

# Effect of Gender on Teachers' Organizational Culture Perception:

## A Meta-Analysis

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### Abstract

This study aims to assess the strength of the effect of gender, if there is any, on the perceptions of teachers on organizational culture in a meta-analysis. 27 studies consisting of Master's theses and PhD dissertations were chosen from the National Thesis/Dissertation Database provided by Turkish Council of Higher Education. The sample consists of 9563 teachers. Of these, 5402 are female and 4161 are male. The variables of school type, publication type, and publication year, the region in which the research was carried on, settlement, positions and teaching levels of the teachers, type of schools, data collection instrument, and researcher's gender were taken as moderator variables in the study. As a result of the study, a low level but statistically significant effect size was found in favor of female teachers according to fixed effect model ( $d=0.021$ ) and random effect model ( $d=0.010$ ). The moderator analysis revealed that, the publication type ( $p=0.003$ ), positions of the teachers (being teacher or manager) ( $p=0.017$ ), the region and the settlement in which the research was conducted ( $p=0.034$ ;  $p=0.022$ ) and researcher's gender ( $p=0.006$ ) were determined as moderator variables with the average effect size. On the other hand, school type (public or private) ( $p=0.223$ ), school level ( $p=0.552$ ), teaching fields of the teachers ( $p=0.786$ ), data collection instrument ( $p=0.672$ ) were not determined as moderator variables with the average effect size. In terms of the gender variable, the study findings indicate that there is an increasing tendency in the effect sizes in favor of female teachers.

**Keywords:** organizational culture, gender, teacher, meta-analysis

### 1. Introduction

Organizational culture, which is defined as a set of philosophies, ideologies, values, assumptions, beliefs, attitudes and expectations, holding the organization together (Lund, 2003), in a sense, constitutes the identity of the organizations. In other words, culture in an organization refers to what identity means for individuals. From this viewpoint, organizational culture is defined as a system of common meanings, beliefs and values which shape the employees' behaviors in an organization (Rashid, Sambasivan & Johari, 2003).

Many classifications were made about organizational culture. In this study, only four classifications widely discussed in previous studies were introduced. The term organizational culture was first classified by Harrison (1975) as "organization's ideological orientations" including power-oriented organizations, role-oriented organizations, task-oriented organizations and individual-oriented organizations. Harrison's classification provided a basis for the later classifications of Handy (1981) & Pheysey (1993). Handy (1981), in his classification, made an analogy between organizations' culture and characteristics of ancient Greek gods. According to Handy (1981), power, role, task and individual cultures defined by Harrison bear the characteristics of Zeus, Apollo, Athena & Dionysus, respectively. In Pheysey's (1993) classification, organizational cultures were called power culture, role culture, achievement culture and support culture. In this classification, *power culture* refers to the organization in which authority and power were in the hands of a single manager at the top; everything is known and controlled by the management; and the employees, in a sense, have the role of slaves. *Role culture* applies to the organization in the shape of a pyramid with number of people decreasing towards the top of the pyramid, in which each section is connected to each other hierarchically and roles and responsibilities of each position are pre-determined. In the operation of this type of organizations, which is also called classical bureaucracy, rational and legal regulations are the main sources of management activities. In Pheysey's (1993)

classification, achievement culture implies that the organizations have matrix structures, operation and success are given more importance than the rules; top management has a partial authority to inspect subordinates; representatives of low levels participate in the decision-making process. *Support culture*, on the other hand, is peculiar to organizations in which there are trust-based relationships between the members, common decision-making and commitment are prioritized; in other words, organizations include informal relationships.

Hofstede (1993), who defined the organizational culture as collectively programmed thinking structures that distinguish a group of people or a community from others, examined the organizational culture through four dimensions: power distance, individuality-collectivism, masculine-feminine orientation and uncertainty avoidance. These classifications about organizational culture actually overlap. As also mentioned above, Handy (1981) and Pheysey (1993) in their classifications used Harrison's classification (1975) as a basis. Pheysey's (1993) organizational culture classification is almost similar to Hofstede's classification (1993); power culture corresponds to power distance, achievement culture to individuality, support culture to feminine orientation and role culture to uncertainty avoidance, respectively (İpek, 1999). Hofstede (1993) later added another cultural orientation to the four different cultural orientations as long-term vs. short-term orientation.

The concept of organizational culture which gradually began to be used by managers through 1980s, and seen in the literature by the publications of the book by Deal & Kennedy (1982) entitled *corporate cultures* and Peters & Waterman's (1982) book *in search of excellence* (Hofstede, Bram, Ohavy & Sanders, 1990). Ouchi (1981), compared Japanese management philosophy and culture with that of USA in the book *theory z*, which played a significant role in the popularization of the term organizational culture.

