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Anxiety, meaning in life, self-efficacy and resilience in families with one or more members with special educational needs and disability during COVID-19 pandemic in Greece

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ABSTRACT

Background: According to World Health Organization, the COVID-19 pandemic sweeps across the world inducing considerable fear, worry and concern in the population.

Aims: This study explores anxiety, meaning in life, self-efficacy and resilience in university students belonging to families with one or more members with SEND during the COVID-19 pandemic in Greece, the differences between participants and the regression coefficients.

Methods & procedures: Study population consisted of 61 participants, aged 20–58 years. A Self-report Questionnaire, the Spielberger State-Trait Anxiety Inventory, the Meaning in Life Questionnaire, the General Self-Efficacy Scale, the Resilience Scale and the Brief Resilience Scale were used for data collection.

Outcomes & results: Participants presented higher levels of anxiety, meaning in life (presence), general self-efficacy and resilience (than average scale). Parents had higher values than university students in state anxiety, state-trait anxiety (total), meaning in life (presence) and resilience. Individuals with higher levels of resilience and meaning in life had lower anxiety levels. A significant correlation was observed for the regression coefficients according to pathway analysis.

Conclusions and implications: Families having members with SEND, although experiencing difficult situations and anxiety due to the unprecedented conditions of the pandemic, activate mechanisms, such as self-efficacy, meaning in life and resilience, to maintain their balance and mental health.

1. What this paper adds?

- This study explores psychological effects such as, anxiety, meaning in life, self-efficacy and resilience in families of university students with one or more members with special educational needs and disability (SEND) during the COVID-19 pandemic in Greece.
- This research is interesting as it focuses on a specific population of university students belonging to families with one or more members with SEND in a period of a pandemic offering practical implications for future research.
- This study suggests that families who have one or more members with SEND, although experiencing uncommon situations and anxiety due to the unprecedented conditions of the COVID-19 pandemic, activate mechanisms, such as self-efficacy, meaning in life and resilience, to maintain their personal and family balance.

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- The current study is an important step to clarify the malleable factors that predict anxiety, self-efficacy, meaning in life and resilience in families with one or more members with SEND. Using these findings may allow health care providers to enhance family well-being in this challenged population during a pandemic.
- Finally, this study proposes that specialists should give importance on the powerful elements that individuals activate themselves.

These will be helpful for the future to improve distance learning seminars and programs to empower these strong parameters both on individual and on family level.

1. Introduction

According to World Health Organization (2020) the COVID-19 pandemic sweeps across the world inducing considerable fear, worry and concern in the population specially among certain groups such as older adults, care providers and people with underlying health conditions. Families with a member with special educational needs and disability (SEND) are a case.

1.1. Families with a member with SEND

Most research work on families with a member with a SEND focus on families raising a child with SEND regard mostly parents with a special mention on mothers. On the other hand, only a few studies on fathers raising a child with SEND were performed (MacDonald & Hastings, 2010). Few studies have been performed regarding the impact of parental disability on offspring (Preston, 2012) and the experiences of adult children of parents with SEND (Krauss & Olkin, 2020).

In literature a mixed picture of families with a member with SEND is presented. Previous research revealed that families of children with SEND can experience physical, social and emotional stress in coping with day-to-day living (Mark Whiting, 2012, 2018) These families face more stressors, on average, respect to others without a member with SEND (McConnell & Savage, 2015; McStay, Trembath, & Disanayake, 2014).

Various family risk-protection models have in common a series of mediating factors and processes through which SEND influence the individual and family wellbeing. Alternative views propose that most families endure stressful events reasonably well and many adapt successfully the SEND condition (Seligman & Darling, 2007; Tsibidaki & Tsamparli, 2009). The literature highlights that key factor in determining how family members cope with the situation of SEND may be how resilient and self-efficacious they are (M. Whiting, Nash, Kendall, & Roberts, 2019).

1.2. COVID-19 and families with a member with SEND

Although research is ongoing on COVID-19 pandemic and families with a member with SEND, the data so far collected indicate that COVID-19 determined a big change and a new reality. This sudden change and the consequent necessary measures such as lockdown, self-isolation and social distancing may be challenging for children with SEND and their families and their carefully established routines relationships and professional and informal support (Toseeb, Asbury, Code, Fox, & Deniz, 2020).

Research demonstrated that parents and children in families with a member with SEND during COVID-19 pandemic seems to experience loss, worry and changes in mood and behavior because of the rapid social changes occurred. Some parents refer feeling overwhelmed and describe the impact of child understanding and awareness. However, a minority of parents reported that COVID-19 had low impact on mental health in their family, or which even led to improvements (Asbury, Fox, Deniz, Code, & Toseeb, 2020).

1.3. Theoretical background

The context of COVID-19 pandemic is changing rapidly while the understanding of COVID-19 is constantly developed (IASC, 2020). As COVID-19 pandemic occurs suddenly and is highly contagious it will inevitably cause anxiety to people (Wang, Di, Ye, & Wei, 2020). COVID-19 pandemic has multiple psychological consequences for individuals and families. Therefore, the need to adapt to the new conditions by developing dynamics that will help their well-being and deal with the tension and worries of such a health crisis is mandatory. Anxiety is crucial for people’s successful adaptation to the environment and has been shown to influence a multitude of core psychological components, such as meaning in life, self-efficacy and resilience.

