



## OCCUPATIONAL STRESS, DEPRESSION AND JOB SATISFACTION OF SPECIAL EDUCATION TEACHERS

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### Abstract:

**Objective:** The purpose of this study is to investigate occupational stress, depression and anxiety of primary education special education teachers, as well as levels of job satisfaction and how these are related to a number of demographic variables. **Method:** One hundred (100) special education teachers (39 males & 61 females) from the Regional Directorate of Attica took part in this study. Four self-report questionnaires were administered to the participants, i.e., the Perceived Stress Scale-14, the Depression Anxiety Stress-21, the Employee Satisfaction Inventory scale, and the Job Satisfaction Scale. A short health status questionnaire was also administered to the participants with questions related to the demographic data of the participants (gender, age, etc.), questions related to the work of the participants (level of education, years of service, etc.), as well as questions related to participants' health (e.g. "How good is your health?"). The statistical package SPSSv.21 was used for statistical analysis of the data. A variety of descriptive measures (frequency, percentages, mean, etc.) were used to describe the results. Pearson's linear correlation coefficient  $r$  was used to test the correlation between two variables. Additionally, the PROCESS macro (version 3) for SPSS was used in order to conduct moderation analysis. **Results:** The results showed that participants reported moderate levels of perceived stress, anxiety and depression, as well as levels of job satisfaction. Negative correlations between perceived stress and job satisfaction and between depression and job satisfaction were observed. Regarding stress and health status, elevated levels of stress were related to poorer health. Furthermore, correlations between stress, anxiety and depression with job satisfaction appeared to be influenced by gender, and in most cases the correlations had different directions between males and

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females. Therefore, occupational stress, depression and anxiety can be considered as predictors of the health status of special education teachers, as high levels of occupational stress and anxiety are strongly related to low levels of self-reported health-well-being, satisfaction. **Conclusions:** The results of this study highlight the need to explore the mental health of special education needs teachers that are associated with specific physical health issues so that measures can be taken for the development of prevention programs and personal strategies in order to cope with stress, anxiety and depression in teachers.

**Keywords:** occupational stress, depression, anxiety, job satisfaction, special education teachers

## 1. Introduction

Many research studies have found that teachers' overall satisfaction can be affected by many different factors. Some of these factors relate to issues that cannot be modified, such as the age of the teacher, years of service, and issues outside the school's influence (McWherter, 2012; Wright, 2017). Other factors directly involved in leadership, such as different types of leadership (Bogler & Nir, 2012), feedback and support types (Sass et al., 2011), have also been associated with teacher job satisfaction. Job expectations (Sass et al., 2011), teacher qualifications, and continuing education (Sass et al., 2011) are also factors that have been shown to affect teacher satisfaction.

In the last 25 years teacher stress has become increasingly recognized in the research literature. Numerous studies on teacher stress sources have revealed that up to a third of teachers consider teaching to be extremely stressful (Atindanbila, 2011). However, despite the seemingly high levels of stress, it has been found that the majority of teachers (at least 60-70%) believe that teaching as a whole is satisfactory (Atindanbila, 2011). Boyle, Borg, Falzon and Baglioni (1995) conducted a study with full-time primary school teachers examining teachers' sources of stress, job satisfaction and career commitment. The results of this study showed that teacher stress was primarily a function of students' workload and misbehavior.

Teachers who are professionally committed to helping high-risk children are themselves a high-risk group. The mortality rate of special education teachers is the highest of any other group of teachers - more than 13% per year (Boe, Cook, Bobbitt, & Terhanian, 1998; Boe, Cook, Bobbit, & Weber, 1995). Many factors are associated with high mortality rates for special education teachers, including occupational stress due to student-teacher characteristics and workplace management. Special education teachers have long faced the difficult task of teaching students who face difficulties in demanding work environments.

Ari & Sipal (2009) investigated the factors that affect job satisfaction in 245 special education teachers. The results of the study concluded that the factors that affect job satisfaction are the lack of audiovisual teaching aids, the ineffective assessment and attitude of students towards themselves, extra duties, low income and huge bureaucracy.

