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Mobbing and Social Network Analysis

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Abstract. The aim of this research is to find out the level of mobbing experience of teachers working in educational institutions and to determine the network characteristics of both the social networks of the organizations where mobbing behavior is common and the participants in these networks. The target population of the research consists of teachers working in a province in Türkiye. The sample of the population was determined by cluster sampling method. In total, 376 teachers in 30 schools were reached, but 11 questionnaires were removed during the pre-analysis data scanning phase, and the remaining 365 questionnaires were analyzed. "Negative Acts Questionnaire" and "Social Network Analysis Questionnaire" were used as data collection tools in the research. SPSS 21.0 and UCINET 6 statistical package programs were used for the analysis of the data obtained in the research, and "frequency", "mean" and "multi-network measurements" were used in data analysis. As a result of the research, it is determined that the average level of mobbing experience of teachers in the organizations participating in the research is low. In addition, three organizations where mobbing is common is determined and the social network structures of these organizations is examined. It is observed that the average degrees and network densities are generally low in these organizations. In addition, these organizations generally show a low level of transitivity. In addition, it is evaluated that some of the participants in the social networks of these organizations may be victims of mobbing, considering that they have a low overall degree. As a support to this finding, it is observed that the participants in question have higher internal and external closeness, low betweenness and low eigenvector values compared to other participants in the organization.

Keywords. Mobbing, Social Network, Social Network Analysis

1. Introduction

When the studies on organizational life are looked through, it is seen that organizational employees experience stress (Mathisen, Einarsen & Mykletun, 2011), anxiety (Vignoli, Muschalla & Mariani, 2017; Jones, Latreille & Sloane 2016), fear (Muschalla & Linden, 2009; Haines, Williams & Carson, 2002), anger (Pfeifer, 2017; Sloan 2012) and bullying (Roscigno, Lopez, & Hodson, 2009) in organizational life. These undesirable situations encountered in organizational life have been examined by researchers for years as they cause problems for the organization itself and all its stakeholders. These undesirable situations encountered in organizational life are discussed in research that cause problems for the organization itself and all its stakeholders.

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Regarding these negativities, the management style (Magie and Upenieks, 2017); workload (Stich, Tarafdar, Cooper and Stacey, 2017); uncertainty caused by a competitive environment (Fletcher et al., 2008); interpersonal conflicts (Mathisen et al., 2011); disorders in employee health (Vignoli et al., 2017); the working hours of the job (Jones et al., 2011); emotional intelligence (Damerdash, 2012); possible crises (Giorgi et al., 2015); the unfairness of the wages (Preifer, 2017); unethical behavior and disrespect in the workplace (Booth et al., 2017); relationships in the workplace (Stich et al., 2017) are effective.

When the studies in educational organizations on the subject are examined, it is seen that factors like burnout (Strauss & Daniels, Langher, Caputo & Ricci, 2017), teacher unhappiness (Mooij, 2008), anxiety (Mahan, Mahan, Park, Shelton, Brown & Weaver, 2010) and stress (Yorimitsu, Houghton & Taylor, 2014; Ferguson, Mang & Frost, 2017; Saeki, Segool, Pendergast & Von Der Embse, 2018; Stočkus & Adaškevičienė, 2013) are effective. Based on these research, the excess of stress draws attention among these factors affecting teachers who are one of the most important stakeholders of education.

Workload (Ferguson et al., 2017), socio-economic difficulties (Strauss & Daniels, 2013), student behavior and discipline problems (Ferguson et al., 2017), professional relationships (Okeke & Dlamini, 2013), working conditions (Lakhwinder & Harpreet, 2015), problems with parents (Strauss & Daniels, 2013) and mobbing (Okçu & Çetin, 2017; Yaman, 2015; Çelebi & Taşçı Kaya, 2014) are found to be effective factors of stress among teachers. Studies have also shown that mobbing is positively related to stress (Yaman, 2015, Celep & Eminoğlu, 2012; Karakuş & Çankaya, 2012; Cemaloğlu, 2007) and teachers and administrators working in primary schools occasionally (Daşçı & Cemaloğlu, 2015) encounter mobbing behavior.

In addition, the group, in other words, social network characteristics of an organization can reveal whether an individual will experience negative behaviors in the organization (Caviglione, Coccoli & Merlo, 2013). Therefore, the social network structures of the organizations and the network characteristics of the members of the organization in these networks also gain importance. These features can provide us with various information and clues about the internal structure of organizations and what is happening in organizations.