Anxiety is defined as an organic response, characterised by apprehension and increased surveillance in situations of uncertain danger or potential threats to the integrity of the organism. In the study of anxiety two complementary concepts exist: A psychophysiological state (state anxiety) and a personality trait (trait anxiety) (Vagg, Spielberger, & O’Hearn, 1980). State anxiety refers to the subjective and transitory feeling of tension, nervousness, worry and may be characterised by activation of the autonomous nervous system, at a given moment. Trait anxiety refers to relatively stable individual differences in anxiety proneness as a personality trait, that is, in the tendency to perceive and respond to stressful situations with elevations in the intensity of state anxiety reactions. State and trait anxiety are analogous in certain respects to kinetic and potential energy (Fountoulakis et al., 2006).

Meaning in life is regarded as a positive variable, as an indicator of well-being. Steger and Frazier (2005) emphasised the important connection between meaning in life and well-being. The difficulty to find meaning in life is usually associated with emptiness and apathy and could lead to several psychological problems. Recent studies have found that meaning in life is not only related with psychological health but might also provide physical health benefits (Brassai, Piko, & Steger, 2011). In theory and research, two important dimensions of meaning in life have emerged. The first regards the degree to which individuals perceive their lives as significant and meaningful, referred to as “presence of meaning in life”. The second regards the degree to which people are engaged in a
“search for meaning in life” Meaning in life has been associated with positive outcomes (e.g., life satisfaction and joy) and has been inversely associated with negative outcomes (e.g., depression and sadness) (Steger, Frazier, Oishi, & Kaler, 2006). A sense of meaning from the SEND has predicted positive family adjustment (Benn & McColl, 2004).

Self-efficacy is the belief in one’s own capability to cope adequately with stressful life demands or challenges (Luszczynska, Scholz, & Schwarzer, 2005). It involves an individual’s perceived self-capability to achieve an optimal amount of a desired effect or goal. Self-efficacy is an important service aim in family centered practice with parents of children with SEND and it is a cognitive coping resource in these families (Benzies, Trute, & Worthington, 2013).

Resilience refers to the capacity to demonstrate wellbeing and adapt positively despite experiencing adversity (Ungar, 2013). It is a multidimensional construct that refers to the ability to maintain adaptation and effective functioning when faced with stressors and it provides a framework for understanding the adjustment to stress as a dynamic process. Strategies that promote resilience may help to buffer parents from the stress related to caring for a child with SEND (Song et al., 2013).

1.4. The present study

The present research focus on both university students and their parents (mothers and fathers) with SEND or with one or more members with SEND in their families and through the study of key parameters and emotional reactions to a condition, that of the pandemic, in Greece. It is worth mentioning that although in most European countries, governments had waited too long to undertake measures to protect their citizens, Greece has been one noticeable exception to this trend undertaken almost immediately appropriate actions and measures. The Greek government imposed severe social distancing measures on an earlier stage of the epidemic respect to other southern European countries (Giugliano, 2020).

COVID-19 coronavirus appeared in Greece on the 26th February 2020. On the 10th of March and after 89 confirmed COVID-19 cases and no deaths, the government suspended educational institutions of all levels nationwide. Furthermore, on March 13th a general lockdown has been implemented with further restrictive measures to contain pandemic’s spread and supportive economic measures. Measures adopted in Greece were between the most proactive and strictest in Europe and were internationally credited for having slowed down the spread of the disease and kept the number of deaths among the lowest in Europe (Giugliano, 2020; Stevis-Gridneff, 2020; Tugwell & Nikas, 2020).

The main research hypothesis was that participants will have a high degree of anxiety and will develop high levels of meaning in life, self-efficacy and resilience necessary to handle the stressful event of the pandemic. In addition, we supposed that no statistically significant differences between parents and university students on the aforementioned parameters will exist. The research hypotheses were:

| Table 1                                                                 |
|------------------------------------------------------------------------|
| The demographics of the participants (N = 61).                         |
|                                                                      |
|                                                                 |
| f   | Valid % | M    | SD  | Min | Max |
|-----|---------|------|-----|-----|-----|
| Sex |         |      |     |     |     |
| Male| 13      | 21.3 | 39.0| 14.1| 20  |
| Female| 48      | 78.7 |     |     |     |
| Age |         |      |     |     |     |
| Tertiary education | 35      | 57.4 | 20  | 58  |
| Secondary education  | 14      | 23   |     |     |
| PhD holder           | 10      | 16.4 |     |     |
| Master’s degree      | 2       | 3.2  |     |     |
| Married              | 32      | 52.5 |     |     |
| Single               | 20      | 32.8 |     |     |
| In a relationship    | 7       | 11.5 |     |     |
| Divorced             | 2       | 3.2  |     |     |
| Parent               | 35      | 57.4 |     |     |
| Family member        |         |      |     |     |     |
| University students  | 26      | 42.6 |     |     |
| Nuclear family       | 39      | 63.9 |     |     |
| Single parent family | 13      | 21.4 |     |     |
| Extended family      | 8       | 13.1 |     |     |
| Stepfamily           | 1       | 1.6  |     |     |
| Full time employed   | 45      | 73.8 |     |     |
| U = University students| 12   | 19.7 |     |     |
| Part time employed   | 3       | 4.9  |     |     |
| Unemployed           | 1       | 1.6  |     |     |
| No work              | 26      | 42.6 |     |     |
| Work from home       | 25      | 41   |     |     |
| Work condition during lockdown                                   |
| Part time work (some hours/days per week) | 7 | 11.5 |     |     |
| Part time work       | 7       | 11.5 |     |     |
| Full-time work       | 3       | 4.9  |     |     |
| I live with all my family members                              |
| Alone                | 8       | 13.1 |     |     |
| I live with a friend  | 1       | 1.6  |     |     |