The studies that focus on organizational culture began to be conducted in Turkey in 1980s. In Kozlu's study (1986) under the title of corporate culture, successful American & Japanese companies were examined; managerial and cultural aspects of this success were emphasized and some companies in Turkey which were deemed successful were also evaluated within this scope. Pekerkan (1993) examined the organizational culture of a company operating internationally based on the organizational culture classification suggested by Hofstede (1993). The first study on organizational culture in educational institutions was conducted by Şişman (1993). In the study, Şişman described the perception of teachers and managers working for primary schools within the context of two dimensions: shared fundamental premises and organizational practices. Unutkan (1994), in his study on the effect of organizational culture on privatization, examined the organizational culture orientations of managers who are working for a public institution. Few studies on organizational culture followed the above-mentioned studies around 2000s (İrmiş, 1995; Özen, 1996; Algan, 1997; İpek 1999); and a notable increase in the studies in this field was observed after that period. When studies on organizational culture conducted in the last 30 years are examined, it may be seen that some of them examine the participants' organizational culture perception in accordance with their personal characteristics (gender, seniority, marital status etc.) whereas some compared it with other organizational features such as organizational commitment, organizational citizenship and leadership styles. However, when literature in this field is searched, a meta-analysis on this issue is yet to be made. This study is expected to become the first meta-analysis aimed at determining the effects of gender on teachers' organizational culture perception.

During the literature search, no meta-analysis on the effect of gender, as a single factor, on participants' organizational culture perception has been detected. However, Steel & Taras (2010), in their study, examined organizational culture as a dependent variable and tried to determine the effects of both personal factors (gender, age, generation, education level and socio-economic status) and national factors (gross national product per capita, economic, political and civilian rights) as a whole on participants' cultural value perception. The study findings suggest that, the effect of gender on cultural values vary depending on whether gender equality is endured or not in countries where the study was conducted. Accordingly, it was found that the effect of gender on cultural values perception in countries, where gender equality is ensured, is lower whereas it is higher in countries where gender inequality still dominates.

When studies in Turkey are examined, it may be seen that no experimental research on teachers' organizational culture perception has been conducted but few descriptive studies examines the effects of demographical variables, primarily of gender on teachers' perception of organizational culture. In these studies, teachers' organizational culture perceptions have been compared based on various variables such as age, experience, marital status, and branch and school type along with gender. The current study is based on those studies including a comparison of teachers' organizational culture perceptions within the context of gender variable and it aims to determine the effects of teachers' gender on their organizational culture perception. Within the scope of this study, the keywords "organization culture", "organizational culture" and "school culture" were used to find the related material and researches in the National Thesis Archive of the Council of Higher Education and 112 theses/dissertations in portable document format (pdf), which are open to public, were found. Fifty of these theses/dissertations have been found to include a comparison of participants' varying organizational culture perception depending upon gender variable. However, only 27 of these studies include teachers as

participants. These studies were used in the current study to determine the effect sizes of teachers' organizational culture perception and whether there is any difference between the effect sizes in terms of some variables that have been ignored in primary studies.

### *1.1 The Purpose of the Study*

The aim of this study is to determine the gender effect size on teachers' organizational culture perception (OCP). Also the variables of school type, publication type, and publication year, the region in which the research was carried out, settlement, positions and teaching fields of teachers, school levels, data collection instrument, and researcher's gender are tested as moderator variables.

## **2. Method**

### *2.1 Research Model*

Meta-analysis research method is used in this study. This method involves analysis, synthesis and the interpretation of quantitative findings from independent studies through advanced statistical techniques. Meta-analysis is used to combine the findings of previous studies conducted at different times in different places on the same subject. This method aims to reveal the realities on the subject and to achieve the most reliable fact in quantitative terms through increasing the number of samples (Aytaç, 2014; Cumming, 2012: 205; Kış, 2013; Yıldırım, 2014). In this study, CMA ver. 2.2.064 [Comprehensive Meta-Analysis], Statistical Package Software for Meta-Analysis was used for measurement of the effect sizes, variances and comparisons of the groups included in each study. SPSS ver. 20.0 package software was used for the rater reliability test.

