Educational Leadership and Job Satisfaction of Teachers: A Meta-Analysis Study on the Studies Published between 2000 and 2016 in Turkey

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Abstract

Problem Statement: The number of studies on the effect of educational leadership on several organizational outputs is increasing. The most popular topic to review within the framework of leadership is job satisfaction. In several studies, a positive correlation was found between leadership and job satisfaction. According to the two-factor theory of Herzberg (1966), the leadership approaches of leaders affect teachers' job satisfaction. This is due to the fact that the administrators are an important part of the work done at school; and they contribute to teachers' experiences in a positive or negative way.

Purpose of the Study: The aim of this study is to test the effect of educational leadership on teachers' job satisfaction using the method of meta-analysis.

Method: In order to define the type of research that needs to be included into the meta-analysis of this study, an in-depth search was made in the Council of Higher Education (YÖK), the Turkish National Academic Network and Information Center (ULAKBİM), and Google Scholar databases. In this phase, the research process was reduced to only certain keywords, titles, and abstracts, based on the terms leadership, and only using job satisfaction, vocational satisfaction, and work satisfaction. The latest date of research included in this study is January 2016. In using meta-analysis, all doctoral and post-graduate dissertations, articles published in refereed and non-refereed journals, seminars, notices, and books on the
subject can be used. However, in this study, only doctoral and post-graduate dissertations and articles published in refereed and non-refereed journals were included in the analysis. The Pearson correlation coefficient (r) was determined to be the impact quantity in this study. A random effects model was applied in the meta-analysis processes in this study. Comprehensive Meta-Analysis software was used in these processes.

Findings: The mean effect size of educational leadership on job satisfaction was found to be .53. This value indicates that educational leadership has a strong impact on job satisfaction. According to the results of the meta-analysis, transformational [r = .52], cultural [r = .59], visionary [r = .47], and educational [r = .60] leadership styles were found to have a strong effect on job satisfaction, and leadership style was found to have a moderate effect.

Conclusion and Recommendations: According to the results of the meta-analysis, only the sampling region was determined to have a statistical significance among the determined moderator variables. The fact that only positive leadership styles and job satisfaction were covered by the study may have had an effect on the results obtained. So, future studies using meta-analysis can be designed to include negative leadership attitudes and outputs received from schools. In regard to organizational outputs, negative leadership approaches may occasionally offer better explanations than the positive leadership ones. Finally, this context should be considered, and studies designed to include leadership styles and other organizational outputs covering job satisfaction should be conducted with meta-analysis, as they would be likely to obtain more detailed information to explain related concepts.

Keywords: Leadership, educational leadership, job satisfaction, meta-analysis

Introduction

Leadership is one of the main concepts analyzed in different fields of the social sciences. Thus, there is not a common definition of leadership because its priorities in each field are different. This means that the idea of leadership, just like the ideas of democracy, love, and peace, are formed according to how the individual perceives them (Northouse, 2010). In other words, leadership is like beauty, it is hard to define but understood immediately when it is brought up (Bennis, 1986).

Leadership is not only found in the administrative sciences and business life, but it is also found in psychology, sociology, and similar fields (Sisman, 2011). When considered conceptually, leadership has four main components. These can be summarized as: (i) leadership is a process, (ii) leadership requires affecting others, (iii) leadership rises in a group, and (iv) leadership requires making the common objectives clear (Northouse, 2010). However, Kouzes and Posner (2002) approached
the concept of leadership in five basic practices: (i) to be a role model, (ii) to be the inspiration of a shared vision, (iii) to manage the process, (iv) to be the trigger for others, and (v) to encourage the hearts of others.

Several theories attempting to explain the nature of leadership have been developed, and a couple approaches have evolved from these theories. Each approach and theory introduced a different point of view for conceptualizing leadership. The characteristics approach, the behavioral approach, the situational approach, and the contemporary approach are listed in chronological order, and preserving their validities in certain terms.

The characteristics approach is the first of the leadership approaches, and it piqued the interests of researchers in the early part of the 20th century. The main assumption of this approach is that certain characteristics, both innate and gained, will create effective and great leaders. Hence, the theories presented within the scope of this approach are called The Great Man theory (Northouse, 2010; Palestini, 2009). In this approach, where the characteristics that created great leaders were analyzed, certain basic characteristics were thought to make a leader more effective. In this sense, Stogdill (1948 – 1974) conducted the studies and carried out research to determine the characteristics of leaders between 1904 and 1974; and he identified the most common leadership characteristics as intelligence, success, determination, entrepreneurship, self-confidence, humanitarianism, tolerance, effectiveness, sociability, alertness, foresight, and responsibility. In the middle of the of 20th century, interest in The Great Man theories gradually decreased, and opinions stating that leadership, which had previously been explained only by individual characteristics, involved a more complicated process began to prevail. Stogdill (1948) stated that one isn't a leader just because one has certain leadership characteristics and that there is not one leadership approach that can be used in every situation.