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Participants will present high degree of anxiety, meaning in life, self-efficacy and resilience.

Participants with higher levels of meaning in life, self-efficacy and resilience will have lower anxiety levels.

There will be a statistically significant correlation for the regression coefficients according to pathway analysis.

2. Methods

2.1. Participants

The study population was composed of 61 participants, 13 (21.3 %) males and 48 (78.7 %) females, aged 20–58 years (M = 39, Sd = 14.1). In 26 families enrolled 61 individuals were affected with SEND, 35 (57.4 %) were parents and 26 (42.6 %) were family members (university students) at the 3rd and 4th years of their studies in the primary teacher education. Demographics of the participants are represented in Table 1.

Seventy cases of SEND were reported (as in some families there were more than one member with SEND): 27 parents, 20 university students and 21 siblings. Forty-three participants were affected with SEND themselves (23 parents and 20 university students) and 18 participants had one or more family members with SEND (Table 2).

The main characteristics of SEND were special learning difficulties (24.3 %), mental disability (11.4 %), psychiatric disorders, emotional or social disorders, attention deficit disorder with or without hyperactivity (10 % respectively) (Table 3).

2.2. Measures

Data were collected using a Self-report Questionnaire, the State-Trait Anxiety Inventory (STAI), the Meaning in Life Questionnaire (MLQ), the General Self-Efficacy Scale (GSE), the Resilience Scale (RS) and the Brief Resilience Scale (BRS). More specifically:

- A Self-report Questionnaire of 13 questions was created for the study to obtain socio-demographic information such as sex, age, educational level, employment status (general and during lockdown), type of family and SEND, etc.
- The State-Trait Anxiety Inventory (STAI): is a 40-item self-reported inventory developed by (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). It was designed to measure two types of anxiety: 1) state anxiety or transient anxiety (STAI X1) is the anxiety about an event and 2) trait anxiety or permanent anxiety is the anxiety level as a personal characteristic (STAI X2). Participants answered each item on a 4-point Likert-type scale ranging from 1 (not at all) to 7 (very much so). Higher scores are positively correlated with higher levels of anxiety. The STAI has been adapted to Greek having satisfactory psychometric properties (a = 0.92) and construct validity (Liakos & Giannitsi, 1984).
- The Meaning in Life Questionnaire (MLQ): is a 10-item self-report inventory designed to measure life meaning. It measures two dimensions of meaning in life: 1) presence of meaning (how much respondents feel their lives have meaning) and 2) search for meaning (how much respondents strive to find meaning and understanding in their lives). Participants answered each item on a 7-point Likert-type scale ranging from 1 (absolutely true) to 7 (absolutely untrue) (Steger et al., 2006). The MLQ can be used as a reliable tool for the assessment of presence and search for meaning in the Greek population. The Cronbach Alpha index for the scale was a = .76, for the Presence subscale was a = .83 and for the Search subscale was a = .82 (Pezirkianidis, Galanakis, Karakasidou, & Stalikas, 2016).
- The General Self-Efficacy Scale (GSE): is a self-report measure of self-efficacy consisting of 10 items. The GSE is correlated to emotion, optimism and work satisfaction. Negative coefficients were found for depression, stress, health complaints, burnout and anxiety. Participants answered each item on a 4-point Likert-type scale ranging from 1 (not at all true) to 4 (exactly true). The final score is the sum of responses for each participant (Schwarzer and Jerusalem, 1995). According to Schwarzer and Jerusalem, the stability of the GSE has been examined in several longitudinal studies (Schwarzer & Scholz, 2000). According to Schwarzer and Jerusalem (1995), based on samples from 25 nations, the Cronbach’s α ranged from 0.76 to 0.90, with the majority in the high 0.80. There is a Greek version of the scale. The Cronbach alpha coefficients in a Greek population were 0.77 (Glynou, Schwarzer, & Jerusalem, 1995).
- The Resilience Scale (RS): The scale is a self-report questionnaire consisting of 25 items. Results were recorded on a 4-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). It should be clarified that the Total RS score is generated if we sum the responses of statistical units in the sample of 25 questions with the result that the value is formed with a minimum of 25 and
maximum of 175 (Wagnild, 2016). Higher scores indicate greater resilience. It has been adapted to Greek (Mamalikou & Tsaousis, 2012) and the Cronbach alpha coefficients in a Greek population were 0.899 (Manomenidis, Panagopoulou, & Montgomery, 2019).