According to Brunsting et al. (2014), special education teachers have a difficult work environment combined with a very difficult student population. Teachers of students with emotional and behavioral disorders, in addition to the difficult work environment they face, are also involved in student discipline (Mastrantuono, 2015). They are also concerned about physical and verbal abuse (Mastrantuono, 2015). Kaff's (2004) study looked at special education teachers who were considering leaving the current education framework and found that 57% attributed this attention to severe cases and various disabilities. The bureaucracy is largely responsible for the dissatisfaction of special education teachers (Kaff, 2004).

### **1.1 Aim of the present study**

The purpose of this study is to investigate several mental health variables of primary school teachers working in special education. More specifically, the study aims to measure levels of stress, anxiety, depression, and their correlation with teacher job satisfaction, exploring health variables such as stress symptoms, anxiety, depression in relation with work characteristics and job satisfaction of teachers. The statistical package SPSSv.21 was used for statistical analysis of the data. A variety of descriptive measures (frequency, percentages, mean, etc.) were used to describe the results. Pearson's linear correlation coefficient  $r$  was used to test the correlation between two variables. Additionally, the PROCESS macro (version 3) for SPSS was used in order to conduct moderation analysis.

We were expecting that, stress will be correlated with job satisfaction of teachers. Anxiety will be correlated with job satisfaction of teachers and depression will be correlated with job satisfaction of teachers. The contribution and correlation of all the factors measured in the study with socio-demographic and psychological factors.

## **2. Methods**

### **2.1 Sample**

The present study involved 100 teachers, of whom 39 (39%) were men and 61 (61%) were women. The age of the participants ranged from 24 to 57 years, with an average age of 40 (SD = 9.1) years. All participants were primary education teachers working in public special education schools. Finally, regarding years of teaching experience, these ranged from 2 to 36, with an average of 14 (SD = 9.1) years.

### **2.2 Materials**

For the purposes of this study, a structured questionnaire consisting of five sections was used. The first section of the questionnaire included the Perceived Stress Scale-14, PSS-14, developed by Cohen et al. (1983), translated into Greek and standardized in the Greek population by Katsarou et al. (2012). The PSS-14 scale assesses the feelings and thoughts about stressful events and situations that have occurred in the last month. The Understanding Stress-14 scale consists of 14 questions with two subscales; one subscale consists of seven questions (1, 2, 3, 8, 11, 12, 14) that have a negative wording and the

second subscale consists of the remaining seven. questions (4, 5, 6, 7, 9, 10, 13) that have a positive wording. The first subscale represents the perceived incompetence of the respondent and the second subscale represents the self-efficacy of the respondent. The respondent states the degree to which he/she considers that he/she is represented by each of the sentences using a five-point Likert scale (from 0 = Never to 5 = Very often). The grading is done after the reversal of the positively formulated questions and then summing up all the grades. The higher the overall score (measurement scale from 0 to 56), the greater the perceived stress of the respondent.

The second section of the questionnaire included the Depression Anxiety Stress Scale-21 (DASS-21), which is a short form of DASS-42 developed by Lovibond & Lovibond (1995) and standardized in the Greek population by Lyraeos et al. (2011). This is a questionnaire that includes three subscales: depression, anxiety and stress. Each subscale includes seven questions that the respondent is asked to answer through a five-point Likert scale (from 0 = It didn't apply to me at all, to 3 = It applied to me too much or most of the time) and they are reported during the previous week. The higher the score, the higher the level of depression, anxiety and stress experienced by the individual (measurement scale from 0 to 21). The reasons for choosing this scale are that it is short and fast to complete, it is in Greek, and it ensures that it provides a reliable three-dimensional measurement of the individual's psychological state.

The third section of the questionnaire included the Employee Satisfaction Inventory (ESI) (Koustelios & Bagiatis, 1997) which is used to measure employee job satisfaction. It consists of 24 sentences that assess six aspects of the work. These aspects are: working conditions, wages, opportunities for promotion, the nature of work, the (immediate) boss and the organization (as a whole). The answers are given on a five-point Likert scale, where 1 corresponds to "I totally disagree" and 5 corresponds to "I totally agree". The questionnaire includes 13 negatively formulated questions in which a price reversal is applied (3, 4, 5, 7, 8, 9, 12, 15, 16, 19, 20, 23 and 24). Then the average value of all the data is calculated to calculate the degree of professional satisfaction of the respondent (measurement scale from 1 to 5).

