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Determination of job stress levels of physical education and sport teachers

Determinación de los niveles de estrés laboral de los profesores de educación física y deporte

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Abstract

This study investigates how the job stress levels of physical education and sport teachers vary according to gender, age, educational status and job position. Within the scope of the research, the data obtained from 520 teachers were used and the job stress questionnaire was evaluated under four main subheadings. The results of Bartlett's test and Kaiser-Meyer-Olkin (KMO) coefficient for the suitability of the data for factor analysis showed that the data were quite suitable for factor analysis; while the workload sub-heading explained the highest variance with 26.7%, skill use explained 14.2%, decision freedom explained 12.03% and social support explained 11.6% of the total variance. In the analyses based on gender differences, it was determined that male teachers had higher levels of workload stress, while female teachers had higher levels of skill use, decision freedom and social support stress. In the analyses conducted between age groups, no significant differences were found in the sub-dimensions. Similar results were obtained in the analyses conducted according to education levels. In the analyses conducted according to job positions, it was determined that administrators did not differ from non-administrators in all dimensions. These results show that it is important to customise job stress management strategies according to gender, age and job positions. It is emphasised that general stress management strategies should be developed to cover all demographic groups.

Keywords: sport; job stress; gender differences; education level

Resumen

Este estudio investiga cómo varían los niveles de estrés laboral de los profesores de educación física y deporte en función del sexo, la edad, el nivel educativo y el puesto de trabajo. En el marco de la investigación, se utilizaron los datos obtenidos de 520 profesores y se evaluó el cuestionario de estrés laboral en cuatro subapartados principales. Los resultados de la prueba de Bartlett y del coeficiente Kaiser-Meyer-Olkin (KMO) para la idoneidad de los datos para el análisis factorial mostraron que los datos eran bastante adecuados para el análisis factorial; mientras que el subepígrafe de carga de trabajo explicaba la mayor varianza con un 26,7%, el uso de habilidades explicaba un 14,2%, la libertad de decisión explicaba un 12,03% y el apoyo social explicaba un 11,6% de la varianza total. En los análisis basados en las diferencias de género, se determinó que los profesores varones presentaban mayores niveles de estrés por carga de trabajo, mientras que las profesoras presentaban mayores niveles de estrés por uso de habilidades, libertad de decisión y apoyo social. En los análisis realizados entre grupos de edad, no se encontraron diferencias significativas en las subdimensiones. Se obtuvieron resultados similares en los análisis realizados en función del nivel educativo. En los análisis realizados según los puestos de trabajo, se determinó que los administradores no diferían de los no administradores en todas las dimensiones. Estos resultados demuestran que es importante personalizar las estrategias de gestión del estrés laboral en función del sexo, la edad y el puesto de trabajo. Se insiste en la necesidad de elaborar estrategias generales de gestión del estrés que abarquen a todos los grupos demográficos.

Palabras clave: deporte; estrés laboral; diferencias de género; nivel educativo

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Introduction

Today, technological developments, changes in the social structure, business environments with intense competition, and challenging conditions in the business environment cause anxiety and stress in individuals (Başoğlu et al., 2016). Stress occurs as a result of individual and environmental interaction (Çakır, 2006), negatively affects people's daily lives, leads them to pessimism and hopelessness (Yıldız et al., 2015), and in business environments, it leads to decreased productivity and attendance, loss of motivation, unwillingness to do the job, decreased performance, and even turnover (Mosadeghrad et al., 2011; Aytaç, 2009). It is a fact that stress, which emerges as mental pressure and tension (Shahsavarani et al., 2015), has become an integral part of modern life and affects all aspects of our lives (Eskin et al., 2013), creates deeper physical and psychological (Korkmaz et al., 2016) problems in people today (Villanueva & Djurkovic, 2009).

Selye (1973) describes job stress as "arising in order to provide the necessary energy to perform the tasks necessary to sustain life, to resist and to adapt to changing external factors (Erat et al., 2011)" (Ergün & Yüksel, 2019). Wickramasinghe (2012), on the other hand, expresses job stress as a negative reaction when individuals are exposed to excessive pressure or demands in work environments (Korkmaz & Ceylan, 2012). Stress, which occurs as a result of the reaction of the individual against external stimuli that cause various reactions in individuals (Güçlü, 2001), is seen in professional groups that provide assistance services to people (Korkmaz et al., 2015) and in professional staff who work for a long time in environments where emotional demands are intense (Kanasar, 2015).

According to Baltaş and Baltaş (2021), stress has the effect of reducing the productivity of individuals and reducing their general happiness and life satisfaction. A stressful life reduces the quality of life of individuals, negatively affects their health and performance (Erdoğan et al., 2009:449) and can cause many diseases (Caspi et al., 2003). Stress causes discomfort to individuals by affecting their abilities in working life, and as a result of long-term exposure, it causes different problems with the deterioration of emotional control (Eskin et al., 2013).

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As members of the society, teachers and administrators are also affected by the developing and growing difficulties of social life and exhibit this effect in their professional lives (Soysüren, 2003). Considering the time that individuals spend in their professional lives to fulfil the duties and responsibilities expected of them (Pehlivan-Aydın, 2002) (Keser, 2014), the importance of organisational stress is gradually increasing today. This kind of stress can be caused by both work and individual factors (Altan, 2018). Teachers face many stressful and problematic situations in their professional lives (Göktaş & Özmanen, 2012). Job stress arising from the interaction between the working individual and the work environment (Efeoğlu & Özgen, 2007) and teacher attrition are problems for teachers (Akçamete et al., 2001). Intense stress levels affect not only teachers' psychological health but also their social life and work performance (Gümüştekin & Öztemiz, 2005).

Teaching is a challenging profession by nature. Stress has a negative impact on teachers both individually and organisationally, and this stress has a negative impact on teachers' job satisfaction and reduces their professional functioning. Various organisational pressures and sources of stress affecting teachers can be listed as physical conditions, ties with students and parents, organisational problems and personal concerns. Stress greatly reduces educators' ability to teach effectively (Özgenel & Canuyulasi, 2021; Telef & Tazıcı, 2009). Stress, which causes negative psychological and social effects for teachers, is a situation that should be prevented (Ağaoğlu et al., 2016) and is a problem that is frequently exposed to in school life, daily life or business life (Akbaş, 2018). Since the teacher is the cornerstone of school life, it is impossible not to be affected by stress (Aladağ, 2015).

Teachers have a very important role as a professional group. The high status and working conditions of teachers in a country means that the development and welfare level of the country is also high (Akiba et al., 2023). Therefore, teachers should be given the necessary value and their problems and problems should be solved (Habacı et al., 2013). The relationship of stress with the concept of sport has increased visibly as in every field today (Tarafdar et al., 2007). Physical Education teachers are also intensely affected by work stress (von Haaren-Mack et al., 2019).

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In addition to fulfilling their teaching duties, physical education teachers undertake various responsibilities during national holidays (Armour, 2009). At the same time, they also take an active role in the organisation and coaching of sports activities inside and outside the school (Mansfield et al., 2018). This situation causes them to have a wide range of jobs and to be in a working environment that requires a high level of mental and physical effort (Belloni et al., 2022). Therefore, it is inevitable that physical education teachers work in a highly stressful environment (Kırırnoğlu et al., 2011; Demir, 2019).

Dere (2024) found that quality of life has a positive effect on job performance and that improving working conditions increases the performance of employees. Identifying the problems that cause job stress in physical education teachers and presenting solution suggestions will increase their performance in working conditions away from job stress. In this context, it is also very important to manage negative stress sources, to identify the underlying problem that causes it and to implement the necessary solutions (Göksoy & Argon, 2014).

Method

The purpose of this study is to examine how teachers' job stress levels differ according to gender, age, education and job position. Within the scope of the study, the data obtained from 520 teachers were used and a job stress questionnaire was applied in four main sub-headings (workload, skill utilisation, decision latitude and social support) to determine job stress levels.

Of the 520 teachers who participated in the study, 39% were male and 61% were female. The demographic characteristics of the participants such as age range, education level, marital status, level of employment, number of children, income status and professional seniority were analysed in detail.