- The Brief Resilience Scale (BRS): is a 6-item, self-reported measure of an individual’s ability to bounce back, resist illness, adapt to stress, or thrive in the face of adversity. Results were recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicate a higher level of resilience (Smith et al., 2008). The BRS was translated from English to Greek and then validated through back-translation and content validity testing by two skilled translators. The final form of the instrument was pilot tested in a sample of university students. The construct validity of the translated to Greek version of the questionnaire was investigated through principal axis factoring varimax rotation.

3. Procedure and data analysis

Data collection was performed at the 2nd and 3rd week of lockdown pandemic in Greece. The briefing took place during e-Learning university lessons, where both students and parents of the students completed the questionnaires using google forms.

Data analysis was based on quantitative statistical methods. Descriptive statistics (percentages, frequencies, means, standard deviation), criterion x2, non-parametric test of Mann-Whitney for independent samples, Spearman rho criterion and pathway analysis were used.

4. Results

It must be mentioned that Cronbach’s alpha reliability scores ratio for all variables were quite high (with one exception), all over 0.700 and most over 0.800 (Table 4).

The results of all the study’s variables (degree of anxiety, meaning in life, self-efficacy and resilience) were:

4.1. Participants will present high degree of anxiety, meaning in life, self-efficacy and resilience

For the transient anxiety (STAI X1): M = 50.67 and SD = 8.70. This value is very close to scale average (50.0). Parents seem to have a higher average (M = 53.77) than university students (M = 46.50). This value is between “some-time” and “often”. For the permanent anxiety (STAI X2) M = 40.54 and SD = 9.13 which is very close to the category scale “some time” (40.0). Parents seem to have a lower average (M = 38.83) than university students (M = 42.85). For the total anxiety (STAI X1 & X2) the M = 91.21 and SD = 11.61 and this value is just above the middle between the category “some time” (80.00) and scale average (100.0). Parents seem to have a higher average (M = 92.60) respect to university students (M = 89.35).

For the Meaning in life (MLQ) – presence: M = 25.54 and SD = 6.42. This value is also very close to scale average (25.0) and is into somewhat true range. Parents seem to have a higher average (M = 27.80) than university students (M = 22.50). For the MLQ - search, M = 21.64 and SD = 8.09 which again is close to scale average (25.0). This value was into “can’t say true or false” range. The respective
mean value for the total sample was 23.97. Parents seem to have a lower average (M = 18.23) than university students (M = 26.23).

For the total General self-efficacy (GSE): M = 29.75 and SD = 4.90, notably over the scale average (25.00). This value of M is very close to moderately true. Parents seem to have a higher average (M = 30.71) respect to university students (M = 28.46).

For the total Resilience (RS): M = 132.33 and SD = 25.13. This value is greater than 131 from where the range of “moderate” starts. Parents seem to have higher average (M = 137.80) respect university students (M = 124.96).

For the total Brief Resilience Scale (BRS) M = 3.61 and SD = 0.61, which is over scale average (3.00). This value of M is just on the “agree” range. Parents seem to have a slightly higher average (M = 3.75) than university students (M = 3.34) (Table 5).

To evaluate whether or not all the above variables have a statistically significant difference between parents and university students the non-parametric test of Mann-Whitney for independent samples was performed. Statistically significant differences were found between parents and university students for the following variables as presented in Table 6:

- Parents had higher values than university students in STAI X1, STAI X1 & X2, MLQ (presence), GSE, RS and BRS.
- Parents had lower values than university students in STAI X2 and MLQ (search).

### 4.2. Participants with higher levels of resilience or of self-efficacy or of meaning of life will have lower anxiety levels

To investigate if this hypothesis is true, Spearman rho criterion was performed as the above variables do not follow the normal distribution. As reported on Table 6 almost all Spearman’s rho values are negative. For the STAI X1, the correlation with MLQ (both presence and search) was negative statistically significant (p < 0.01**). Correlation of the STAI X2 was negative and statistically significant with the MLQ (presence) and the RS (p < 0.01**). Besides, the correlation of the total anxiety was negative and statistically significant with the RS. Finally, there was no statistically significant correlation between GSE and anxiety levels. In summary:

1) participants with higher levels of resilience (RS) had lower anxiety levels, regarding permanent (STAI X2) and total anxiety (STAI X1 & X2) the correlation was statistically significant and
2) participants with higher levels of MLQ (presence) had lower anxiety levels and for transient (STAI X1) and permanent anxiety (STAI X2) the correlation was statistically significant (Table 7).