1.1. The Present Study

When the literature is looked through, mostly descriptive, relational, or correlational studies are found on mobbing. In these studies, questionnaires or qualitative interviews are used as data collection techniques. Since these techniques are mostly based on perception, in-depth information about mobbing cannot be reached based on these studies. With "Social Network Analysis", organizational network/networks can be revealed through employees in the organization or organizations. From this point of view, to reveal the situation of being exposed to mobbing behavior in the institution, Negative Acts Questionnaire (NAQ) was applied to the teachers working in the schools determined by the researchers. And then “Social Network Analysis” was carried out to reveal the social relations in three organizations where mobbing behavior is more common. In this context, the current research is aimed at seeking the answer to the following question:

1. What is the mobbing experiencing level of teachers working in educational institutions?
2. What are the social network characteristics of the three schools with the highest level of mobbing?

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3. What are the social network characteristics of the teachers in the three schools with the highest level of mobbing?

2. Methodology

2.1. Research *Design*

This research is aimed to reveal the social network characteristics of schools where teachers are likely to experience mobbing by using the "NAQ" and "Social Network Analysis". Therefore, this research is mixed methods research.

2.2. Procedure *and Participants*

In the first step of the study, NAQ was applied to teachers working in 30 schools (primary, secondary, and high schools) determined by using cluster sampling method) (n=376) in a province in Türkiye. After the collection of questionnaires, 11 of them were removed during the pre-analysis data scanning phase, and the remaining 365 questionnaires were analyzed.

In the second part of the study, after the evaluation of the NAQ, three schools with the highest mobbing scores were selected and the "Social Network Analysis Questionnaire" which was developed by the researcher was applied to the teachers working in these schools. Teachers in these school were coded as "N1 – N2 – N3 ….. N40".

2.3. Instrumentation

Negative Acts Questionnaire. The scale was developed by Einarsen and Raknes (1997) and then adapted into Turkish by Cemaloğlu (2007). The scale is a 21-itemed, unidimensional self-assessment scale consisting of 5 items in the Likert type, ranging from "Never" (1) to "Everyday" (5). The Cronbach's Alpha internal consistency reliability coefficients of the scale were calculated as .83 for whole scale. In this study, that value is .92.

Social Network Analysis Questionnaire. The questionnaire was developed by the researchers. In the first part of the questionnaire, there were questions about the participant's personal information (age, professional seniority, branch, etc.), while in the second part, there were three questions to reveal the social network of the school in question. Participants were asked to write the names of three of their colleagues that they thought appropriate for each question. Respondents were free to specify no names, one or two names, or more than three names for each question.

The first question was "Please indicate the names of the first three colleagues you will consult for advice if you have any problems at your school", and it was aimed to reveal the people that the participant would ask for help in an official problem in school life. The second question was "You want to conduct a project in your school. Please indicate the names of the first three colleagues from your school that you want to manage and continue the project together.". It was aimed to determine the people with whom the participant would like to work together in any study which is optional within the school life. The third question was "You are organizing a picnic on the weekend. Please indicate the names of your first three colleagues from your school (individually or as a family) that you will invite." It was aimed to determine how much the friendships made with colleagues in school life were transferred to informal environments outside of the school.

2.4. Data Analysis

SPSS 21 software was employed for the analysis of the data obtained from the NAQ, and UCINET 6 software was employed for the evaluation of the "Social Network Analysis

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Questionnaire". The statistics applied to determine the level of mobbing of teachers in the schools sampled in the research and to reveal the three schools with the highest mobbing scores were carried out in the SPSS 21 program. Afterwards, the statistics applied to determine the social network structures of these three schools and the social network characteristics of the teachers in these schools were carried out in the UCINET 6 program.