Job stress questionnaire was used to measure job stress levels. The questionnaire and research techniques used in the study conducted by Demiral et al. (2007), Investigation of the Validity and Reliability of the Job Stress Scale in Male Workers Working in İzmir Konak Municipality, Barat and Dere (2024) were adapted to this study and the questionnaire form was restructured and rearranged according to the

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subject and content of the research (Barat & Dere, 2024). In the preparation of the new questionnaire prepared for the research and study, opinions and support were obtained from many experts in the field. Prior to the actual research, a pre-test was conducted with 78 sport teachers with different demographic characteristics and analysed to ensure the validity and reliability of the questionnaire and a value of 0.701 was obtained as Alpha Cronbach coefficient. Since this value was above the expected value, the actual research was started. The questionnaire consists of 17 questions with four sub-headings: workload, skill utilisation, decision latitude and social support. The internal consistency of the questionnaire was evaluated by Cronbach's alpha coefficients obtained for each sub-section. The questionnaire form was distributed to all participants over the internet and social media accounts and they were asked to answer. The population of the research includes people who are active sports teachers in different provinces of Turkey. This research period was completed within 85 days. All of the participants were determined by simple random method through social media and were determined as active sports teachers. All participants participated in the research in line with their own consent and acceptance. Questionnaire forms were sent by obtaining participation approvals from all participants participating in the research.

In calculations between groups, $p < 0.01$ value was taken into consideration. Factor analysis was used to determine the socio-demographic perception dimensions of individuals. Principal components and cyclic factor analysis methods were applied for construct validity of job stress. The 17 questions in the job stress questionnaire were evaluated in the sub-dimensions of workload, decision latitude, skill utilisation and social support. The suitability of the data for factor analysis was evaluated by Bartlett's test and the size of the research group was evaluated by Keiser-Meyer-Olkin coefficient. For the internal consistency of the questionnaire, Cronbach's alpha coefficient was calculated in all sub-dimensions. The suitability of job stress levels for normal distribution was evaluated by Kruskal-Wallis test. Since all data were found to be right-skewed (normally distributed), Anova test and Independent Samples t-test were used to compare stress levels. SPSS v17.0 (SPSS Science, Chicago, IL, USA) software was used for all analyses.

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Objective

The aim of this study was to examine how the job stress levels of sport teachers differ according to gender, age, education and job position and to determine what these stress levels are. The scale form used to determine the job stress levels of sport teachers was evaluated under four main sub-headings. In the study, it was investigated how teachers' job stress levels vary according to demographic characteristics and how these differences can contribute to the development of job stress management strategies. In this context, it is aimed to compare the job stress levels of teachers according to gender, age, education and job position and to provide meaningful strategic information for employers.

Results

According to the analyses and findings, 39% of the participants are male and 61% are female. This distribution shows that the majority of the respondents are women. Such a ratio of gender distribution reveals a meaningful result, especially depending on the target group or sector of the research.

When the age range of the participants is analysed, the largest group is 31-35 years old with 27%. This is followed by the 26-30 age group with 25% and the 41 and over age group with 25%. While the rate of the 20-25 age group is 9%, the 36-40 age group is 14%. This distribution shows that the majority of the participants consist of young adults and middle age group.

When the education levels are analysed, it is seen that 84% of the participants are undergraduate graduates. Master's degree graduates are 12%, associate degree graduates are 3% and doctorate graduates are 1%. These data show that the majority of the participants have a high level of education.

In the distribution of marital status, 75% of the participants were married and 25% were single. The high proportion of married participants was considered as an important variable in the questions related to marital status and revealed a different perspective.

The spouses of 77% of the participants are working, 20% of them are not working and 3% of them are retired. This situation provides information about the

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economic structure of families and shows that a significant portion of household income is provided by working spouses.

While 74% of the respondents live in Istanbul, 26% live in other provinces and regions. The high proportion of respondents living in Istanbul provides an important clue to further analyse the demographic characteristics in this region.

In terms of level of employment, 46% of the participants work in high school, 28% in secondary school, 21% in primary school and 4% in preschool education institutions. The high rate of high school level employees shows that this level of education is important for the research.

While 37% of the participants have no children, 24% have 1 child, 33% have 2 children, 5% have 3 children and 1% have 4 or more children. This distribution provides information about the family structure of the participants and their status of having children.

While 64% of the participants are in the middle level income group, 26% are in the lower-middle level, 5% in the lower level, 5% in the middle-upper level and 0% in the upper level income group. The fact that income distribution is largely concentrated at the middle level provides important information about the economic status of the participants. When professional seniority and professional experience are analysed, 31% of the participants have 0-5 years of experience, 23% have 6-10 years of experience, 17% have 11-15 years of experience, 13% have 16-20 years of experience and 16% have 21 years or more of experience. This shows that most of the participants are relatively new in their professions. While 12 per cent of the participants work in managerial positions, 88 per cent of them are not in managerial positions. The low proportion of those working in managerial positions indicates that managerial roles are less common.

These demographic data provide important information to understand the general characteristics and various sub-groups of the community. Demographic variables such as gender, age, education, marital status, spouse's employment status, province and region of residence, job level, number of children, income status, professional seniority and managerial position can be used in interpreting the results of the research and making comparisons between different groups. Correct analyses of

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these data obtained by other studies and researchers will increase the validity and reliability of the research and will provide more meaningful results.

Table 1. Demographic statistics

		n	n%
Gender	Male	202	39%
	Female	318	61%
Age	20-25 years	45	9%
	26-30 years	130	25%
	31-35 years	139	27%
	36-40 years	74	14%
	41 and above years	132	25%
Education	Associate Degree	17	3%
	Licence	435	84%
	Master's Degree	64	12%
	PhD	4	1%
Marital Status	Single	130	25%
	Married	390	75%
Co-working	Working	300	77%
	Not working	79	20%
	Pensioner	11	3%
Place and Region of Residence	Istanbul	385	74%
	Other	135	26%
Duty Grade	Preschool	21	4%
	Primary School	111	21%
	Middle School	146	28%
	High School	241	46%
Number of Children	None	191	37%
	1 child	125	24%
	2 children	172	33%
	3 children	28	5%
	4 and more children	4	1%
Income Status	Lower level	26	5%
	Lower-middle level	133	26%
	Medium level	335	64%
	Medium-High level	24	5%
	Top level	2	0%
Profession Seniority	0-5 years	161	31%
	6-10 years	122	23%
	11-15 years	89	17%
	16-20 years	66	13%
	21 years and over	81	16%
Manager Task	Yes	64	12%
	No	456	88%

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Factor analysis

Factor analysis was conducted on the data obtained from 520 teachers. Bartlett's test $p < 0.001$ and Kaiser- Meyer- Olkin (KMO) coefficient 0.807 (high) were found to assess the suitability of the data for factor analysis.

Factor analysis was conducted on the data obtained from 520 teachers. In this analysis, Bartlett's test and Kaiser-Meyer-Olkin (KMO) coefficient were used to evaluate the suitability of the data for factor analysis.

Bartlett's test is a statistical test used to assess the suitability of factor analysis. This test evaluates whether the correlation matrix is a unit matrix. In other words, it tests whether there is a sufficient level of relationship between the variables. The result of Bartlett's test was 2532,281 as the approximate chi-square value and the significance level (p) was determined as $< 0,001$. This result shows that the correlation matrix is not a unit matrix and factor analysis is appropriate. The fact that the p value is less than 0.001 indicates that the test is statistically significant and there are significant relationships between the variables.

The KMO test is another statistical criterion used to assess the adequacy of the sample. The KMO coefficient helps to determine whether there is a common factor structure among the variables. The fact that this coefficient is above 0.50 indicates that the suitability for factor analysis is good. The KMO value obtained after the analysis is 0,807, which is a very high value. This result reveals that the sample size and data are sufficient for factor analysis, and we have determined that a value with higher reliability than the KMO value obtained in many similar studies in the field has been obtained.

- As a result of Bartlett's test, $p < 0.001$, we determined that the data were suitable for factor analysis and that there were significant relationships between the variables.
- KMO Coefficient: The KMO coefficient of 0.807 confirmed that the sample was of sufficient size and the data were suitable for factor analysis.

These results show that the data for factor analysis generally show high suitability. The fact that the data obtained from teachers working in the education sector are suitable for factor analysis provides the opportunity to examine the relationships between the attitudes, thoughts and behaviours of these teachers in more depth. Such analyses provide critical information for developing educational policies, identifying teachers' professional development needs and improving educational processes.

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In different studies and researches, for example, the relationships between various factors such as teachers' job satisfaction, professional burnout, attitudes towards educational methods can be analysed. These analyses will help to determine in which areas teachers need to be supported and will enable educational institutions to develop strategies in this direction.

After our analyses and applications; Bartlett's test and KMO coefficient show that the data are quite suitable for factor analysis and this situation allows a more detailed analysis of teachers' professional and personal characteristics. Such analyses also revealed that it has the potential to make significant improvements in the education sector.

Table 2. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,807	
Bartlett's Test of Sphericity	Approx. Chi-Square	2532,281
	df	91
	Sig.	,000

- The factor loadings of each question are given in Table 3.
- Three of the 5 questions measuring workload were grouped under factor 1. Questions 4 (time) and 5 (conflicting work) were excluded from the analysis because they did not reveal significant results with this factor and other factors.
- There are 4 questions for the measurement of skill utilisation. While 3 of these questions were gathered in the relevant question group, it was observed that the 9th question (repetitive work) was not related to this factor and other factors.
- The number of questions asked for Freedom of decision was 2 and questions 10 and 11 were clustered together in this question group.
- The social support dimension consisted of 5 questions and all of these questions were collected in this question group.