### 4.3. There will be a very strong statistically significant correlation for the regression coefficients according to pathway analysis

Pathway analysis was applied as the latest step on exploring the association between endogenous and exogenous variables to the total anxiety. It employed pathway analysis method to determine whether a multivariate set of non-experimental data fits well with a priori causal model. In the following models the MLQ (presence and search) of participants in the sample and their self-efficacy, were exogenous variables and their variance was assumed to be caused entirely by variables, not in the causal model. The connecting line with arrows at both ends shows that the correlation between these 3 variables will remain unanalyzed because we choose not to identify one variable as a cause of the other variable. Resilience degree of participants (RS and BRS) and the total anxiety (STAI X1 & X2) were considered as endogenous variables and their variance was explained in part by other variables in the model. This was because we had 6 independent question groups: 2 for meaning in life (MLQ: presence and search), 1 for self-efficacy (GSE), 2 for resilience (RS & BRS) and 1 for anxiety (STAI X1 & X2). MLQ and GSE have different questions and measure other parameters in relation to resilience. The effort in the pathways is to approach the paths to reach the anxiety after the strong correlations we found that exist between all the above variables. The hypothesis was that meaning in life and self-efficacy are influenced by external factors and due to the strong correlations in turn affect resilience and this in turn affects anxiety.

Paths drawn to endogenous variables were directional (arrowhead on one end only). Variance in anxiety is theorised to result from variance in MLQ (presence and search), GSE, RS and BRS and extraneous (not in the model) sources. Variance in RS and BRS was theorised to be caused by variance in the MLQ (presence and search), GSE and extraneous sources. Model fit refers to how well our proposed model (in this case, the model of the factor structure) accounts for the correlations between variables in the dataset. If we are accounting for all the major correlations inherent in the dataset (with regard to the variables in our model), then we will have a good fit; if not, then there is a significant “discrepancy” between the correlations proposed and the correlations observed and thus we will

### Table 5
Central tendency measures (N = 61).

| Variables  | Total (N = 61) |  | Parent (N = 35) |  | University student (N = 26) |  |
|------------|---------------|-----------|----------------|-----------|----------------------------|-----------|
|            | Mean | S.D. | Min-Max | Mean | SD | Min-Max | Mean | SD | Min-Max |
| STAI X1    | 50.67 | 8.70 | 29.00–67.00 | 53.77 | 4.00 | 36.00–67.00 | 46.50 | 8.81 | 29.00–67.00 |
| STAI X2    | 40.54 | 9.13 | 28.00–70.00 | 38.83 | 5.00 | 28.00–56.00 | 42.85 | 11.27 | 28.00–70.00 |
| STAI total | 91.21 | 11.61 | 64.00–136.00 | 92.60 | 6.00 | 64.00–115.00 | 89.35 | 12.98 | 73.00–136.00 |
| MLQ (Presence) | 25.54 | 6.42 | 8.00–35.00 | 27.80 | 7.00 | 11.00–35.00 | 22.50 | 6.19 | 8.00–31.00 |
| MLQ (Search) | 21.64 | 8.09 | 5.00–35.00 | 18.23 | 8.00 | 5.00–35.00 | 26.23 | 4.40 | 20.00–34.00 |
| GSE        | 29.75 | 4.90 | 12.00–39.00 | 30.71 | 9.00 | 25.00–39.00 | 28.46 | 5.18 | 12.00–36.00 |
| RS         | 132.33 | 25.13 | 85.00–163.00 | 137.80 | 10.00 | 88.00–161.00 | 124.96 | 24.83 | 85.00–163.00 |
| BRS        | 3.61  | 0.61  | 2.00–4.83  | 3.75  | 1.10  | 2.50–4.83  | 3.44  | 0.46  | 2.00–4.17  |
have a poor model fit. Our proposed model does not “fit” the observed or “estimated” model (i.e., the correlations in the dataset).

The following statistics were used to test the significance and goodness of fit:

- Chi-square statistics: Non-significant chi-square value in pathway analysis shows the goodness of fit model. Sometimes, chi-square statistics is significant. However, we still have to test one absolute fit index and one incremental fit index.

### Table 6

| Variables | Parent (N = 35) | University student (N = 26) | U | p |
|-----------|----------------|----------------------------|---|---|
| STAI X1   | Median (I.R.)  | Median (I.R.)              | 220.500 | 0.001 |
| STAI X2   | 39.00 (10.00) | 39.50 (15.00)             | 365.000 | 0.188 |
| STAI X1 & X2 | 90.00 (10.00) | 86.50 (12.00)            | 305.500 | 0.028 |
| MLQ (Presence) | 28.00 (8.00)    | 21.00 (9.00)            | 262.000 | 0.005 |
| MLQ (Search) | 19.00 (15.00)    | 27.50 (8.00)            | 198.000 | 0.000 |
| GSE       | 29.00 (9.00)  | 29.00 (5.00)            | 359.000 | 0.158 |
| RS        | 144.00 (26.00) | 122.50 (27.00)        | 310.000 | 0.034 |
| BRS       | 3.50 (1.00)   | 3.50 (0.50)             | 341.000 | 0.090 |

The values refer to Median, Interquartile Range (I.R.), non-parametric test Mann-Whitney U and respective p-value, ***p < 0.001 ** p < 0.01 * p < 0.05.

