

The Effect of Gender and Seniority on the Perceptions of Organizational Justice of Teachers in Turkey: A Meta-analysis*

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ABSTRACT The aim of this study, was to identify the effect of gender and seniority, on the perceptions of the organizational justice of teachers who work in Turkey. Within the scope of this research, and concerning the perceptions of organizational justice of teachers, among MA theses, PhD dissertations, and research articles deemed appropriate based on inclusion criteria, 35 studies regarding gender variable, and 22 studies regarding seniority variable, were evaluated. As one of the methods used to synthesize research results, the meta-analysis method was the method used in this research. In the research, it was discovered that among the personality variables, seniority and gender, had little effect on the perceptions of the organizational justice of the teachers. In the result obtained from the moderator analysis made in accordance with the gender variable; the moderator effects of the educational stage, branch, and the gender of the teachers, were determined.

INTRODUCTION

In the dictionary of the Turkish Language Association (TDK), the word “justice” is defined as “being appropriate for rights and remedies; looking after one’s rights; righteousness; giving everybody the right and privilege appropriate to each specific person; and, enabling everybody to use the rights guaranteed by laws” (TDK 2015). As an important variable of organizational behaviour, the notion of justice is related to treating equals in an equal way (Basar and Sýgrý 2015; Erden and Erden 2009). According to Adams’s Equity Theory, individuals decide whether they are being treated equally or not, first, by checking the rate between the contributions they make to the organization and the gains they acquire. And then, they clarify their perceptions, by evaluating these rates in comparison with the contribution-gain rates of other people. As a result of this comparison, individuals search for equality (Greenberg 1990; Kilic 2013a; Yilmaz 2010; Yurur 2005).

Organizational Justice (OJ)

Derived from Adams’s Equity Theory, the notion of OJ is frequently handled as a research

subject in fields, such as human resource management, organizational culture, and organizational behaviour. OJ deals with how the decisions and practices of the administrative level of an organization are perceived by the employees, and the perceptions of the employees on how they are being treated on an equal basis (Blakely et al. 2005; Eskew 1993). Individuals pass judgment on whether processes, mechanisms, duties and rewards in an organization, and the behaviour exhibited towards them are the same among all employees or not; and, as a result of this judgment, they develop an attitude towards the organization and hence, their duties. In the literature, OJ is generally handled in three dimensions (Cohen-Charash and Spector 2001; Greenberg 1990; Robbins and Judge 2012);

- *Distributive Justice*: This is the perception regarding equal sharing of rewards and resources among the employees. Distributive justice, is the justice perceived by an employee which is a consequence of the comparison he/she made between the outcomes related to the job (such as the rewards, duties, and responsibilities), which he/she acquires in return for his/her contributions to the organization, and the contribution levels of other employees and the outcomes they acquire.
- *Procedural Justice*: Procedural justice is related to how and in what accordance the rewards to be given to each employee are determined by the organization, and it is also related to how the decision processes

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and procedures used in the distribution of these rewards are perceived by the employees, as equal.

- *Interactional Justice*: Interactional justice is the perception of an individual with regards to how reputably, concernedly, and respectfully, he/she is treated (Erturk 2011).

OJ Within the Context of Different Variables

The relationships between OJ and organizational citizenship (Bas and Senturk 2011; Karriker and Williams 2009), organizational commitment (Ay 2013; Babaoglan and Erturk 2013), organizational trust (Bas and Senturk 2011; Yilmaz and Altinkurt 2012), leadership (Armagan and Erzen 2014; Kazanci 2010), and job satisfaction (Elma 2013), are handled within the context of different educational levels and variables. According to the results of a meta-analysis study covering 183 researches about OJ, it was discovered that a relationship existed between all sub-divisions of OJ and job satisfaction, organizational commitment, organizational citizenship behaviour, cease of employment, and evaluation of performance and authority (Colquitt et al. 2001). In most of the domestic and foreign researches made about OJ, it has been inferred that the strong perceptions of OJ of the employees, positively influence the variable which is relatively being researched. In this context, it becomes important to identify the personal and occupational characteristics, and external factors, that influence the perceptions of OJ of teachers in schools (Aydin and Karaman-Kepenekci 2008). The perceptions of OJ of teachers in schools, enable them to trust the institution they work for; and, to contribute to the creation of a positive organizational culture (Hoy and Tarter 2004; Ozgan 2011).

In some researches made in the literature (Celik 2011; Guzelyurt 2014), it was observed that the perceptions of teachers in relation to OJ were positive for the benefit of males. In some conducted researches (Altinkurt and Yilmaz 2012; Celik 2011), on the other hand, it was observed that there was no significant difference between the perceptions of OJ by the male and female teachers. In the researches conducted by Nartgun and Isleyici (2014), and Pirali (2007), a difference for the benefit of females, was observed. In the study carried out by Yilmaz (2010), while the perceptions of OJ of teachers varied in accordance with age, seniority, and the number of stu-

dent variables, they did not vary in accordance with gender, branch, educational level, and the number of teachers variables. In the research conducted by Ozgan (2011), he concluded that a medium level positive and significant relationship between personal and occupational variables, and the perceptions of OJ of teachers, existed. In the meta-analysis study covering the researches conducted about OJ between 2005-2012 by Altinkurt et al. (2015), they observed that genders, seniorities, and branches of teachers, had a low level effect on their perceptions of OJ.

With the development of measuring tools related to the perception of OJ in educational institutions, the number of researches has increased (Hoy and Tarter 2004). In line with this improvement, both in Turkey and all around the world, the subject of OJ has become one of the most researched subjects in the education sector; and, it has been handled with its various characteristics (Altinkurt et al. 2015). However, the meta-analysis studies dealing with the effects of personal and occupational characteristics on the perception of OJ of teachers, are not sufficient. It is important to be able to compare both internationally and nationally, the meta-analysis studies carried out in relation to this subject (Altinkurt et al. 2015; Jepsen and Rodwell 2007). Yilmaz (2010) and Altinkurt et al. (2015) assert that within the context of the different results of the studies carried out in relation to OJ, it is necessary to synthesise these results, and to carry out meta-analysis studies. In recent years, the number of the studies about the opinions of teachers with regard to OJ has increased; therefore, it is necessary for these results to be compiled, synthesised, and a common outcome concluded, by taking the number of samples into consideration. Also, it is important to associate the conducted meta-analysis results.

Objectives

The aim of this research was to identify the effects of gender and seniority variables on the perceptions of OJ of teachers in Turkey.

METHODOLOGY

In this research, with the aim of identifying the effects of gender and seniority variables on OJ perceptions of teachers, a meta-analysis of the researches conducted in Turkey with regard to OJ, was made.

Research Model

As one of the methods used to synthesise research results, the meta-analysis method, formed the pattern of this research (Hartung 2008).