The fourth section of the questionnaire consists of the Job Satisfaction Scale (JSS) developed by Warr et al. (1979). It consists of 15 sentences which the respondents are asked to evaluate on a seven-point scale (from 1 = I am particularly unhappy up to 7 = I am particularly satisfied) depending on the degree to which they feel satisfied with internal (recognition, opportunities) and external (conditions). This scale is divided into two subscales. The first expresses the internal professional satisfaction and consists of the questions and the second expresses the external professional satisfaction and consists of the single questions. The rating is done by calculating the average score of the ratings in the 15 sentences. Higher scores correspond to greater professional satisfaction (Likert scale from 1 to 7).

The fifth and final section of the questionnaire included questions related to the socio-demographic data of the participants (gender, age, etc.), questions related to the work of the participants (level of education, years of service, etc.), as well as questions related to participants' health (e.g. "How good is your health?").

The reliability of the research tool scales was assessed based on the Cronbach's alpha internal consistency index. The results for the scales and subscales of the questionnaire are presented in the table below:

**Table:** Cronbach's internal consistency values for research tool scales and subscales

Scale	Subscales	Number of sentences	Cronbach's alpha
<b>Perceived Stress Scale 14</b>			
	Perceived incompetence	7	0,71
	Self-efficacy	7	0,85
<b>Depression, Anxiety and Stress Questionnaire – 21</b>			
	Depression	7	0,73
	Anxiety	7	0,74
	Stress	7	0,73
<b>Professional Satisfaction Record Questionnaire</b>			
	Work conditions	5	0,68
	Salary	4	0,49
	Changes for promotion	3	0,35
	Nature of work	4	0,70
	Supervisor	4	0,80
	Organization	4	0,36
<b>Scale of employment satisfaction</b>			
	Internal Job Satisfaction	7	0,74
	External Job Satisfaction	8	0,72

The scales and subscales of the research tools presented from very low (opportunities for promotion, organization) to very satisfactory (Professional Satisfaction Scale) levels of internal consistency reliability. More specifically, three of the subscales of the Job Satisfaction Questionnaire showed a very low reliability index, however the corresponding value for the overall scale was considered satisfactory and therefore it was decided to use the scale as a whole rather than the individual subscales.

The statistical package SPSSv.21 was used for statistical analysis of the data. A variety of descriptive measures (frequency, percentages, mean, etc.) were used to describe the results. Pearson's linear correlation coefficient  $r$  was used to test the correlation between two variables. Additionally, the PROCESS macro (version 3) for SPSS was used in order to conduct moderation analysis.

### 3. Results

#### 3.1 Stress and job satisfaction

**Table 1:** Correlations (Pearson's  $r$ ) of the ESI and JSS questionnaires with the DASS-21 Anxiety scale

	Anxiety
Employment Satisfaction (ESI)	.26*
Internal Job Satisfaction (JSS)	.24*
External Job Satisfaction (JSS)	.29**

Job Satisfaction (JSS)	.28**
<i>Note.</i> *p<0,05. **p<0,01.	

The increase in teachers' anxiety levels is related to a decrease in their internal, external and overall job satisfaction.

### 3.2 Depression and job satisfaction

**Table 2:** Correlation (Pearson's r) of the ESI and JSS questionnaires with the DASS-21 depression scale

	Depression
Employment Satisfaction (ESI)	.33**
Internal Job Satisfaction (JSS)	.0,19
External Job Satisfaction (JSS)	.0,16
Job Satisfaction (JSS)	.0,19
<i>Note.</i> **p<0,01.	

Increased levels of teacher depression are associated with decreased internal, external, and overall job satisfaction.

### 3.3 Stress and demographic characteristics

**Table 3:** Gender and stress levels

	Gender				t - value
	Man		Woman		
	Mean	S.D.	Mean	S.D.	
Perceived stress (PSS-14)	.26,28	.4,50	.26,97	.5,29	.0,67
Stress (DASS-21)	.8,38	.3,44	.8,36	.3,08	.0,03

There is no statistically significant difference between men and women in terms of stress levels.

**Table 4:** Age and stress levels

	Age
Perceived stress (PSS-14)	.0,16
Stress (DASS-21)	.0,07

Very low not significant correlations between teachers' age and stress levels.

### 3.4 Anxiety and demographic characteristics

**Table 5:** Gender and anxiety levels

	Gender				t - value
	Man		Woman		
	Mean	S.D.	Mean	S.D.	
Anxiety (DASS-21)	.7,31	.3,27	.6,77	.3,51	.0,77

There is no statistically significant difference between men and women in terms of anxiety levels.

