas & Whitman, 2011; Montes & Halterman, 2007; Gau, Chou, Chiang, Lee, Wong, Chou & Wu, 2012; Dunn, Burbine, Bowers & Tantleff-Dunn, 2001). Children diagnosed with autism feature various behavioral issues related to socialization and communication, and they represent possible sources of stress for parents (Hastings & Taunt, 2002). Some studies insist on the relationships between the child's behaviour and the marital adjustment issues. Such a study examines the way in which being the parent of a child diagnosed with autism influences their marital relationship. Hence, Brobst, Clopton and Hendrick (2009) show that the parents of children with autism intensely experience the behaviour difficulties of the child, some higher levels of stress and less satisfaction in their relationship with their spouse, compared to families where the child does not have this type of disorder (Brobst, Clopton and Hedrick, 2009). Higgins, Bailey and Pearce (2005) conducted a study to identify the perceptions and experiences of families with a child diagnosed with autism. The results show that the parents of children diagnosed with autism have lower levels of marital happiness, family adaptability and cohesion, compared to parents of children with any other difficulty or disability (Higgins, Bailey & Pearce, 2005). Gau et al. (2012) found out that the mothers of children diagnosed with autism enjoy less marital satisfaction, fewer ways of expressing affection, less family adaptability and cohesion than the mothers of non-disabled children. The study highlights that parents of children diagnosed with autism encounter more psychological problems, marital difficulties and family dysfunction, and this concerns mothers in particular (Gau et al. 2012). After having examined the associations between mothers' positive and negative perceptions of their children, the marital adjustment and the maternal well-being, Lickenbrock, Ekas and Whitman (2011) discovered that marital adjustment moderated the relation between negative perceptions and negative maternal affect. Furthermore, mothers who scored high in positive perceptions scored higher in marital adjustment and well-being. Findings also showed that marital adjustment moderated the relationship between negative perceptions and negative maternal affect (Lickenbrock, Ekas & Whitman, 2011). Hock, Timm and Ramisch (2012) conducted a qualitative study to explore the ways in which parenting a child diagnosed with ASD influences the marriage and couple relationship; they

described the stages of the couple's relationship, from the moment parents are informed about the diagnosis, to the moment they succeed in adjusting to the disorder. Using the interview as a data collecting method for nine couples, the authors found that parenting a child diagnosed with ASD introduced contextual demands and elicited intense emotional responses, which exerted great pressure on the couple's relationship. This pressure pushes the couple's relationship to its limits and forces qualitative changes concerning the way the partners relate to each other. Since the demands related to ASD continue throughout the family's life, the partners evolve to the next phase in their marriage (at least in the post-diagnostic phase) – the “tag-team” phase, which involves successfully performing their parental tasks. At the same time, in terms of the couple's relationship, they experience conflict and widen the distance between them. In the next phase, most couples evolve to deeper intimacy and commitment, thus feeling more confident about the resilience of their relationship (Hock, Timm and Ramisch, 2012).

A couple's capacity of coping with stress depends on the emotional regulations of each partner and on their methods of acting in difficult situations. Dyadic coping aims to maintain or restore individual and dyadic homeostasis, both partners' well-being and the couple's functioning (Bodenmann, 1997). A series of studies have shown that the quality of couples' dyadic coping is associated with psychological distress, their well-being and the quality of their relationship (Bodenmann, 2000; Martin, Peter Wight, Braun, Hornung, & Scholz, 2009). Ambivalent or hostile dyadic coping has been proven to be more frequent among distressed couples or in the context of mental disorders and even chronic illness (Bodenmann, Widmer, Charvoz, & Brandbury, 2004). However, positive dyadic coping can reduce the negative influence of stress on a relationship (Martin et al., 2009). Twoy, Connolly and Novak (2007) conducted a survey to explore the coping strategies among parents with children diagnosed with ASD. These coping strategies include acquiring social support, reframing, mobilizing the family to acquire and accept help and seeking spiritual support and passive appraisal. Researchers concluded that the parents of children diagnosed with ASD were prone to use the support systems within social networks, which became a main coping strategy: “Mobilization of family support was highly utilized as families struggle to cope, to understand the disorder and seek further information about the disorder” (p. 258). The results of that study indicated that families adapt to the challenges of caring for and raising a child diagnosed with autism. However, they often employed passive appraisal to cope with their child's ASD-related behaviour (Twoy, Connolly & Novak, 2007).

