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Research article

STRESS LEVELS, QUALITY OF LIFE AND LIFE SATISFACTION IN PARENTS OF CHILDREN WITH DISABILITIES AND/OR SPECIAL EDUCATIONAL NEEDS

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Abstract
The present research aims to examine the levels of anxiety in parents of children with disabilities and/or special educational needs, their quality of life, and life satisfaction. Ninety-nine parents shared and answered questionnaires to assess the three factors. The results showed that anxiety is correlated with the life quality of parents and their life satisfaction. Higher levels of anxiety were associated with low life quality and reduced life satisfaction. Overall, the correlation of the three factors indicated that support and information for families help improve life quality, increase life satisfaction, and reduce parental anxiety.

Keywords: *parental anxiety, quality of life, life satisfaction, parents, disability, special educational needs*

Introduction

The role of a parent is crucial for a child's development but also challenging when it comes to choosing the right way to educate them. The responsibility becomes even more demanding when parents have to navigate raising children with issues or disorders such as autism, cognitive impairments, mental health conditions, Asperger's syndrome, Down syndrome, motor problems, neurological disabilities, vision issues, epilepsy, developmental disorders, and more.

Children with special needs encounter significant limitations in their everyday activities, such as mobility and communication (Withers & Bennett, 2003). The role of parents is focused on assisting the child in becoming a valued member of the community with appropriate social behavioral norms. In this regard, parents require support in guiding their child and providing them with the opportunity to develop a positive outlook on life and creativity (Luther et al., 2005).

The experience of these challenges varies from parent to parent. Some parents, faced with the difficulty, become proactive, mobilize themselves, and provide their children with both material and intellectual resources for their well-being. On the contrary, there are parents who abandon the effort, expressing feelings of anger, despair, and a sense of inadequacy to make any further attempts. The negative disposition usually originates from within themselves and primarily requires self-love (Seltzer et al., 2004). Parents require support from specialized entities, and at the same time, both the children and the parents should benefit from all that needs to be done. Many times, we will hear them say that they give up, that ultimately it is too difficult, and they refuse to collaborate with specialists. Their fear of whether they will succeed weakens them and triggers anger (Green, 2003).

Through a critical and systematic literature review, a significant relationship was identified between the presence of a child with disabilities and/or special educational needs and parental stress. Components of this relationship include the family environment, family ecology, parental characteristics, information, and social/cultural conditions (Karasavvidis et al., 2011).

The birth of a child with a disability or any other kind of issue is perceived as a threat to the functional harmony of the family and the self-image of the parents. Fear of the unknown, the threat of social stigma, and a lack of information complicate the relationships within the couple, disrupting the dynamics and prospects for the future.

The form of parental response and its final management is attributed to the flexibility of the parents (Moysiadou, 2007). By the term 'response,' we mean a certain chronological and situational stability in their manifestation rather than sporadic reactions that do not foreshadow future changes (Alevriadou, 2005). Anxiety is utilized in daily life as the human reaction that puts both physical and mental powers to the test (Melissa-Chalikiopoulou, 2005).

Anxiety is defined as a symptom with various manifestations, including biological-physical (e.g., disruptions in heart rate, insomnia), cognitive (e.g., phobias, catastrophic predictions), and behavioral (e.g., avoidance) aspects (Samakouri et al., 2012). The term 'anxiety' expresses (a) a common emotional reaction characterized by internal tension, apprehension, sympathetic arousal, and having the adaptive function of preparing for coping with difficulties and risks, or (b) a multidimensional clinical symptom, which typically represents a dysfunctional quantitative exacerbation and/or perpetuation of an anxious state (Samakouri et al., 2012). Anxiety is the balance between external demands and an individual's internal perception of their ability to adapt to those demands (Raina et al., 2005). High anxiety is associated with parents' views on the functioning of the family and their perceptions of themselves (Ong et al., 2005). International literature in recent years has focused on parameters influencing the emergence of anxiety, primarily the diagnosis of the child's disability, the severity of the disability, the child's behavior, family support sources, and the quality of marital relationships (Gupta, 2007; Kwon, 2007).

Parental anxiety is a significant factor in the development of fears and difficulties in children. This has been demonstrated in research examining maternal anxiety and its connection to

childhood anxiety, showing that a mother's interpretations of the events surrounding her significantly influence how children, in turn, interpret their experiences (Harel et al., 2006).