### *2.2 Data Collection*

MA theses and PhD dissertations on teachers' organizational culture perceptions in Turkey are the basic data sources of this study. The keywords of "culture of the organizations", "organizational culture" and "school culture" were used to get the related material and researches in the National Theses/Dissertations Database of Turkish Higher Education Council. In the consequence of this search, 27 theses/dissertations were deemed meeting the inclusion criteria among almost 100 theses/dissertations about the subject of this study. The theses/dissertations included in this study were chosen according to the following selection criteria:

- (i) Published or unpublished master's thesis or PhD dissertation.
- (ii) The research method of the study: Quantitative study and use gender as an independent variable.
- (iii) Existence of statistical calculations: Sample size, mean, standard deviation, F value, t value, chi-square value, Kruskal Wallis value, Mann Whitney U value and p value.

23 studies were not included in the study since they used different variables (managers, academic members) and they lacked the data necessary for a meta-analysis. The sample of this study is limited to 27 studies, 25 MA theses and 2 PhD dissertations, on this subject written in Turkey between the years 2003 and 2014.

*Research Reliability:* In order to evaluate the research reliability, a coding protocol was created. The protocol included the names, contents and other required data of the theses/dissertations involved in this study. Also an inter-rater reliability form was prepared in order to determine the inter-rater reliability. The form was rated by three authors to ensure the inter-rater reliability. Cohen's Kappa statistics (0.94) indicated an almost perfect compliance between the raters.

*Research validity:* The validity and reliability of the studies included in this research also determine the validity and reliability of our current meta-analysis study. Since all related studies meeting the criteria of meta-analysis were searched and included in this study, content validity may be assumed quietly high. DeCoster (2004) and Petitti (2000) pointed out that the combined effect size of a meta-analysis depends on the validity of the studies included in it. All theses/dissertations we investigated for this study have been carried out with valid and reliable data collection instruments. In other words, the validity of data collection instruments had been ensured in all of 27 studies included in the meta-analysis.

### *2.3 Data Analysis*

During data analysis, fixed and random-effects, effect sizes, variances and group comparisons were measured through Comprehensive Meta-Analysis [CMA ver. 2.2.064] Statistical Package Software (Borenstein et al., 2005). The female teachers are accepted as sample group and the male teachers are accepted as control group. The positive effect size is interpreted in favor of female teachers while negative effect size is interpreted in favor of male teachers (Aytaç 2014).

## **3. Results**

The findings of the research related to the publication bias, descriptive statistics, forest plot, fixed effect model,

homogeneity test, random effect model and moderator analysis are given below.

As reflected in Figure 1, a majority of the 27 studies that were included in this study is located at upper side of the figure and very close to the conjoined effect size. In case there is no publication bias, studies are expected to expand symmetrically on both sides of the vertical line showing the effect size (Borenstein et al, 2009: 284). One of the studies (Karaman, 2011) that was included in this study to determine the conjoined effect size measured based on gender variable went beyond the pyramid but this study expanded around the top and the middle of the figure. If there was a publication bias in 27 studies that were included in this study, then, the majority of the studies will be located at the bottom of the figure or only at a single part of the vertical line (Borenstein et al, 2009: 284). In this sense, this cone graphic is an indicator of the absence of a publication bias in terms of the studies included in this study.



Figure 1. Cone Dispersion Graphic of the Studies with Effect Size Data on Differences among Teachers' Organizational Culture Perceptions in accordance with their Gender

In order to test the publication bias Orwin's Fail-Safe N Test was conducted. This test calculates the number of studies that are likely to be excluded from the meta-analysis (Borenstein et al, 2009: 285). In the consequence of this analysis, Orwin's Fail-Safe N was found to be 16. The necessary number of study for the average effect size found as 0.018 in the consequence of the meta-analysis to reach 0.01 (trivial) level, in other words, almost to zero effect size is 34. However, 27 studies which were included in this study are the total number of studies which meet the inclusion criteria and which are available among all the studies conducted on this subject in Turkey (qualitative, quantitative, theoretical etc.). Impossibility to attain other 34 studies may be accepted as another indicator of the absence of publication bias in this meta-analysis.

### 3.1 Non-Conjoint Findings of Effect Size Analysis Based on Teachers' Gender

The effect sizes of male and female teachers' organizational culture perceptions, standard error and its upper and lower limits based on a reliability level of 95% are given on Table 1.