3. Objectives

The purpose of our study is to investigate the relationships between family resilience, parenting stress, dyadic coping and dyadic adjustment for the parents of children diagnosed with ASD. Another aim is to explore the implication of family

resilience and of parenting stress in their capacity of predictors for dyadic adjustment and dyadic coping. For the third objective it was tested whether there is a moderating effect based on the age of the child.

4. Method

4.1. Participants and procedure

This research involved 100 parents (50 women and 50 men), aged between 27 and 53 years old ($m = 42.8$; $SD = 6.30$) who are caregivers for children with autism, aged between 4 and 17 years old ($m = 9.60$; $SD = 4.04$). The subjects were recruited from two day-care centres in Suceava and Iasi as well as one inclusive educational school in Gura Humorului. After obtaining their consent, the participants filled in several self-reporting scales.

4.2. Instruments

Family Resilience Assessment Scale – FRAS (Sixbey, 2005) measures family resilience and is used in Walsh's theoretical model (2006). This scale is comprised of 66 questions (the last one is an open question, but it was not used in this study) with a Likert scale, where 4 means *strongly agree*, while 1 means *strongly disagree*. A high score in this instrument indicates high family resilience, while a lower score shows low family resilience. The instrument contains six subscales: 1) *Family Communication and Problem Solving*, which is defined by Sixbey (2005) as a family's ability to convey information, feelings and facts clearly and openly while recognizing problems and carrying out solutions; 2) *Utilizing Social and Economic Resources* which is defined as those external and internal norms allowing a family to carry out day-to-day tasks by identifying and utilizing resources; 3) *Maintaining a Positive Outlook*, that is defined as a family's ability to organize around a distressing event with the belief that there is hope for the future and persevering to make the most out of their options; 4) *Family Connectedness*, which is defined as a family's ability to organize and bond together for support while still recognizing individual differences; 5) *Family Spirituality*, which is defined as a family's use of a larger belief system to provide a guiding system and help to define lives as meaningful and significant; 6) *Ability to make Meaning of Adversity*, which is defined as a family's ability incorporate the adverse event into their lives while seeing their reactions as understandable in relation to the event (Sixbey, 2005). The analysis of the internal consistency of items indicates a Cronbach alpha of 0.89. After analyzing the internal consistency coefficient for each subscale, values between .61 and .92 were obtained.

Parenting stress was assessed through *The Parenting Stress Index-Short Form - PSI-SF* (Abidin, 1995). This is a Likert type scale: from (1) *strongly agree* to (5) *strongly disagree* and is comprised of 36 items. It is a short form of

Parenting Stress Index (PSI) (Loyd & Abidin, 1985). PSI-SF yields a Total Stress score and scores from three scales: Parental Distress, which concerns negative feelings and stress related to the parent's self rather than to the child, Parent-Child Dysfunctional Interaction and Difficult Child that reveal stress created by the experiences of a particular child and the specific demands the child makes on the parent. The analysis of internal consistency of all items indicates a Cronbach alpha of 0.89. After analyzing the internal consistency coefficient for each subscale, the following values: .85, .84 and .81 were obtained.

To assess the dyadic coping, *Dyadic Coping Inventory – DCI* (Bodenmann, 2007) was used, which is comprised of 37 items, rated on a 5-point scale, from 1 – *very rarely* to 5 – *very often*, grouped in nine subscales. Within the statistical analyses presented in this study, we will use the general score of dyadic coping. A high score means high dyadic coping, while a low score means low dyadic coping. The analysis of internal consistency of the items indicates a Cronbach alpha of 0.72.

Dyadic Adjustment Scale – DAS (Spanier, 1976) is an instrument that includes 32 items and measures the quality of relationship adjustment. The score may range from 0 to 151, and items are rated on a 5-point scale: 5 – *always agree*, to 1 – *always disagree*. The analysis of internal consistency indicates a Cronbach alpha of 0.93.