**Table 6:** Age and anxiety levels

	Age
Anxiety (DASS-21)	.0,09

There is no correlation between teachers' age and anxiety levels.

### 3.5 Depression and demographic characteristics

**Table 7:** Gender and depression levels

	Gender				t - value
	Man		Woman		
	Mean	S.D.	Mean	S.D.	
Depression (DASS-21)	.6,76	.3,01	.7,05	.3,52	.0,42

There is no statistically significant difference between men and women in terms of depression levels.

**Table 8:** Age and depression levels

	Age
Depression (DASS-21)	.0,04

There is no correlation between teachers' age and depression levels.

### 3.6 Job Satisfaction and demographic characteristics

**Table 9:** Gender and job satisfaction levels

	Gender				t- value
	Man		Woman		
	Mean	S.D.	Mean	S.D.	
Employment Satisfaction (ESI)	.3,06	.0,25	.3,04	.0,32	.0,33
Internal Job Satisfaction (JSS)	.4,19	.0,57	.4,03	.0,79	.1,13
External Job Satisfaction (JSS)	.4,10	.0,59	.4,17	.0,78	.0,49
Job Satisfaction (JSS)	.4,14	.0,56	.4,10	.0,73	.0,28

There is no statistically significant difference between men and women in terms of job satisfaction levels.

**Table 10:** Age and job satisfaction levels

	Age
Employment Satisfaction (ESI)	.0,22*
Internal Job Satisfaction (JSS)	.0,16
External Job Satisfaction (JSS)	.0,15
Job Satisfaction (JSS)	.0,16

Note. \* p < 0,05.

There is a statistically significant negative correlation between teachers' age and job satisfaction levels based on ESI. That is, older teachers have lower levels of job satisfaction.

### 3.7 Stress and years of service

**Table 11:** Years of service and stress levels

	Years of service
Perceived Stress (PSS-14)	.0,18
Stress (DASS-21)	.0,10

There is no statistically significant correlation between teacher service years and stress levels.

### 3.8 Anxiety and years of service

**Table 12:** Years of service and anxiety levels

	Years of service
Anxiety (DASS-21)	.0,11

There is no statistically significant correlation between teachers' years of service and anxiety levels.

### 3.9 Depression and years of service

**Table 13:** Years of service and depression levels

	Years of service
Depression (DASS-21)	.0,07

There is no statistically significant correlation between teacher service years and depression levels.

### 3.10 Job satisfaction and years of service

**Table 14:** Years of service and job satisfaction levels

	Years of service
Employment Satisfaction (ESI)	.0,16
Internal Job Satisfaction (JSS)	.0,18
External Job Satisfaction (JSS)	.0,12
Job Satisfaction (JSS)	.0,16

There is no statistically significant correlation between teachers' years of service and job satisfaction levels.



### 3.11 Stress and job satisfaction by Gender

**Table 15:** Moderation analysis and Pearson's r Comparisons of the ESI and JSS questionnaires with the DASS-21 stress scale using Gender as a moderator

Moderator: Gender	Stress		
	Males	Females	Significance (p) of Interaction Effect
Internal Job Satisfaction (JSS)	.021	.025	<b>.0035</b>
External Job Satisfaction (JSS)	.015	.023	.091
Job Satisfaction (JSS)	.018	.025*	<b>.0046</b>

*Note.* \*p<0,05.

The correlation between Job satisfaction and Stress appears to be inverted between the two genders. Stress tends to appear with higher job satisfaction levels for males while the opposite is true for females.

### 3.12 Depression and job satisfaction by Gender

**Table 16:** Moderation analysis and Pearson's r Comparisons of the ESI and JSS questionnaires with the DASS-21 Depression scale using Gender as a moderator

Moderator: Gender	Depression		
	Males	Females	Significance (p) of Interaction Effect
Internal Job Satisfaction (JSS)	.029	.037**	<b>.0005</b>
External Job Satisfaction (JSS)	.029	.034**	<b>.0004</b>
Job Satisfaction (JSS)	.030	.038**	<b>.0002</b>

*Note.* \*\*p<0,01.

The correlation between Job satisfaction and Depression appears to be inverted between the two genders. Depression tends to appear with higher job satisfaction levels for males, and lower job satisfaction levels for females.