In this study, the job stress scale was analysed under four sub-headings and the factor loadings of these headings were evaluated. The data provide important information about the validity and reliability of the job stress scale.

Factor loadings indicate how much each item is related to a particular factor. Four main factors were identified for the job stress scale: Workload, Skill Utilisation, Decision Freedom and Social Support. The items with the highest loadings for each factor are summarised below:

- **Workload**
 - ✓ "Do you work much faster in your job?" (0.852)

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- ✓ "Do you have to work very hard in your job?" (0.835)
- ✓ " Do you exert too much force (effort) in your work? (0.710)
- **Skill Utilisation**
 - ✓ "Does your job require more skills and expertise than necessary?" (0.769)
 - ✓ "Are there expectations from you to make innovations in your work?" (0.748)
 - ✓ "Do you have the possibility to learn differently and innovatively in your job?" (0.605)
- **Freedom of Decision**
 - ✓ "Are you able to make decisions about what to do in your job?" (0.883)
 - ✓ "Are you able to make your own decisions about how to do your job?" (0.878)
- **Social Support**
 - ✓ "My colleagues at work support me and contribute to me" (0.858)
 - ✓ "We get along well with my colleagues and harmonise with each other" (0.836)
 - ✓ "I would be happy to be together with my work and colleagues and to act in common" (0.812)

These factor loadings indicate that each sub-heading is consistent within itself and represents the specific job stress elements well. Cronbach's Alpha values and mean scores for each sub-heading are as follows.

- **Workload:** Mean = 20.25, Cronbach's Alpha = 0.892
- **Skill Utilisation:** Mean = 9.52, Cronbach's Alpha = 0.761
- **Freedom of Decision:** Mean = 6.83, Cronbach's Alpha = 0.801
- **Social Support:** Mean = 9.74, Cronbach's Alpha = 0.582

These data show that the job stress scale is a valid and reliable measurement tool in general. Especially Workload and Freedom of Decision sub-headings draw attention with high Cronbach's Alpha values; this shows that these sub-headings have high internal consistency in the measurement of these sub-headings. Skill Utilisation sub-heading also has an acceptable reliability level.

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However, Cronbach's Alpha value for the Social Support sub-heading is relatively low (0.582). This situation means that there are some inconsistencies in the measurement of social support items or insufficient internal consistency.

This analysis and analysis of the data helps us to better understand the effects of job stress factors on teachers. From a different perspective, high workload and lack of decision-making freedom have negative effects on teachers' job satisfaction and performance. Lack of social support decreases morale and motivation in the workplace.

From a different perspective, teachers' expectations of skill utilisation and innovation are important indicators for their professional development and success at work. In this context, increasing teachers' professional development opportunities, balancing workload and strengthening social support mechanisms help to reduce the overall level of job stress.

These findings and the results of the analyses contribute to the development of strategies to reduce teachers' work stress and to create a healthier work environment and provide an important resource for researchers. Improving teachers' levels in four main dimensions increases the success of teachers and students.

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Table 3. Factor loadings of the job stress scale

	Workload	Skill Utilisation	Freedom of Decision	Social Support
14. My colleagues at the workplace support me and contribute to me	,858	,013	,053	,125
13. I get along well with my colleagues and harmonise with each other	,836	-,041	,054	,056
17. I am happy to be together with my work and colleagues and to act in common	,823	,049	,089	,057
15. When I have bad days and times, my colleagues understand this situation	,749	,006	,092	,042
12. My workplace consists of a calm and pleasant environment.	,712	-,034	,001	,155
16. I get along well with my managers and I am in harmony with them	,704	-,032	,150	,089
1. Do you work much faster at your job?	-,004	,852	,004	,078
2. Do you have to work very hard at your job?	-,041	,835	,052	,125
3. Do you exert too much force (effort) in your work?	,011	,710	-,074	-,002
11. Are you able to make your own decisions about what to do in your job?	,120	,003	,883	,159
10. Are you able to make your own decisions about how to do your job?	,145	-,033	,878	,137
7. Does your job require too much skill and expertise?	,065	,217	-,060	,769
8. Are there expectations from you to make innovations in your work?	,079	,066	,210	,748
6. Do you have the possibility to learn differently and innovatively in your work?	,206	-,069	,185	,605

- Table 4 shows the mean, standard deviation and Cronbach's alpha values determined for the subheadings of the scale, stress. Cronbach's Alpha values are 0.892 for workload, 0.761 for skill utilisation, 0.801 for decision freedom and 0.582 for social support.
- The mean values for the subheadings of Job Stress were 20.25, 9.52, 6.83, 9.74, respectively.
- Cronbach's Alpha values of each sub-heading were calculated by excluding questions 4, 5 and 9 which were not collected in their own field by factor analysis.

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Workload

For the workload factor, the mean value was 20.25, the variance was 12.458 and the standard deviation was 3.52953. Cronbach's Alpha value for this subheading is 0.892, which is a very high level of reliability. The 6 questions under the workload sub-heading are consistent and reliable enough to measure the workload of employees and the stress caused by this load.

Skill utilisation

For the skill utilisation factor, the mean value was 9.52, the variance was 3.533 and the standard deviation was 1.87965. Cronbach's Alpha value of 0.761 indicates an acceptable level of reliability. This sub-heading is sufficient to measure how much skill and expertise employees require in their jobs and their expectations to innovate. However, in order to increase the reliability level a little more, the number of questions may need to be increased or the existing questions may need to be revised.

Freedom of decision

The mean value for the freedom of decision factor was found to be 6.83, the variance 2.092 and the standard deviation 1.44639. Cronbach's Alpha value of 0.801 shows that this sub-heading is reliable. There are enough two questions to measure the freedom of employees to make decisions in their jobs and the stress created by this freedom.

Social support

For the social support factor, the mean value was found to be 9.75, the variance 2.891 and the standard deviation 1.70033. However, Cronbach's Alpha value of 0,566 shows a low level of reliability. This situation reveals that the 3 questions under the social support sub-heading are not consistent enough to measure the social support that employees receive at the workplace and how this support affects stress. It shows that the existing questions should be reviewed, reformulated or additional questions should be added to increase the reliability of the social support factor. In this direction, other researchers should approach the research with a different perspective in this respect.

With this kind of analysis, the study will help to develop job stress management strategies. Employers can utilise these data to balance employees' workload, increase skill utilisation and decision latitude, and strengthen social support mechanisms. Thus,

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work stress levels can be reduced and employee satisfaction will be increased. These data provide valuable information about improvements that can be made to reduce workplace stress and increase the overall well-being of employees. This evaluation of the validity and reliability of the job stress scale constitutes an important step towards creating a healthier and more productive work environment.

Table 4. Scale & reliability statistics

Factor	Mean	Variance	Std. Deviation	Cronbach's Alpha	N of Items
Workload	20,2500	12,458	3,52953	,892	6
Skill Utilisation	9,5250	3,533	1,87965	,761	3
Freedom of Decision	6,8346	2,092	1,44639	,801	2
Social Support	9,7462	2,891	1,70033	,582	3

- The scale explains 64% of the total variance of job stress. The contribution of the sub-dimensions of the scale to the total variance was determined as 26.7% in the workload dimension, 14.2% in the skill utilisation dimension, 12.03% in the decision freedom dimension and 11.6% in the social support dimension.

Table 4 shows how the four main components of the job stress scale explain the total variance. The first four components explain 64,723% of the total variance. This result reveals that most of the job stress factors are covered by these four components.

Workload

Workload component has the highest variance explanation (26,777%). This result shows that workload is the main source of stress on employees. High workload significantly increases the stress levels of employees and this situation causes negative effects on work efficiency and employee satisfaction.

Skill utilisation

Skill utilisation component explains 14,210% of the total variance. This result shows that the extent to which employees can use their skills in their jobs and the effect of these skills on job stress are important. Adequate skill utilisation and expertise requirements of employees in their jobs increase their job satisfaction and motivation and decrease their stress levels.

Freedom of decision

Freedom of decision component explains 12.039% of the total variance. This result shows that how independent employees are in their jobs and freedom of decision

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making has a significant effect on job stress. Employees with high Freedom of decision feel that they have more control in their jobs and this reduces their stress levels.

Social support

Social support component explains 11,697% of the total variance. This result shows that social support in the workplace significantly affects the stress levels of employees. Employees who receive adequate social support at the workplace are better able to manage job stress, which in turn increases overall job satisfaction.