During adolescence, social and psychological changes occur, which are related to the emergence of intense anxiety that complicates their daily lives (Ollendick & Hirshfeld, 2002). The presence of depressive episodes and anxiety symptoms in mid-childhood increases the likelihood of depression and mental disorders in their adult lives (Bittner et al., 2007; Roza et al., 2003). The direct relationship between parental anxiety and childhood anxiety disorders is not easy to pinpoint, but correlations have been observed, indicating that children of parents with anxiety are more likely to engage in substance use or self-destructive behaviors (Briggs-Gowan et al., 2001).

Parents' anxiety, or even parents with anxious children, tend to be more controlling and negative towards their children, exhibiting less interaction with them (Stams & Bogels, 2008; Mc Leod et al., 2007). Parental warmth contributes to the smooth adaptation of the child to the environment, while the harshness of the parent can lead to the development of problems (Zimmer-Gembeck & Thomas, 2010).

The factors contributing to increased levels of anxiety include (a) marital relationships, (b) the daily challenges posed by disability, and (c) the behavior of the child and how parents approach their child's disability (Lianou & Siamaga, 2011). Children's behaviors indeed impact parental anxiety, leading to exhaustion and despair (Abbeduto et al., 2004; Emerson, 2003; Seltzer et al., 2004). Parents have identified hyperactivity, demandingness, and the child's disturbed mood as the primary behavioral factors contributing to anxiety (Rao & Beidel, 2009).

Other significant parameters contributing to the development of anxiety include the socioeconomic status of parents (Emerson et al., 2006), parenting styles, and the choice of professional assistance they receive (O'Neil et al., 2001; Van Schie et al.,2004). Additionally, parents' anxiety is influenced by the child's communication impairments, the burden of daily care, and the child's maladjustment (Karasavvidis et al., 2011). Furthermore, factors such as how parents cope daily with their child's challenges, the quality of their social network, satisfaction within the couple, and the tendency for depression have been identified as linked to childhood disability and parental anxiety (Dykens, 2000; Withers & Bennett, 2003).

Many parents experience anxiety when they realize they are responsible for teaching their children the skills and behaviours necessary for social integration. It is noteworthy that the presence of a positive family and marital climate helps keep parental anxiety at low levels (Withers & Bennett, 2003; Simmerman et al., 2001). Parents are particularly concerned about the future and the prospects for their children as they contemplate the possibility of their child's future independence, long-term advocacy and protection, future care, employment prospects, and support (Khamis, 2007; Kermanshahi et al., 2008).

Increased scores on symptoms related to parental anxiety demand serious attention from clinicians and researchers. The elevations may be associated with reduced parental quality of life and self-effectiveness (Hastings & Brown, 2002). This indicates that additional factors may be at

play for children's parents. A model that includes parental education, life events, the quality of marital relationships, social support, and the quality of education and intervention services for children is essential to better understanding the spectrum of factors (Estes et al., 2009).

A significant determinant of parental experiences is the quality of the marital relationship, especially in families raising children (Barker et al., 2011). Parents who have good relationships report less anxiety than those with poor marital relationships. Mothers and fathers who are dissatisfied with their marriage report more anxiety than those who are satisfied with their marriage.

Furthermore, the quality of the marital relationship affects the parent-child relationship. Essex (2002) found that marital satisfaction is also linked to feelings of closeness between the child and the mother or father. The marital relationship "spills over" into the parent-child relationship. When parental anxiety is at high levels, it influences the parent-child relationship (Hoffman et al., 2006). Parents who have better-quality marital relationships also exhibit better parent-child relationships (Krishnakumar & Buehler, 2000).

Families receiving a diagnosis indicating developmental disorders in their child often experience high levels of stress (Gomes & Bosa, 2004). Emotional distress is frequently accompanied by financial problems, as many parents are occupied with the daily needs and essential therapies for their child's survival, and many give up on their professional careers. Resignation from a professional career for the care of the child creates anxiety for parents (Santos et al., 2010). Thus, family income decreases, and often, it depends on government assistance programs to ensure the necessary care for the child (Da Costa Cunha et al., 2017). In the care of a child with special needs, additional stress can arise related to the challenges the child faces in communication, difficult behavior, social isolation, difficulties in self-care, and a lack of understanding from the social environment (Schieve et al., 2007). Some research has revealed a connection between parental education and the levels of anxiety they experience, but the results of studies vary. While Freitas, Rocha, and Haase (2014), found emotional overload in mothers with higher education, the study by Da Costa Cunha, Pontes & Da Costa Silva (2017), showed that parents with minimal emotional burden had only completed high school. One possible explanation is that these parents, in some way, developed coping strategies, allowing them to reveal low anxiety levels.