Data Collection

Masters theses, PhD dissertations, and articles on the perceptions of OJ of teachers in Turkey, constituted the basic source of data for this research. To access the relevant studies, keywords such as “örgütsel adalet” and “organizational justice” were scanned, using databases such as YOK National Thesis Archive, EBSCO, Scencedirect, Proquest, Tübitak ULAKBIM, Web of Science, ERIC, and Google Scholar. The deadline specified for the included researches was May 2015. After the literature review, among 47 studies carried out with regard to the research topic, 35 studies were deemed appropriate, based on the inclusion criteria. In determining the studies to be included in the research, the following inclusion criteria were adopted:

- (i) Research methods used in the studies should be appropriate, and, the studies should include necessary statistical data for meta-analysis,
- (ii) They should be published or unpublished MA theses, PhD dissertations, and research articles,
- (iii) They should be about the identification of the perceptions of OJ of teachers in Turkey,

Within the scope of the criteria given above, the data concerning the numbers and sample sizes of the included studies, are given in Table 1. 35 of the researches were included with regards to the gender variable of OJ, and 22 of the researches were included with regards to the seniority variable.

Since they were carried out on different samples (manager, faculty members), and they did not have the necessary statistical data for the meta-analysis, 12 studies were not included in the research. The sample of this research is limited to 35 studies, and is based on the findings of

the MA theses, PhD dissertations, and research articles conducted in Turkey on this subject, between the years 2007 and 2015.

Reliability of the Research

In the research, before the meta-analysis, a coding protocol concerning the identity, content, and data of the research, was created, to help in deciding the studies that would be included in the meta-analysis with regard to OJ. Year of the research, branches of teachers, gender of the researcher, location of the research, educational level, publication type, sample size, whether there are validity and reliability proofs of the tools used in measuring or not, and sample size data in accordance with seniority/gender variables, were keyed into the coding protocol. The coding forms of the researchers were evaluated by consulting an Assessment and Evaluation expert, and an evaluation was made, concerning the studies to be included within the scope of this research. To ensure the Interrater Reliability (IRR), an interrater reliability analysis was made. To secure the interrater reliability, Cohen's Kappa statistics was used; and, the reliability was 0.93. Such result demonstrates an almost perfect coherence between encoders.

Validity of the Research

It was observed that for the theses and research articles included in this study, validity and reliability studies of the measuring tools were carried out. In the conducted research, all theses and research articles appropriate for the specified criteria were accessed. Within this context, since validity and reliability of the data collection tools were ensured for all of the 35 researches, it can be said that this meta-analysis study is valid.

Analysis of the Data

In the analysis of the data, from the group comparison meta-analysis methods (fixed effects and random effects models), the Group Differ-

Table 1: Number and sample sizes of the studies included in the meta-analysis

OJ	Gender			Seniority				
	Number of studies	Female	Male	Total	Number of Studies	≤10 years	≥11 years	Total
	35	7995	7390	15185	22	4282	3602	7884

ence model was used. In cases where arithmetic mean values of the independent variables in the study, were not taken from the same scales, the standardized arithmetic mean difference effect size method was used. In this study, in the comparison of the effect size of each study with the variances and groups, the Statistical Package Software for Meta-Analysis (Borenstein et al. 2009; Ustun and Eryilmaz 2014), was used.

In this study, according to the gender variable, the female teachers were taken as the experimental group; and, the male teachers were taken as the control group. According to the seniority variable, teachers who had 1-10 years of experience were taken as the experimental group; and, teachers who had more than 10 years of experience, were taken as the control group. Therefore, it is interpreted such that, in all groups, if the calculated effect size is positive, it is for the benefit of the experimental group; and if the calculated effect size is negative, it is for the benefit of the control group.

According to the gender variable, 25 of the studies included in the meta-analysis were postgraduate theses (71.4%), and 10 of them were articles (28.6%); and, according to the seniority variable, 16 of the studies were postgraduate theses (72.7%), and 6 of them were articles (27.3%).

RESULTS

Acquired as a result of the analysis made with the aim of answering the problem of the research,

publication bias, descriptive statistics, forest plot, findings of fixed and random effects models, homogeneity test, and findings related to the moderator analysis, are given in this chapter.

The Effects of Gender on OJ Perceptions of Teachers

The aim of this research was to identify the effects of gender and seniority variables on the perceptions of OJ of teachers. Before determining the sample size, the included studies were analysed, to determine if there was publication bias in them or not. The result of the funnel scatter plot, showing the possibility of the publication bias, given in Figure 1.

Most of the studies included in the research are situated towards the upper part of the shape, and in a close position to the combined effect size. In cases where there is no publication bias, studies are expected to symmetrically expand on both sides of the vertical line, which shows the unified effect size. If there was publication bias in the 35 studies included in the research, most of the studies would be accumulated at the bottom of the funnel shape and/or only at one side of the vertical line (Borenstein et al. 2009; Dincer 2014). In this sense, the funnel scatter plot displays that there is no publication bias with regards to the studies included in the research.

To test for publication bias, Orwin's Fail-Safe N calculation was also used (Borenstein et al. 2009). As a result of this analysis, Orwin's Fail-

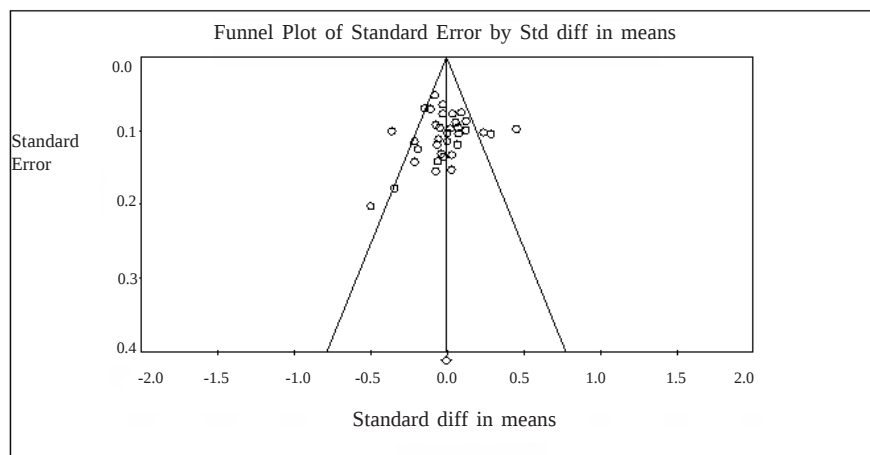


Fig. 1. Funnel scatter plot with regard to gender variable

Safe N was calculated as 28. For the average effect size, which was -0.006 as a result of the meta-analysis, to reach the level of 0.01 (trivial) – to reach almost zero effect level – the number of studies necessary is 28. However, 35 studies, specified in accordance with the inclusion criteria, were the entire number of studies (qualitative, quantitative, theoretical and so on), conducted on this research in Turkey. Since it is not possible to access 28 more studies apart from these, this result is considered as another indicator, which proves that there was no publication bias in this meta-analysis. Also, it was observed that Kendall's Tau coefficient, which is used to statistically calculate whether there is publication bias or not, was -0.20 and $p=0.08$ (Borenstein et al. 2009; Dincer 2014); in such a case,

since the p value did not create a significant difference-since it satisfies the expectation of being more than 0.05- it was statistically proven that there was no publication bias.