### Table 7

Correlations (Spearman’s rho) between MLQ, GSE, RS, BRS and STAI – Trait Anxiety Inventory.

| Variables | STAI X1 | STAI X2 | STAI X1 & X2 |
|-----------|---------|---------|-------------|
| MLQ (presence) | 0.366** | −0.553** | −0.182 |
| MLQ (search) | −0.345** | 0.175 | −0.185 |
| GSE        | 0.000    | −0.187  | −0.112 |
| RS         | −0.048   | −0.515** | −0.469** |
| BRS        | −0.171   | −0.241  | −0.201 |

***p < .001 ** p < .01 * p < .05”

### Fig. 1.

Model 1- Total sample: Exogenous variables [Meaning in Life (Presence and Search), (General Self-Efficacy)], endogenous variables [Resilience (RS and BRS), State-Trait Anxiety].

Goodness-of-fit indicators of model 1 (total sample, N = 61)

| Model      | X² | df | X²/df | CFI | GFI | AGFI | RMSEA | PCLOSE |
|------------|----|----|-------|-----|-----|------|-------|--------|
| Pathway model | 3.52 | 5  | 0.70  | 1.00 | 0.98 | 0.92 | 0.00  | 0.69   |

Legend: Thick black arrows p < .001, black arrows p < .05.
- Absolute fit index: RMSEA: An absolute fit index using a 90% confidence interval for RMSEA should be less than 0.08 for the goodness of fit model.
- Increment fit index: CFI, GFI, NNFI, TLI, RFI and AGFI are some incremental fit indexes, which should be greater than 0.90 for the goodness of fit model.
- Modification indexes: Modification indexes (MI) may be used to add arrows to the model. The larger the MI, the more arrows will be added to the model which will improve the model fit. This pathway analysis applied in the total sample and in the sub-samples:
  - Parents
  - University students

According to Fig. 1 (Model 1, total sample), it derives that:

a) a remarkable statistically significant correlation ($p < .001$) for the regression coefficients was observed:

| GSE | RS  | (positive) |
|-----|-----|------------|
| GSE | BRS | (positive) |
| BRS | STAI X1 & X2 | (negative) |
| GSE | STAI X1 & X2 | (positive) |
| RS  | STAI X1 & X2 | (negative) |

b) a statistically significant correlation ($p < .05$) for the regression coefficients was observed:

| MLQ (presence) | Resilience Scale (RS) | (positive) |
|----------------|-----------------------|------------|
| MLQ(Search)    | STAI X1 & X2          | (negative) |

Findings indicate that the MLQ (presence) has a positive impact on RS (r.f. $r = 0.92$, $p < 0.05$), which negatively impacts the total

![Diagram](image)

**Fig. 2.** Model 2 - Parents: Exogenous variables [Meaning in Life (presence and search), (General Self-Efficacy)], endogenous variables [Resilience (RS and BRS), State-Trait Anxiety]].

| Goodness-of-fit indicators of Model 2 (parents, N = 35) |
|--------------------------------------------------------|
| Model                                                  |
| Pathway model                                          |
| $X^2$                                                   |
| df                                                     |
| $X^2/df$                                                |
| CFI                                                    |
| GFI                                                    |
| AGFI                                                   |
| RMSEA                                                  |
| PCLOSE                                                 |
| Pathway model                                          |
| 9.88                                                   |
| 6                                                      |
| 1.65                                                   |
| 0.97                                                   |
| 0.93                                                   |
| 0.74                                                   |
| 0.14                                                   |
| 0.17                                                   |

Legend: Thick black arrows $p < .001$, black arrows $p < .05$. 

anxiety (r.f. = −0.30 p < 0.001). The GSE initially positively impacts RS (r.f. = 2.37, p < 0.001), which negatively impacts total anxiety. The same variable GSE, has, a positive impact on BRS (r.f. = 0.10 p < 0.001), which negatively impacts total anxiety (r.f. = −13.45 p < 0.001). Finally, the MLQ (search) and the GSE directly impact the total anxiety (r.f. = −0.27, p < 0.05 and r.f. = 1.90, p < 0.001 respectively).

Remark: As positive impact was meant that when the first variables increase and the same is valid for the second variable. As negative impact was meant that when the first variables increase and the second variable decreases.

According to Fig. 2 (Model 2, parents):

a) there is a considerable statistically significant correlation (p < .001) for the regression coefficients:

| GSE  | BRS (positive) |
|------|----------------|
| BRS  | STAI X1 & X2   |
| GSE  | STAI X1 & X2   |
| RS   | STAI X1 & X2   |

b) statistically significant correlation (p < .05) for the regression coefficients:

| GSE  | MLQ (search) (positive) |
|------|-------------------------|
| RS   | STAI X1 & X2 (negative) |

The GSE initially positively impacts RS (r.f. = 1.96, p < 0.05), which negatively impacts total anxiety RS (r.f. = −0.35 p < 0.001). The same variable, GSE, has a positive impact on BRS (r.f. = 0.13 p < 0.001), which negatively impacts total anxiety (r.f. = −14.22 p < 0.001). Finally, MLQ (search) and GSE impacts directly on total anxiety (r.f. = −0.25, p < 0.05 and r.f. = 2.27, p < 0.001) respectively.