Research Aims and Hypothesis

The aim of the present study is to examine the stress of parents with children with disabilities and/or special educational needs in relation to their quality of life and life satisfaction, controlling for the age of children and the demographic characteristics of parents.

The research hypotheses are below:

Hypothesis 1 The stress levels of parents with children with disabilities and/or special educational needs will be high.

Hypothesis 2: parents with children with disabilities and/or special educational needs will score low in all domains of quality of life.

Hypothesis 3 Parents with children with disabilities and/or special educational needs will experience low levels of life satisfaction.

Hypothesis 4 The educational level, as well as the child's age increases the stress of parents with children with disabilities and/or special educational needs

Hypothesis 5 Physical health will be the factor that will reduce the quality of life of parents with children with disabilities and/or special educational needs.

Hypothesis 6 Living conditions are an important factor in reducing the life satisfaction of parents with children with disabilities and/or special educational needs.

Research Design

- ✓ Demographic characteristics of parents and children- The section involves eight questions, where seven refer to parents, examining the characteristics of gender, age, educational level, marital status, special education needs of child, number of children and existence of health problem while 1 question refer to the children, examining their age.
- ✓ Parental Stress was measured via the Parental Stress Index (PSI) of Abidin (1995), which was used in Greece and translated by Leze (2013). The PSI involves 36 Likert-type questions from 1-5 (1=Disagree Strongly, 2=Disagree, 3=Not sure, 4=Agree, 5=Agree strongly) and three factors.
- ✓ Quality of Life- The WHOQOL – BREF (WHO, 1997) questionnaire was used to measure the quality of life. WHOQOL-BREF has been translated into 50 languages, including Greek (Ginieri–Coccossis et al., 2001), which involves 26 Likert-type questions from 1 to 5 (1=Not at all, 2=A little, 3=Moderately, 4=Very much, 5=Extreme) and the following five factors.
- ✓ Life Satisfaction (SWLS) of Diener et al. (1985) was used to measure life satisfaction. The SWLS scale has been translated and used in a Greek population with satisfactory reliability in an elderly sample (Patsiaouras et al., 2003). The SWLS involves 5 Likert type questions from 1-7 (1=Disagree strongly, 2=Disagree, 3=Disagree slightly, 4=Neither agree nor disagree, 5=Agree slightly, 6=Agree, 7=Agree strongly), which indicate life satisfaction, e.g., “The conditions of my life are excellent” and “I am satisfied with my life”.

Reliability

The reliability of the factors was tested using the Cronbach Alpha coefficient, which measures internal consistency. Values in the interval [0.6, 0.7) are considered moderate, while values in [0.7, 0,8) present satisfactory reliability, high in [0,8,0.9) and perfect in [0.9,1.0] (Galanis, 2013). Table 2 presents the results of the factor reliability analysis. It emerges that the factor "Parental Distress" presents reliability $\alpha=0.908$ (perfect), “Parent-Child Dysfunctional Interaction” $\alpha=0.903$ (perfect), “Difficult Child” $\alpha=0.913$ (perfect), “Quality of Life and General Health”

α=0.617 (moderate), "Physical Health" *α=0.698* (moderate), "Psychological Health" *α=0.777* (satisfactory), "Social Relationships" *α=0.752* (satisfactory), "Environment" *α=0.613* (moderate) and "Satisfaction with Life" *α=0.894* (high).

Table 1:Reliability analysis

Questionnaire	Factor	Questions	Cronbach Alpha	Reliability
PSI	Parental Distress	1-12	0.908	Perfect
	Parent-Child Dysfunctional Interaction	13-21, 22R, 23,24	0.903	Perfect
	Difficult Child	25-31, 32R, 33R, 34-36	0.913	Perfect
WHOQOL – BREF	Quality of Life and General Health	1,2	0.617	Moderate
	Physical Health	3R, 4R, 10, 15-18	0.698	Moderate
	Psychological Health	5-7, 11, 19, 26R	0.777	Satisfactory
	Social Relationships	20-22	0.752	Satisfactory
	Environment	8-9, 12-14, 23-25	0.613	Moderate
SWLS	Satisfaction With Life	1-5	0.894	High

The target population of the current research are the parents of children with disabilities and/or special educational needs in Greece. Sampling was convenient as the researcher collected data from parents to whom she had access (Creswell, 2014). The participants were parents of children studying in a special Kindergarten, Primary School, Middle School and High School or Special Vocational Training Workshops in Igoumenitsa, in employment agencies for disabled children in Igoumenitsa and in Thessaloniki as well as from groups of parents with disabled children on the internet who voluntarily answered the questionnaire that was posted.