Uncombined Findings of the Effect Size Analysis With Regard to Gender of Teacher

Effect sizes, standard error, and lower and upper limits, in accordance with 95 percent confidence interval, of the opinions of male and female teachers with regard to OJ, are given in Table 2.

According to Table 2, the Standardized Mean Difference (SMD) of these 35 studies differs within the intervals of -0.651 for the benefit of male teachers, and interval of 0.541 for the benefit of

Table 2: Effect sizes of teachers' opinions concerning OJ perceptions of teachers with regard to their gender

Model	Name of the study	EB (d)	Standard error		Lower	Upper	p-value	Male	Female
		(d)	variance		limit	limit	limit		
	Acikgoz 2009	0.093	0.076	0.006	-0.055	0.241	1.228	433	295
	Akgeyik 2014	-0.211	0.142	0.020	-0.490	0.068	-1.479	75	146
	Akguney 2014	0.123	0.087	0.008	-0.048	0.294	1.406	302	231
	Altinkurt and Yilmaz 2010	-0.197	0.125	0.016	-0.442	0.049	-1.572	118	140
	Ay 2013	0.037	0.077	0.006	-0.114	0.188	0.478	374	305
	Ay and Koc 2014	0.019	0.077	0.006	-0.132	0.170	0.243	364	301
	Bas and Senturk 2011	0.009	0.100	0.010	-0.187	0.205	0.089	204	197
	Comert 2008	-0.020	0.140	0.020	-0.295	0.255	-0.142	81	137
	Capraz 2009	0.027	0.153	0.023	-0.274	0.327	0.174	66	120
	Celik 2011	0.010	0.096	0.009	-0.179	0.198	0.100	200	234
	Cetin 2014	-0.147	0.070	0.005	-0.284	-0.010	-2.107	396	428
	Cirak 2013	-0.057	0.111	0.012	-0.275	0.161	-0.511	233	124
	Daglı et al. 2013	0.000	0.104	0.011	-0.203	0.203	0.000	174	201
	Dogan 2008	-0.213	0.115	0.013	-0.437	0.012	-1.854	150	156
	Dundar 2011	-0.068	0.119	0.014	-0.302	0.166	-0.567	208	106
	Dundar and Tabançali 2012	0.068	0.119	0.014	-0.166	0.302	0.569	200	99
	Erturk 2011	-0.080	0.052	0.003	-0.182	0.023	-1.526	702	761
	Gok 2014	-0.382	0.101	0.010	-0.580	-0.184	-3.779	192	208
	Gunce 2013	0.000	0.115	0.013	-0.225	0.225	0.000	170	138
	Guzelyurt 2010	0.284	0.105	0.011	0.078	0.490	2.706	162	210
	Imamoglu 2011	0.074	0.096	0.009	-0.115	0.262	0.767	300	170
	Kahraman 2014	0.074	0.104	0.011	-0.130	0.278	0.708	202	170
	Kara 2011	0.058	0.089	0.008	-0.117	0.233	0.652	234	271
	Karaman 2009	0.032	0.133	0.018	-0.229	0.293	0.241	155	89
	Kazanci 2010	0.121	0.100	0.010	-0.075	0.317	1.206	237	173
	Kilic 2011	0.239	0.103	0.011	0.038	0.440	2.328	158	243
	Kilic 2013	-0.075	0.155	0.024	-0.379	0.229	-0.483	81	85
	Nartgun and Isleyici 2014	-0.413	0.209	0.044	-0.822	-0.003	-1.975	44	50
	Oguz 2011	-0.061	0.142	0.020	-0.339	0.216	-0.434	105	95
	Pirali 2007	-0.651	0.233	0.054	-1.107	-0.195	-2.800	111	23
	Polat 2014	-0.140	0.069	0.005	-0.276	-0.004	-2.018	407	429
	Selekler 2007	0.028	0.098	0.010	-0.163	0.220	0.291	230	193
	Ugurlu 2009	-0.028	0.065	0.004	-0.155	0.099	-0.438	472	481
	Yildizhan 2011	0.541	0.102	0.011	0.340	0.742	5.276	163	249
	Yilmaz 2010	-0.020	0.136	0.018	-0.286	0.246	-0.148	92	132
Fixed		-0.006	0.016	0.000	-0.038	0.026	-0.370	7795	7390
Random		-0.007	0.029	0.001	-0.063	0.049	-0.234	7795	7390

female teachers. While statistically significant differences ($p < 0.05$) are found in eight studies, in 27 studies, no significant difference is found.

Forest Plot of the Studies Including Data Related to Gender

Forest plot related to the 35 studies included in the research that include data about gender is displayed in Figure 2.

When Figure 2 is analysed, it is observed that there is a difference less than zero for the benefit of male teachers. The fact that there is a difference for the benefit of male teachers, can

be interpreted that they perceive OJ more, compared to female teachers.

Combined in Accordance With Fixed and Random Effects Models, Findings of the Effect Size

Combined in accordance with fixed and random effects model, the average effect size (without excluding outliers) of the effect sizes of the perceptions of female and male teachers with regard to OJ, standard error, and lower and upper limits of it in accordance with a 95 percent confidence interval are given in Table 3.

