Analysis Factors Related to Work Stress among Public High School Teachers in Jakarta during COVID-19 Pandemic

by Robiana Modjo, Desy Sulistiyorini Denti Vadalika Putri

ORIGINAL ARTICLE

Analysis Factors Related to Work Stress among Public High School Teachers in Jakarta during COVID-19 Pandemic

Robiana Modjo[1], Desy Sulistiyorini[2], Denti Vadalika Putri[1]

[1] Occupational Health and Safety Department, Faculty of Public Health Universitas Indonesia. Kampus Baru UI, 16424, Depok, Wst Java, Indonesia.

[2] Universitas Indonesia Maju. Jalan Harapan No. 50 Lenteng Agung, South Jakarta, 12610, Indonesia

ABSTRACT

Introduction: During the recent COVID-19 pandemic situation, teachers are more likely to experience job stress due to an imbalance between job demands and the ability to manage those demands. The purpose of this study was to determine factors related to job stress among public high school teachers in the Jakarta Pusat region during the COVID-19 pandemic. **Methods:** Data were collected from 113 public high school teachers in 2021 during the second wave of COVID-19 using the NIOSH Generic Job Stress Questionnaire (GJSQ). **Results:** Findings showed that 47,8% of teachers experience job stress. It was found that role conflict (P .127), workload (P .134), and social support (P .056 were not significantly associated with job stress. Meanwhile, role ambiguity (P .015) was significantly associated with job stress. **Conclusion:** These findings suggest role ambiguity of the public-school teachers during the COVID-19 pandemic becomes the major factor associated with job stress.

Keywords: Public High School Teachers, Individual Characteristic Factors, Psychosocial Factors, Job Stress

Corresponding Author:
Robiana Modjo, PhD
Email: bian@ui.ac.id
Tel:+62-812-9016-291

INTRODUCTION

Job stress is described as a mismatch between the demands at work and the employee's ability to manage or cope with the demands of the job (1). It is undeniable that a stressful workplace is the main cause of job stress cases. Then, the incidence of job stress is one thing that can contribute to various health problems, such as psychological disorders, musculoskeletal disorders, gastrointestinal diseases, and cardiovascular diseases (2).

Job stress is a response that a person may have when faced with work demands and pressures that are not following their knowledge and abilities so that it challenges them to overcome them (3). Job stress is a response that a person may have when faced with work demands and pressures that are not following his knowledge and abilities so that it is challenging to

overcome them. responsibilities, duties, or other forms of pressure related to their work that cause tension, anxiety, or worry.

As the spearhead of the implementation of national education development to create superior and quality human resources, of course, this profession has many demands. Various parties such as students, parents, school principals, communities, and the government demand teachers to always provide optimal, quality, disciplined performance, and be able to become role models. In addition, teachers are also required to play an active role in every learning process. The description of the situation that must be faced by the teacher makes this profession inseparable from events that cause stress in their work(4,5). During the current COVID-19 pandemic, the teaching profession is also required to be able to adapt quickly to all forms of changes that occur related to their work. Coronavirus disease 2019 (COVID-19) is an acute infectious respiratory disease caused by a new coronavirus, namely SARS-CoV-2 (6). This situation forced most educational institutions around the world to close and learning methods shifted to online (7,8).

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2020, there were about 63 million teachers worldwide who had to face very different education systems due to school closures in about 165 countries due to the COVID-19 pandemic. This condition requires teachers to be able to adapt to new teaching methods. A survey conducted by Eickelmann & Drossel in Federkeil (2020), states that only 33% of teachers feel ready to do distance teaching. Based on the results of a study conducted by Gregersen dan Mercer Tahun 2020 on "Coping strategies of language teachers during COVID-19 conversion to online teaching: Correlation with stress, well-being and negative emotions", workload, work-related controls, role ambiguity, and work schedule. are some of the main factors that contribute to the emergence of job stress on teachers. Data collection in this study was conducted through an online survey.

In addition, in another study conducted by Ko ir 2020 on "Predictors of perceived job stress of teachers and school counselors during the transition to online education in schools during the COVID-19 pandemic" the results showed that the main factors that contributed to the incidence of job stress were: on teachers during the pandemic are individual characteristics and support from superiors. Then, teachers who have children are more likely to experience stress. Data collection in this study was conducted online by sending a questionnaire to the target sample via email.