The sample was conducted by 99 parents, mainly with children with autism, intellectual disabilities, learning disabilities and ADHD. The majority of parents were married with 1-2 children who were six years old or older, females 31-60 years old, bachelor- or master's degree holders, and without serious health problems. Specific percentages regarding the demographic characteristics of parents and children are presented in the chapter on results (Descriptive Statistics-Demographics).

Research Procedure

The data collection process occurred during the year 2023, specifically from September 12 to November 31. The questionnaires, either in writing to organizations, schools and teachers who have children with special needs or in the form of a questionnaire posted on the internet to groups of parents of children with special needs. Parents were given a document stating the reasons that the research was accomplished and the researcher's personal data. Principals,

teachers and parents were informed that the questionnaires were anonymous and that the researcher would handle the answers with absolute confidentiality. Parents had to give verbal or written consent in a letter accompanying the questionnaire (APA, 2010). Parents then answered the demographics questionnaire. The questionnaires were anonymous, and the parents' responses were registered and separated by numerical codes to ensure the anonymity and confidentiality of the results and their more accessible collection and analysis.

Data analysis

Microsoft Office Excel 2016 was used for the coding of data. IBM SPSS 26 was used to analyze data. Demographic characteristics were presented using percentages and frequencies, while PSI, WHOQOL–BREF, and SWLS items were presented via mean, standard deviation, minimum, and maximum values. Inferential Statistics were performed at a=5%. Values of PSI, WHOQOL–BREF and SWLS factors were transformed to the interval [0,100] using the mathematical formula 100*[Xi-Min(x)]/Range(X). Levels of factors were estimated using 95% confidence intervals. Normality of factors was tested via the Shapiro Wilk test. Correlations between scale variables that are normally distributed were examined using the Pearson coefficient; otherwise, the Spearman coefficient was used. Mean differences between 2 independent samples that are normally distributed were examined using the independent samples t-test, presenting the corresponding Mean and standard deviation. Median differences between 2 independent samples not normally distributed were examined using the Mann Whitney, presenting the corresponding Median and Interquartile range. Predictors of WHOQOL–BREF and SWLS factors were identified via multiple regression models using the PSI factors and the demographic characteristics as independent variables that presented a significant effect in the bivariate analysis (Field, 2017).

Results

Table 2 presents the sample's demographic data, consisting of 99 participants.

Table 2: Demographics

Question	Category	N	%
Gender	Male	14	14.14%
	Female	85	85.86%
Age	20-30	1	1.01%
	31-40	27	27.27%
	41-50	45	45.45%
	51-60	24	24.24%
	61-70	2	2.02%
Educational level	High school	24	24.24%
	Bachelor	46	46.46%
	Master	28	28.28%
	PhD	1	1.01%
Marital status	Married	82	82.83%
	Single	6	6.06%

	Divorced	7	7.07%
	Widower	4	4.04%
Special education needs of child	Learning difficulties	20	20.20%
	ADHD	16	16.16%
	Autism	32	32.32%
	Intellectual disabilities	23	23.23%
	DOWN syndrome	3	3.03%
	Hemiplegia	1	1.01%
	Brain paralysis	4	4.04%
Number of children	1	41	41.41%
	2	48	48.48%
	3	8	8.08%
	4 +	2	2.02%
Age of child	3-5 years	31	31.31%
	6+ years	68	68.69%
Health problem	No	79	79.80%
	Yes	20	20.20%

Concerning the gender of participants *85.86% (N=85)* are females. Regarding the age, *45.45% (N=45)* of the parents who took part in the research are 41-50 years old, *27.27% (N=27)* are 31-40 and *24.24% (N=24)* are 51-60 years old. As far as the level of education is concerned, *46.46% (N=46)* of the participants have a bachelor's degree, *28.28% (N=28)* MSc and *24.24% (N=24)* are high school graduates. Regarding the marital status, *82.83% (N=82)* are married. Concerning the special education needs of the child, *32.32% (N=32)* of participants have a child with autism, *23.23% (N=23)* with intellectual disabilities, *20.20% (N=20)* with learning difficulties and *16.16% (N=16)* with ADHD. Regarding the number of children the participants have, *48.48% (N=48)* have two children, and *41.41% (N=41)* have one. The *68.69% (N=68)* of participants have a 6+-year-old child, while *31.31% (N=31)* have a 3–5-year-old child. Of the *parents, 79.80% (N=79)* do not have a health problem.