5. Results

5.1. Relationship between family resilience, parenting stress, dyadic adjustment and dyadic coping

The means, the standard deviations and the correlation coefficients for all variables analyzed are featured in Table 1. By analyzing the results of Pearson's correlation, it becomes apparent that the score for dyadic adjustment correlates positively with the following subscales of family resilience: family communication and problem solving ($r=.23$, $p= .021$), utilizing social and economic resources ($r=.32$, $p = .001$), maintaining a positive outlook ($r= .34$, $p< .001$), family spirituality ($r=.20$, $p = .04$) and family connectedness ($r=.22$, $p=.02$). The total score for family resilience correlates positively with dyadic adjustment ($r =.32$, $p = .001$). There are negative correlations among all subscales of parenting stress: parental distress ($r = -.24$, $p=.01$), parent-child dysfunctional interaction ($r = -.44$, $p<.001$), difficulty of child ($r = .34$, $p = .001$) and the scores for the scale of dyadic adjustment.

The results obtained for dyadic coping correlate positively both with the total score for family resilience ($r = .29$, $p = .003$) and with some subscales: family communication and problem solving ($r =.44$, $p<.001$), maintaining a positive outlook ($r =.30$, $p= .002$) and family connectedness ($r =.47$, $p<.001$). The findings also indicate that dyadic coping correlates negatively with a subscale specific to

parenting stress: parental distress ($r = -.30, p = .002$). At the same time, however, dyadic coping correlates positively with another subscale of parenting stress: difficulty of child ($r = .27, p = .006$).

As far as the relationship between parenting distress and family resilience is concerned, after having checked the correlations among their subscales, the conclusion that can be drawn is that parental distress correlates negatively both with the total score for family resilience and with the following subscales: family communication and problem solving ($r = -.31, p = .001$), maintaining a positive outlook ($r = -.28, p = .004$) and family connectedness ($r = -.25, p = .010$). In the same direction, we found negative correlations between the parent-child dysfunctional interaction subscale and the family resilience subscales: family communication and problem solving ($r = -.22, p = .02$), maintaining a positive outlook ($r = -.20, p = .040$) and family connectedness ($r = -.20, p = .043$). As far as the scores for the difficulty of child subscale are concerned, these ones correlate positively with a subscale of family resilience called ability to make meaning of adversity ($r = .38, p < .001$).

Table 1: Analysis of correlations among parenting stress (including subscales), family resilience (including subscales), dyadic adjustment and dyadic coping.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1.FCPS	1												
2.USER	<i>.23*</i>	1											
3.MPO	<i>.63**</i>	<i>.07</i>	1										
4.FC	<i>.31</i>	<i>.13</i>	<i>.20*</i>	1									
5.FS	<i>.15</i>	<i>.27</i>	<i>.06</i>	<i>-.07</i>	1								
6.AMMA	<i>.70</i>	<i>.15</i>	<i>.46</i>	<i>.07</i>	<i>.26</i>	1							
7.TS_RF	<i>.88</i>	<i>.61</i>	<i>.56</i>	<i>.28*</i>	<i>.40</i>	<i>.71</i>	1						
8.PD	<i>-.31*</i>	<i>-.10</i>	<i>-.28</i>	<i>-.25</i>	<i>-.06</i>	<i>-.11</i>	<i>-.25*</i>	1					
9.I-DCP	<i>-.22*</i>	<i>-.13</i>	<i>-.20*</i>	<i>-.20*</i>	<i>-.03</i>	<i>.02</i>	<i>-.18</i>	<i>.38</i>	1				
10.DC	<i>.07</i>	<i>-.17</i>	<i>-.17</i>	<i>.007</i>	<i>.11</i>	<i>.38</i>	<i>.06</i>	<i>.10</i>	<i>.68</i>	1			
						<i>**</i>							
11.TS_PS	<i>-.19*</i>	<i>-.18</i>	<i>-.29</i>	<i>-.19</i>	<i>.01</i>	<i>.13</i>	<i>-.15</i>	<i>.63</i>	<i>.89</i>	<i>.78</i>	1		
12.DA	<i>.23*</i>	<i>.32</i>	<i>.34</i>	<i>.22*</i>	<i>.20*</i>	<i>.10</i>	<i>.32</i>	<i>-.24*</i>	<i>-.44</i>	<i>-.34</i>	<i>-.44</i>	1	
13.DCo	<i>.44</i>	<i>.04</i>	<i>.30</i>	<i>.47</i>	<i>-.11</i>	<i>.16</i>	<i>.29</i>	<i>-.30</i>	<i>.17</i>	<i>.27</i>	<i>.06</i>	<i>-.004</i>	1
Mean	92.45	35.82	14.61	8.61	18.03	15.37	184.89	31.30	31.91	34.08	97.29	112.01	129.66
SD	7.52	4.12	1.45	1.66	1.17	1.30	11.01	6.80	6.69	7.20	15.91	17.67	19.92

Note: FCPS – Family Communication and Problem Solving; USER – Utilizing Social and Economic Resources; MPO – Maintaining a Positive Outlook; FC - Family Connectivity; FS – Family Spirituality; AMMA – Ability to Make Meaning of Adversity; TS_RF – total score Family Resilience; PD – parental distress; I-DCP – parent-child dysfunctional interaction; DC – difficulty of child; TS_PS – total score Parenting Stress; DA – Dyadic Adjustment; DCo – Dyadic Coping; N – 109; * $p < .05$; values under italic are significant at a $p < .001$.