3. Results

3.1. Evaluation of Mobbing per School

Table 1
Mobbing Levels of the Teachers Participating in the Research per Schools (First 3 Schools)

School (Coded)	n	x̄	s
School 1	13	1,5873	,966
School 2	13	1,5333	,414
School 3	14	1,517	,433
Total (In general)	365	1,16	,297

Based on the data obtained, three schools with higher mobbing averages compared to other schools were selected for research to have their social networks studied. As is seen in table 1, the average mobbing level of the first school is (x̄) 1.58, the second school is (x̄) 1.53 and the third school is (x̄) 1.51. In other words, mobbing is experienced more frequently in these three schools compared to other schools. When the standard deviation values are examined, the most homogeneous evaluation among the schools was realized in the "school 2" (S= ,414), and the most heterogeneous evaluation was in the "school 1" (S= ,966). When a total of 30 schools included in the study are examined, the average mobbing level (x̄) is 1.16 and the standard deviation value is (S= .297). In other words, mobbing in schools is not experienced intensely in general and the level of mobbing among schools show homogeneous structure.

3.2. Characteristics of Schools' Social Network Structures

Table 2
Structural Characteristics of Social Networks of the Selected Schools

School	Question	Network Size	Ties	Average Degree	Density	Transitivity
School 1	1	13	31	2,385	0,199	0,258
	2	13	33	2,538	0,212	0,211
	3	13	33	2,538	0,212	0,371
School 2	1	13	32	2,462	0,205	0,184
	2	13	51	4,25	0,386	0,546
	3	13	54	4,5	0,409	0,557
School 3	1	14	39	2,786	0,214	0,294
	2	14	38	2,714	0,209	0,232
	3	14	38	2,714	0,209	0,333

As is seen in table 2, 31 ties in the first question and 33 ties in both the second and the third questions are found between 13 actors in school number one. Since the network in question

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is a directed network, the total number of ties that can occur in the network (number of actors x number of actors – 1) is 156. In a social network, density can take a value between 0 and 1 and is a value that shows how connected the network is within itself. In this context, for school number one, the network density (number of ties / total number of ties) in the first question is 0,199, and it is 0,212 in both second and the third questions. In other words, the network densities are low, which indicates that the network is low connected within itself.

Degree is the number of direct ties an actor has with other actors. Considering the degree values, the average degree for school number one is 2,385 in the first question and 2,538 in the second and third questions. In other words, considering that the teachers participating in the research could specify three teachers for each question, an average grade below 3 indicates that there is a communicative problem in the school in question.

Transitivity is an important value in social networks and works with the logic of "my friend's friend is my friend". A triangle is formed if nodes (actors) A and B, nodes (actors) B and C, and nodes (actors) C and A are connected in a network. Transitivity value is obtained by multiplying the number of the triangles in a network by 3 divided by the number of connected triple nodes in the network. It can take a value between 0 and 1. In a social network, this value is usually between 0.3 and 0.6 (Al-Taie & Kadry, 2017, p.4; Knoke & Young, 2020). High transitivity can be interpreted as the network contains internally densely interconnected communities or groups of nodes. In school number one, the transitivity value is 0.258 for the first question, 0.211 for the second question, and 0.371 for the third question. In other words, transitivity values of the organization are low, and this can be interpreted as the school does not contain densely interconnected communities or node groups within itself.

In school number two, 32 connections in the first question, 51 connections in the second question and 54 connections in the third question are found among 13 actors. Since the network in question is a directed network, the total number of ties that can occur in the network (number of actors x number of actors – 1) is 156. In this context, for school number two, the network density (number of ties / total number of ties) in the first question is 0,205, 0,386 in the second question and 0,409 in the third question. In other words, the network densities are low, which indicates that the network is low connected within itself. Considering the degree values, the average degree for school number two is 2,462 in the first question and 4,25 in the second question and 4,5 in the third question. In school number two, the transitivity value is 0,184 for the first question, 0,546 for the second question, and 0,557 for the third question. In other words, transitivity values of the organization are low, and this can be interpreted as the school does not contain densely interconnected communities or node groups within itself.

In school number three, 39 connections in the first question and 38 connections in both the second and the third questions are found among 14 actors. Since the network in question is a directed network, the total number of ties that can occur in the network (number of actors x number of actors – 1) is 182. In this context, for school number three, the network density (number of ties / total number of ties) in the first question is 0,214, and it is 0,209 in both second and the third questions. In other words, the network densities are low, which indicates that the network is low connected within itself. Considering the degree values, the average degree for school number three is 2,786 in the first question and 2,714 in the second and the third questions. In other words, considering that the teachers participating in the research could specify three teachers for each question, an average grade below 3 indicates that there is a communicative problem in the school in question. In school number three, the transitivity value is 0,294 for the first question, 0,232 for the second question, and 0,333 for the third question. In other words,

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transitivity values of the organization are low, and this can be interpreted as the school does not contain densely interconnected communities or node groups within itself.