Predictors

Parental Distress

Table 3 presents the results of the multiple linear regression with the dependent variable, "Parental Distress". The model was considered statistically significant (*F (2,96) =8.750, p<0.001)*, with a low degree of adjustment (R^2*=15.40%*) and absence of multicollinearity (*VIF≤1.020<10*). Predictive factors emerged as "Educational level" (*beta=0.228, t=2.403, p=0.018, 38% effect*) and "Age of child" (*beta=-0.290, t=-3.054, p=0.003, 62% effect*).

Table 3: Linear regression with "Parental Distress" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	51.933	-	5.362	**<0.001**	-
Educational level	10.196	0.228	2.403	**0.018**	1.020
Age of child	-12.716	-0.290	-3.054	**0.003**	1.020

(F (2,96) =8.750, p<0.001, R^2=15.40%)

Parent-Child Dysfunctional Interaction

Table 4 presents the results of the multiple linear regression with the dependent variable "Parent-Child Dysfunctional Interaction". The model was considered statistically significant (*F (4,94) =7.177, p<0.001)*, with a moderate degree of adjustment (R^2*=23.40%*) and absence of multicollinearity (*VIF≤1.182<10*). Predictive factors emerged the "Gender" (*beta=-0.259, t=-2.645, p=0.010, 45% effect*), the "Educational level" (*beta=0.266, t=2.881, p=0.005, 38% effect*) and the "Autism" (*beta=0.187, t=2.041, p=0.044, 17% effect*)

Table 4: Linear regression with "Parent-Child Dysfunctional Interaction" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	56.109	-	4.688	**<0.001**	-
Gender	-15.340	-0.259	-2.645	**0.010**	1.173
Educational level	12.100	0.266	2.881	**0.005**	1.049
Autism	8.256	0.187	2.041	**0.044**	1.028
Age of child	-7.013	-0.157	-1.603	0.112	1.182

(F (4,94) =7.177, p<0.001, R^2=23.40%)

Difficult child

Table 5 presents the results of the multiple linear regression with the dependent variable "Difficult child". The model was considered statistically significant (*F (4,94) =6.906, p<0.001)*, with a moderate degree of adjustment (R^2*=22.70%*) and absence of multicollinearity (*VIF≤1.182<10*). Predictive factors emerged the "Gender" (*beta=-0.252, t=-2.571, p=0.012, 42% effect*), the "Educational level" (*beta=0.269, t=2.901, p=0.005, 38% effect*) and the "Autism" (*beta=0.204, t=2.220, p=0.029, 20% effect*).

Table 5: Linear regression with "Difficult child" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	58.496	-	4.945	**<0.001**	-
Gender	-14.737	-0.252	-2.571	**0.012**	1.173
Educational level	12.045	0.269	2.901	**0.005**	1.049
Autism	8.876	0.204	2.220	**0.029**	1.028
Age of child	-5.917	-0.135	-1.368	0.174	1.182

(F (4,94) =6.906, p<0.001, R^2=22.70%)

Quality of Life and General Health

Table 6 presents the results of the multiple linear regression with the dependent variable "Quality of Life and General Health". The model was considered statistically significant (*F (6,92) =7.718, p<0.001)*, with a satisfactory degree of adjustment (R^2*=33.50%*) and absence of multicollinearity (*VIF≤4.475<10*). A predictive factor emerged the "Parental Distress" (*beta=-0.470, t=-4.367, p<0.001)*

Table 6: Linear regression with "Quality of Life and General Health" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	70.165	-	8.463	**<0.001**	-
Parental Distress	-0.328	-0.470	-4.367	**<0.001**	1.602
Parent-Child Dysfunctional	0.235	0.342	1.901	0.060	4.475

Interaction					
Difficult Child	-0.210	-0.301	-1.738	0.086	4.155
Educational level	-4.469	-0.143	-1.579	0.118	1.139
Number of children	2.147	0.075	0.833	0.407	1.105
Age of child	3.133	0.102	1.117	0.267	1.162

(F (6,92) =7.718, p<0.001, R^2=33.50%)

Physical Health

Table 7 presents the results of the multiple linear regression with the dependent variable "Physical Health". The model was considered statistically significant (*F (5,93) =7.915, p<0.001),* with a satisfactory degree of fit (*R^2=29.90%*) and absence of multicollinearity (*VIF≤4.519<10*). Predictive factors emerged as "Parental Distress" (*beta=-0.311, t=-2.818, p=0.006, 57% effect*), "Number of children" (*beta=-0.268, t=-2.969, p=0.004, 22% effect*) and "Health problem" (*beta=-0.264, t=-2.912, p=0.004, 20% effect*).