5.2. Predictors of dyadic adjustment and dyadic coping

Following Pearson’s correlation analyses, we identified the subscales of family resilience (family communication and problem solving, utilizing social and economic resources, maintaining a positive outlook, family connectedness, family spirituality) and of parenting stress (parental distress, parent-child dysfunctional interaction, difficulty of child) that correlate significantly with dyadic adjustment. By using the linear regression analysis, we assessed the extent to which the previously mentioned subscales predict dyadic adjustment and which are the significant predictors. Standardized and non-standardized regression coefficients are featured in Table 2. We found that the scores for two subscales of family resilience – maintaining a positive outlook and utilizing social and economic resources – are significant predictors of dyadic adjustment. Among the subscales of parenting stress, only the parent-child dysfunctional interaction is a significant predictor for dyadic adjustment.

Table 2: Score prediction in *dyadic adjustment*

Predictors	R ² aj	B	SE	beta	t	p
1.FCPS	.044	-.42	.30	-.18	-1.39	.167
2.USER	.111	1.01	.40	.23	2.47	.015
3.MPO	.186	5.05	1.80	.33	2.79	.006
4.FC	.197	1.76	1.42	.11	1.23	.219
5.FS	.208	1.52	.97	.14	1.57	.119
6.PD	.213	-.01	.25	-.006	-.06	.949
7.I-DCP	.318	-.95	.37	-.36	-2.54	.012
8.DC	.310	.009	.004	.004	.02	.979

Note: FCPS – Family Communication and Problem Solving; USER – Utilizing Social and Economic Resources; MPO – Maintaining a Positive Outlook; FC - Family Connectedness; FS – Family Spirituality; PD – parental distress; I-DCP – parent-child dysfunctional interaction; DC – difficulty of child

Pearson’s correlation analyses offered us the possibility of identifying the subscales of family resilience, which correlate significantly with dyadic coping. These are: family communication and problem solving, maintaining a positive outlook and family connectedness. We also underlined which subscales of parenting stress are significantly related to dyadic coping: parental distress and difficulty of child. Moreover, by using linear regression analysis, we assessed the extent to which these subscales predict dyadic coping and which are the significant predictors. Standardized and non-standardized regression coefficients are featured in Table 3. We emphasize that family connectedness and difficulty of child are the only significant predictors for dyadic coping.

Table 3: Score prediction for *dyadic coping*

Predictors	R ² aj	B	SE	beta	T	p
1.FCPS	.189	.48	.29	.18	1.69	.09
2.MPO	.181	2.004	1.83	.11	1.09	.27
3.FC	.299	6.06	1.48	.34	4.08	<.001
4.PD	.305	-.44	.25	.15	-1.76	.08
5.DC	.377	.80	.23	.29	3.48	.001

Note: FCPS – Family Communication and Problem Solving; MPO – Maintaining a Positive Outlook; FC - Family Connectivity; FS – Family Spirituality; PD – parental distress; DC – difficulty of child

5.3. *The influence of family resilience and parental stress on dyadic adjustment according to the the child's age*

In order to study the manner in which dyadic adjustment is influenced by family resilience and parental stress along with the progress of the disease, we tested whether there is a moderating effect based on the age of the child. We turned the variable child age into a variable with four levels: 4-6 years (preschool), 7-11 years (primary school), 12-14 years (preadolescence), 15-17 years (adolescence). We also turned family resilience and parental stress into variables with two levels (low vs. high), according to the median value. We checked whether the variables' age of the child and family resilience influence dyadic adjustment, and this was done with the help of Anova Univariat. The results show that child age ($F(3.99) = 5.78, p = .001$) and family resilience ($F(1.99) = 6.33, p = .014$) have significant effects on dyadic adjustment. There is no significant interaction effect between the age of the child and family resilience on dyadic adjustment ($F(3.99) = .43, p = .72$). By using One Way Anova, it can be noticed that not only in case of a high level of family resilience ($F(3.48) = 3.50, p = .002$) but also in case of a low level of family resilience ($F(3.44) = 2.88, p = .047$), parents who have children aged 12-14 years get scores at dyadic adjustment significantly lower ($M_{\text{low family resilience}} = 100.20; M_{\text{higher family resilience}} = 110.36$) than the parents with children between 15 and 17 years. ($M_{\text{low family resilience}} = 125.85; M_{\text{higher family resilience}} = 127.16$).