Research also conducted by Weken, Mongan and Kekenusa Tahun 2020 on "The Relationship of Workload, Role Conflict, and Social Support with Teacher Job stress During the COVID-19 Pandemic" showed that as many as 86.2% of teacher respondents with workload and workload tall. Role conflict experiences high levels of stress. Data collection in this study was conducted online via google form using the NIOSH Job Stress Questionnaire instrument. This study aimed to determine the factors associated to job stress among public high school teachers in Jakarta.

MATERIALS AND METHODS

This study used a cross-sectional research design because data collection and processing were carried out in one period of time. The method used in this study was quantitative. This research was conducted at seven senior high schools located in Central Jakarta. The research location was chosen based on the affordability of the researcher, because the data confirmation and obtaining research permits were done offline. the list of the schools was taken based on data from the Ministry of Education and Culture.

The time of this research was carried out in February 2021 - June 2021. The population of this research was public high school teachers in Central Jakarta, totaling 523 people with a target population of 7 schools. Among 13 public schools in Central Jakarta, 7 schools were selected randomly. The population of the study comprised of 523 teachers, of which 113 teachers were recruited to the study to the inclusion and exclusion criteria with simple random sampling used in this study as sampling method. From the calculation of the sample size 2.0 (13).

. The instrument that was used in this research is in the form of an online questionnaire. The questionnaire consisted of three parts, the first part contains demographic information (gender, age, marital status, personality type, number of children) and employment information (work period, working hours, overtime hours), the second part contains psychosocial factors (workload), social support, job control, role conflict, role ambiguity, home-work interface), the third part contains indicators of job stress (physiological changes, psychological changes and behavioral changes). The type of questionnaire that was used in this study is the NIOSH Generic Job Stress Questionnaire, with a total of 64 questions and 76 statements that have been adapted to the context of public high school teachers. The NIOSH Generic Job Stress Questionnaire instrument has been tested to measure job stress and factors related to job stress in all types of work , including the teaching profession. This questionnaire is a standardized and validated instrument which was used in job stress researches conducted worldwide (14–16). Questions and statements in this questionnaire were divided into two types, namely positive and negative, with the following conditions.

If the question/statement were positive, then the scores that could be given are:
- Strongly Disagree / Never: score 1
- Disagree / Rarely: score 2
- Agree / Often: score 3
- Strongly Agree / Always: score 4
If the question/statement is negative, then the scores that can be given are:
- Strongly Agree / Always: 1
- Agree / Often: 2
- Disagree/Rarely: score 3
- Strongly Disagree / Never: score 4

The measurement scale for each component of the question on each variable was adjusted. Most of the questions/statements used five Likert scales and seven Likert scales for the statement of role conflict and role ambiguity variables in the original questionnaire. However, this study only used four Likert scales. There were several questions/statements that applied a reverse assessment according to the types of positive questions and negative questions.

Some numerical data such as job stress, personality type, workload, social support, work-related control,

role conflict, and role ambiguity were classified into two categories. This category determined based on the cutoff point value obtained after performing a normality test on each data variable. If the data were normally distributed, then the cutoff point value of the variable used the mean value. However, if the data were not normally distributed, then the cutoff point value of the variable used the median value. The way to calculate the mean was to divide the total score of answers by the number of questions/statements asked. The higher the variable score after being calculated, the higher the psychosocial danger. (17). The age group was categorized into two groups, the young and middle aged adults (under 45 years old), and senior adults (45 years old or more) (18). Reliability test is used to determine the consistency of a measuring instrument. The reliability test for the NIOSH Generic Job Stress Questionnaire instrument which was translated into Indonesian has been carried out and the Cronbach alpha value of 0.84 was obtained (19).

The data was analyzed using SPSS. Frequency and percentages were used for categorical variables in univariate analysis. The bivariate analysis was performed using Chi-square to determine the association between role ambiguity, role conflict, work load, and social support with job stress among public high school teacher in Central Jakarta region. For all the bivariate analyses, a p value under 0.05 was considered unsignificant.

ETHICAL CLEARANCE

This study has been received ethical clearance and approval from the Faculty of Public Health University of Indonesia Research Ethics Committee, (Ref. No: Ket-113/UN2.F10.D11/PPM.00.02/2021). All participants gave written approval to participate in this study and all interviews were conducted anonymously.