Table 7: Linear regression with "Physical Health" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	90.744	-	16.095	**<0.001**	-
Parental Distress	-0.214	-0.311	-2.818	**0.006**	1.619
Parent-Child Dysfunctional Interaction	0.025	0.037	0.203	0.840	4.519
Difficult Child	-0.141	-0.205	-1.160	0.249	4.143
Number of children	-7.616	-0.268	-2.969	**0.004**	1.083
Health problem	-9.198	-0.264	-2.912	**0.004**	1.090

(F (5,93) =7.915, p<0.001, R^2=29.90%)

Psychological Health

Table 8 presents the results of the multiple linear regression with the dependent variable "Psychological Health". The model was considered statistically significant (*F (3,95) =45.786, p<0.001),* with a high degree of adjustment (*R^2=59.10%*) and absence of multicollinearity (*VIF≤4.325<10*). Predictive factor emerged was "Parental Distress" (*beta=-0.648, t=-8.022, p<0.001)*

Table 8: Linear regression with "Psychological Health" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	85.354	-	30.987	**<0.001**	-
Parental Distress	-0.516	-0.648	-8.022	**<0.001**	1.518
Parent-Child Dysfunctional Interaction	-0.182	-0.232	-1.701	0.092	4.325
Difficult Child	0.045	0.056	0.431	0.668	3.982

(F (3,95) =45.786, p<0.001, R^2=59.10%)

Social Relationships

Table 9 presents the results of the multiple linear regression with the dependent variable "Social Relationships". The model was considered statistically significant (*F (3,95) =10.460, p<0.001),*

with a satisfactory degree of fit (R^2*=24.80%*) and absence of multicollinearity (*VIF≤1.063<10*). Predictive factors emerged the "Parental Distress" (*beta=-0.304, t=-3.337, p=0.001, 42% effect*), the "Divorced status" (*beta=-0.271, t=-2.956, p=0.004, 33% effect*) and the "Health problem" (*beta=-0.238, t=-2.636, p=0.010, 26% effect*).

Table 9: Linear regression with "Social Relationships" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	70.679	-	16.042	**<0.001**	-
Parental Distress	-0.310	-0.304	-3.337	**0.001**	1.050
Divorced	-21.933	-0.271	-2.956	**0.004**	1.063
Health problem	-12.312	-0.238	-2.636	**0.010**	1.034

(F (3,95) =10.460, p<0.001, R^2=24.80%)

Environment

Table 10 presents the results of the multiple linear regression with the dependent variable "Environment". The model was considered statistically significant (*F (4,94) =5.566, p<0.001)*, with a low degree of adjustment (R^2*=19.10%*) and absence of multicollinearity (*VIF≤4.332<10*). Predictive factor emerged the "Parental Distress" (*beta=-0.392, t=-3.403, p=0.001)*

Table 10: Linear regression with "Environment" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	67.994	-	19.375	**<0.001**	-
Parental Distress	-0.213	-0.392	-3.403	**0.001**	1.541
Parent-Child Dysfunctional Interaction	-0.026	-0.049	-0.251	0.802	4.332
Difficult Child	0.035	0.065	0.351	0.726	4.008
Educational level	-3.107	-0.128	-1.303	0.196	1.119

(F (4,94) =5.566, p<0.001, R^2=19.10%)

Satisfaction with Life

Table 11 presents the results of the multiple linear regression with the dependent variable "Satisfaction with Life" and the independent correlative factors. The model was considered statistically significant (*F (7,91) =11.433, p<0.001)*, with a high degree of adjustment (R^2*=46.80%*) and absence of multicollinearity (*VIF≤4.467<10*). Predictive factors emerged the "Parental Distress" (*beta=-0.242, t=2.403-2.422, p=0.017, 74% effect*) and the "Age" (*beta=-0.251, t=-2.888, p=0.005, 26% effect*)