These results provide important information for the development of job stress management and employee satisfaction strategies. Employers can benefit from these data to balance workload, support employees' skill utilisation and development, increase decision latitude and strengthen social support mechanisms.

Table 5. Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Workload	4,170	29,782	29,782	4,170	29,782	29,782	3,749	26,777	26,777
Skill Utilisation	2,159	15,424	45,207	2,159	15,424	45,207	1,989	14,210	40,987
Freedom of Decision	1,684	12,029	57,236	1,684	12,029	57,236	1,685	12,039	53,026
Social Support	1,048	7,487	64,723	1,048	7,487	64,723	1,638	11,697	64,723

- The communality coefficients calculated for each question vary between 0.456 and 0.821.

Communality coefficients are a measure of the variance explained by the common factors of each factor analysed variable. A high communality coefficient indicates that the variable is well explained by the factors. In this study, the communality coefficients vary between 0.456 and 0.821. This shows that most of the variables are well explained by the common factors.

After the analyses, the communality coefficients ranged between 0.456 and 0.521, indicating that the majority of the questions of the job stress scale are well explained by the factors. This supports that the scale is generally reliable and valid.

Workload

- **Questions:** 1, 2, 3
- **Communality coefficients:** 0,743, 0,731, 0,511

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The communality coefficients of the questions related to workload show that these variables are explained very well by the job stress factors. Especially questions 1 and 2 draw attention with their high communality values.

Skill utilisation

- **Questions:** 6, 7, 8
- **Communality coefficients:** 0,456, 0,647, 0,619

The communality coefficients of the questions related to skill utilisation show that these variables are reasonably explained by the job stress factors. The question "Is there a possibility to learn new things in your job?" has the lowest communality value, indicating that this variable is explained by the factors at a slightly lower level.

Freedom of decision

- **Questions:** 10, 11
- **Communality coefficients:** 0,823, 0,821

The communality coefficients of the questions related to freedom of decision-making indicate that these variables are explained very well by the job stress factors, indicating that the effect of freedom of decision-making on job stress is strong.

Social support

- **Questions:** 12, 13, 14, 15, 16, 17
- **Communality coefficients:** 0,542, 0,711, 0,759, 0,575, 0,531, 0,675

The communality coefficients of the questions related to social support show that these variables are well explained by job stress factors. Especially the questions "My colleagues at work support me and contribute to me" and "We get along well with each other where I work" draw attention with high communality values.

The data obtained after the analysis are of sufficient quality and adequacy to be used to examine various aspects of the job stress scale and to make more in-depth analyses. For example.

- **Workload and skill utilisation:** The relationship between workload and skill utilisation can be examined by other researchers. How does high workload affect expectations of skill utilisation and innovation? Can employees use their skills sufficiently under high workload? Answers to such questions can be sought.
- **Freedom of decision and social support:** The relationship between freedom of decision and social support can be evaluated. Do employees with high decision

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latitude feel more social support at work? How can social support reduce the stress caused by decision latitude? Answers to such questions can be sought.

- **Development areas:** Questions with low communality values can be emphasised. For example, the question "Is there a possibility of learning new things in your job?" can be formulated more clearly or differently so that it can be better explained by the factors. Answers to such questions can be sought.

Table 6. Communality coefficients of job stress scale questions

	Extraction
1. Do you work much faster at your job?	,743
2. Do you have to work very hard at your job?	,731
3. Do you exert too much force (effort) in your work?	,511
6. Do you have the possibility to learn differently and innovatively in your work?	,456
7. Does your job require too much skill and expertise?	,647
8. Are there expectations from you to make innovations in your work?	,619
10. Are you able to make your own decisions about how to do your job?	,823
11. Are you able to make your own decisions about what to do in your job?	,821
12. My workplace consists of a calm and pleasant environment	,542
13. I get along well with my colleagues and harmonise with each other	,711
14. My colleagues at the workplace support me and contribute to me	,759
15. When I have bad days and times, my colleagues understand this situation	,575
16. I get along well with my managers and I am in harmony with them	,531
17. I am happy to be together with my work and colleagues and to act in common	,675

Stress levels of teachers according to their gender were compared with independent samples t test. The results are summarised in Table 7.

- Workload stress does not show a significant difference ($p > 0,001$) in the participants.
- Skill utilisation does not show a significant ($p > 0,001$) difference in the participants.
- Freedom of decision is significantly ($p < 0.001$) higher in women than in men.
- Social support does not differ significantly ($p > 0.001$) in the participants.

Workload

- There was no difference between the participants in terms of workload stress ($p > 0.001$).

It can be said that male and female teachers are exposed to the same level of workload stress. It can be said that women do not experience positive discrimination in terms of teachers' jobs.

Skill utilisation

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- It is seen that there is no difference between the participants in terms of skill utilisation ($p > 0,001$).

Female and male teachers should have the same skill utilisation in terms of professional competence. It can be interpreted that female and male teachers make similar efforts to continue their professional development.

Freedom of decision

- Decision freedom stress of female teachers was significantly higher than that of male teachers ($p < 0.001$).

This is because female teachers feel less independence or freedom of decision-making in their work. This leads women teachers to feel more restricted at work and this situation causes stress.

Social support

- There was no difference between the participants in terms of social support stress ($p > 0.001$).

It can be said that female and male teachers seek social support at work at the same rate.

These results show that gender difference in the workplace has a significant effect on job stress in the decision-making dimension. Such analyses provide valuable information for the development of gender equality and employee satisfaction policies in the workplace. In addition, when we want to give an example to these data from a different perspective;

- **Workload management:** In order to reduce the workload stress of male and female teachers, it is important that the distribution of workload is fair.
- **Skills development support:** It is important to provide professional development programmes and training opportunities to support the use of professional skills by female and male teachers.
- **Freedom of decision:** It shows that there is a need to increase flexibility and delegation of authority in the workplace to enable women teachers to have more independence and freedom of decision-making in their work.
- **Social support:** Strengthening social support systems in the workplace will make all teachers feel more supported, which suggests the need to promote a culture of solidarity and co-operation in the workplace.

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Table 7. Job stress values of teachers according to their gender

	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Workload	,007	519	,994	,00065370	,09005985
Skill Utilisation	-2,178	519	,030	-,19527515	,08965022
Freedom of Decision	-3,565	519	,000	-,31723015	,08897472
Social Support	-1,623	519	,105	-,14583094	,08983163

Stress levels of the teachers according to their ages were compared with Anova test. The results are summarised in Table 8.

- In age groups, all main dimensions do not differ significantly ($p < 0.001$) between the groups.

According to the ANOVA test results, there is no significant difference between age groups in terms of workload, skill utilisation, decision latitude and social support ($p < 0,001$). These results show that age groups do not significantly affect job stress levels.

Workload

- There is no significant difference between age groups in terms of workload stress ($p = 0,168$).

Workload was perceived at a similar level for all age groups. This shows that workload does not change depending on age and all teachers are exposed to similar workload stress.

Skill utilisation

- There is no significant difference between age groups in terms of skill utilisation ($p = 0,061$).

Teachers' skill utilisation and related stress do not vary according to age. Teachers in all age groups experience similar levels of skill utilisation and related stress in their work.

Freedom of decision

- There is no significant difference between age groups in terms of Freedom of decision ($p = 0,272$).

Freedom of decision-making and the stress related to this issue do not differ between age groups. This shows that all teachers feel a similar level of decision-making freedom and related stress in their jobs.

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Social support

- There is no significant difference between age groups in terms of social support ($p=0,913$).

Social support received at the workplace and related stress do not vary according to age groups. Teachers in all age groups experience similar levels of social support and related stress at work.

These results show that job stress factors do not differ significantly depending on age in the workplace. This indicates that job stress management and employee satisfaction strategies may not need to be customised according to age groups. It also shows that it is important to develop general stress management strategies to cover all age groups.

- **Workload:** Workload management strategies should cover all age groups. Balanced distribution of workload and optimisation of work processes reduce work stress levels of all teachers.
- **Skills development:** Professional development programmes and training opportunities should support the use of skills by teachers of all age groups. This, in turn, increases teachers' motivation and satisfaction with their work.
- **Freedom of decision:** Increasing freedom of decision-making in the workplace can reduce job stress levels of all teachers. This will help teachers to feel more committed to their jobs and increase their work productivity.
- **Social support:** Establishing strong social support mechanisms makes teachers of all age groups feel more supported at work. This encourages a culture of solidarity and co-operation in the workplace.

Table 8. Job stress values of teachers according to their ages

	Sum of Squares	df	Mean Square	F	Sig.
Workload	6,443	4	1,611	1,618	,168
Skill Utilisation	8,969	4	2,242	2,264	,061
Freedom of Decision	5,159	4	1,290	1,293	,272
Social Support	,982	4	,245	,244	,913

Stress levels of teachers according to their duties were compared with independent samples t test. The results are summarised in Table 9.