### 3.13 Anxiety and job satisfaction by Gender

**Table 17:** Moderation analysis and Pearson's r Comparisons of the ESI and JSS questionnaires with the DASS-21 Anxiety scale using Gender as a moderator

Moderator: Gender	Anxiety		
	Males	Females	Significance (p) of Interaction Effect
Internal Job Satisfaction (JSS)	.003	.036**	0.182
External Job Satisfaction (JSS)	.002	.040**	<b>0.034</b>
Job Satisfaction (JSS)	.003	.040**	0.111

*Note.* \*\*p<0,01.

The correlation between Job satisfaction and Anxiety appears to be different between the two genders. Anxiety has no correlation with job satisfaction for males, however for females the correlation is negative, and higher anxiety levels tend to appear with lower job satisfaction levels.

#### 4. Discussion

According to the results of the present study, participants reported moderate levels of perceived stress, high levels of anxiety and depression, moderate job satisfaction and moderate internal, external and overall job satisfaction. The above finding disagrees with previous studies showing that special education teachers are at high risk of developing chronic stress, low job satisfaction and low efficiency (Emery, 2012). Study also looked at special education teachers who were considering leaving the current field and found that 57% attributed this attention to severe cases and various disabilities. Why the results of the present study different? (Kaff's, 2004).

Specifically, and relating stress to job satisfaction, it is concluded that there is a statistically significant negative correlation. Therefore, the increase in the levels of perceived stress of teachers is related to a decrease in their internal, external and overall job satisfaction. The comparison of anxiety and job satisfaction came to the same conclusion. In other words, as the stress increases, so does the professional satisfaction of the teachers.

Regarding the relationship between depression and job satisfaction, the correlation between them concluded a statistically significant negative correlation. Therefore, increased levels of depression in special education teachers are associated with reduced job satisfaction. According to a number of studies (Boe et al., 1998; Boe & Weber, 1995), those who are professionally committed to helping high-risk children are themselves a high-risk group. The mortality rate of special education teachers is the highest among any other group of teachers - more than 13% per year.

Focusing on demographic characteristics, the study did not show a statistically significant difference between men and women in terms of stress and anxiety levels. It is also showed no correlation between teacher age and stress and anxiety levels. In contrast, Zabel & Zabel (2001) found that older, more experienced and trained special education teachers had lower levels of stress and anxiety. In addition, Banks & Necco (1990) concluded that age was significantly associated with stress and anxiety. Older teachers showed less stress and anxiety, but years of experience also seemed unrelated to stress and anxiety.

Similarly, the present study did not show a statistically significant difference between men and women in terms of depression levels, nor between the age of the teachers and the levels of depression levels. In contrast, Ravichandran & Rajendran (2007) found that inexperienced and younger special education teachers and female special education teachers left the field more frequently than male teachers.

At the same time, the survey did not show a statistically significant difference between men and women in terms of job satisfaction levels. The above finding agrees with Mohammed's (2012) study, according to which no significant statistical differences were observed in the level of gender satisfaction of teachers. The present study did not statistically show a significant correlation between teachers' years of service and levels of stress, anxiety, depression and job satisfaction.

However, there was a statistically significant negative correlation between teacher age and job satisfaction levels. That is, older teachers have lower levels of job satisfaction. The above finding agrees with studies such as McWherter (2012) and Wright (2017) on the basis of which a teacher's overall satisfaction can be influenced by many different factors, some of which relate to issues that cannot be changed, such as teacher's age and years of service. He also agrees with Mohammed's (2012) study, which found significant differences in the level of satisfaction of respondents due to the age that favors younger teachers. In contrast, Collie's research et al. (2012) found that more experienced special education teachers tend to be more committed. In addition, the study of Mohammad et al. (2018) concluded that those with more than 21 years of experience showed higher levels of satisfaction than those with 1 to 9 years of experience.

## **5. Recommendations**

It would be necessary in future studies, before investigating the professional sources of stress in specific school environments, to conduct a preliminary qualitative survey at the top of the interview, to collect the factors that cause stress, as they are perceived by the teachers. The stressors, which are due to the exact characteristics of each educational system, the exact conditions of the teachers and the schools and the prevailing trends and values of teachers and schools in a society as a whole (Kyriacou, 2001).