Table 1. Effect Sizes of Teachers’ Organizational Culture Perceptions Based on Their Gender

Model	Research Name	Effect size (d)	Standard error	Variance	Lower limit	Upper Limit	Z-Value	p-Value	Model	Research Nan
	Erdoğan Gümüş, 2011	0.073	0.112	0.012	-0.146	0.292	0.654	0.513	265	115
	Aslan, 2008	-0.170	0.129	0.017	-0.423	0.083	-1.319	0.187	135	109
	Yalınkılıç, 2012	0.041	0.108	0.012	-0.171	0.253	0.380	0.704	258	128
	Esinbay, 2008	-0.012	0.071	0.005	-0.150	0.126	-0.171	0.864	393	412
	Yılmaz, 2008	-0.019	0.104	0.011	-0.222	0.184	-0.184	0.854	199	175
	Cit, 2010	0.111	0.108	0.012	-0.102	0.324	1.024	0.306	104	468
	Altuğ, 2014	-0.030	0.116	0.013	-0.258	0.198	-0.259	0.796	200	118
	Güzel, 2010	-0.229	0.110	0.012	-0.445	-0.013	-2.081	0.037	181	153
	Arabacı, 2014	-0.206	0.122	0.015	-0.445	0.033	-1.693	0.091	111	174
	Uç 2013	0.164	0.131	0.017	-0.092	0.420	1.254	0.210	213	81
	Pulat, 2010	-0.039	0.114	0.013	-0.263	0.185	-0.343	0.732	190	128
	Çelik, 2008	-0.067	0.142	0.020	-0.345	0.212	-0.469	0.639	91	109
	Açıklı, 2013	0.036	0.149	0.022	-0.255	0.328	0.245	0.807	131	69
	Şahmelikoğlu, 2013	0.084	0.115	0.013	-0.142	0.310	0.726	0.468	149	152
	Önsal, 2012	0.373	0.115	0.013	0.148	0.599	3.247	0.001	205	123
	Lal, 2012	-0.174	0.098	0.010	-0.367	0.018	-1.777	0.076	193	227
	Karaman, 2011	-0.252	0.289	0.084	-0.819	0.315	-0.871	0.384	60	15
	Şirin, 2011	-0.126	0.159	0.025	-0.438	0.186	-0.793	0.428	113	61
	Doğan, 2010	-0.135	0.135	0.018	-0.399	0.130	-0.998	0.318	126	98
	Uzun, 2008	-0.069	0.189	0.036	-0.438	0.301	-0.363	0.716	47	70
	Zeytin, 2008	0.224	0.118	0.014	-0.006	0.455	1.909	0.056	172	126
	Taner, 2008	0.040	0.117	0.014	-0.190	0.269	0.339	0.734	165	131
	Alkan, 2008	0.042	0.123	0.015	-0.200	0.284	0.339	0.735	114	155
	Çakır, 2007	-0.024	0.150	0.022	-0.317	0.270	-0.158	0.874	133	67
	Fırat, 2007	0.096	0.074	0.005	-0.049	0.241	1.296	0.195	647	255
	Vural, 2007	-0.127	0.116	0.013	-0.355	0.100	-1.095	0.274	161	138
	Şahin, 2003	0.213	0.070	0.005	0.077	0.350	3.058	0.002	646	304
Fixed		0.021	0.021	0.000	-0.021	0.063	0.992	0.321	5402	4161
Random		0.010	0.029	0.001	-0.047	0.067	0.351	0.725	5402	4161

In accordance with Table 1, the standardized mean difference (SMD=SOF) based on gender in these 27 studies, varies from -0.252 in favor of male teachers to 0.373 in favor of female teachers. A statistically significant difference ( $p < 0.05$ ) was found in 3 studies while no significant difference was determined in 24 studies. The confidence interval of 27 studies varies from -0.819 to 0.599.

3.2 Forest Plot of the Studies Including Data on Gender

The forest plot of 27 studies included in this study and consisting of the data concerning gender is given in Figure2.

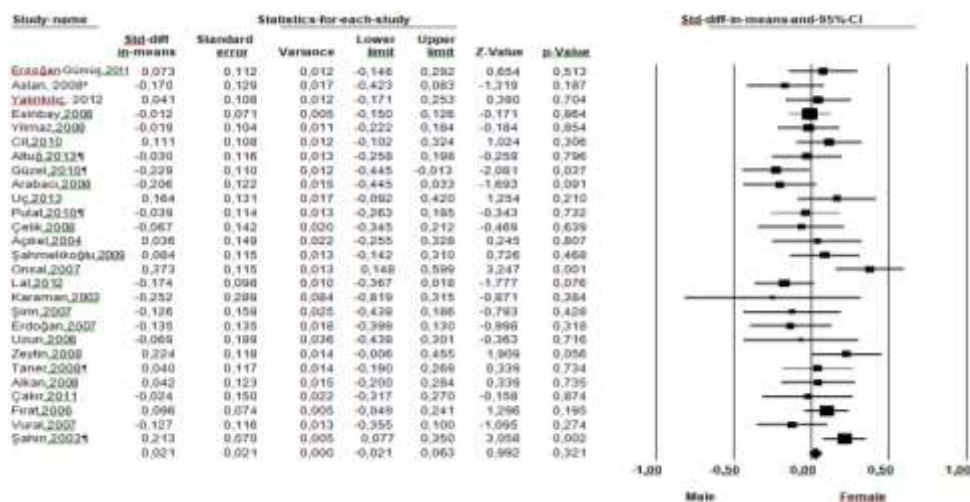


Figure 2. Forest plot of the effect sizes of teachers’ organizational culture perception based on gender