- There is no significant ($p>0,001$) difference in all main dimensions for managers at workplace compared to non-managers.

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Workload

- Workload stress is not significantly different in managers compared to non-managers ($p>0,001$).

Although the responsibilities undertaken by administrators and non-administrative teachers differed, this situation did not create a difference in workload stress in terms of task.

Skill utilisation

- Skill utilisation stress does not differ significantly in managers compared to non-managers ($p>0,001$).

It is seen that administrators and non-administrative teachers do not have a significant difference in terms of skill utilisation. There is no difference between the skill utilisation of teachers in educational activities and the skill utilisation of administrators in administrative issues in terms of job stress.

Freedom of decision

- Decision freedom stress is not significantly different in non-managers compared to managers ($p>0,001$).

Non-administrative teachers and administrators may feel dependent on the people and institutions they feel responsible for when making decisions. There is no significant difference between administrators and teachers in terms of freedom of decision.

Social support

- Social support stress does not differ significantly in managers compared to non-managers ($p>0,001$).

It can be said that individuals with and without managerial positions tend to establish better relationships among employees and benefit more from support mechanisms. There is no difference between managers and teachers in terms of the need for social support.

These results show that managerial and teaching positions do not have different effects on job stress factors. The development of job stress management strategies should be made more effective by taking these differences into consideration. When we want to give an example to this situation;

- **Support and training for managers:** In order to reduce the workload and skill utilisation stress of managers, trainings and support programmes can be offered

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to improve their management skills. It is also very important to balance the workload of managers and optimise their work processes.

- **Freedom of decision and delegation of authority:** In order to reduce the decision latitude stress of non-managerial teachers, they can be provided with more delegation of authority and more independence in their work. This will make teachers feel more committed to their jobs and reduce their stress levels.
- **Social support:** Strong social support mechanisms should be established for both managers and non-manager teachers. This will increase overall job satisfaction by encouraging a culture of solidarity and co-operation in the workplace.

Table 9. Job stress values of teachers according to their duties

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Workload	,419	519	,677	,05578597	,13359034
Skill Utilisation	1,839	519	,069	,24469621	,13317964
Freedom of Decision	-,437	519	,664	-,05823229	,13358837
Social Support	,453	519	,655	,06026353	,13358659

The stress levels of the teachers related to their educational status were calculated with the Anova test. The results are given in Table 10.

- There is no significant ($p < 0,001$) differentiation between the groups in all main dimensions in the education groups.

According to the ANOVA test results, there is no significant difference between the educational groups in terms of workload, skill utilisation, decision latitude and social support ($p < 0,001$). These results show that education levels do not significantly affect job stress levels.

Workload

- There is no significant difference between the education groups in terms of workload stress ($p = 0,221$).

Workload is perceived at a similar level for all education levels. This shows that workload does not change depending on the level of education and all teachers are exposed to similar workload stress.

Skill utilisation

- There is no significant difference between the education groups in terms of skill utilisation ($p = 0,904$).

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Teachers' skill utilisation and related stress do not vary depending on their level of education. Teachers at all levels of education experience similar levels of skill utilisation requirements and related stress in their work.

Freedom of decision

- There is no significant difference between the education groups in terms of Freedom of decision ($p=0,069$).

Freedom of decision-making and related stress do not differ according to educational levels. This shows that teachers at all educational levels feel similar levels of decision-making freedom and related stress in their work.

Social support

- There is no significant difference between the education groups in terms of social support ($p=0,456$).

Social support received at the workplace and the related stress do not vary according to educational levels. Teachers at all educational levels experience similar levels of social support and related stress at work.

These results show that job stress factors do not differ significantly according to educational levels. This indicates that it is not necessary to take education levels into consideration in the development of job stress management strategies. However, it is very important to develop general stress management strategies to cover all education levels.

- **Workload management:** Workload management strategies should cover all levels of education. Balanced distribution of workload and optimisation of work processes can reduce work stress levels of all teachers.
- **Skills development:** Professional development programmes and training opportunities should support the use of skills by teachers at all levels of education. This, in turn, increases teachers' job satisfaction and motivation.
- **Freedom of decision:** Increasing the freedom of decision-making in the workplace reduces the level of job stress of all teachers. This helps teachers to feel more committed to their jobs and increase their work productivity.
- **Social support:** Establishing strong social support mechanisms enables teachers at all levels of education to feel more supported at work. This, in turn, promotes a culture of solidarity and co-operation in the workplace and increases overall job satisfaction.

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Table 10. Job stress values of teachers according to their education

	Sum of Squares	df	Mean Square	F	Sig.
Workload	4,439	3	1,489	1,485	,221
Skill Utilisation	,568	3	,186	,198	,907
Freedom of Decision	7,106	3	2,369	2,397	,069
Social Support	2,669	3	,879	,898	,449

Discussion

In the study conducted to determine the job stress levels of physical education and sports teachers, the findings obtained after the analysis of the data were evaluated comparatively with various studies available in the literature.

In the analyses based on gender differences in this study, it was found that female teachers' workload stress was significantly higher in the decision-making dimension than male teachers (Stengård et al., 2022). This is because female teachers feel less independence or decision-making freedom in their work (Ertürk, 2023). This leads female teachers to feel more restricted at work and this situation causes stress (Chen et al., 2023). Yücel et al. (2019) found that the participants' organisational job stress differed according to gender. They also found that the workload stress level of the participants was high and women experienced more work stress. Tuna and Çimen (2013) found a significant difference between teachers' gender and emotional exhaustion in favour of female teachers. It is known that factors such as gender factor and socio-demographic characteristics affect teachers' stress and burnout levels (Hadi et al., 2009; Ratanasiripong et al., 2021). Arıcan (2011) stated in his study that women experience more stress than men. In the study conducted by Aydoğan (2006), it was found that there was a significant relationship between the problems causing stress and the gender variable. Özkan (2007) found that female teachers experienced burnout more than male teachers. Pepe (2008) found that female teachers experienced more emotional exhaustion.

Analyses between age groups did not show a significant difference in terms of workload, skill utilisation, decision latitude and social support (Vanagas & Bihari-Axelsson, 2004). This finding shows that age is not a determinant of job stress and that job stress is at similar levels in all age groups (Lucini et al., 2023). Similarly, Yücel et

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al. (2019) concluded that the job stress levels of the participants did not show a significant difference according to their age. Unlike our study, Yıldız (2013) found that the teachers included in the study had job stress above the medium level (Zhao et al., 2022) and found that the job stress levels of teachers showed a statistically significant difference according to age (Agai-Demjaha et al., 2015). The level of job stress was found to be the highest in the 26-30 age group and the lowest in teachers aged 41 and over (Vázquez-Cano et al., 2023). Kul and Yıldız (2018) found that the motivation of physical education and sports teachers in the 22-30 age group was high considering the fact that they were new to the profession and the profession was less wearing (Duffey et al., 2021). In the participants in the [31-39] and [49 and over] age groups, they stated that stress increased with increasing age and motivation decreased (Birditt et al., 2021). Karaca et al. (2024) found that the level of stress decreased in teachers at the age of 36 and later (Agyapong et al., 2022). Vatansever Bayraktar and Gökpınar (2021) stated in their study that the job stress levels of classroom teachers did not change according to age. In the study conducted by Bozkurt (2014), no significant difference was found in the levels of emotional exhaustion, depersonalisation and decreased sense of personal accomplishment of physical education teachers according to their age (Koruklu et al., 2012). Erkmén and Çetin (2008) found significant differences in physical education teachers' attitudes towards coping with stress according to age. It was determined that physical education teachers decreased the use of negative coping style in coping with stress with age and experience. Bulut (2005) stated that as the age of teachers increases, their experience increases and their organisational stress levels decrease.

Similarly, no significant difference was found in job stress levels between education levels. This situation can be interpreted as that the level of education does not have an effect on job stress. Yücel et al. (2019) similarly concluded that the organisational job stress levels of the participants did not differ significantly according to their educational level. Arıcan (2011) found that the general stress levels of master's degree graduates were higher (Allen et al., 2021). Similarly, Karaca et al. (2024) concluded that teachers with master's degrees had higher stress levels and that stress decreased in teachers with more than 15 years of working experience. Elaman and Karaçam (2023) found that there was a significant difference in the level of external

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satisfaction according to educational status. Vatansver Bayraktar and Gökpinar (2021) found that job stress levels of classroom teachers did not change with their educational level. Alhija (2015) concluded that experienced teachers (working for more than 10 years) had lower stress levels than teachers with less experience. Bulut (2005) emphasised that as teachers' professional working time increases, they become more advantageous in coping with stress, problem solving and using active methods with experience. Yaşar (2008) stated in his study that physical education teachers with seniority years between 11-15 years resorted to social support seeking behaviour more in coping with stress (Yaşar, 2008).