3.3. Characteristics of Actors (Nodes) in the Social Network

Table 3
Multiple Whole Network Measures (School 1)

Node	Out Degree	In Degree	Total Degree	Out Closeness	In Closeness	Betweenness	Eigenvector
N1	11	12	23	23	22	13.805	0.423
N2	9	11	20	22	21	26.688	0.267
N3	9	9	18	23	23	11.840	0.345
N4	9	8	17	23	26	10.333	0.302
N5	9	7	16	19	30	10.217	0.242
N6	8	8	16	29	24	2.905	0.329
N7	5	10	15	24	26	9.857	0.314
N8	9	6	15	22	26	17.467	0.258
N9	9	5	14	18	27	14.955	0.204
N10	9	3	12	25	27	7.867	0.268
N11	6	4	10	26	28	2.567	0.138
N12	4	5	9	22	34	3.500	0.149
N13	0	9	9	60	22	0.000	0.231

As is seen in table 3, "N1" has the highest total degree (degree=23) and "N12" and "N13" has the lowest total degree (degree=9). In other words, while the participant who is the most communicated in the network is “N1”, the loneliest participants are “N12” and “N13”.

Closeness centrality is a measure of how close a node is to all other nodes in the network. It is calculated as the average of the shortest path length from a node to all other nodes in the network (Golbeck, 2013, pp.25-44). While calculating closeness centrality, the lowest score indicates the highest closeness, while the highest score indicates the lowest closeness. In other words, a lower closeness score means a more central and a more important position in the network for a node (Hansen, Shnedierman & Smith, 2011, pp.69-78). As is seen in table 3, “N13” has the lowest outer closeness (out closeness =60) and “N12” has the lowest internal closeness (in closeness =34). N13” is the node that must travel the most (has the most difficulty) when s/he wants to reach another node in the network, while “N12” is the node that is least desired to be reached in the network.

Betweenness (centrality) is a measure of how many times a node in the network connects two other nodes as the shortest path (Prell, 2012, p.104). In other words, it is used to detect nodes affecting roaming in a network. As is seen in table 3, “N2” is the most effective node in providing the connection between the nodes in the network (betweenness=26,688), while "N13" has no such effect (betweenness=0.000).

Eigenvector (centrality), like degree centrality, indicates how well a node is connected to other nodes in the network and how many other connections its connections have (Aggrawal & Anand, 2022, p.57). In other words, eigenvector centrality provides information about how qualified a node's degree is and how important the node is in the network. As is seen in table 3, the node with the highest eigenvector value (eigen=0.423) is "N1" and the lowest one

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(eigen=0.149) is "N12". Based on this finding, it can be said that "N1" is the most qualified and important node in the network, while "N12" is the node with the least impact.

Table 4
Multiple Whole Network Measures (School 2)

Node	Out Degree	In Degree	Total Degree	Out Closeness	In Closeness	Betweenness	Eigenvector
N14	9	18	27	20	15	18.833	0.419
N15	6	17	23	21	15	27.083	0.334
N16	9	10	19	20	19	17.417	0.279
N17	8	9	17	21	18	15.683	0.276
N18	9	8	17	20	19	8.667	0.359
N19	10	6	16	22	22	4.583	0.333
N20	9	7	16	20	19	10.217	0.240
N21	9	6	15	20	24	2.683	0.262
N22	8	6	14	19	21	10.167	0.252
N23	9	5	14	23	26	1.667	0.332
N24	4	4	8	23	25	3.250	0.087
N25	6	2	8	24	25	1.750	0.086
N26	3	1	4	25	30	0.000	0.062

As is seen in table 4, “N14” has the highest total degree (degree=27) and “N26” has the lowest total degree (degree=4). In other words, while the participant who is the most communicated in the network is “N14”, the loneliest participants is “N26”.

“N26” is the node with both the lowest outer closeness (out closeness=25) and the lowest internal closeness (in closeness=30). In other words, “N26” is the node that must travel the most when s/he wants to reach another node in the network. And “N26” is also the least desired to be reached in the network.

It is also seen that “N15” is the most effective node in providing the connection between the nodes in the network (betweenness=27,083), while “N26” has no such effect (betweenness=0.000). The node with the highest eigenvector value (eigen=0.419) is “N14”, and the lowest (eigen=0.062) is “N26”.