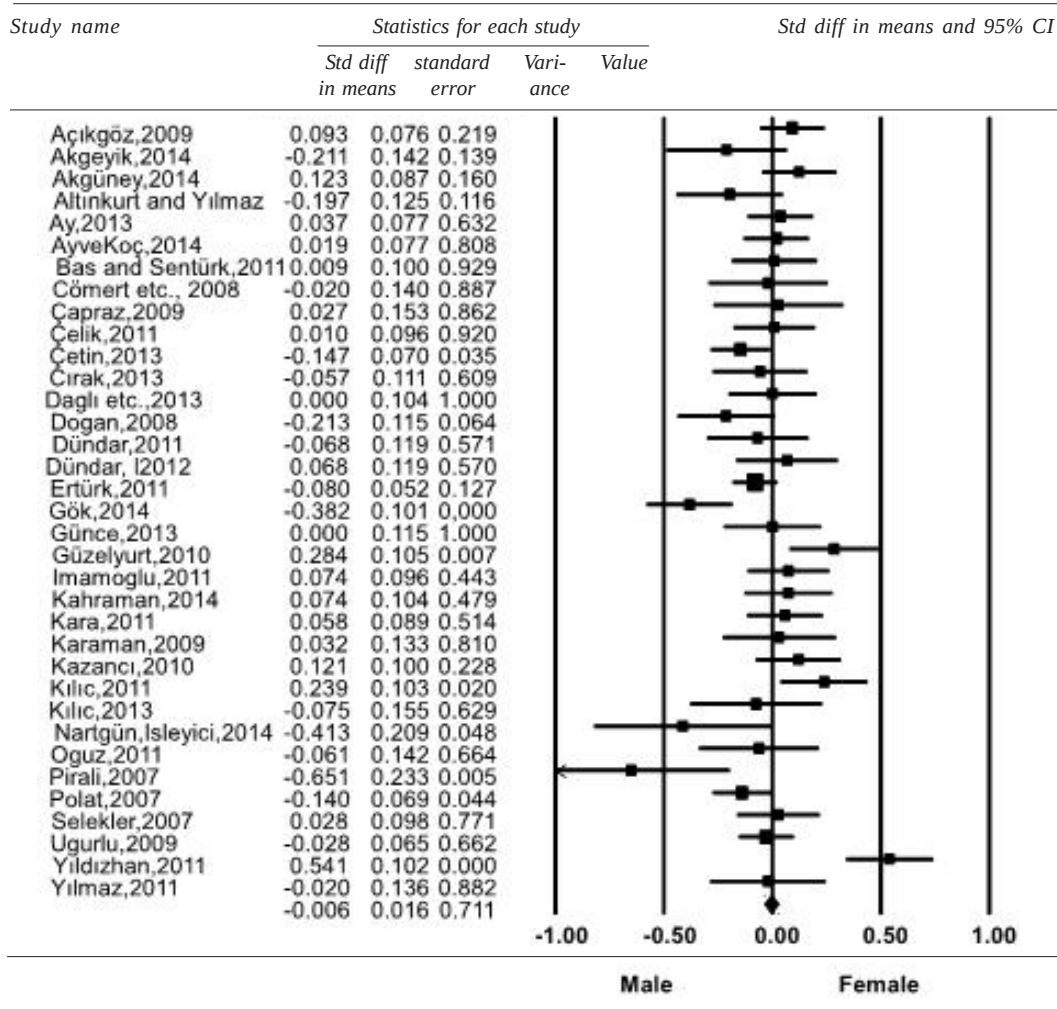


Fig. 2. Forest plot of the effect sizes related to gender variable

Table 3: Homogeneity test

<i>Model</i>	<i>Effect size and %95 confidence interval</i>						<i>Heterogeneity</i>				
	<i>Number of studies</i>	<i>Effect size</i>	<i>Standard error</i>	<i>Variance</i>	<i>Lower limit</i>	<i>Upper limit</i>	<i>P-value</i>	<i>Z-value</i>	<i>Q-value</i>	<i>df (Q)</i>	<i>I²</i>
Fixed effects	35	-0.006	0.016	0.000	-0.038	0.026	0.711	-0.370	93.895	34	63.789
Random effects	35	-0.007	0.029	0.001	-0.063	0.049	0.815	-0.234			

The average effect size value of the effect size values of the studies included in the research in accordance with the gender variable, was calculated as $d=-0.007$; standard error of the average effect size, was calculated as $SE=0.029$; and, the upper limit and lower limit of the average effect size, were calculated as 0.049 and -0.063, respectively. In accordance with these calculations, and according to the random effects models, the data of the 35 studies included in the meta-analysis, showed that male teachers had more OJ perceptions compared to female teachers. However, since the effect size value was lower than 0.20, the identified effect size was lower than the lower limit, with respect to the classification of Cohen and Lipsey (Cohen 1988). According to the classification of Thalheimer and Cook (2002), a difference on an insignificant level was observed (-0.15-0.15).

When the statistical significance was calculated in accordance with Z test, Z was -0.370. It was determined that the acquired result did not have a statistical significance with $p=0.711$. For homogeneity test, in other words, for Q statis-

tics, Q was calculated as 93.895. In χ^2 table, on a 95 percent significance level, 34 degrees of freedom value was 46.802. Since the Q statistics value ($Q=93.895$) exceeded 34 degrees of freedom, and critical value of chi-square distribution ($\chi^2_{0.95}=46.802$), the hypothesis with regards to the absence of homogeneity of the distribution of effect sizes, were rejected in the fixed effects model. Therefore, the distribution of effect sizes has a heterogeneous characteristic in accordance with the fixed effects model.

As a result of the homogeneity tests (Q and I^2) carried out for the gender variable, a medium level of heterogeneity was found between the studies, therefore, the random effects model was used in the combining process. Results of the moderator analysis, carried out to reveal the reasons of this heterogeneity, are given in Table 4.

As a result of the conducted moderator analysis, the moderator effects of the level of education ($p=0.02$); branches of teachers ($p=0.04$); and, gender of the research subjects ($p=0.06$) were identified. It was observed that the effect sizes of the researches did not vary in accordance with

Table 4: Categorical moderator results with regard to the effect of gender towards OJ

<i>Moderator</i>	<i>k</i>	<i>D</i>	<i>SE</i>	<i>%95 CI</i>	<i>Q</i>
<i>Level of Education</i>					
Primary	20	0.037	0.037	[-0.035; 0.109]	7.477
Secondary	7	-0.118	0.043	[-0.204; -0.033]	
Primary-Secondary	8	-0.023	0.061	[-0.143; 0.097]	
<i>Branch</i>					
Class	6	-0.045	0.037	[-0.117; 0.027]	6.383
Branch	7	-0.118	0.043	[-0.204; -0.033]	
Class/Branch	22	-0.029	0.039	[-0.048; 0.106]	
<i>Publication Type</i>					
Article	10	-0.030	0.037	[-0.103; 0.043]	0.493
Thesis	25	0.006	0.036	[-0.065; 0.077]	
<i>Gender of the Researcher</i>					
Male	21	0.035	0.036	[-0.035; 0.106]	3.447
Female	14	-0.071	0.045	[-0.159; 0.017]	

Note: k=number of studies, d= Cohen's d (SOF), SE=Standard Error CI=confidence interval, Q=Heterogeneity between studies. * $p<.05$

the publication type ($p=0.49$). Although the perceptions of OJ of female teachers in primary level of education was more positive, in the secondary level of education, perceptions of male teachers were more positive.

As observed in Figure 3, with regards to the effect sizes of the years that the researches were carried out; it was observed that there was no significant difference by years, however, in recent years, there was a difference for the benefit of males.

Effect of Seniority on OJ Perception

Secondly, the effect of the seniority variable on OJ perceptions of teachers was conducted in the research. Before determining the sample size, the included studies were analysed, to determine if there was publication bias in them or not. Since most of the 22 studies included in the research are situated towards the upper part of the shape and in a close position to the combined effect size, it can be said that there was no publication bias. The result of the funnel scatter plot, showing the possibility of the publication bias, is given in Figure 4 (Borenstein et al. 2009).