Table 11: Linear regression with "Satisfaction with Life" as dependent variable

Independent	B	Beta	t	p-value	VIF
(Constant)	108.823	-	10.428	**<0.001**	-
Parental Distress	-0.262	-0.242	-2.422	**0.017**	1.714
Parent-Child Dysfunctional Interaction	-0.330	-0.311	-1.924	0.057	4.467
Difficult Child	-0.054	-0.050	-0.319	0.750	4.169

Age	-12.222	-0.251	-2.888	**0.005**	1.287
Educational level	-5.935	-0.123	-1.395	0.166	1.328
Divorced	-7.613	-0.089	-1.108	0.271	1.100
Autism	-6.566	-0.140	-1.666	0.099	1.204

(F (7,91) =11.433, p<0.001, R^2=46.80%)

Conclusions and Discussion

The aim of the current study was to examine the stress of parents with children with disabilities and/or special educational needs in relation to their quality of life and life satisfaction. The sample was conducted by 99 parents, mainly with children with autism, intellectual disabilities, learning disabilities and ADHD.

Hypothesis 1 was not confirmed since parental stress levels were medium to low rated (*34.08%-43.67%*). Parents, to a moderate degree, feel that they cannot handle things, and that their child reacts strongly and does annoying things. Although parents feel that they gave up their life for the needs of their children, they believe that they are competent in their role as parents. Parents of children with special needs, such as hemiparesis, experience high levels of stress, which are linked to feelings of incompetence and social isolation (Butcher et al, 2008). Children's beliefs about their control during a parental conflict can moderate the impact of family stress on their behaviour and perceptions of competence (Rossman & Rosenberg, 1992). Parents' reactions to children's negative emotions, particularly when they are distressed, can influence children's emotional and social responses (Fabes et al., 2001). Overall, parenting stress is a complex construct that encompasses both psychological and physiological aspects (Abidin et al., 2022).

Although hypotheses 2 was not confirmed since quality of life was moderate rated (*53.11%-62.76%*), hypotheses 5 was confirmed with the physical health to be moderate to high (*62.76%*). The most important problems refer to moderate satisfaction from sleep, sex life, time for leisure activities and the existence of negative feelings. The stress experienced by parents of children with disabilities and special educational needs significantly impacts their quality of life and life satisfaction (Dellve et al., 2006; Staunton et al., 2023; Darling et al., 2012). Fathers of children with disabilities tend to experience greater stress, lower life satisfaction and negative feelings compared to fathers of children without disabilities (Darling et al., 2012). The stress experienced by parents of children with disabilities and special educational needs has been found to significantly impact their sleep quality (Gallagher et al., 2010). This stress is often exacerbated by the need for parents to be vigilant at night, leading to relentless and draining sleep deprivation (McCann et al., 2015). Interventions that empower parents in managing their child's disability can help reduce stress and improve overall life satisfaction (Dellve et al., 2006).

Hypotheses 3 was, also, not confirmed since satisfaction with life was moderately rated (*52.69%*). Parents are unsure about their conditions of life, confirming hypotheses 6 and that their life is what it should be. Research consistently shows that parents of children with disabilities experience higher levels of stress and lower quality of life compared to parents of typically developing children (Browne & Bramston, 1998; Dellve et al., 2006; Gupta & Kaur, 2010). They may also experience a range of emotional dilemmas, including shock, loss, and disappointment (Rogers, 2007). This stress is often related to feelings of incompetence, social isolation, and physical and emotional strain (Dellve et al., 2006; Gupta & Kaur, 2010). Interventions that aim to empower parents in managing their child's disability can help reduce this stress and improve overall well-being (Dellve et al., 2006).

Hypotheses 4 was confirmed since parental distress was mainly affected by age of child, with higher levels of parental stress to be presented to parents who have a younger child of 3-5 years old. Research consistently shows that parents of children with disabilities and special educational needs experience high levels of stress, which can significantly impact their quality of life (Azad et al., 2013). This stress is particularly pronounced in parents of younger children, with the age of the child being a significant factor (Orr et al., 1993; Azad et al., 2013). The stress is often related to the child's behavior problems, future concerns, and the child's diagnosis (Miranda et al, 2015).

Hypotheses 4 was, also, confirmed in regard to the educational level, as parents of master or PhD educational level, indicated higher stress. The stress levels of the parents are somewhat related to their educational level, with those holding a master's or PhD degree reporting higher stress (Gupta, 2007). The interactions between parents and their children with disabilities can significantly impact the child's progress in therapeutic or educational programs (Lessenberry & Rehfeldt, 2004).