Table 5
Multiple Whole Network Measures (School 3)

Node	Out Degree	In Degree	Total Degree	Out Closeness	In Closeness	Betweenness	Eigenvector
N27	9	13	22	21	22	8.301	0.300
N28	9	12	21	24	22	4.992	0.298
N29	9	11	20	22	22	6.700	0.269
N30	9	10	19	22	22	10.308	0.254
N31	9	9	18	18	28	14.983	0.290
N32	9	9	18	20	22	13.810	0.300
N33	7	10	17	24	23	6.896	0.358
N34	9	8	17	22	25	14.988	0.231
N35	9	8	17	20	24	8.143	0.278

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N36	9	7	16	21	25	10.373	0.285
N37	9	7	16	21	26	3.827	0.277
N38	9	5	14	22	23	7.095	0.225
N39	9	3	12	23	26	1.583	0.198
N40	0	3	3	52	23	0.000	0.060

As is seen in table 5, “N27” has the highest total degree (degree=22) and “N40” has the lowest total degree (degree=3). In other words, while the participant who is the most communicated in the network is “N27”, the loneliest participants is “N40”.

N40” is the node with the lowest outer closeness (out closeness=52), and “N31” is the nodes with the lowest internal closeness (in closeness=28). In other words, "N40" is the node that must travel the most when s/he wants to reach another node in the network while "N31" is the node that is least desired to be reached in the network.

It is also seen that “N34” is the most effective node (betweenness=14.988) in providing the connection between the nodes in the network, while “N40” has no such effect (betweenness=0.000). The node with the highest eigenvector value (eigen=0,300) is “N27”, and the lowest node (eigen=0,060) is “N40”.

4. Discussion and Conclusion

Mobbing is a situation that every person experiences and encounters from time to time or constantly in his life. However, when mobbing victims are considered, some of the victims unfortunately do not even know that the situation they are facing with is mobbing. Although it is very important to reveal and research mobbing, and to identify mobbing actors (victim, bully, spectator, etc.), it is not an easy task because of the negativity of the concept of mobbing itself.

In this study, first, "NAQ" was applied to the teachers working in 30 schools which were selected using the cluster sampling method in a province in Türkiye and then the three schools with the highest mobbing scores were selected. Afterwards, the "Social Network Analysis Questionnaire" prepared by the researchers was applied to the teachers working in this schools. The schools in question were discussed in three aspects (communication in an official situation within the school, communication in a non-compulsory situation in the school and communication outside the school) with three questions, and in addition to this, the network structures of the schools were also examined.

This research is aimed to find answer to the following questions: “What is the mobbing experiencing level of teachers working in educational institutions?”; “What are the social network characteristics of the three schools with the highest level of mobbing? “and “What are the social network characteristics of the teachers in the three schools with the highest level of mobbing?”.

As a result of the research, the level of mobbing experience of teachers working in educational institutions has been found to be low on average. In addition, the level of mobbing among schools shows a homogeneous structure. From this point of view, on average, it can be said that teachers are not exposed to high levels of mobbing behaviors in the institutions they work. In addition, on average, this situation is seen homogeneously among schools. However, due to the nature of mobbing, the fact that the victims may be one or several people has led to the necessity of approaching the issue in an organizational sense in this context rather than averages. From this point of view, as a result of the social network analyzes applied to the three schools with the highest mobbing behavior, it is determined that the answers given to all questions in these schools are below the average level that can occur. This situation is an

indication that there is a communicative problem in schools. Supporting this finding, the density values, which indicate how connected the network is within itself, are also low in these schools. In addition, these schools have low network transitivity. This situation can be interpreted as schools do not contain densely interconnected communities or node groups within themselves. In social networks, individuals are evaluated within their group characteristics and dynamics. In parallel with our research findings, Mona & Irwansyah (2016) stated in their research that there is a low level of network density in an organization where mobbing is experienced.

Another finding of the research is that the participants with a low degree in the network also generally have the lowest internal and external closeness, betweenness and eigenvector values in the network. This is an indication that the participants in question are in a sense isolated in the network. The isolated status of these people in the network is an indication that they may be victims of mobbing. Veenstra et al. (2005) found in their research that victims are much more isolated in organizations than mobbing followers.