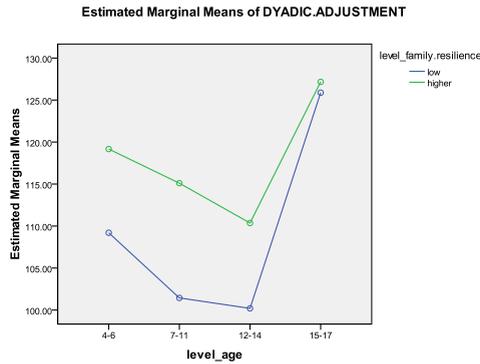


Figure 1. The influence of family resilience and the child’s age on dyadic adjustment

To test whether parental stress influences dyadic adjustment according to the the child’s age, Univariate ANOVA was used. The results show that parental stress has a significant influence on dyadic adjustment ($F(1,99) = 12.87, p = .001$), but this is not the same with child age ($F(3,99) = .57, p = .634$). There is no significant interaction effect between the child age and parental stress on dyadic adjustment ($F(3,99) = 1.58, p = .199$). Using the One Way Anova it can be noticed that in case of low parental stress, dyadic adjustment scores of parents with children of 15-17 years are significantly higher ($M = 130.33$), compared to the scores of parents with children of 4-6 years ($M = 115.42, p = .016$) but also to parents of children of 7-11 years ($M = 113.45, p = .019$). Once we used the Test t for independent samples, it can be remarked that parents of children between 12 and 14 years but with a high level of parental stress, have significant lower scores in dyadic adjustment ($M = 98.72, p = .001$), in comparison with parents of children between 12 and 14, with a low level of parental stress ($M = 117.50$). On the other hand, parents of children between 15 and 17 with high parental stress levels have significantly lower scores on dyadic adjustment ($M = 103.33, p < .001$) compared to parents of children between 15 and 17 with a low level of parental stress ($M = 130.33$).

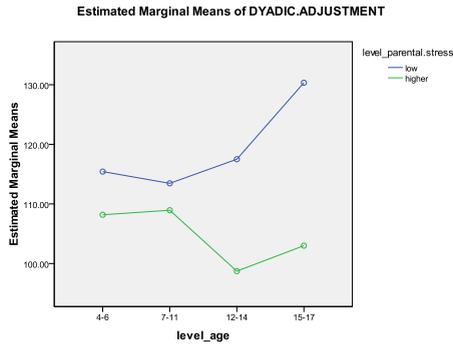


Figure 2. The influence of parental stress and the child's age on dyadic adjustment

As shown in Figures 1 and 2, parents with children between 12 and 14 show a lower level of dyadic adjustment, therefore there is a lower quality of marital relationship for parents with children aged between 15 and 17.

6. Discussions

The main purpose of this study was to investigate the impact of parenting stress and family resilience on couple relationships in general including two concepts – dyadic adjustment and dyadic coping – in particular. First we aimed to investigate the relationships between family resilience, parenting stress, dyadic coping and dyadic adjustment for the parents of children diagnosed with ASD. Another key aim of this study was to identify factors that led to dyadic adjustment and dyadic coping based on predictors like family resilience and parenting stress. Thirdly, we investigated that family resilience and parental stress influence dyadic adjustment according to the child age.