Spiers (2003) stated that facing stress in business life is directly proportional to factors such as age, gender, income, and education level of the employee (Giorgi et al., 2017). Negative stress causes mental, physical and professional problems in teachers (Göksoy & Argon, 2014).

In the analyses conducted according to managerial status, it was concluded that managers did not show significant differences in all dimensions compared to non-managers (Praveen Paul, 2018). Unlike the study, Arıcan (2011) stated in his study that the stress factors in the dimension of task structure caused more stress in administrators than teachers (Harmsen et al., 2018). The difficulties faced by teachers in coping with stress include factors such as inadequate support from the administration, lack of peaceful environment at school, workload and paperwork burden, classroom management, student behaviour and lack of parental support (Açıkgöz et al., 2023). Taşmektepligil (2011) found that physical education teachers had high levels of organisational stress. Kaur (2016) found that the majority of teachers had high levels of organisational stress (Tsubono & Ogawa, 2022).

Gitonga and Ndagi (2016) state that working environments that reduce organisational stress should be prepared in order to increase the performance of teachers. Physical education courses, which are an integral part of education, will increase the efficiency of physical education teachers if they are carried out in line with the expectations of the individual, society and physical education teachers and the solution of their problems in the profession (Göktaş & Özmaden, 2012).

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Conclusion

This study was conducted to understand how teachers' job stress levels differ according to demographic characteristics. The factor analyses showed that the job stress scale was evaluated under four sub-headings (workload, skill utilisation, decision latitude, social support) and that this scale was a valid and reliable measurement tool in general.

In the analyses based on gender differences, it was found that female teachers' workload stress was significantly higher in the decision-making dimension than male teachers. It can be said that this situation causes female teachers to be more stressed in decision-making, assuming responsibility and fulfilling certain roles.

Analyses between age groups did not show a significant difference in terms of workload, skill utilisation, decision latitude and social support. This shows that age is not a determining factor on job stress and all age groups experience similar levels of job stress. Similarly, no significant difference was found in job stress levels between education levels. This shows that education level does not have a significant effect on job stress.

In the analyses made according to administrative status, it was determined that administrators did not show significant differences in all main dimensions compared to non-administrators. Although the responsibilities undertaken by administrators and non-administrators differed, this situation did not create a difference in terms of workload stress. There is no difference between the skill utilisation of teachers in educational activities and the skill utilisation of administrators in administrative issues in terms of job stress. Non-administrative teachers and administrators may feel dependent on the people and institutions they feel responsible for when making decisions. There is no significant difference between administrators and teachers in terms of freedom of decision.

These findings and results provide important information for the development of job stress management and employee satisfaction strategies. Employers can utilise these data to balance employees' workload, increase skill utilisation and decision latitude, and strengthen social support mechanisms. This will contribute to reducing job stress levels and increasing overall job satisfaction.

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References

- Açıkgöz, M., Taşkın, E., Taşkın, A. Ü., & Özbay, E. (2023). Öğretmenlik Mesleğinde Stres Yönetimi, *International Academic Social Resources Journal*, 8(54), 3869-3880. <http://doi.org/10.29228/ASRJOURNAL.71875>
- Agai-Demjaha, T., Bislimovska, J. K., & Mijakoski, D. (2015). Level of Work Related Stress among Teachers in Elementary Schools. *Open access Macedonian journal of medical sciences*, 3(3), 484-488. <https://doi.org/10.3889/oamjms.2015.076>
- Agyapong, B., Obuobi-Donkor, G., Burbach, L., & Wei, Y. (2022). Stress, Burnout, Anxiety and Depression among Teachers: A Scoping Review. *International journal of environmental research and public health*, 19(17), 10706. <https://doi.org/10.3390/ijerph191710706>
- Ağaoğlu, E., Ceylan, M., & Maden, T. (2016). Öğretmenin Kendi Stres Düzeylerine İlişkin Görüşleri. XIII. Ulusal Eğitim Bilimleri Kurultayı, Malatya.
- Akbaş, S. (2018). Üniversite öğrencilerinin duygusal zekâ yetenekleri ve stresle başa çıkma stilleri: Pamukkale Üniversitesinde bir araştırma [Master's Project, Pamukkale University]. Pamukkale GCRIS Database. <https://gcris.pau.edu.tr/handle/11499/2542>
- Akçamete, G., Kaner, S., & Sucuoğlu, B. (2001). Öğretmenlerde Tükenmişlik, İş Doyumu ve Kişilik. Nobel Yayın Dağıtım.
- Akiba, M., Byun, S., Jiang, X., Kim, K., & Moran, A. J. (2023). Do Teachers Feel Valued in Society? Occupational Value of the Teaching Profession in OECD Countries. *AERA Open*, 9. <https://doi.org/10.1177/23328584231179184>
- Aladağ, E. (2015). Öğretmenlerin stres kaynakları algılarının ve stresle baş etme yollarına ilişkin tutumların incelenmesi (Publication No. 439899) [Master's Thesis, Zirve University]. Council of Higher Education National Thesis Center.
- Alhija, F. N. A. (2015). Teacher stress and coping: the role of personal and job characteristics. *Procedia - Social and Behavioral Sciences*, 185, 374-380. <http://doi.org/10.1016/j.sbspro.2015.03.415>
- Allen, H. K., Barrall, A. L., Vincent, K. B., & Arria, A. M. (2021). Stress and Burnout Among Graduate Students: Moderation by Sleep Duration and

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

Quality. *International journal of behavioral medicine*, 28(1), 21-28.
<https://doi.org/10.1007/s12529-020-09867-8>

Altan, S. (2018). Örgütsel yapıya bağlı stres kaynakları ve örgütsel stresin neden olduğu başlıca sorunlar. *Stratejik ve Sosyal Araştırmalar Dergisi*, 2(3), 137-158.
<https://doi.org/10.30692/sisad.470420>

Arıcan, K. (2011). Örgütsel Stres Kaynakları: Kavramsal Bir Çözümleme. *Eğitim ve İnsani Bilimler Dergisi: Teori ve Uygulama*, 2(4), 55-76.

Armour, K. M. (2009). The physical education profession and its professional responsibility ... or ... why '12 weeks paid holiday' will never be enough. *Physical Education and Sport Pedagogy*, 15(1), 1-13.
<https://doi.org/10.1080/17408980903413479>

Aydoğan, H. (2006). *Beden Eğitimi Öğretmenlerinin Meslekte Karşılaştıkları Sorunlar (Trabzon İli Uygulaması)* (Publication No. 215278) [Master's Thesis, Gazi University]. Council of Higher Education National Thesis Center.

Aytaç, S. (2009). *İş Stresi Yönetimi El Kitabı İş Stresi: Oluşumu, Nedenleri, Başa Çıkma Yolları, Yönetimi*. Labour Ministry- CASGEM.

Baltaş, A., & Baltas, Z. (2021). *Stres ve Başa Çıkma Yolları* (38th ed.). Remzi Kitabevi.

Barat, A., & Dere, E. (2024). Protective Role of Resveratrol Against Toluene-Induced Oxidative Stress in Rats. *Cumhuriyet Science Journal*, 45(2), 188-193.
<https://doi.org/10.17776/csj.1409301>

Başoğlu, B., Şekeroğlu, M. Ö., & Altun, E. (2016). Öğretmenlerin aile-iş çatışması ve iş-aile çatışmalarının yaşam doyumuna etkisi ve bazı demografik özelliklere göre incelenmesi. *Akademik Sosyal Araştırmalar Dergisi*, 32, 277-291.
<https://doi.org/10.16992/ASOS.4481>

Belloni, M., Carrino, L., & Meschi, E. (2022). The impact of working conditions on mental health: Novel evidence from the UK. *Labour Economics*, 76, 102176.
<https://doi.org/10.1016/j.labeco.2022.102176>

Birditt, K. S., Turkelson, A., Fingerman, K. L., Polenick, C. A., & Oya, A. (2021). Age Differences in Stress, Life Changes, and Social Ties During the COVID-19 Pandemic: Implications for Psychological Well-Being. *The Gerontologist*, 61(2), 205-216. <https://doi.org/10.1093/geront/gnaa204>