When Figure 2 is examined, a difference higher than zero in favor of female teachers is observed. The fact that there is a difference in favor of female teachers may be interpreted as a sign of the fact that they perceive and encounter organizational culture more in proportion to male teachers.

### 3.3 Findings of Effect Size Meta-Analysis of Teachers' Gender Conjoined in accordance with Fixed and Random Effect Models

The average effect size of male and female teachers' organizational culture perceptions conjoined in accordance with fixed and random effect models (without subtracting the outliers), standard error and its upper and lower limits based on a confidence interval of 95% are given on Table 2.

Table 2. Findings of Effect size Meta-Analysis Based on Gender Variable Conjoined in accordance with Fixed and Random Effect Models and Homogeneity Test

Model	Effect size and confidence of %95						Heterogeneity			
	Number of studies	Point estimate	Standard error	Variance	Lower limit	Upper limit	Z-value	Q-value	Df (Q)	I <sup>2</sup>
Fixed effect	27	0.021	0.021	0.000	-0.021	0.063	0.992	44.543	26	41.629
Random effect	27	0.010	0.029	0.001	-0.047	0.067	0.351			

In Table 2, the average effect size of the studies included in this study based on gender variable in accordance with fixed effect model was calculated as  $d=0.021$  whereas the standard error of the average effect size, the upper limit and lower limit of confidence interval of the average effect size was calculated as  $SE=0.021$ ;  $0.063$ ; and  $-0.021$ , respectively. Data obtained from 27 studies included in this study based on the calculations showed that female teachers have a higher level of organizational culture perception than their male counterparts in accordance with fixed effect model. However, since the effect size value is lower than 0.20, it may be regarded as an effect even below the lower level according to Cohen's classification (Cohen, 1988, p. 40). The classification of Thalheimer & Cook (2002) shows that there is a nonsignificant difference (-0.15-0.15). When statistical significance is calculated according to Z test,  $Z=0.992$  was found. The obtained result was found to have statistical significance with  $p=0.013$ . Only 7 of the 27 studies that were included in the study remained within the upper and lower limits of the effect size and near the effect size obtained while the remaining 20 studies gave results which are above or below these limits.

Homogeneity test, in other words, Q statistics was calculated as  $Q=44.543$ . 26 degrees of freedom at a significance level of 95% from  $\chi^2$  table was found to be 38.9. The hypothesis on the absence of homogeneity in terms of the distribution of effect sizes was rejected in fixed effect model because Q-statistics value ( $Q=44.543$ ) exceeded the critical chi square distribution value ( $\chi^2_{0.95, 26}=44.543$ ) with a degree of freedom of 26. Thus, effect sizes distribution was determined to be heterogeneous in accordance with fixed effect model.

$I^2$ , which was developed as a supplement to Q statistics, put forth a clearer result concerning heterogeneity (Petticrew & Roberts, 2006; Yıldırım, 2014).  $I^2$  shows the rate of total variance about the effect size. As opposed to Q-statistics,  $I^2$  Statistics is not affected by number of studies. During the interpretation of  $I^2$ , 25% indicates a low-level heterogeneity, 50% indicates a mid-level heterogeneity and 75% shows a high-level heterogeneity (Cooper et al, 2009, 263). Since a level of heterogeneity close to a mid-level heterogeneity was found between the studies in the consequence of the homogeneity test for the purpose of gender variable (Q and  $I^2$ ) the model to be used for conjoining process was transformed into a random model. The results of the moderator analysis made to put forth the reasons for this heterogeneity are given on Table 3.