According to Fig. 3 (Model 3, university students):

Fig. 3. Model 3 - University students: Exogenous variables [Meaning in Life (presence and Search), (General Self-Efficacy)], endogenous variables [Resilience (RS and BRS), State-Trait Anxiety]].

| Goodness-of-fit indicators of Model 3 (university students, N = 26) |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Model                  | X²    | df  | X²/df | CFI  | GFI  | AGFI | RMSEA | PCLOSE |
| Pathway model          | 16.15 | 6   | 2.692* | 0.82 | 0.87 | 0.56 | 0.26  | 0.02   |

Legend: Thick black arrows p < .001, black arrows p < .05.
a) noteworthy statistically significant correlation ($p < .001$) for the regression coefficients:

| GSE  | RS    | (positive) |
|------|-------|------------|
| MLQ (presence) | BRS   | (positive) |
| BRS  | STAI X1 & X2 | (negative) |

b) statistically significant correlation ($p < .05$) for the regression coefficients:

| GSE  | BRS   | (positive) |
|------|-------|------------|
| GSE  | STAI X1 & X2 | (positive) |
| RS   | STAI X1 & X2 | (negative) |

Findings indicate that the MLQ (presence) has a positive impact on BRS ($r.f. = 0.04 p < 0.001$), which negatively impacts the total anxiety ($r.f. = -19.17 p < 0.001$). The GSE initially positively impacts RS ($r.f. = 2.98, p < 0.001$), which negatively impacts total anxiety ($RS (r.f. = -0.23 p < 0.05$). The same variable, GSE, has a positive impact on BRS ($r.f. = 0.04 p < 0.05$), which negatively impacts total anxiety. Finally, the GSE directly impacts the total anxiety ($r.f. = 1.50, p < 0.05$).

5. Discussion

The purpose of the current study was to examine the degree of anxiety, the meaning in life, the self-efficacy and the resilience of families with members with SEND during COVID-19 pandemic in Greece, the coefficients among the above parameters and the differences between parents and university students.

Regarding the degree of anxiety, the study found that parents and university students in families with members with SEND presented higher anxiety levels than the scales average during COVID-19 pandemic. This finding is consistent with findings from other studies in families with a member with SEND (Gogol, Kumar, & Deuri, 2017; Keller & Honig, 2004; Scherer, Verhey, & Kuper, 2019). These data confirm the research related to COVID-19 which suggests that anxiety and depression are common psychological phenomena in any disaster and can be a barrier to rational medical and mental health interventions (Wang, Di et al., 2020) with subsequent mental health problems and emotional distress in self-isolated and quarantined individuals (Kelvin & Rubino, 2020). In addition, the results suggest that the values of the transient anxiety are higher than those of the permanent anxiety. This was expected as the condition of COVID-19 that occurs suddenly (Wang, Di et al., 2020) and swept across the world, inducing considerable fear, worry and concern (World Health Organization, 2020).

The hypothesis that participants will have a higher degree respect to the scales average of meaning in life, self-efficacy and resilience was verified. Several studies identify positive abilities and outcomes in the families of parents with SEND (Hogan, Shandra, & Msall, 2007; Morin, Nelson, & Corbo-Cruz, 2015). These data confirm the research related to COVID-19 which suggests that, in a more positive way, some people may have positive experiences (World Health Organization, 2020). There is enough evidence to assert that processes associated with resilience protect against the traumatic effects associated with acute and chronic stressors, but the mechanisms are complex and contextual and culturally dependent (Ungar, 2013). As proposed by research on mental health and emotional impact of COVID-19, anxiety of falling sick or fear of death may amplify the sense of helplessness, hopelessness, exhaustion, burnout and nervous anticipation, negative emotions, work-life balance and personal life stressors further compromising physical, mental and emotional wellbeing, which requires resilience (Mukhtar, 2020). Participants showed a high degree of resilience and this helps them to cope psychologically. Given that resilience rests fundamentally on relationships (Luthar, 2006; Luthar, Lyman, & Crossman, 2014) and especially on family relationships, combined with a high degree of meaning in life and self-efficacy, all these are key dynamics in dealing with COVID-19 pandemic. At the same time, high levels of meaning in life (Steger & Frazier, 2005) and self-efficacy (Luszczynska et al., 2005) function as positive variables and indicators of prosperity in dealing with difficult pandemic conditions.

Another interesting result of the study regards the statistically significant differences between parents and university students. Parents have higher values than university students in state anxiety, state-trait anxiety (total), meaning in life (presence) and resilience and lower values than university students in trait anxiety and meaning in life (search). Literature clear patterns point out the influence of age on resilience. However, the type and source of anxiety changes though out development (Portillo-Reyes, Capps, Loya-Mendez, Reyes-Leal, & Quinones-Soto, 2020).