RESULT

Participants Characteristics

In this study, table I shows there were 73 female teachers (64.6%) and 40 male teachers (35.4%). The teachers in this study had a minimum age of 23 years and a maximum age of 59 years, with the average age of teachers being 40.18 years. There are 71 teachers (62.8%) belonging to the age group 45 years, and 42 teachers (37.2%) belonging to the age group > 45 years. There are 24 teachers (21.2%) who are not married, and 89 teachers (78.8%) are married. There are 75 teachers (66.4%) who have a diploma/bachelor's education level and 38 teachers (33.6%) who have a master's level of education.

Table I Participant's Characteristics

Variables	Category	n	%
Sex	Female	73	64.6
	Male	40	35.4
Age	≤ 45 years old	71	62.8
	> 45 years old	42	37.2
Marital status	Unmarried	24	21.2
	Married	89	78.8
Educational background	Bachelor degree	75	66.4
	Master degree	38	33.6

ASSOCIATION OF FACTORS RELATED TO JOB STRESS

Based on Table II, job stress was experienced by 35 teachers who have a high workload (31.0%) and 19 teachers who have a low workload (16.8%). In addition, the results of the analysis showed that the workload variable had a P-value of 0.134. P-value > 0.05 indicated that there was no relationship between workload and job stress. The value of the Odds Ratio (OR) for the workload variable is 1.781/1 = 1.781, meaning that teachers with high workloads have a probability of experiencing job stress 1.781 times higher than teachers with low workloads.

Table II Correlation between Factors Related to Job Stress among School Teachers

Vari-ables	Cate-gory	Suffered from Job Stress				OR	P-value
		Yes		No			
		n	%	n	%		
Role ambi-guity	High	37	32.7	27	23.9	2.580	.015
	Low	17	15.0	32	28.3		
Role con-flict	High	36	31.9	31	27.4	1.806	.127
	Low	18	15.9	28	24.8		
Work load	High	35	31.0	30	26.5	1.781	.134
	Low	19	16.8	29	25.7		
So-cial sup-port	Good	37	32.7	30	26.5	2.104	.056
	Poor	17	15.0	29	25.7		

This study also showed that job stress was experienced by 37 teachers who had poor social support (32.7%) and 17 teachers who have good social support (15.0%). In addition, the results of the analysis show that the social support variable had a P-value of 0.056. P-value > 0.05 indicated that there was no relationship between social support and job stress. The value of the Odds Ratio (OR)

for the social support variable was 2.104/1 = 2.104, meaning that teachers with poor social support had a probability of experiencing job stress 2.104 times than teachers with good social support.

The study also revealed that job stress was experienced by 36 teachers who have high role conflict (31.9%) and 18 teachers who have low role conflict (15.9%). In addition, the results of the analysis showed that the role conflict variable had a P-value of 0.127. P-value > 0.05 indicated that there was no relationship between role conflict and job stress. The value of the Odds Ratio (OR) for the role conflict variable was 1.806/1 = 1.806, meaning that teachers with high role conflicts had a probability of experiencing job stress 1.806 times than teachers with low role conflicts.

It was found that job stress was experienced by 37 teachers who had high role ambiguity (32.7%) and 17 teachers who had low role ambiguity (15.0%). In addition, the results of the analysis showed that the role ambiguity variable has a P-value of 0.015. P-value <0.05 indicated that there was a relationship between role ambiguity and job stress. The Odds Ratio (OR) value for the role ambiguity variable was 2.580/1 = 2.580, meaning that teachers with high role ambiguity had a probability of experiencing job stress 2.580 times than teachers with low role ambiguity.

DISCUSSION

With these results, it can be concluded that this research has a similar result with the previous study (20) which also states that there is no relationship between workload and job stress. According to previous study, workload is something that arises from the interaction between the demands of tasks and the work environment which is also related to the skills, behavior, and perceptions of the workers themselves. In terms of workload, both excessive workload and insufficient workload can potentially be a problem, this is explained in detail by Karasek (1979) in the job-demand control job stress model. From several studies that have been conducted, the workload has been shown to interfere with psychological health. Where the workload is high to exceed the ability of workers to cope with it can cause job stress (21). Then quote from Tom Cox et al (2000) (22), it is said that workload is one of the main aspects of job stress that is of concern. Hence, the work load of the teacher was too high during the COVID-19 pandemic due to the changing requirements for instruction, job expectations, and classroom environments. With these changes to instructional approaches, teachers faced many challenges when providing all-in-person, hybrid, and virtual teaching (22). Previous study revealed that increased teacher workload during the period of distance learning was caused not only by the need to seek new teaching methods and adjust content to the new format but also by intensified communication with students and their parents and an increased amount of homework to review (23).