As a result of this analysis, Orwin's Fail-Safe N was calculated as 124. For the average effect size, which was -0.007 as a result of the meta-analysis, to reach the level of 0.01 (trivial) – to reach almost zero effect level – the required number of studies is 124. However, 22 studies, specified in accordance with the inclusion criteria, are the entire number of studies (qualitative, quantitative, theoretical etc.) conducted on this

subject in Turkey. Since it is not possible to access 124 more studies apart from these, this result was considered as another indicator, which proved that there was no publication bias in this meta-analysis. Also, it was observed that Kendall's Tau coefficient, which is used to statistically calculate whether there is publication bias or not, was 0.27 and $p=0.08$; in such an instance, since the p value did not create a significant difference – since it satisfies the expectation of being more than 0.05 – it was also statistically proven that there was no publication bias.

Forest Plot of the Studies Including Data Related to Seniority

Forest plot related to 22 studies included in the research that include data about seniority is displayed in Figure 5.

When Figure 5 is analysed, it is observed that there is a difference less than zero for the benefit of teachers who had 1-10 years of experience. It can be said that although on a low level, OJ perceptions of teachers, who are in the first 10 years of their occupations, are higher, compared to the teachers who have more than 10 years of experience.

Uncombined Findings of the Effect Size Analysis With Regard to Seniority of Teacher

Combined in accordance with fixed and random effects model, the average effect size (without excluding outliers) of the effect sizes of the perceptions of teachers about OJ with regard to

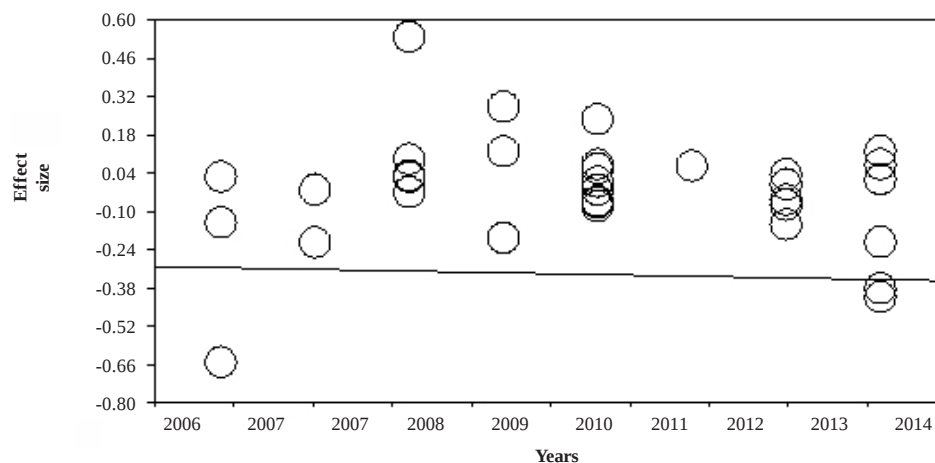


Fig. 3. Meta-regression results of the effect sizes with regard to the years that the researches are carried out

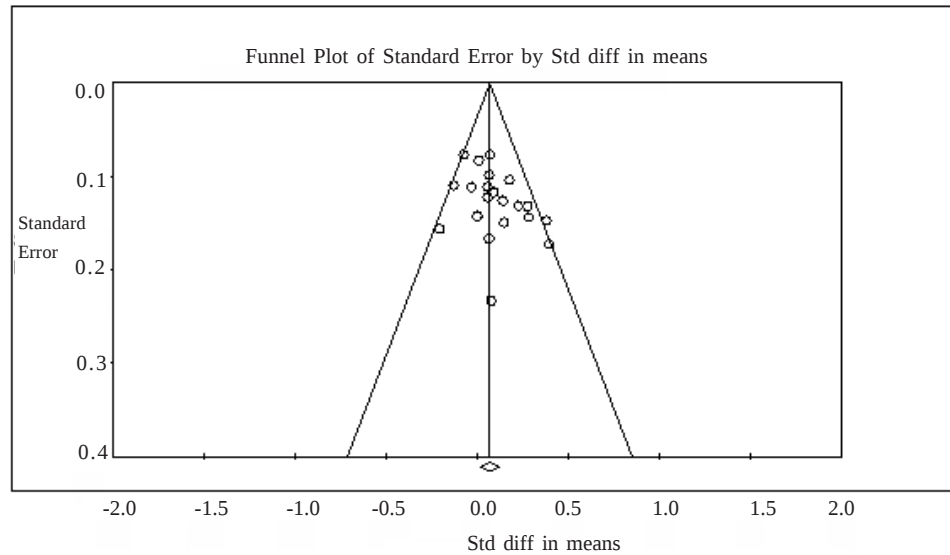


Fig. 4. Funnel scatter plot with regard to seniority variable

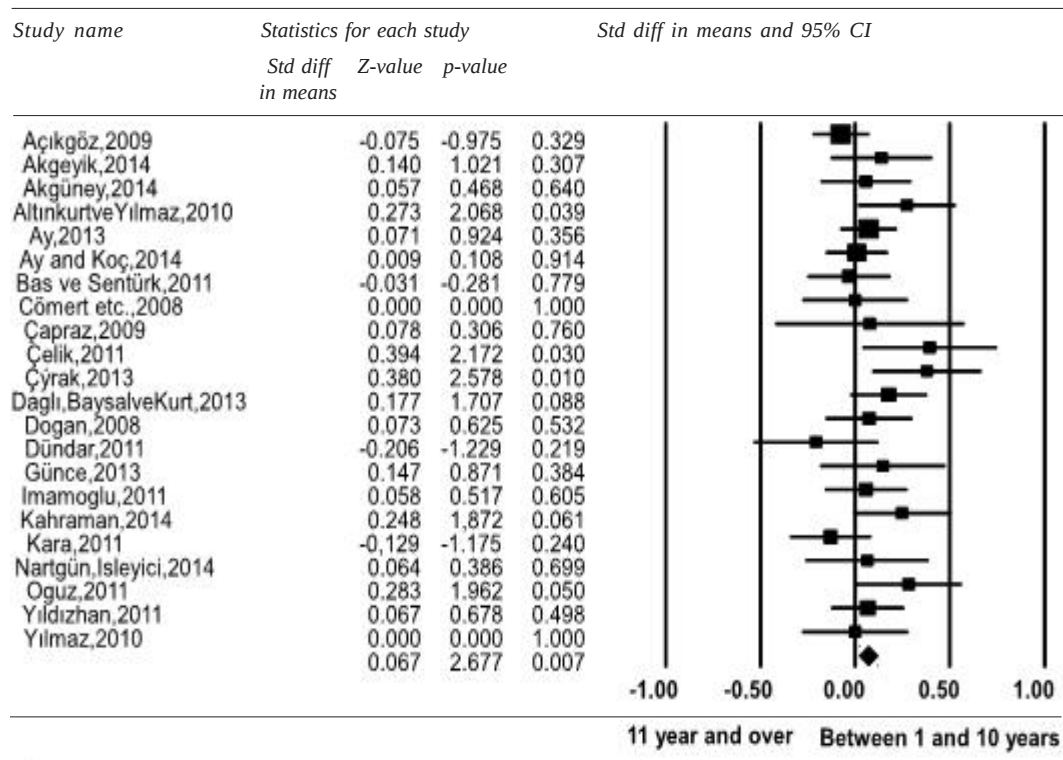


Fig.5. Forest plot of the effect sizes related to seniority variable

their seniority, standard error, and lower and upper limits of it in accordance with a 95 percent confidence interval, are given in Table 5.