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

- Bozkurt, Ö. (2014). *İlköğretimde Beden Eğitimi Derslerini Yürüten Beden Eğitimi ve Spor Öğretmenlerinin İş Doyumu ve Tükenmişlik Düzeylerinin İncelenmesi (Lefköşe Örneği)* [Master's Thesis, Near East University]. Near East University Repository. <https://docs.neu.edu.tr/library/6344469193.pdf>
- Bulut, N. (2005). İlköğretim öğretmenlerinde, stres yaratan yaşam olayları ve stresle başa çıkma tarzlarının çeşitli değişkenlerle ilişkisi. *Kastamonu Eğitim Dergisi*, 13(2), 467-478.
- Caspi, A., Sugden, K., Moffitt, T. E., Taylor, A., Craig, I. W., Harrington, H., McClay, J., Mill, J., Martin, J., Braithwaite, A., & Poulton, R. (2003). Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. *Science (New York, N.Y.)*, 301(5631), 386-389. <https://doi.org/10.1126/science.1083968>
- Chen, S., Ntim, S. Y., Zhao, Y., & Qin, J. (2023). Characteristics and influencing factors of early childhood teachers' work stress and burnout: A comparative study between China, Ghana, and Pakistan. *Frontiers in psychology*, 14, 1115866. <https://doi.org/10.3389/fpsyg.2023.1115866>
- Çakır, İ. (2006). *Polislerin iş stresi ve bazı değişkenlere göre stresle başa çıkma tarzlarının karşılaştırılması* (Publication No. 187750) [Master's Thesis, Çukurova University]. Council of Higher Education National Thesis Center.
- Demir, F. (2019). *Beden eğitimi ve spor öğretmenlerinin fiziksel aktivite ve mesleki tükenmişlik düzeylerinin incelenmesi* (Publication No. 581240) [Master's Thesis, Uludağ University]. Council of Higher Education National Thesis Center.
- Demiral, Y., Ünal, B., Kılıç, B., Soysal, A., Bilgin, A. C., Uçku, R., & Theorell, T. (2007). İş stresi ölçeğinin İzmir Konak Belediyesi'nde çalışan erkek işçilerde geçerlik ve güvenilirliğinin incelenmesi. *Toplum Hekimliği Bülteni*, 26(1), 11-18.
- Dere, G. (2024, Mayıs 29-31). *Beden Eğitimi ve Spor Öğretmenlerinin Tekno Stres Düzeylerinin Çalışma Yaşam Kalitesine ve İş Performanslarına Etkisi*. 12. Uluslararası İstanbul Bilimsel Araştırmalar Kongresi, İstanbul, Türkiye.
- Duffey, K., Barbosa, A., Whiting, S., Mendes, R., Yordi Aguirre, I., Tcymbal, A., Abu-Omar, K., Gelius, P., & Breda, J. (2021). Barriers and Facilitators of Physical Activity Participation in Adolescent Girls: A Systematic Review of Systematic

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

Reviews. *Frontiers in public health*, 9, 743935.
<https://doi.org/10.3389/fpubh.2021.743935>

Efeoğlu, İ. E., & Özgen, H. (2007). İş-Aile Yaşam Çatışmasının İş Stresi, İş Doyumu ve Örgütsel Bağlılık Üzerindeki Etkileri: İlaç Sektöründe Bir Araştırma. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 16(2), 237-254.

Elaman, S., & Karaçam, A. (2023). *Beden Eğitimi ve Spor Öğretmenlerinin İş Stresinin Yaşam Memnuniyeti ve İş Doyumuna Olan Etkisinin İncelenmesi*. Duvar Yayınları.

Erat, Ş., Korkmaz, M., Çimen, V., & Yahyaoğlu, G. (2011). Hemşirelerin iş yaşam kalitesinin motivasyona etkisi. *Uluslararası Hakemli Akademik Spor Sağlık ve Tıp Bilimleri Dergisi*, 1(1), 68-97.

Erdoğan, T., Ünsar, S., & Süt, N. (2009). Stresin Çalışanlar Üzerindeki Etkileri, *Süleyman Demirel Üniversitesi İktisadi İdari Bilimler Fakültesi Dergisi*, 14(2), 447-461.

Ergün, E., & Yüksel, A. (2019). İş-yaşam çatışmasının çalışanın davranışsal sonuçlarına etkisi ve iş stresinin aracılık rolü. *İstanbul Aydın Üniversitesi Dergisi*, 11(1), 67-90.

Erkmen, N., & Çetin, M. Ç. (2008). Beden Eğitimi Öğretmenlerinin Stresle Başa Çıkma Tarzlarının Bazı Değişkenlerle İlişkisi. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 19, 231-242.

Ertürk, R. (2023). The Effect of Teacher Autonomy on Teachers' Professional Dedication. *International Journal of Psychology and Educational Studies*, 10(2), 494-507.

Eskin, M., Harlak, H., Demirkıran, F., & Dereboy, Ç. (2013). Algılanan stres ölçeğinin Türkçeye uyarlanması: Güvenirlilik ve geçerlik analizi. *New Symposium Journal*, 51(3), 132-140.

Giorgi, G., Arcangeli, G., Perminiene, M., Lorini, C., Ariza-Montes, A., Fiz-Perez, J., Di Fabio, A., & Mucci, N. (2017). Work-Related Stress in the Banking Sector: A Review of Incidence, Correlated Factors, and Major Consequences. *Frontiers in psychology*, 8, 2166. <https://doi.org/10.3389/fpsyg.2017.02166>

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

- Gitongo, M. K., & Ndagi, J. M. (2016). Influence of Occupational Stress on Teachers' Performance in Public Secondary Schools in Nyeri County, Nyeri South Sub County Kenya. *International Journal of Business and Management Invention*, 5(5), 23-29.
- Göksoy, S., & Argon, T. (2014). Okullarda Öğretmenleri Engelleyici ve Destekleyici Stres Kaynakları. *Journal Of Teacher Education And Educators*, 3(2), 245-271.
- Göktaş, Z., Özmaden, M. (2012). Beden eğitimi öğretmenlerinin meslekte karşılaştıkları sorunların bazı değişkenlere göre incelenmesi. *International Journal of Human Sciences*, 9(2), 1321-1336.
- Güçlü, N. (2001). Stres yönetimi. *Gazi Üniversitesi Eğitim Fakültesi Dergisi*, 21(1), 91-109.
- Gümüştekin, G. E., & Öztemiz, B. (2005). Örgütlerde stresin verimlilik ve performansla etkileşimi, *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 14(1), 271-288.
- Habacı, İ., Karataş, E., Adıgüzelli, F., Ürker, A., & Atıcı, R. (2013). Öğretmenlerin güncel sorunları. *Turkish Studies - International Periodical For The Languages, Literature and History of Turkish or Turkic*, 8(6), 263-277. <http://doi.org/10.7827/TurkishStudies.8020>
- Hadi, A. A., Naing, N. N., Daud, A., Nordin, R., & Sulong, M. R. (2009). Prevalence and factors associated with stress among secondary school teachers in Kota Bharu, Kelantan, Malaysia. *Southeast Asian J Trop Med Public Health*, 40(6), 1359-1370.
- Harmsen, R., Helms-Lorenz, M., Maulana, R., & van Veen, K. (2018). The relationship between beginning teachers' stress causes, stress responses, teaching behaviour and attrition. *Teachers and Teaching*, 24(6), 626-643. <https://doi.org/10.1080/13540602.2018.1465404>
- Kanasar, N. (2015). *Stres Düzeylerinin Araştırılması: Kavramlar, İlkeler, Yöntem ve Teknikler*. Nobel Yayın Dağıtım.
- Karaca, E., Akça, S., Çatıkkaş, K. T., Özge, S., Ergül, M., Ergül, M., Yakıt, H., Ünsal, L., Elagöz, H., & Taymur, Z. A. (2024). Öğretmenlerin İş Stresi Düzeylerinin

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

Belirlenmesi ve İlişkili Faktörlerin Belirlenmesi. *Sosyal Gelişim Dergisi*, 2(1), 1-9.

Kaur, N. (2016). Evaluation of Factors Causing Stress Among School Teachers of North India [Master's Thesis, Dublin Business School]. DBS eSource. <http://hdl.handle.net/10788/3189>

Keser, A. (2014). *İş Stresi Kaynakları*. Ekin Basım Evi.

Kırımoğlu, H., Yıldırım, Y., & Temiz, A. (2011) İlk ve Ortaöğretim Okullarında Görev Yapan Beden Eğitimi ve Spor Öğretmenlerinin Stresle Başa Çıkma Tarzlarının İncelenmesi (Aydın İli Örneği). *Niğde Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 5(2), 113-114.

Korkmaz, M., & Ceylan, B. (2012). Örgütsel stres yönetimi ve stresin İstanbul büyükşehir belediyesi çalışanlarının iş performansı üzerine etkisinin uygulamalı olarak incelenmesi. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 10, 313-344. <https://doi.org/10.14520/adyusbd.384>

Korkmaz, M., Germir, H. N., Şahbudak, E., Şen, E., Gürkan, A., & Kuzucuoğlu, A. H. (2016). *Stres - Performans - Verimlilik*. Çatı Kitapları.