As a result, when the structural features of the social networks of the three schools, where mobbing levels high compared to the others, various problems are observed in the network structures. In addition, based on the network values, it can be evaluated that the teachers who have the lowest degree, betweenness, inner closeness, outer closeness, and eigenvector values in the network, in other words, who are isolated in a sense, may be victims of mobbing. In order to reveal this situation more clearly and to determine the mobbing actors in case of a mobbing situation, it is recommended by the researchers to interview the participants in question.

References

[1] Aggrawal, N., & Anand, A. (2022). *Social Networks Modelling and Analysis.* Florida:Taylor&Francis.

[2] Al-Taie, Z., N. & Kadry, S. (2017). Python for Graph and Network Analsis. Switzerland:Springer

[3] Booth, J., Ireland, J. L., Mann, S., Eslea, M., & Holyoak, L. (2017). Anger expression and suppression at work: causes, characteristics and predictors. International Journal Of Conflict Management (Emerald), 28(3), 368-382.

[4] Caviglione, L., Coccoli, M., & Melo, A. (2013). Social Network Engineering for Secure Web Data and Services. USA:IGI Global.

[5] Celep, C., & Eminoglu, E. (2012). Primary School Teacher's Experience with Mobbing and Teacher's Self-Efficacy Perceptions. Procedia - Social And Behavioral Sciences, 46(4th WORLD CONFERENCE ON EDUCATIONAL SCIENCES (WCES-2012) 02-05 February 2012 Barcelona, Spain), 4761-4774.

[6] Cemaloğlu, N. (2007). The Relation Between School Administrators' Leadership Styles and Bullying. Hacettepe University Journal of Education, (33), 77.

[7] Çelebi, N., T., & Taşçı Kaya, G., T. (2014). Mobbing Experience by Teachers: A Qualitative Research. Journal of Education and Humanities: Theory and Practice. 5(9), 43

[8] Damerdash, F., S., A. (2012). Emotional intelligence: Its role in managing stress and anxiety in elementary school teachers at workplace. International Journal of Psycho-Educational Sciences (IJPES), (1), 22.

[9] Daşçı, E. & Cemaloğlu, N. (2015). The Relationship Between Leadership Styles of Elementary School Principles and Mobbing that Teachers Experience. Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, (19), 129.

[10] Einarsen, S., Raknes, B.I. (1997), Harassment at Work and Victimization of Men. Violence and Victims, 12, pp. 247-263.
[11] Ferguson, K., Mang, C., & Frost, L. (2017). Teacher Stress and Social Support Usage. Brock Education: A Journal Of Educational Research And Practice, 26(2), 62-86.
[12] Fletcher, T., D., Major, D., A.., & Davis D., D. (2008). The Interactive Relationship of Competitive Climate and Trait Competitiveness with Workplace Attitudes, Stress, and Performance. Journal Of Organizational Behavior, (7), 899.
[13] Giorgi, G., Arcangeli, G., Mucci, N., & Cupelli, V. (2015). Economic stress in the workplace: The impact of fear of the crisis on mental health. Work, 51(1), 135-142.
[14] Haines, J., Williams, L., C., & Carson, M., J.. (2002). Workplace Phobia: Psychological and Psychophysiological Mechanisms. International Journal Of Stress Management, (3), 129.
[15] Hansen, D., H., Shneiderman, B., & Smith, M., A. (2011). *Analyzing Social Media Networks with NodeXL*. Amsterdam:Morgan Kaufmann
[16] Jones, M. K., Latreille, P. L., & Sloane, P. J. (2016). Job Anxiety, Work-Related Psychological Illness and Workplace Performance. British Journal Of Industrial Relations, 54(4), 742-767.
[17] Jones, M., K., Latreille, P., L. & Sloane, P., J. (2011). NILS Working paper no 180. Job anxiety, work-related psychological illness and workplace performance. NILS Working Papers,
[18] Karakuş, M., T., & Çankaya, İ., T. (2012). Examining a Model related to Mobbing Incurred by Teachers. Hacettepe University Journal of Education, (42), 225.
[19] Knoke, D., & Yang, S. (2020). Social Network Analysis. Londan:SAGE
[20] Lakhwinder Singh, K., & Harpreet, S. (2015). Identification of Stressors at Work: A Study of University Teachers in India. Global Business Review, (2), 303.
[21] Magie, W., & Upenieks, L. (2017). 'Stuck in the Middle with You?' Supervisory Level and Anger about Work. Canadian Review Of Sociology, 54(3), 309.
[22] Mahan, P., Mahan, M., Park, N., Shelton, C., Brown, K., & Weaver, M. (2010). Work environment stressors, social support, anxiety, and depression among secondary school teachers. AAOHN Journal, 58(5), 197-205.
[23] Mathisen, G., E., Einarsen, S., & Mykletun, R. (2011). The Relationship Between Supervisor Personality, Supervisors' Perceived Stress and Workplace Bullying. Journal of Business Ethics, (4), 637.
[24] Mona, N., & Irwansyah, I. (2016). Contagion mechanism on social network (Bullying on Teenage Peer Group). The Social Sciences, 11 (19).
[25] Mooij, J. (2008) Primary education, teachers' professionalism and social class about motivation and demotivation of government school teachers in India. (n.d). Internatıonal Journal Of Educatıonal Development, 28(5), 508-523.
[26] Muschalla, B., & Linden, M. (2009). Workplace phobia - A first explorative study on its relation to established anxiety disorders, sick leave, and work-directed treatment. Psychology, Health & Medicine, 14(5), 591-605.
[27] Okçu, V., & Çetin, H. (2017). Investigating the Relationship among the Level of Mobbing Experience, Job Satisfaction and Burnout Levels of Primary and Secondary School Teachers. Universal Journal Of Educational Research, 5(1), 148-161.
[28] Okeke, C., & Dlamini, C. (2013). An empirical study of stressors that impinge on teachers in secondary schools in Swaziland. South African Journal Of Education, 33(1).
[29] Pfeifer, C. (2017). 'Have you felt angry lately?': A note on unfair wage perceptions and the negative emotion of anger. Bulletin of Economic Research, 69(2), 124-137