Table 3. Categorical Moderator Results on the Effect of Gender on Teachers' Organizational Culture Perception

Moderator	k	D	SE	%95 CI	Q
Publication Type					8.842
MA	25	-0.009	0.051	[-0.055; 0.038]	
PhD	2	0.158	0.031	[0.059; 0.257]	
School Type					7.639
Private	2	-0.079	0.087	[-0.250; 0.092]	
Public	16	0.005	0.028	[-0.050; 0.061]	
Private-Public	9	0.063	0.035	[0.007; 0.232]	
Education level					0.354
Primary	22	0.026	0.023	[0.019; 0.072]	
Secondary	5	-0.011	0.059	[-0.127; 0.104]	
Sample					5.663
Teacher	23	-0.013	0.026	[-0.063; 0.038]	
Manager and Teacher	4	0.098	0.039	[-0.022; 0.174]	
Teacher's Title					0.074
Branch	6	0.008	0.052	[-0.094; 0.111]	
Grade	21	0.024	0.024	[-0.022; 0.070]	
Region of the Study					8.683
Mediterranean	2	-0.123	0.158	[-0.433; 0.186]	
Aegean	5	0.090	0.040	[0.011; 0.169]	
Central Anatolia	3	-0.117	0.040	[-0.239; 0.005]	
Marmara	17	0.020	0.065	[-0.035; -0.076]	
Assessment Instrument					0.179
Questionnaire	3	-0.011	0.078	[-0.164; 0.143]	
Scale	24	0.024	0.022	[-0.020; 0.068]	
Scale Type					1.432
Developed	4	0.067	0.044	[-0.019; 0.152]	
Ready	23	0.007	0.025	[-0.042; 0.055]	
Settlement Unit of the Study					7.639
Province	23	0.042	0.023	[-0.003; 0.086]	
District	2	0.184	0.118	[-0.415; 0.047]	
Province/District	2	-0.135	0.080	[-0.291; 0.022]	
Researcher's sex					7.693
Male	10	-0.071	0.040	[-0.148; 0.007]	
Female	17	0.060	0.026	[0.010; 0.110]	

Note: k=number of studies, d=Cohen's d, SE= Standard Error, CI= Confidence Interval, Q=heterogeneity among the studies

Comparison analyses were made for those studies whose number of subgroups is 2 and more. \* $p < .05$

In the consequence of the moderator analysis conducted, the publication type ( $p=0.003$ ), title of the sample members, being teacher or manager ( $p=0.017$ ), region of the study ( $p=0.034$ ), settlement of the study ( $p=0.022$ ) and researcher's sex ( $p=0.006$ ) were determined to be moderators for the average effect size calculated. As a result of the moderator analysis, the school type (public-private) ( $p=0.223$ ), education level ( $p=0.552$ ), teacher's title (branch-grade) ( $p=0.786$ ), assessment instrument ( $p=0.672$ ) and scale type (ready or developed) ( $p=0.231$ ) were determined not to be moderators for the average effect size calculated. Moderator analysis showed that effect sizes of the studies conducted ( $p=0.003$ ) vary in depending on the publication type. In terms of publication type, results of MA theses were found to be in favor of male teachers while the results of PhD dissertations were found to be in favor of female teachers. Within the context of the moderator effect of the researcher's gender, it may be said that the direction of teachers' JS perception changes in favor of male teachers when the researcher is male ( $d=-0.086$ ) whereas it changes in favor of female teachers when the researcher is female ( $d=0.054$ ). Male teachers' organizational culture perception found higher in studies including only teachers as samples ( $d=-0.013$ ) while an increase in the effect size in favor of female teachers was observed in studies including both school managers and teachers as samples ( $d=-0.098$ ). Studies conducted in the regions in which the provinces of the studies are located ( $p=0.034$ ) were observed to have an influence on the effect sizes. Results of the studies conducted in Aegean & Marmara (Aegean:  $d=0.090$  and Marmara:  $d=0.020$ ) were in favor of female teachers while the effect size of the studies including samples from Mediterranean and Central Anatolia was in favor of male teachers (Mediterranean:  $-0.123$  and Central Anatolia:  $d=-0.028$  and Aegean:  $d=-0.117$ ). When the settlements of the studies are considered, female teachers' organizational culture perception is observed to be at a higher level in studies in which provinces ( $d=-0.042$ ) and districts ( $d=-0.184$ ) are handled separately whereas male teachers' organizational culture perception is observed to be at a higher level in studies in which provinces and districts are handled together.

When the researcher is male, the difference changes in favor of male teachers ( $d=-0.071$ ) while it changes in favor of female teachers when the researcher is female ( $d=0.060$ ).