As far as the connection between parenting stress and family resilience is concerned, the strongest correlations ($r > .30$) describe: the low score of *parental distress* is associated with high levels of *family communication and problem solving* and a high score of *difficulty of child* is related to *ability to make meaning of adversity*. The negative correlation between *parental distress* and *family communication and problem solving* is in accordance with Plumb (2011), but the positive correlation between *difficulty of child* and the ability to make meaning of adversity reflects discrepancy with the results Plumb identified (2011). In other words, the results of this present research show that the *ability to make meaning of adversity* - which is defined by Sixbey (2005) as a family's ability to assimilate the adverse event into their lives, considering their understandable reactions in relation to the event - increases along with the parental perception related to *difficulty of child*. This tendency may be relevant because some studies have shown that parents' perception regarding their child's disease (intensity, magnitude, duration, unpredictability) increases parenting stress (Noh, Dumas,

Wolf & Fisman, 1989); in this case parenting stress appears due to the experiences of *difficulty of child*. So, when a parent has a realistic perspective on a child diagnosed with ASD (this disorder is chronic and always involves serious demands), the parent's concern about the child's problem is even greater.

When thoroughly analysing the results about *dyadic adjustment*, it can be noticed that this variable correlates positively with five out of the six subscales of family resilience: *family communication and problem solving, utilizing social and economic resources, maintaining a positive outlook, family spirituality and family connectedness*. These results suggest that family resilience represents not only a specific capacity of a family system to successfully manage their life circumstances (Patterson, 2002), but also a couple's ability to be satisfied and happy, and also successfully accomplishing a set of tasks specific to marriage (Dimkpa, 2010). On the other hand, the results showed negative correlations between all subscales of parenting stress - *parental distress, parent-child dysfunctional interaction, difficulty of child* - and the scores for the scale of *dyadic adjustment*. These results identify a strong relationship between the stress arising from child care and the adjustment of couple's relationship, in other words their marital satisfaction. When the level of parental stress is influenced by the birth of a child diagnosed with autism, the marital adjustment and the couple's satisfaction are negatively affected (Lickenbrock, Ekas & Whitman, 2011; Montes & Halterman, 2007; Gau, Chou, Chiang, Lee, Wong, Chou & Wu, 2012; Dunn, Burbine, Bowers & Tantleff-Dunn, 2001; Brobst, Clopton and Hedrick, 2009). These results can be explained by the fact that the resources of the family and of the couple (time, money, energy etc.) are largely directed towards the sick child, neglecting the needs of couple relationship. Hock, Timm and Ramisch (2012) investigated the way in which parenting a child diagnosed with ASD influences a marriage and a couple's relationship and concluded that parenting a child diagnosed with ASD involves great pressure on the couple's relationship because the demands related to ASD are present throughout the family's life course (Hock, Timm & Ramisch, 2012). Linear regression analysis revealed the strongest predictors for dyadic adjustment. Two subscales of family resilience - *maintaining a positive outlook* and *utilizing social and economic resources* - and one of parenting stress - *parent-child dysfunctional interaction* - are significant predictors for *dyadic adjustment*. Sixbey (2005) defined the idea of *maintaining a positive outlook* as a family's ability to organize in the case of a distressing event, with the belief that there is hope for the future and persevering to make the most out of their options. Also, the idea of *utilizing social and economic resources* is defined by Sixbey (2005) as referring to those external and internal norms that allow a family to carry out day-to-day tasks by identifying and utilizing resources, such as (helpful family members, community systems or neighbors) (Sixbey, 2005). Taking all these into consideration we can state that the necessary economic and social resources as well as a positive perception about the present and future family situation contribute to the improvement of the relationships within the couple and to the dyadic adjustment.

At the same time, a significant negative predictor for dyadic adjustment is represented by the *parent-child dysfunctional interaction*. Considering the systemic perspective, which states that families represent an interactive and independent system in which the life events of one single family member will impact all the other members of the system (Goldenberg & Goldenberg, 2003). It can be concluded that in this case the dysfunctional interaction between parents and their autistic child affects, in a significant and negative way, the relationship between spouses.