[30] Prell, C. (2012). *Social Network Analysis. History, Theory & Methodology.* Los Angeles:SAGE
[31] Roscigno, V. J., Lopez, S. H., & Hodson, R. (2009). Supervisory Bullying, Status Inequalities and Organizational Context. Social Forces, 87(3), 1561.
[32] Saeki, E., Segool, N., Pendergast, L., & Von der Embse, N. (2018). The Influence of Test-Based Accountability Policies on Early Elementary Teachers: School Climate, Environmental Stress, and Teacher Stress. Psychology In The Schools, 55(4), 391-403.
[33] Sloan, M. M. (2012). Controlling Anger and Happiness at Work: An Examination of Gender Differences. Gender, Work & Organization, 19(4), 370-391.
[34] Stich, J., Tarafdar, M., Cooper, C. L., & Stacey, P. (2017). Workplace stress from actual and desired computer-mediated communication use: a multi-method study. New Technology, Work & Employment, 32(1), 84-100.
[35] Stočkus, A., & Adaškevičienė, E. (2013). Pecularities of stressors experienced by physical education teachers at work. / kūno kultūros mokytojų darbe patiriamų stresorių ypatumai. Education. Physical Training. Sport, 90(3), 62-69.
[36] Strauss E., & Daniels, D. (2013). "Dis 'n tydbom ... die skip gaan sink": Emosionele welsyn van Hoërskool-opvoeders in die Helderberg-area van die Wes-Kaap. Tydskrif Vir Geesteswetenskappe, 53(3), 391-403.
[37] Veenstra, R., Lindenberg, S., Oldehinkel, A., Winter, A., Verhulst, F., & Ormel, J. (2005). Bullying and Victimization in Elementary Schools: A Comparison of Bullies, Victims, Bully/Victims, and Uninvolved Preadolescents. Developmental psychology. 41. 672-82.
[38] Vignoli, M., Muschalla, B., & Mariani, M. G. (2017). Workplace Phobic Anxiety as a Mental Health Phenomenon in the Job Demands-Resources Model. Biomed Research International, 1-10.
[39] Yaman, E . (2015). Mobbing and Stress. International Journal Of Progressive Education, 11 (2), 6-13.
[40] Yorimitsu, A., Houghton, S., & Taylor, M. (2014). Operating at the Margins While Seeking a Space in the Heart: The Daily Teaching Reality of Japanese High School Teachers Experiencing Workplace Stress/Anxiety. Asia Pacific Education Review, 15(3), 443-457.