Social support is positive social ties where relationships between individuals both horizontally and vertically have positive ties that are pleasing (24). Referring to these results, this study was in accordance with a previous study (25), which shows that there was no relationship between support social with job stress. Meanwhile, another research also showed the same thing. Good interpersonal relationships between a worker and other workers are very important and have a big impact on the health of the individual and the organization itself. Various surveys and studies have proven that social support at work can affect the incidence of job stress. This is supported by the statement that high social support is proven to reduce the tension experienced by workers to reduce the stress they feel. (26). Previous study revealed that administrative support and technological infrastructure were helpful in notifying teachers about the transition to a new format, in preparation for such transition, in providing access to technical and information resources. Psychological assistance from colleagues and administrators was highly appreciated as supportive measure in the transition of the new learning format during the COVID-19 pandemic (23).

Role conflict is something that can occur because someone is in a role that is contrary to the principles and the incompatibility between one role and another in their life (26). The results of this study were in accordance with a previous study (20) which shows that there was no relationship between conflict roles with job stress. However, it is different from previous study (27) which state that there is a relationship between role conflict and job stress. During COVID-19 pandemics, the teachers faced unavoidable change in teachers' work format intensified work overload, generated work–family balance conflicts and resulted in a negative effect on teachers (28).

Role ambiguity is defined as an individual's level of uncertainty about job expectations (29–32). Role ambiguity can occur when a worker does not have adequate information about his job (26). The results of this study were the same as recent findings (33) which also state the same thing, namely that there is a relationship between role ambiguity and job stress. The theory put forward by Cooper dan Davidson explains that role ambiguity is one of the main sources of job stress. Various things related to role ambiguity such as unclear roles and goals, lack of job clarity, and uncertainty related to job responsibilities have been shown to contribute to the incidence of job stress. (26) Role ambiguity was experienced by the teachers during the COVID-19 pandemics. Previous study showed that the teachers believe that the role of parents increased in distance learning and mention having hoped for their support. Others, mean- while, say that they provided

support to parents, particularly during the first days of lockdown (23).

CONCLUSION

These findings suggest role ambiguity of the public high school teachers during the COVID-19 pandemic become the major factor associated with job stress among public high school teachers in Jakarta. Recommendations for prevention and control of job stress are needed to reduce the risks that may occur for teachers to participate in solving problems faced by schools by conducting online discussions and asking for input from teachers. Schools need to carry out regular control and evaluation of teacher work, by conducting online morning briefings to ensure that all teachers have sufficient information regarding what they will be doing.