Conducting a long-term comparative study of the stress levels of special education teachers, in order to thoroughly investigate and make clear the factors that affect the phenomenon in the long run, would be particularly useful. Also, a new study that will have an equal number of male and female teachers working in the field of special education and use the research tool of the interview in addition to the questionnaire with the aim of collecting and further qualitative characteristics.

The subject of future research interest may also be the investigation of sources of work stress in a variety of cultural contexts, given the differences in the various educational systems regarding the position of teachers, the prestige of their profession, their working conditions, the requirements and expectations for them, which may affect the assessment of stress. These differences could be taken into account in the design of teacher education and training programs.

## **6. Conclusion**

The results of the research could also be used to draw up curricula from educational institutions that refer to prospective teachers, informing them of the difficulties faced by teachers in pursuing high-level professions, training them in management positions, providing them with the necessary skills needed by the teaching profession and informing them about the techniques in the treatment of stressful situations.

Finally, it would be crucial to conduct a comparative study of stress levels in general and special education teachers in order to identify the factors that affect the phenomenon over time. The findings of such a study would be particularly important

and would highlight the stressors that persist and affect both categories of teachers. Particularly useful would be a study with a sample of teachers who have worked in both disciplines, in order to record their experiences and their subsequent comparison.

Other specific topics that would be useful to include in the curriculum are stress management, time management, cognitive strategies for dealing with stressful situations, and greater recognition of the teaching profession by their management, management in society and parents decisions, their preparation but also their training in the management of difficult behaviors of the students and in ways of raising their interests in combination with the support from the administration and parents of pupils and reducing the number of students in the classroom so that there is a possibility of personalized learning and less workload (Cartwright & Cooper, 1994).

### **Conflict of Interest Statement**

The authors declare no conflicts of interests.

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## References

- Ari M, Sipal RF, 2009. Factors affecting job satisfaction of Turkish special education professionals: predictors of turnover: Türkiye'deözeleğitimuzmanlarınınişdoyumunu etkileyen faktörler: İşten ayrılma işaretleri. *European Journal of Social Work*, 12(4): 447-463.
- Atindanbila S, 2011. Perceived stressors of lecturers at the University of Ghana. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)* 2(5): 347-354.
- Banks SR, Necco EG, 1990. The effects of special education category and type of training on job burnout in special education teachers. *Teacher Education and Special Education* 13(3-4): 187-191. doi:10.1177/088840649001300309.
- Boe E, Cook L, Bobbitt S, Terhanian G, 1998. The shortage of fully certified teachers in special and general education. *Teacher Education and Special Education* 21(1): 1-21. doi: 10.1177/088840649802100103.
- Boe E, Cook L, Bobbitt S, Weber A, 1995. Retention, transfer, and attrition of special and general education teachers in national perspective. [www.csa.com](http://www.csa.com). Accessed 10 April 2020.
- Bogler R, Nir AE, 2012. The importance of teachers' perceived organizational support to job satisfaction: What's empowerment got to do with it?. *Journal of Educational Administration*, 50(3): 287-306.
- Boyle GJ, Borg MG, Falzon JM, Baglioni Jr AJ, 1995. A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology* 65(1): 49-67. doi: 10.1111/j.2044-8279.1995.tb01130.x.
- Brunsting NC, Sreckovic MA, Lane KL, 2014. Special education teacher burnout: A synthesis of research from 1979 to 2013. *Education and treatment of children*, 37(4): 681-711.
- Cartwright S, Cooper CL, 1994. *No hassle!: taking the stress out of work*. Random House.