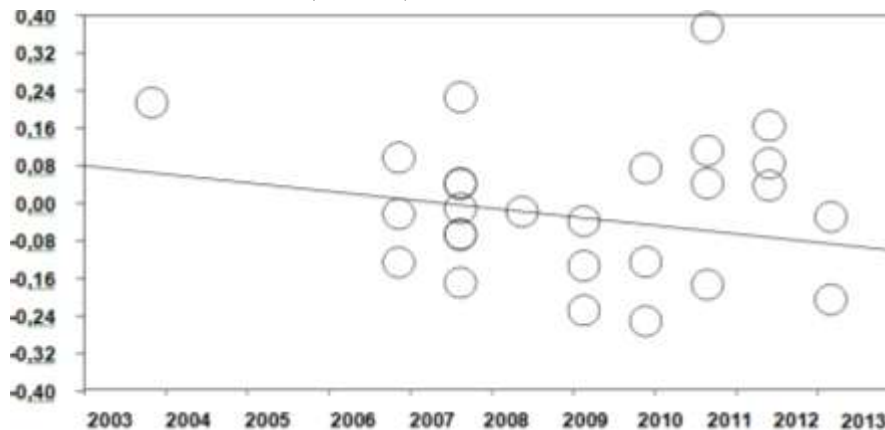


Figure 3. Effect Sizes Meta-Regression Results based on the Years in which the Research was conducted

As shown in Figure 3, there is an increasing tendency in the effect sizes by years in favor of female teachers. However, the differences observed based on gender variable is not validated statistically (Intercept = 27.913, Year  $d=-0.013$ ,  $SE=0.07$ ,  $[-0.027; 0.000]$ ,  $Z=1,930$   $p=0.053$ ).

#### 4. Discussion and Conclusion

In the theses/dissertations used for the purposes of the current study, teachers' varying perceptions about organizational culture, depending on their gender, were compared and different results were obtained. In some studies, teachers' organizational culture perception was observed to change based on their gender at a statistical level whereas in others it was observed not to change. For instance, in some of those theses/dissertations including teachers of primary schools, teachers' organizational culture perceptions were observed not to change at a statistically significant level depending on their gender (Çakır, 2007; Vural, 2007; Fırat, 2007; Esinbay, 2008; Taner, 2008; Güzel, 2010; Pulat, 2010; Karaman, 2011; Erdoğan Gümüş, 2011; Şirin, 2011; Yalınkılıç, 2012; Açıkel, 2013; Altuğ, 2014). In contrast, in some theses/dissertations including teachers of primary schools, teachers' organizational culture perceptions were observed to change at a statistically significant level based on their gender (Şahin, 2003; Zeytin, 2008; Yılmaz, 2008; Önsal, 2012; Lal, 2012). The study of Uç (2013) showed that teachers' organizational culture perceptions do not change in accordance with their gender but there is a significant difference in statistical terms in favor of female teachers in role and support culture sub-dimensions.

In addition, some of those studies including teachers of secondary schools show that teachers' organizational culture perceptions do not to change at a statistically significant level depending on their gender (Alkan, 2008; Aslan, 2008; Uzun, 2008; Doğan, 2010; Çit, 2012) whereas others dealing with secondary school teachers show that teachers' organizational culture perceptions change at a statistically significant level based on their gender (Çelik, 2008; Şahmelikoğlu, 2013; Arabacı, 2014). In some studies in which teachers' organizational culture perception change based on their gender, the arithmetic mean of female teachers' organizational culture perception is higher (Şahin, 2003; Zeytin, 2008; Önsal, 2012) while in other similar studies the arithmetic mean of male teachers' organizational culture perception is higher (Çelik, 2008; Yılmaz, 2008; Lal, 2012; Şahmelikoğlu, 2013; Arabacı, 2014).

To sum up, the number of studies on organizational culture in the field of education has been gradually increasing as it does in other fields. These studies examine organizational culture through using different scales and independent variables (gender, branch, marital status, education level, graduation faculty and seniority). In the consequence of these studies, results both significant and nonsignificant in statistical terms and varying in terms of sub-groups of independent variables were obtained. There is a strong need for meta-analyses through synthesizing the results of all these studies within the context of teachers' organizational culture perceptions to pave the way for new studies in this field. In addition, an increase in the number of studies on teachers' organizational culture perception in recent years also requires the academia to obtain synthesize common results from these studies through combining these results considering also the number of samples. When literature in this field is scanned, no study dealing with teachers' organizational culture perceptions through meta-analysis method are found. For this reason, the current study may be regarded as an original research both in national and international terms. It is also expected to be a pioneer of future studies that would discuss the organizational culture within the context of a variety of variables through a meta-analysis method.