ACKNOWLEDGEMENTS

REFERENCES

1. Babatunde A. Occupational Stress: A Review on Conceptualisations, Causes and Cure. Econ Insights-Trends Challenges. 2013;65(3).
2. Landsbergis PA, Dobson M, LaMontagne AD, Choi BK, Schnall P, Baker DB. Occupational stress. Occupational and Environmental Health. 2017. 325–344 p.
3. Stravroula Leka, Amanda Griffiths TC. Work Organization and Stress. Prot Work ' Work World Heal. 2005;(3).
4. Akbar Z, Pratasiwi R. Resiliensi Diri Dan Stres Kerja Pada Guru Sekolah Dasar. JPPP - J Penelit dan Pengukuran Psikol. 2017;6(2):106–12.
5. Ekawarna dan Hendra sofyan. STRES PEKERJAAN PADA GURU SEKOLAH NEGERI. Kondisi Kerja Fis Dan Partisipasi dalam Pengambilan Keputusan Sebagai Stres Pekerj pada Guru Sekol Negeri Pendidikan, Jur Pengetahuan, Ilmu Jambi, Univ Pendidikan, Jur Pengetahuan, Ilmu Jambi, Univ. 2010;14(2):141–6.
6. ILO. Dalam menghadapi pandemi : Memastikan Keselamatan dan Kesehatan di tempat Kerja. 2020;
7. Tri SRC. Pengaruh Work From Home (WFH) Terhadap Kinerja Guru SD Negeri Dengkek 01 Pati Selama Masa Pandemi Covid-19. EduPsyCouns J Educ Psychol Couns. 2020;2(1):424–37.
8. Weken ME, Mongan AE, Kekenusa JS. Hubungan antara Beban Kerja, Konflik Peran, dan Dukungan Sosial dengan Stres Kerja Pada Guru di Sekolah Menengah Atas Negeri 1 Manado Pada Masa Pandemi COVID-19. 2020;1(2020):1–9.
9. Eickelmann B, Drossel K. Schule auf Distanz. Perspektiven und Empfehlungen für den neuen Schulalltag : eine repräsentative Befragung von Lehrkräften in Deutschland. 2020;34 S.
10. Federkeil L, Heinschke F, Jungmann T, Klapproth F. Teachers experiences of stress and their coping strategies during COVID - 19 induced distance teaching. J Pedagog Res. 2020;4(4):444–52.
11. MacIntyre PD, Gregersen T, Mercer S. Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. System. 2020;94(August):102352.
12. Košir K, Dugonik Š, Huskić A, Gračner J, Kokol Z, Krajnc Ž. Predictors of perceived teachers' and school counsellors' work stress in the transition period of online education in schools during the COVID-19 pandemic. Educ Stud. 2020;00(00):1–5.
13. World Health Organization. Sample Size Calculator [Internet]. [cited 2022 Mar 1]. Available from: https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/steps/sample-size-calculator.xls?sfvrsn=ee1f4ae8_2
14. Yehya A, Sankaranarayanan A, Alkhal A, Alnoimi H, Almeer N, Khan A, et al. Job satisfaction and stress among healthcare workers in public hospitals in Qatar. Arch Environ Occup Heal [Internet]. 2020;75(1):10–7. Available from: https://doi.org/10.1080/19338244.2018.1531817
15. Zaki M, Amalina N, Zainuddin, Huda, Rahman A, Hejar. Job Stress and Its Determinants among Academic Staff in a University in Klang Valley, Malaysia. Int J Public Heal Clin Sci. 2016;3(November):125–36.
16. Elshaer NSM, Moustafa MSA, Aiad MW, Ramadan MIE. Job Stress and Burnout Syndrome among Critical Care Healthcare Workers. Alexandria J Med [Internet]. 2018;54(3):273–7. Available from: https://doi.org/10.1016/j.ajme.2017.06.004
17. Cameron GD, Wagenfeld M, Danawi H, Gordon M, Heick R, Crommett A. Occupational Stress and Health Outcomes Comparison of Faculty Teaching in Online, On-Ground, and Mixed Working Environments. Pedagog Heal Promot. 2016;2(2):108–16.
18. Chikkala R, Edara S, Bhima P. Human Facial Image Age Group Classification Based On Third Order Four Pixel Pattern (TOFP) of Wavelet Image. Int Arab J Inf Technol. 2019;16(1):30–40.
19. Amalia R, Fithri NK, Bachtiar F. Hubungan antara Dukungan Keluarga terhadap Risiko Stres Kerja pada Pekerja Kereta Api. Indones J Heal Dev. 2020;2(1).
20. Wicaksono MN, Anggarini IM. Factors Relating to Work Stress on Workers in the Business Solution, Support and Service Delivery Division of PT Administration Medika Jakarta. J Ilm Kesehat. 2018;10(September):161–72.
21. Zavanya E, Ekawati, Jayanti S. Hubungan Job Demand, Job Control, Dan Usia Dengan Stres Kerja Pada Pekerja Konstruksi. J Kesehat Masy.

2019;7(4):54–60.

22. Pressley T, Ha C, Learn E. Teacher Stress and Anxiety During COVID-19: An Empirical Study. Sch Psychol. 2021;36(5):367–76.

23. Petrakova A V., Kanonire TN, Kulikova AA, Orel EA. Characteristics of Teacher Stress during Distance Learning Imposed by the COVID-19 Pandemic. Vopr Obraz. 2021;2021(1):93–114.

24. Taylor S., Letitia A., David O. Psikologi Sosial. Jakarta: Kencana; 2009.

25. Suci A. Relationship between Worker Characteristics, Workload and Social Support with Work Stress on Operational Officers in the Field of Fire Fighting at the Regional Disaster Management Agency and the Padang City Fire Department in 2015. University of Andalas; 2015.