Korkmaz, M., Germir, H. N., Yücel, A. S., & Gürkan, A. (2015). Yaşam memnuniyeti üzerinde etkili olan sosyodemografik bileşenler üzerine bir analiz. *Uluslararası Hakemli Psikiyatri ve Psikoloji Araştırmaları Dergisi*, 3(2), 78-111.

Koruklu, N., Feyzioglu, B., Ozenoglu-Kiremit, H., & Aladag, E. (2012). Teachers' Burnout Levels in terms of Some Variables. *Educational Sciences: Theory and Practice*, 12(3), 1823-1830.

Kul, M., & Yıldız, M. (2018). Beden Eğitimi ve Spor Öğretmenlerinin Psikolojik Şiddete Maruz Kalma Düzeylerinin Motivasyon Düzeyleri Üzerine Etkilerinin İncelenmesi. *Turkish Studies*, 13(4), 885-898. <http://doi.org/10.7827/TurkishStudies.13139>

Lucini, D., Pagani, E., Capria, F., Galiano, M., Marchese, M., Cribellati, S., & Parati, G. (2023). Age Influences on Lifestyle and Stress Perception in the Working Population. *Nutrients*, 15(2), 399. <https://doi.org/10.3390/nu15020399>

Mansfield, L., Kay, T., Anokye, N., & Fox-Rushby, J. (2018). A qualitative investigation of the role of sport coaches in designing and delivering a complex

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

community sport intervention for increasing physical activity and improving health. *BMC public health*, 18(1), 1196. <https://doi.org/10.1186/s12889-018-6089-y>

Mosadeghrad, A. M., Ferlie, E., & Rosenberg, D. (2011). A study of relationship between job stress, quality of working life and turnover intention among hospital employees. *Health Services Management Research*, 24(4), 170-181. <https://doi.org/10.1258/hsmr.2011.011009>

Özgenel, M., & Canuylassi, E. M. (2021). Okul Müdürlerinin Yıkıcı Liderlik Davranışlarının Örgütsel Strese Etkisi. *Manas Sosyal Araştırmalar Dergisi*, 10(3), 1652-1664. <https://doi.org/10.33206/mjss.735234>

Özkan, Ş. Y. (2007). *Niğde İlinde Görevli Beden Eğitimi Öğretmenlerinin Mesleki Tükenmişlik Düzeylerinin Araştırılması* (Publication No. 209331) [Master's Thesis, Niğde University]. Council of Higher Education National Thesis Center.

Pehlivan-Aydın, İ. (2002). *İş Yaşamında Stres*. Pegem Yayıncılık.

Pepe, Ş. (2008). *Beden eğitimi ve spor öğretmenlerinin mesleki tükenmişlik düzeylerinin incelenmesi* (Publication No. 224889) [Master's Thesis, Selçuk University]. Council of Higher Education National Thesis Center.

Praveen Paul, J. (2018). Comparison of job satisfaction among managerial and non-managerial employees a mathematical approach. *International Journal of Pure and Applied Mathematics*, 120(6), 1231-1255.

Ratanasiripong, P., Ratanasiripong, N. T., Nungdanjark, W., Thongthammarat, Y., & Toyama, S. (2021). Mental health and burnout among teachers in Thailand. *Journal of Health Research*, 36(3), 404-416. <https://doi.org/10.1108/JHR-05-2020-0181>

Selye, H. (1973). Stress and the General Adaptation Syndrome. *British Medical Journal*, 1(4667), 1383-1392. <https://doi.org/10.1136/bmj.1.4667.1383>

Shahsavarani, A. M., Azad Marz Abadi, E., & Hakimi Kalkhoran, M. (2015). Stress: Facts and theories through literature review. *International Journal of Medical Reviews*, 2(2), 230-241.

Soysüren, A. (2003, Temmuz 09-11). *Orta dereceli okullarda görev yapan branş öğretmenlerin stresle başa çıkma stratejileriyle işdoyumları arasındaki ilişki*,

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

İnönü Üniversitesi. VII. Ulusal Psikolojik Danışma ve Rehberlik Kongresi, Ankara, Türkiye.

Spiers, C. (2003). *Accuracy Clarity Value Tolley's Managing Stress In The Work Place*. Reed Elsevier.

Stengård, J., Mellner, C., Toivanen, S., & Nyberg, A. (2022). Gender differences in the work and home spheres for teachers, and longitudinal associations with depressive symptoms in a Swedish cohort. *Sex Roles*, 86, 159-178. <https://doi.org/10.1007/s11199-021-01261-2>

Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301-328. <https://doi.org/10.2753/MIS0742-1222240109>

Telef, B., & Tazıcı, H. (2009). Öğretmenlerin kişilik özellikleri, stresle başa çıkma yöntemleri ve kontrol algıları arasındaki ilişkiler. *Milli Eğitim Dergisi*, 38(183), 259-271.

Tsubono, K., & Ogawa, M. (2022). The analysis of main stressors among high-stress primary school teachers by job positions: A nationwide survey in Japan. *Frontiers in public health*, 10, 990141. <https://doi.org/10.3389/fpubh.2022.990141>

Vanagas, G., & Bihari-Axelsson, S. (2004). Interaction among general practitioners age and patient load in the prediction of job strain, decision latitude and perception of job demands. A cross-sectional study. *BMC public health*, 4, 59. <https://doi.org/10.1186/1471-2458-4-59>

Vatansever Bayraktar, H., & Gökpınar, İ. (2021). Sınıf Öğretmenleri ve Eğitim Yöneticilerinin İş Stresi Düzeylerinin Çeşitli Değişkenlere Göre İncelenmesi, *International Journal of Eurasia Social Sciences*, 12(46), 870-885. <https://doi.org/10.35826/ijoess.3018>

Vázquez-Cano, E., Sáez-López, J., Grimaldo-Santamaría, R., & Quicios-García, M. (2023). Influence of Age, Gender and Years of Experience on Teachers in Promoting Strategies for Digital Sustainability and Data Protection. *Journal of New Approaches in Educational Research*, 12(2), 307-322. <https://doi.org/10.7821/naer.2023.7.1467>

Original article. Determination of job stress levels of physical education and sport teachers. Vol. 11, n.º 1; p. 1-38, January 2025. <https://doi.org/10.17979/sportis.2025.11.1.11090>

- Villanueva, D., & Djurkovic, N. (2009). Occupational stress and intention to leave among employees in small and medium enterprises. *International Journal of Stress Management*, 16(2), 124-137. <https://doi.org/10.1037/a0015710>
- von Haaren-Mack, B., Schaefer, A., Pels, F., & Kleinert, J. (2019). Stress in Physical Education Teachers: A Systematic Review of Sources, Consequences, and Moderators of Stress. *Research Quarterly for Exercise and Sport*, 91(2), 279-297. <https://doi.org/10.1080/02701367.2019.1662878>
- Wickramasinghe, G. L. D., & Wickramasinghe, V. (2012). Effects of perceived organisational support on participation in decision making, affective commitment and job satisfaction in lean production in Sri Lanka. *Journal of Manufacturing Technology Management*, 23(2), 157-177. <https://doi.org/10.1108/17410381211202179>
- Yaşar, G. (2008). *Beden eğitimi öğretmenlerinin okulla ilgili sorunları ve stresle başa çıkma tarzlarının bazı değişkenler açısından incelenmesi* (Publication No. 203316) [Master's Thesis, Çukurova University]. Council of Higher Education National Thesis Center.
- Yıldız B. (2013). *İlkokul ve ortaokul öğretmenlerinin iş stresi, örgütsel bağlılık ve iş doyumuna yönelik algılarının incelenmesi* (Publication No. 345622) [Master's Thesis, Maltepe University]. Council of Higher Education National Thesis Center.
- Yıldız, M., Güç, K., & Erdem, S. (2015). Stresle Başa Çıkma Tutumlarının İnsani Değerler Açısından İncelenmesi: Kamu Kurumu Çalışanları Üzerine Bir Çalışma. *Kara Harp Okulu Bilim Dergisi*, 25(1), 41-62.
- Yücel, A. S., Orhan, S., Şekeroğlu, B., Karadağ, T. F., & Çeviker, A. (2019). Beden Eğitimi Öğretmenlerinin Örgütsel İş Stres Düzeylerinin Bazı Demografik Değişkenler Açısından Değerlendirilmesi. *Spor Eğitim Dergisi*, 3(2), 58-70.
- Zhao, W., Liao, X., Li, Q., Jiang, W., & Ding, W. (2022). The relationship between teacher job stress and burnout: A moderated mediation model. *Frontiers in Psychology*, 12, 784243. <https://doi.org/10.3389/fpsyg.2021.784243>