The average effect size value of the effect size values of the studies included in the research in accordance with the seniority variable, was calculated as $d=-0.065$, for the fixed effects model; and $d=0.075$, for the random effects model. In accordance with these calculations, according to the fixed and random effects models, the data of the 22 studies included in the meta-analysis, showed that teachers who had 1-10 years of experience, had a higher level of OJ perception, compared to the teachers who had more than 10 years of experience. Since the effect size value is lower than 0.20 with respect to the classification of Cohen and Lipsey, it can be said that seniority had such a low level of effect on OJ perceptions of teachers, that it was even lower than the lower limit (Cohen 1988). According to the classification of Thalheimer and Cook (2002), it was observed that there was a difference on an insignificant level (-0.15-0.15).

When the statistical significance was calculated in accordance with the Z test, Z was 2.667. It was shown that the acquired result had a statistical significance of $p=0.007$. For homogeneity test, in other words, for Q statistics, Q was calculated as 26.913. In χ^2 table, at a 95 percent significance level, 21 degrees of freedom value was 32.671. Since the Q statistics value ($Q=26.913$) did not exceed 21 degrees of freedom, and critical value of chi-square distribution ($\chi^2_{0.95}=32.671$), the hypothesis with regard to the absence of homogeneity of the distribution of effect sizes were accepted in the fixed effects model. Therefore, we discovered that the distribution of effect sizes had a homogenous characteristic, in accordance with the fixed effects model. As a result of the homogeneity tests (Q and I^2) of the seniority variable, a low level of heterogeneity was found between studies, therefore,

the model was not turned into the random model, for the combination process.

DISCUSSION

This research was conducted with the aim of identifying the effects of gender and seniority variables, on the perceptions of organizational justice of teachers. With regard to OJ perception, 35 studies for the gender variable and 22 studies for seniority variable, that were deemed appropriate based on the specified inclusion criteria of meta-analysis, were included in the study. In the research, a significant increase was observed in the number of studies being carried out, especially after 2010. Sample sizes of the studies included in the research were 15185 for the gender variable, and 7884 for the seniority variable. In the random effects model ($d=-0.007$), in the result of the combination process for the gender variable, a statistically significant low level of effect size, was found for the benefit of male teachers. The result is in accordance with the results of the meta-analysis conducted by Altinkurt et al. (2015), which dealt with OJ perceptions of teachers with regard to their gender.

In this research study, it was found that gender had a very weak effect on the overall perception of OJ. Thus, it is possible to say that gender does not have a significant effect on the perception of OJ. Within the scope of this study, the aforementioned situation, supports the thought that gender does not have any effect on teachers' perception of OJ in Turkey (Cohen-Charash and Spector 2001; Hang-yue et al. 2006; Jepsen and Rodwell 2007; Lishchinsky 2012). It is stated by the studies in the literature (Clay-Warner et al. 2013; Simpson and Kaminski 2007), that teachers' gender does not affect their perception of OJ, and that some other factors such as working conditions, salaries, perception of management, should be examined as well.

Table 5: Homogeneity test

Model	Effect size and %95 confidence interval						Heterogeneity				
	Number of studies	Effect size	Standard error	Variance	Lower limit	Upper limit	P-value	Z-value	Q-value	df (Q)	I^2
Fixed effects	22	0.067	0.025	0.001	0.018	0.117	0.007	2.667	26.913	21	21.970
Random effects	22	0.075	0.029	0.001	0.017	0.132	0.011	2.541			

Presently, even when the gender discrimination between the workers is relatively at a lower level, it is seen that schools are also affected by this. It is a significant fact that gender does not change the perception of OJ in a place where men and women work together by its nature. Factors such as, high number of male-dominated school administrations, and the fact that female teachers cannot be effective in decision-making processes of the administrations, can be effective in the low level of OJ perceptions of female teachers (Basar and Sigr  2015; Selcuk et al. 2015; Simpson and Kaminski 2007; Yurur 2005).

As a result of the combination process in Fixed and Random Effects Models, according to the seniority variable, a statistically significant low level of effect size, was found for the benefit of teachers who had 1-10 years of experience. The study showed that teachers who had 1-10 years of seniority, had more OJ perception compared to the teachers who had more than 10 years of seniority. In the meta-analysis study carried out by Cohen-Charash and Spector (2001), no relationship was identified between the seniority of the personnel, and their OJ perceptions. Also, in the researches conducted by Bas and Senturk (2011), Oguz (2011), and Yilmaz (2010), the result that there is no difference in OJ perceptions of teachers with regards to the seniority variable, supports the conclusion of this research. In the researches conducted by Comert et al. (2008), Ozgan (2011), Titrek (2009, 2009a), and Yilmaz and Tasdan (2009), on the other hand, a significant difference was observed between the seniority of teachers and their OJ perceptions. In these researches, it observed that as the seniority level of the teachers increased, their OJ perceptions changed in a positive way. However, the results of this meta-analysis study, reveal that the seniority of teachers influences their OJ perceptions on an insignificant level. The study conducted by Simpson and Kaminski (2007), also showed that there was no relationship between seniority and OJ perception of teachers.

In the meta-analysis study carried out by Cogaltay et al. (2014), a positively strong relationship between school leadership and OJ perceptions of teachers, was observed. It was observed that there was a specifically strong relationship between the ethical leadership approaches of school administrators, and OJ per-

ceptions of teachers. In the study carried out by Polat and Kazak (2014), it was concluded that there is a negative and significant relationship between favouritism attitudes and the behaviours of school administrators, and OJ perceptions of teachers; and it was concluded that favouritism is a significant and strong predictor of OJ. In another study carried out by Yavuz (2012), on the other hand, he observed that social security and job security variables, were effective in OJ perceptions of teachers who worked in private teaching institutions. These results reveal that external factors are more effective in OJ perceptions of teachers. Lishchinsky (2012) and Simpson and Kaminski (2007), discovered that other external factors were more effective in teachers' OJ perception, rather than gender and seniority. This finding supports the results of this study.

In the study carried out by Ozgan (2011), gender, occupational seniority, age, the school of graduation, and position variables, were observed as significant predictors of OJ perceptions of teachers. Dulebohn et al. (2009), explained in another study, that gender has an effect on workers' OJ perception.

CONCLUSION

Teachers' high level of OJ perception, may affect either their individual performance, or the efficiency of the school in a positive way. Within the context of the outcomes of this meta-analysis study, it can be stated that the personal characteristics of teachers, such as their gender and seniority, create an insignificant effect on OJ perceptions of teachers. It is significant that there are similarities between this research study and meta-analysis studies, conducted in the literature field.