The findings of research during COVID-19 pandemic present a mixed picture related to anxiety and age. The unadjusted estimates for the model predicting anxiety/depression revealed that younger age, being female, living in a city, pre-existing health conditions, COVID-19 status, COVID-19 related anxiety and perceived risk of COVID-19 infection all significantly increased the probability of screening positive for anxiety or depression. Contrary to expectations, the oldest age group and being a male were associated with a lower probability of anxiety or depression, even though these factors have been associated with a higher mortality rate (Wang, Tang, &
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6. Conclusions, limitations and implications for practice

6.1. Conclusions

- Parents and university students demonstrate higher anxiety (than the scales average) during COVID-19 pandemic. The values of the transient anxiety are higher than permanent, and the difference was statistically significant. The differences between parents and university students were statistically significant.
- Parents and university students demonstrate higher meaning in life (presence), general self-efficacy and resilience (than the scales average).
- Parents have higher values than university students in state anxiety, state-trait anxiety (total), meaning in life (presence) and resilience and they have lower values in trait anxiety and meaning in life (search).
- Participants with higher levels of resilience and meaning in life have lower anxiety levels.
- There is a very strong statistically significant correlation for the regression coefficients according to pathway analysis.
- Families who have one or more members with SEND, although experiencing difficult situations and anxiety due to the unprecedented conditions of the pandemic, activate mechanisms, such as self-efficacy, meaning in life and resilience, to maintain their balance and mental health.

6.2. Limitations of the study

This study had some limitations. The main limitation of the study regards the sample of participants, which was relatively small, as no easy access to participants was possible due to the special conditions of the COVID-19 pandemic. The sample emerged as a sub sample of a larger survey sample and it is, of course, subject to the limitations of the small sample. This, however, doesn’t limit the validity of results, as the present study are consistent results with those of other ones. The small sample prevented the analysis from focusing on differences between the distinct types of disabilities, as well as on differences between participants who have SEND themselves and participants who have family one or more members with a SEND. In addition, the research didn’t use quality tools in combination in order to investigate the changes brought by the pandemic in depth. However, besides the limitations, this research is interesting as it focusses on a specific population of student families with members with SEND in a period of a pandemic offering practical implications for future research.

6.3. Implications for practice

- Researchers, specialists and clinicians should work with and process the powerful elements that individuals with and without SEND activate themselves such as resilience, self-efficacy and meaning in life as means of handling the anxiety and the hard conditions of a pandemic.
- Specialists should focus on individuals with SEND and their families to help them strengthen further strengthen the aspects of wellbeing in a crisis period.
- Higher education, utilising its experience and potential, can provide specialised lectures, teaching materials, psychoeducational programs and e-counseling for university students and their families, as well as high-risk groups, such as individuals with SEND, to combine in order to investigate the changes brought by the pandemic in depth. However, besides the limitations, this research is interesting as it focusses on a specific population of student families with members with SEND in a period of a pandemic offering practical implications for future research.

Regarding the hypothesis that participants with higher levels of resilience or of self-efficacy or of meaning in life will have lower anxiety levels was demonstrated by study findings. This finding is consistent with other studies that highlight how families with adolescents and young adults may experience more intense stress and anxiety during COVID-19 (Pomini, 2020) activating protective dynamics, such as resilience, meaning in life and self-efficacy to cope and adjust to the anxiety of the new condition of COVID-19. In addition, there is a magnitude of other factors which influence anxiety and resilience. Socioeconomic features, family factors and community influences impact on children’s risk for negative outcomes even if many individuals have positive outcomes even though various disadvantages (Schibli, Wong, Hedayati, & D’Angiulli, 2017).

Finally, there are remarkable statistically significant correlations for the regression coefficients according to pathway analysis. Resilience impacts the total anxiety negatively and meaning in life (search) and the general self-efficacy (GSE) impacts directly the total anxiety. More specifically, parents and university students have high levels of meaning in life (especially present), self-efficacy and resilience which results in less anxiety. While families with one or more members with SEND during the pandemic in Greece present anxiety they present psychological flexibility through resilience, meaning in life and self-efficacy. Positive psychological parameters are enforced due to several factors: 1) the research was done on family members who were not infected with the virus, 2) the majority stayed at home with all family members during the COVID-19 pandemic, 3) there was emotional security generated from the state strict protective measures, which were taken quickly, leaving the number of cases and deaths low and 4) Greek citizens remained safe and informed by the state which helped better adaptation and wellbeing of participants. Access to relevant information also seems to play an important role on the level of psychological burden of the population in the present COVID-19 pandemic, as occurred in past (Brooks et al., 2020; Wang, Di et al., 2020).

Wei, 2020). Most young adults feel less threatened by the COVID-19 pandemic than older (Pomini, 2020). However, women, students and individuals with physical disabilities and poor physical health, experienced increased mental burden and more intense stress. This data is interesting as women and young people when infected have less severe symptoms, while individuals with physical disability are indeed more exposed to the dangerous consequences of the virus (G. Wang et al., 2019).

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manage the consequences of the pandemic and reinforcing the potential that will help them respond effectively to the new challenges of the COVID-19 pandemic.

- E-counselling and e-support are vital and indispensable for individuals and families with members with SEND in a period of a pandemic.

- Researchers and professionals could also consider the possibility of studying the use of telepractice techniques and tools regarding the issues.

Despite limitations, the current study is an important step to clarify the malleable factors that predict anxiety, self-efficacy, meaning in life and resilience in families with one or more members with SEND. Using these findings may allow health care providers to enhance family well-being in this challenged population during a pandemic.

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