While considering the results of the correlations in the first part of this research, it can be noticed that *dyadic coping* correlates positively with three subscales of family resilience, and these are: *family communication and problem solving*, *maintaining a positive outlook* and *family connectedness*. Sixbey (2005) defined *family communication and problem solving* as a family's ability to convey information, feelings and facts clearly and openly while recognizing problems and carrying out solutions. Also, the researcher defined *family connectedness* as a family's ability to organize and connect for support, while still admitting individual differences (Sixbey, 2005). To return to dyadic coping, that aims to maintain both partners' well-being and the couple's functioning (Bodenmann, 1997), it can be concluded that family resilience is closely related to the ability of couple to adapt and keep functioning, in spite of adversities and external requirements, such as the illness of a child. The findings also indicate that dyadic coping correlates negatively with parental distress, which refers to negative feelings and stress related to the parent's self rather than to the child. These data are consistent with previous literature which specifies that the quality of couples' dyadic coping is associated with psychological distress, well-being and the quality of the relationship (Bodenmann, 2000; Martin, Peter Wight, Braun, Hornung, & Scholz, 2009). But the interesting fact is that dyadic coping also correlates positively with another subscale of parenting stress: *difficulty of child* which means that the stress that the experience with an autistic child involves and the specific demands of this situation lead to some increase in the couple's capacity of coping with stress. These results can be explained by turning to the study of Hock, Timm and Ramisch (2012) that described the stages of the couple's relationship, from the confirmation of diagnosis to their adjustment to the disorder. According to them, due to the specific demands related to ASD, partners evolve to a new next phase in their marriage (at least in the post-diagnosis phase) – the *tag-team* phase, which involves successfully performing their parental role. The focus of each partner and the function of their relationship became centred on parenting, but couples experience increased conflict and distance in relationship. What the authors describe as the next phase, in which most couples evolve to deeper intimacy and commitment, thus feeling more confident about the resilience of their relationship, is in agreement with the results of this present study; in other words dyadic coping positively correlates with *difficulty of child*. We also underlined which subscales of parenting stress are significantly related to dyadic coping: *parental distress* and

difficulty of child. Moreover, linear regression analysis showed that *difficulty of child*, along with *family connectedness* are significant positive predictors for dyadic coping. While *family connectedness* refers to a family's ability to organize and connect for support while still admitting individual differences among members (Sixbey, 2005), and *difficulty of child* refers to the parental perception about specific the demands of the child, it can be concluded that dyadic coping of parents with a child diagnosed with autism is significantly predicted by family support in a difficult situation. Thus, once again we should emphasize the idea that the family's ability to identify an actual problem and then take steps toward solving that specific problem can result in a sense of unity among family members (Walsh, 2003).

Analyzing if family resilience and parental stress influence dyadic adjustment according to the child's age, the results show that parents with children aged between 12-14 years old who show a lower level of dyadic adjustment have a lower quality of marital relationship towards parents with children aged 15 to 17 years. These results can be explained by reference from research of Hock, Ramisch and Timm (2012) who find that after receiving the diagnosis and adapting to contextual requirements associated with ASD, couple partners step into a stage where the primary goals are related to parenting; their marriage began to assign the label of "team" that needed to successfully perform several parental tasks. At the same time, the couple's relationship has more and more conflicts, and the distance between partners becomes larger. The outcomes in low dyadic adjustment for parents with children aged 12-14 can be explained by positioning the marital relationship in a stage, called the Hock et al. (2012) "tag team". After this stage, for most couples, the intimacy between partners becomes more profound; there is a more powerful engagement, which enhances the partners' trust in the ability of resilience of the couple's relationship, and marital satisfaction increases (Hock, Timm Ramisch 2012). This explains the high scores on dyadic adjustment for parents with children aged 15-17 years, which means that for these parents, perceived quality of the relationship is much higher.

7. Conclusion

The results of this study suggest that family resilience and parental stress are a complex phenomenon that can differently influence dyadic adjustment and dyadic coping in families affected by autism. Therefore, family therapists should work with these types of families in order to improve communication and problem solving skills; they should assist in supporting families to develop coping mechanisms that are supposed to maintain a positive outlook, along with building social connections and supportive networks.

It is important to note several methodological limitations of this current study. Specifically, there are no data about psychological functioning of parents' or partners' relationship quality prior to the child's diagnosis. Another limitation is

that the data are of a correlational type, and some sub-dimensions of variables, such as dyadic adjustment or dyadic coping were not taken into consideration. The fact that this study is of transversal nature it is another limit. Confirmation of the results in a longitudinal research should provide greater confidence in data obtained. Another research direction for the future is to investigate the extent to which specific variables are affected by the relationships between both partners of a couple, using for example the actor–partner interdependence model (APIM), which is a model of dyadic relationships (APIM: Kashy & Kenny, 1999; Kenny, 1996). In addition, it recommends further research to explore the effect of external variables (social support, child behavior) on the marital relationship.

Despite these limitations, these current findings suggest that parental stress and family resilience play important roles in understanding the parental adjustment which follows the diagnosis of autism. Researchers, clinicians and professionals who work with this population should insist on better understanding and promoting factors that contribute to positive adjustment and resilience.

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