The fact that gender and seniority factors that are regarded as teachers' personal characteristics do not have a significant effect on their OJ perception, allows us to examine other external factors. From this result, it can be understood that various factors may be effective in teachers' OJ perception. With these outcomes, it can be interpreted that external factors, such as working conditions, payment, job satisfaction, and leadership, are more effective in OJ perceptions of teachers.

RECOMMENDATIONS

Within the context of the outcomes of this meta-analysis study, apart from the gender and

seniority variables of teachers, by using variables such as school culture, organizational citizenship, working conditions, administration forms, and job satisfaction, which are all predictors of OJ, meta-analysis studies, should be carried out to reveal the relationship between them.

NOTE

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REFERENCES

- Those references marked with the asterisk (*) indicate those studies included in the meta-analysis.*
- *Acikgoz A 2009. *Conflict Management Styles of School, Administrators and the Relationship Between Organizational Justice*. MA Dissertation, Unpublished. Bolu: Abant İzzet Baysal University.
- *Akgeyik G 2014. *The Opinions of the Managers and Teachers Working at Anatolian High Schools with Regard to Organizational Justice*. MA Dissertation, Unpublished. Diyarbakir: Dicle University.
- *Akguney E 2014. *The Relationship Between Teachers' Perceptions of Organizational Justice and Organizational Citizenship Behaviours*. MA Dissertation, Unpublished. Istanbul: Marmara University.
- *Altinkurt Y, Yilmaz K 2010. Examining the relationship between management by values and organizational justice by secondary school teachers perceptions. *Educational Administration: Theory and Practice*, 16(4): 463-484.
- Altinkurt Y, Yilmaz K, Karaman G 2015. The effect of gender, seniority and subject matter on the perceptions of organizational justice of teachers: A meta-analytical study. *Educational Sciences: Theory and Practice*, 15(1), 33-43.
- Armagan Y, Erzen E 2014. The effect of leadership on organizational justice. In: Engin Karadag. (Ed.): *Leadership and Organizational Outcomes: Meta-analysis of Empirical Studies*. Switzerland: Springer Publication, pp. 239-254.
- Aydin I, Karaman-Kepeneci Y 2008. Principals' opinions of organisational justice in elementary schools in Turkey. *Journal of Educational Administration*, 46(4): 497-513.
- *Ay G 2013. *A Comparative Analysis to Determine the Relation Between the Perception of Organizational Justice and Level of Organizational Commitment of Teachers*. MA Dissertation, Unpublished. Ankara: Ankara University.
- *Ay G, Koc H 2014. Determine the relation between perception of organizational justice and level of organizational commitment: Study case of teachers. *Journal of Business Research-Turk*, 6(2): 67-90.
- Babaoglan E, Erturk E 2013. The relationship between teachers' organizational justice perception and organizational commitment. *Hacettepe University Journal of Education*, 28(2): 87-101.
- *Bas G, Senturk C 2011. Elementary school teachers' perceptions of organizational justice, organizational citizenship behaviours and organisational trust. *Educational Administration: Theory and Practice*, 17(1): 29-62.
- Basar U, Sýgrý U 2015. Effects of teachers' organizational justice perceptions on intention to quit: Mediation role of organizational identification. *Educational Sciences: Theory & Practice*, 15(1): 45-59.
- Blakely GL, Andrews MC, Moorman RH 2005. The moderating effects of equity sensitivity on the relationship between organizational justice and organizational citizenship behaviors. *Journal of Business and Psychology*, 20(2): 259-273.
- Borenstein M, Hedges LV, Higgins JPT, Rothstein HR 2009. *Introduction to Meta-analysis*. West Sussex-UK: John Wiley & Sons Ltd.
- Cohen J 1988. *Statistical Power Analysis for the Behavioral Sciences*. 2nd Edition. New Jersey: Lawrence Erlbaum Associates.
- Cohen-Charash Y, Spector PE 2001. The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2): 278-321.
- Colquitt JA, Conlon DE, Wesson MJ, Porter COL, Yee, KY 2001. Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3): 425-445.
- *Comert M, Demirtas H, Ustuner M, Ozer N 2008. High school teachers' perceptions on organizational. *Journal of Educational Sciences and Practices*, 7(13): 3-22.
- *Capraz H 2009. *The Relationship Between Secondary School Teacher's Perception of Organizational Justice and Job Satisfaction*. MA Dissertation, Unpublished. Istanbul: Yeditepe University.
- *Celik OT 2011. *The Relationship Between Primary School Manager's and Teacher's Perception of Organizational Justice and Job Satisfaction*. MA Dissertation, Unpublished. Konya: Selcuk University.
- *Cetin KS, Cinkir S 2014. School managers' and teachers' influence tactics and relationship with organizational justice. *Mehmet Akif Ersoy University Journal of Education Science*, 3(5): 50-64.
- *Cirak S 2013. *Public Primary School Teachers' Organizational Justice Perceptions (Ankara/Yenimahalle)*. MA Dissertation, Unpublished. Ankara: Hacettepe University.
- Clay-Warner J, Culatta E, James KR 2013. Gender and organizational justice preferences. *Sociology Compass*, 7(12): 1074-1084.
- Cogaltay N, Karadag E, Bektas F 2014. School leadership and organizational justice: A meta-analysis with Turkey representative sample. *International Journal of Education*, 6(1): 49-60.
- *Dagli A, Baysal N, Korkut A 2013. Organizational justice in primary schools. *Electronic Journal of Education Sciences (EJEDUS)*, 3a: 158-167.
- Dincer S 2014. *Applying Meta-analysis in Education Sciences*. Ankara: Pegem Academy Publication.
- *Dogan A 2008. *Teachers' Organizational Justice and Psychological Contract Violation Perceptions*. MA Dissertation, Unpublished. Elazig: Firat University.