26. Cox T, Griffiths A, Rial-Gonzalez E. Research on Work-related Stress. Luxembourg: European Agency for Safety and Health at Work; 2000.

27. Soltani I, Hajatpour S, Khorram J, Nejati MH. Investigating the effect of role conflict and role ambiguity on employees' job stress :Articulating the role of work-family conflict. Manag Sci Lett.

28. Lizana PA, Vega-Fernadez G. Teacher teleworking during the covid-19 pandemic: Association between work hours, work–family balance and quality of life. Int J Environ Res Public Health. 2021;18(14).

29. Baral R, Bhargava S. Work-family enrichment as a mediator between organizational interventions for work-life balance and job outcomes. J Manag Psychol. 2010;247–300.

30. Epie C. Managing time-based conflict across life domains in Nigeria: A decision making perspective. Ife Psychol. 2009;194–216.

31. Fayakinnu EA, Alo OA. Globalization and work: An insight from the Ghanaian and Nigerian women experience. Gend Behav. 2007;1129–61.

32. Akanji. Realities of Work Life Balance in Nigeria: Perceptions of Role Conflict and Coping Beliefs. Business, Manag Educ. 2012;248–63.

33. Satrini IDAK, Riana IG, Subudi IM. The Effect of Work Overload, Role Ambiguity and Organizational Culture on Work Stress. E-Jurnal Ekon dan Bisnis Univ Udayana. 2017;6(3):1177–204.

2013;3(7):1927–36.

Analysis Factors Related to Work Stress among Public High School Teachers in Jakarta during COVID-19 Pandemic

9 Student Paper

1%

10 Submitted to Universitas Lancang Kuning
Student Paper

1%

11 ejournal.fkm.unsri.ac.id
Internet Source

1%

12 Sholihatul Hamidah Daulay, Nurika Khalila Daulay, Abdul Halim Daulay, Reflina Reflina, Siti Maysarah, Dita Khairunnisa. "Online Learning Problems in the Covid-19 Pandemic for English Education Students", AL-ISHLAH: Jurnal Pendidikan, 2021
Publication

<1%

13 eprints.uthm.edu.my
Internet Source

<1%

14 www.jpmph.org
Internet Source

<1%

15 Kwanglim Seo, Evan Jordan, Kyle Maurice Woosnam, Choong-Ki Lee, Eun-Ji Lee. "Effects of emotional solidarity and tourism-related stress on residents' quality of life", Tourism Management Perspectives, 2021
Publication

<1%

16 Submitted to Universiti Teknologi MARA
Student Paper

<1%

17   Belinda Agyapong, Gloria Obuobi-Donkor, Lisa Burback, Yifeng Wei. "Stress, Burnout, Anxiety and Depression among Teachers: A Scoping Review", International Journal of Environmental Research and Public Health, 2022
Publication

<1 %

18   theses.gla.ac.uk
Internet Source

<1 %

19   www.turkiyeklinikleri.com
Internet Source

<1 %

20   Yasuhiko Deguchi, Shinichi Iwasaki, Akihiro Niki, Aya Kadowaki et al. "Relationships between Occupational Stress, Change in Work Environment during the COVID-19 Pandemic, and Depressive and Anxiety Symptoms among Non-Healthcare Workers in Japan: A Cross-Sectional Study", International Journal of Environmental Research and Public Health, 2022
Publication

<1 %

21   journal.fkm.ui.ac.id
Internet Source

<1 %

22   Submitted to CSU, Los Angeles
Student Paper

<1 %

23 Dewi Puspa Amalia, Muhammad Zakiy. "Working Period As A Moderating Variable Of Work Family Conflict, Work Stress, And Turnover Intention On Contraproductive Work Behavior (Case Study On Bca Syariah)", Perisai : Islamic Banking and Finance Journal, 2021
Publication

<1 %

24 dergipark.org.tr
Internet Source

<1 %

25 dinastipub.org
Internet Source

<1 %

26 www.tandfonline.com
Internet Source

<1 %

27 etd.uum.edu.my
Internet Source

<1 %

28 www.mdpi.com
Internet Source

<1 %

| Exclude quotes | On | Exclude matches | Off |
| Exclude bibliography | On | | |