In addition, parents who have a child with autism presented higher dysfunctional interaction with their child and believe that they face more difficulties because of their child. Parents of children with autism experience higher levels of stress, psychological distress, and parenting stress compared to parents of typically developing children (Gau et al., 2012). This is often due to the child's behavior problems, the need for special services, and the financial burden of treatment (Serrata, 2012).

Furthermore, male parents presented higher dysfunctional interaction with their child and believe that they face more difficulties due to their child. Research consistently shows that parents of children with autism, particularly fathers, experience higher levels of psychopathology, marital difficulties, and family dysfunction (Gau et al., 2012). This is further exacerbated by the child's behavior problems and the parents' own executive function impairments (Dumas et al,1991; Hughes et al, 1997).

Parental distress was the most important predictor of quality of life. Parents with higher level of parental distress indicated lower quality of life, lower physical, psychological and general health,

lower satisfaction from their environment and less social relationships. Research consistently shows that parental distress is a significant predictor of quality of life for parents of children with disabilities (Davis & Gavidia-Payne, 2009). This distress is influenced by a range of factors, including the severity of the child's disability, family dynamics, and the presence of new stressors (Leung, 2003).

In addition, parents with health problems emerged as a weaker group with lower physical health and fewer social relationships. Thus, the necessary empowerment is proposed to parents with health problems who have children with disabilities and/or special educational needs. A range of studies have highlighted the need for empowerment of parents with health problems who have children with disabilities. Parents of special needs children often experience poorer physical health and mental well-being compared to parents of typically developing children (Smith & Grzywacz, 2014). This is particularly true when the child's condition is more severe, leading to increased stress and physical health problems (Gallagher & Whiteley, 2013). Parents of children with physical disabilities are at a higher risk of poor mental health, with parental distress being a significant factor (Hung et al., 2010). Interventions that focus on parental adaptation and support, as well as strategies to address the challenges they face, are crucial (Kratz et al., 2009).

Furthermore, divorced parents indicated less satisfaction from their social relationships, while parents with 2 or more children presented lower physical health. Research suggests that a healthy marital status can be a protective factor for the health of parents with special needs children (Namkung, 2015). However, the impact of a child's disability on marital satisfaction is complex, with some studies finding no significant difference in divorce rates (Sobsey, 2004) and others indicating a potential increase in risk (Guidubaldi, 1985). Marital quality is a key predictor of parental well-being, with higher quality relationships associated with lower parenting stress and better mental health (Kersh et al, 2006).

Parental distress was the most important predictor of life satisfaction. Parents with higher level of parental distress indicated lower life satisfaction. A range of studies have consistently found that parental distress is a significant predictor of life satisfaction in parents of disabled children (Dellve et al, 2006; Snowdon et al, 1994; Staunton et al, 2023; Darling et al, 2012; Browne & Bramston, 1998; Gupta & Kaur, 2010).

Levels of satisfaction with life were lower for 40-70 years old parents who have children with disabilities and/or special educational needs. Research consistently shows that parents of children with disabilities and special educational needs experience lower levels of satisfaction with life (Darling et al., 2012). The impact of these challenges is particularly pronounced in the 40-70 age group (Ha et al., 2008).

Limitations-Future Research

Convenient sampling limits the generalization of the results. Results refer to female parents of high educational level, 31-60 years old, married, with 1-2 children, who live in Greece, mainly

with children with autism, intellectual disabilities, learning disabilities and ADHD, of 6 years old or older. Sample was conducted by 99 participants, size that was not sufficient to ensure the necessary statistical power (Cohen, 1988) and to confirm the structure of the questionnaires (Kline, 2014). The WHOQOL–BREF presented moderate reliability and validity. Future research is proposed in a sample of 300 parents, with cluster sampling, using as strata the most common special education needs of child and introducing the economic status of parents. Furthermore, future researchers could compare the way that PSI factors affect the WHOQOL – BREF and SWLS factors according to special education need of child.

Conclusion

Parents of children with disabilities and/or special educational needs presented medium quality of life and life satisfaction and medium to low-stress levels. Higher parental stress was indicated to parents of higher educational level, males and those who have a younger child of 3-5 years old, with autism. Parental distress reduced the quality of life and life satisfaction. It will be more possible for parents with health problems, to have low quality of life, due to the parental stress. Healthy marital status and lower number of children were identified as protective factors of the quality of life of parents. Satisfaction with life was lower for 40-70 years old parents.

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