- Dulebohn JA, Conlon DE, Sarinopoulous I, Davidson RB, Mcnamara G 2009. The biological bases of unfairness: Neuroimaging evidence for the distinctiveness of procedural and distributive justice. *Organizational Behaviour and Human Decision Process*, 110: 140-151.
- *Dundar T 2011. *The Relationship Between Organizational Justice Perceptions and Job Satisfaction Levels*. MA Dissertation, Unpublished. Istanbul: Yildiz Teknik University.
- *Dundar T, Tabancali E 2012. The relationship between organizational justice perceptions and job satisfaction levels. *Procedia-Social and Behavioral Sciences*, 46: 5777-5781.
- Elma C 2013. The predictive value of teachers' perception of organizational justice on job satisfaction. *Eurasian Journal of Educational Research*, 51: 157-176.
- Erden A, Erden H 2009. Predicting organizational trust level of school managers and teachers at elementary schools. *Procedia Social and Behavioral Sciences*, 2180-2190.
- *Erturk E 2011. *The Relationship Between Perception of Organizational Justice and Teachers' Organizational Commitment in Primary and Secondary Schools*. MA Dissertation, Unpublished. Burdur: Mehmet Akif Ersoy University.
- Eskew DE 1993. The role of organizational justice in organizational citizenship behavior. *Employee Responsibilities and Rights Journal*, 6: 185-194.
- *Gok D 2014. *A Study of Primary School and Secondary School Teachers' Perceptions of Organisational Justice and Organisational Commitment in Terms of Some Parameters: Sahinbey/Gaziantep Example*. MA Dissertation, Unpublished. Gaziantep: Gaziantep University.
- Greenberg J 1990. Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, 16: 399-432.
- *Guzelyurt L 2010. *Investigating the Relationship Between Values and Organizational Justice*. MA Dissertation, Unpublished. Usak: Usak University.
- Hoy WK, Tarter CJ 2004. Organizational justice in schools: No justice without trust. *International Journal of Educational Management*, 18(4): 250-259.
- *Imamoglu G 2011. *The Relationship Between Primary School Teachers' Organizational Commitment Levels and Organizational Justice*. MA Dissertation, Unpublished. Ankara: Gazi University.
- Jepsen DM, Rodwell J 2007. Female perceptions organizational justice. *Gender, Work and Organizations*, 4(3): 1-18.
- *Kahraman U 2014. *Relationship Between Performance Management Applications and Organizational Justice Perceptions of Teachers in Primary Schools*. MA Dissertation, Unpublished. Usak: Usak University.
- *Kara M 2011. *Organizational Justice Perceptions of Public and Private Primary School Teachers*. MA Dissertation, Unpublished. Sanliurfa: Harran University.
- *Karaman P 2009. *An Application on Teachers to Examine the Relation Between Organizational Justice Perception and Burnout*. MA Dissertation, Unpublished. Istanbul: Yildiz Teknik University.
- Karriker JH, Williams ML 2009. Organizational justice and organizational citizenship behavior: A mediated multifoci model. *Journal of Management*, 35(1): 112-135.
- *Kazanci N 2010. *The Styles of Leaderships of Primary School Administrators and the Relationships Between the Teachers' Organizational Justice Perception*. MA Dissertation, Unpublished. Sakarya: Sakarya University.
- *Kilic G 2011. *A Study Related to Determine of the Relationship Organizational Justice Perception and Organizational Communication*. MA Dissertation, Unpublished. Istanbul: Marmara University.
- Kilic E 2013. Organizational justice at regional boarding primary schools: Sinop case. *Journal of World of Turks*, 5(2): 19-32.
- *Kilic Y 2013a. *The Relationship Between Perceptions of Organizational Justice and Job Satisfaction of the Secondary School Teachers*. MA Dissertation, Unpublished. Elazig: Firat University.
- Lishchinsky OP 2012. Teachers' withdrawal behaviors: Integrating theory and findings. *Journal of Educational Administration*, 50(3): 307 - 326.
- *Nartgun SS, Isleyici K 2014. The level of organizational justice and organizational silence in Anatolian high school teachers. *Education Management Forum IV*, 12(3): 228-245.
- *Oguz E 2011. The relationship between teachers' perceptions of organizational justice and administrators' leadership styles. *The Journal of Inonu University Education Faculty*, 1: 45-65.
- Ozgan H 2011. The relationships between organizational justice, confidence, commitment, and evaluating the manager and the perceptions of conflict management at the context of organizational behavior. *Educational Sciences: Theory and Practice*, 11: 241-247.
- *Pirali J 2014. *The Influence of Job Satisfaction, Organizational Commitment, and Perceptions of Organizational Justice on Organizational Citizenship Behavior in Turkish Education Sector*. MA Dissertation, Unpublished. Ankara: ODTU University.
- Polat S, Kazak E 2014. The correlation between school principals' favoritist behaviors and attitudes and teachers' perception of organizational justice. *Educational Administration: Theory and Practice*, 20(1): 71-92.
- Robbins SR, Judge TA 2012. *Organizational Behaviour*. (Trans. Editor: Inci Erdem). 14th Print. Ankara: Nobel Yayin Dagitim.
- Selcuk G, Altintas, G, Ciritci, HM 2015. "Adventure of Democracy" seen through animal metaphors created By 6th grade students. *Procedia-Social and Behavioral Sciences*, 191: 185-189.
- *Selekler ZO 2007. *Teachers' Organizational Justice and Psychological Contract Violation Perceptions*. MA Dissertation, Unpublished. Kocaeli: Kocaeli University.
- Simpson PA, Kaminski M 2007. Gender, organizational justice perceptions, and union organizing. *Employee Responsibilities and Rights Journal*, 19(1): 57-72.
- TDK 2015. Actual Turkish Dictionary. From <http://www.tdk.gov.tr> (Retrieved on March 18, 2015).
- Thalheimer W, Cook S 2002. How to Calculate Effect Sizes From Published Research Articles: A Simplified

- Methodology. From<http://work-learning.com/effect_sizes.htm> (Retrieved in April 2015).
- Titrek Ö 2009. Employees' organizational justice perceptions in Turkish schools. *Social Behavior and Personality*, 37(5): 605-620.
- Titrek Ö 2009a. The level of organizational justice in schools according to school types. *International Journal of Human Sciences*, 6(2): 551-573.
- *Uğurlu ZÖ 2009. *Effects of Administrators? Ethical Leadership and Organizational Justice Behavior on Primary School Teachers? Organizational Commitment Level*. MA Dissertation, Unpublished. Malatya: İnönü University.
- Ustun U, Eryılmaz A 2014. A research methodology to conduct effective research syntheses: Meta-analysis. *Education and Science*, 39(174): 1-32.
- Yavuz M 2012. Perceptions of organizational justice which teachers employed in private teaching center. *Turkish Studies-International Periodical for the Languages, Literature and History of Turkish or Turkic*, 7(2): 1147-1160.
- *Yıldızhan Y 2011. *The Relationship Between Organizational Justice Perceptions and Job Satisfaction: The Sample of General Directorate of Educational Technologies*. MA Dissertation, Unpublished. Ankara: Gazi University.
- *Yılmaz K 2010. Secondary public school teachers' perceptions about organizational justice. *Educational Sciences: Theory and Practice*, 10(1): 603-616.
- Yılmaz K, Altinkurt Y 2012. Relationship between the leadership behaviors, organizational justice and organizational trust. *Cukurova University Faculty of Education Journal*, 41(1): 12-24.
- Yılmaz K, Altinkurt Y, Yildirim H 2015. The effects of gender, seniority and subject matter variables on teachers' organizational citizenship behaviors in Turkey: A meta-analysis. *Education and Science*, 40(178): 285-304.
- Yılmaz K, Tasdan M 2009. Organizational citizenship and organizational justice in Turkish primary schools. *Journal of Educational Administration*, 47(1): 108-126.
- Yurur S 2005. *The Relationship Between Rewarding System and Organizational Justice*. PhD Thesis, Unpublished. Bursa: Uludağ University.