In the current study, 27 effect sizes related to 27 studies constituting a sample of 9.563 people were calculated. A statistically significant difference was detected in four studies while no significant difference was found in 23 studies. In



fixed effect model, as a result of the conjoining process, a statistically significant effect size of 0.021 was found (SOF) in favor of female teachers. This indicates a low and nonsignificant result in accordance with the classification of Cohen (1988) and Thalheimer & Cook (2002). On the other hand, in random effect model, the conjoining process produced a statistically significant effect size of 0.010 in favor of male teachers. However this result may be evaluated as low and insignificant in the classification of Cohen (1988), Thalheimer & Cook (2002). When these results are evaluated together, they show that there is a difference which may be regarded as nonsignificant among teachers' organizational culture perceptions in terms of gender variable.

The result of this study indicating to the fact that teachers' organizational culture perception changes based on teachers' gender even if it is at a low level, is in parallel with the result of the study conducted by Steel & Taras (2010) showing that the effect of gender on cultural value perception is at a lower level in countries where gender equality is ensured than the countries where there exists no gender equality. Since there is not any meta-analysis on the effect of teachers' gender on their OCP perception in Turkey, the comparison of this result with the related literature is not possible. However, the comparison of this result with the results of studies in which teachers' OCP is compared in accordance with their gender is possible. Within this context, results of the studies showing that female teachers' OCP is higher than that of their male counterparts (Şahin, 2003; Zeytin, 2008; Önsal, 2012; Uç, 2013) is in parallel with the result of this study. For instance, studies of Şahin (2003), Zeytin (2008) & Önsal (2012) on primary school teachers showed that female teachers' OCP is higher than male teachers' OCP. Study of Uç (2013) on primary school teachers showed that female teachers' OCP is higher than male teachers' OCP in the sub-dimensions of role and support culture. In the research made by Şahmelikoğlu (2013) on secondary school teachers, it was observed that teachers' OCP changes in favor of female teachers in achievement culture sub-dimension based on their gender.

The result obtained from this study is in compliance with the results of the studies showing that male teachers' OCP is statistically higher than OCP of their female counterparts (Çelik, 2008; Yılmaz, 2008; Lal, 2012; Şahmelikoğlu, 2013; Arabacı, 2014). For instance, study of Çelik (2008) on teachers working for Anatolian high schools showed that male teachers' OCP is higher than female teachers' OCP. Similarly, Lal (2012), in the study on primary school teachers, found that male teachers' OCP is higher than female teachers' OCP in support and role culture dimensions. The research made by Şahmelikoğlu (2013) on secondary school teachers showed that male teachers' OCP is higher than female teachers' OCP in role culture sub-dimension. Study of Arabacı (2014) on vocational high school teachers indicated to the fact that male teachers' OCP is higher than their female counterparts in support culture sub-dimension.

In most studies conducted in Turkey, teachers' OCP has been observed not to change based on their gender. For instance, researches made by Çakır (2007), Vural (2007), Esinbay (2008), Güzel (2010), Pulat (2010), Erdoğan Gümüş (2011), Karaman (2011), Şirin (2011), Yalınkılıç (2012) & Açıkel (2013) on primary school teachers showed that teachers' OCP does not change in accordance with their gender. Similarly, in studies of Alkan (2008), Aslan (2008), Uzun (2008), Doğan (2010) & Çit (2012) on high school teachers, teachers' OCP has been observed not to change based on their gender.

According to these results, it may be said that female teachers have a more positive OCP than their male counterparts even if it is at a low level. As also reflected by Ertürk (2013), the reasons for the fact that female teachers have a more positive OCP than male teachers in Turkey may be listed as follows; the fact that male teachers face mobbing more even if it is at a low level, the perception teaching as a profession is more suitable for women, and finally the fact that a more protective attitude towards women is foregrounded in Turkish culture.

In accordance with the years in which this study is conducted as a moderator variable, an increase tendency in teachers' gender difference in terms of effect sizes of researches based on the year of the research moderator is observed. The result showing that there is not a significant difference between teachers' OCP based on gender variable may be evaluated as an indicator of the fact that teachers' gender cannot be used as an independent variable in studies concerning teachers' organizational perception. Findings of recent studies also support this result.

In conclusion, school environments should be designed to ensure that teachers can easily demonstrate positive organizational culture behaviors regardless of their gender. Further studies to reveal and discuss the reasons for the low level of difference among teachers' perceptions about organizational culture based on gender variable in schools and for the fact that women have a more positive OCP than their male counterparts even if it is at a low level may be recommended. Within the context of the results of this meta-analysis, further studies using meta-analyses method may aims to measure the effect size of the variable of marital status, school type, experience and career in terms of organizational culture.

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