- Cohen S, Kamarck T, Mermelstein R, 1983. A global measure of perceived stress. *J Health Soc Behav* 24(4): 385-96. doi: 10.2307/2136404.
- Collie RJ, Shapka JD, Perry NE, 2012. School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of educational psychology* 104(4): 1189. doi: 10.1037/a0029356.
- Emery H, 2012. A global study of primary English teachers' qualifications, training and career development. *British Council* 69: 12-08.
- Hayes F, Andrew, 2017. Introduction to Mediation, Moderation, and Conditional Process Analysis Second Edition A Regression-Based Approach, [PROCESS](#)
- Kaff MS, 2004. Multitasking is multitasking: Why special educators are leaving the field. *Preventing School Failure* 48(2): 10-17.
- Katsarou A, Panagiotakos D, Zafeiropoulou A, Vryonis M, Skoularigis I, Tryposkiadis F, Papageorgiou C, 2012. Validation of a Greek version of PSS-14; a global measure of perceived stress. *Cent Eur J Public Health* 20(2): 104-109.
- Koustelios A, Bagiatis K, 1997. The Employee Satisfaction Inventory (ESI): Development of a Scale to Measure Satisfaction of Greek Employees. *Educational and Psychological Measurement* 57(3): 469-476.
- Kyriacou C, 2001. Teacher stress: Directions for future research. *Educational review* 53(1): 27-35. doi: 10.1080/00131910120033628.
- Lovibond PF, Lovibond SH, 1995. The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy* 33: 335-343. doi:10.1016/0005-7967(94)00075-U.
- Lyrakos NG, Arvaniti C, Smyrnioti M, Kostopanagiotou G, 2011. Translation and validation study of the Depression Anxiety Stress Scale in the Greek general population and in a psychiatric patient's sample. *European Psychiatry* 26: 1731. doi: 10.1016/S0924-9338(11)73435-6.
- Mastrantuono S, 2015. Job satisfaction and attrition among special education teachers. [https://rdw.rowan.edu/cgi/viewcontent.cgi?referer=https://scholar.google.gr/scholar?hl=el&as\\_dt=0%2C5&as\\_ylo=2014&q=Lawrenson+%26+Mckinnon%2C+1982&btnG=&httpsredir=1&article=1403&context=etd](https://rdw.rowan.edu/cgi/viewcontent.cgi?referer=https://scholar.google.gr/scholar?hl=el&as_dt=0%2C5&as_ylo=2014&q=Lawrenson+%26+Mckinnon%2C+1982&btnG=&httpsredir=1&article=1403&context=etd)
- McWherter S, 2012. The Effects of Teacher and Student Satisfaction on Student Achievement. [https://digitalcommons.gardner-webb.edu/cgi/viewcontent.cgi?referer=https%253A%252F%252Fscholar.google.gr%252Fscholar%253Fq%253DXin%2520%2526%2520MacMillian%2520teacher%2520satisfaction&hl=el&as\\_sdt=0%2C5&as\\_ylo=2010&as\\_yhi=2018&httpsredir=1&article=1063&context=education\\_etd&sei-redir=1#search=%22Xin%22](https://digitalcommons.gardner-webb.edu/cgi/viewcontent.cgi?referer=https%253A%252F%252Fscholar.google.gr%252Fscholar%253Fq%253DXin%2520%2526%2520MacMillian%2520teacher%2520satisfaction&hl=el&as_sdt=0%2C5&as_ylo=2010&as_yhi=2018&httpsredir=1&article=1063&context=education_etd&sei-redir=1#search=%22Xin%22). Accessed 16 April 2020.
- Mohammad N, Rahman MKU, Haleem F, 2018. The moderating effect of age, gender and educational level on relationship between emotional intelligence and job satisfaction: An analysis of the banking sector of Pakistan. *Middle East Journal of Business*, 13(3). doi: 10.5742/MEJB.2018.93464.

- Mohammed A, 2012. Job satisfaction among special education teachers in Jordan. *International Interdisciplinary Journal of Education*: 1(3), 48-56.
- Ravichandran R, Rajendran R, 2007. Perceived sources of stress among the teachers. *Journal of the Indian Academy of Applied Psychology*: 33(1), 133-136.
- Sass DA, Seal AK, Martin NK, 2011. Predicting teacher retention using stress and support variables. *Journal of Educational Administration*, 49(2): 200-215.
- Warr PB, Cook J, Wall T, 1979. Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology* 52: 129-148. doi: 10.1111/j.2044-8325.1979.tb00448.x.
- White M, Mason CY, 2006. Components of a successful mentoring program for beginning special education teachers: Perspectives from new teachers and mentors. *Teacher Education and Special Education* 29(3): 191-201. doi: 10.1177/088840640602900305.
- Wright CF, 2017. Teacher stress and curriculum reform: An illustrative example with the "Growth Mindset" movement. Doctoral dissertation.
- Zabel RH, Zabel M, 2001. Revisiting burnout among special education teachers: Do age, experience, and preparation still matter?. *Teacher Education and Special Education* 24(2): 128-139. doi: 10.1177/088840640102400207.

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