In parallel with this idea, the belief that the behavioral approach was the correct approach had also increased during the same period. The assumption that leaders have two different types of leadership attributes is the basis of the behavioral approach. This shows that leaders have two different types of leadership attributes, which can be summarized as being able (i) to establish structure and (ii) to tolerate or face either (i) production problems and (ii) worker problems (Cunningham & Cordeiro, 2009; Northouse, 2010; Palestini, 2009). Based on these studies, Blake and Mounton (1964) developed the managerial style leadership theory and paved the way for the conceptualization of leadership attributes. The next theory that came to the forefront of the behavioral approach was the X-Y leadership theory of McGregor (1960). In this theory, X, one of the dimensions of this theory, argues that leaders behave authoritatively and in a domineering manner, while Y, the other dimension, argues that leaders behave democratically and in a participative manner. Criticisms that the characteristics approach and behavioral approach were not enough to explain the nature of leadership and define effective leadership helped to pave the way for the situational approach to leadership to come about.
The situational leadership approach is based on the 3-D Managerial Style theory by Reddin (1967) and developed by Hersey and Blanchard (1969; Northouse, 2010). Situational leadership focuses on situations and looks at leadership in two different dimensions, imperative and supportive situations. Several more theories were developed in relation to situational leadership approaches. The Contingency theory of Fiedler (1964, 1967) is a leader-matching theory attempting to match leaders with appropriate situations. This theory argues that effective leadership depends on the harmony between leadership style, time, and environment. Another situational leadership approach is The Path-Goal Theory that attempts to explain how leaders can motivate their followers and make choosing the right path clearer (Evans, 1970; House, 1971).

Another situational leadership approach is the multifactor leadership theory that is frequently used in literature (Bass, 1985). In the multifactor leadership theory, types of leadership consist of transformational leadership, maintainer leadership, and leadership offering freedom. The most frequently studied part of the theory is composed of the relationships between transformational leadership and organizational effectiveness (Bass, 1990; Bass & Avolio, 1994; Bycio, Hackett, & Allen, 1995, Cannella & Monroe, 1997; Witherspoon, 1997). According to Bass, transformational leadership reflects the type of behavior found in leaders defined in the minds of the people. Tichy and Devanna (1986), who attempted to envision the character of transformative leaders, stated that these leaders went against the norms, were willing to take risks, and were agents of change.

After the 90s is better, new theories emerged, including shared leadership (Gronn, 2006), distributed leadership (Elmore, 2000; Gronn, 2000; Gronn, 2002; Spillane, 2005), servant leadership (Greenleaf, 2002), ethical leadership (Brown & Trevino, 2006), spiritual leadership (Fry, 2003), and authentic leadership (Gardner, Cogliser, Davis & Dickens, 2011). All of these theories presented different formulas for creating effective leadership by developing separate points of view in understanding the nature of leadership.

Educational Leadership: A Conceptual Framework

Leadership is approached from a variety of perspectives in terms of institutions and organizations, and it is a very popular research subject in the field of education (Kruger & Scheerens, 2012). Leadership is associated with schools and administrators in educational studies. In this case, school administrators are expected to guide all employees and students, support them, undertake all responsibility, and inspire them to meet the objectives of the school. Furthermore, the school administrators pave the way for curriculum reform and developing a positive learning environment (Cotton, 2003; Hallinger, 2005; Huber, 2004; Nichols, 2011).

Studies on school leaders accelerated with the Effective School Act in the 1970’s. Research done in England and North America determined student success in certain schools to be greater compared to other schools. The researchers argued that this situation cannot be explained just by the unique individual and social characteristics of the students, but that the real difference between the schools was due to the
leadership behaviors of the school administrators. Because of this finding, educational leadership began to be discussed more frequently in educational studies (Bamburg & Andrews, 1991; Kruger & Scheerens, 2012; Ross & Gray, 2006).

The school leader is the person who plans and maintains program development, allocates resources, improves the performances of employees and students by encouraging them, and guides them in order to meet the objectives of the school. Upon determining the objectives of the school, school leaders ensure that these objectives are stated and agreed upon with the students, teachers, and school environment. Furthermore, these leaders manage the out-of-school activities as well. They direct the employee and student activities in other areas of the school, encourage local organizations to work with the school, and also collaborate with families and business organizations (Bush, Harris & Wise, 2000). In conclusion, school leaders undertake the main responsibility of ensuring that student success is at its maximum potential.

**Educational Leadership and Job Satisfaction**

Job satisfaction is an employee’s general view towards the components of a job and whether or not the employee likes the job (Shields, 2007; Shraibman, 2008). In this case, job satisfaction is a mixture of (i) emotional, (ii) cognitive, and (iii) behavioral characteristics (Willson, 2009). One research study defined job satisfaction as a person’s happiness while doing his or her job (Wray, Luft & Highland, 1996). Defining job satisfaction is as hard to identify as the feeling of happiness. It is unknown what makes anyone happy, and if one thing makes one person happy it is still unclear if that can be the source of happiness for someone else. The difficulty of identifying job satisfaction can be explained by this uncertainty. Schultz and Schultz (2005) and Verner (2008) defined job satisfaction to be the positive and negative emotions of a person’s feeling towards his or her job.

The number of studies on the effect of educational leadership on several organizational outputs is increasing. The most popular topic to review within the framework of leadership is job satisfaction (Schyns & Schilling, 2013). In several studies, a positive correlation was found between leadership and job satisfaction of teachers (Yang, 2012; Walumbwa, Orwa, Wang & Lawler, 2005). According to the two-factor theory of Herzberg (1966), the leadership approaches of leaders affect the job satisfaction of teachers. This is due to the fact that interacting with administrators is an important part of the work done by teachers at school, and they contribute to teachers’ experiences in a positive or negative way.

The main reason for addressing the concepts of leadership and job satisfaction—whose scope in the organization and management literature is quite wide and which gives rise to the efficiency of the organization and increases the dynamic relations between leaders and their followers—is that a meta-analysis of the relationship between leadership and job satisfaction in the Turkish context has not been conducted to the authors’ knowledge. Furthermore, it is important to gather together the studies related to leadership and job satisfaction to see what the results are since the number of those studies is quite high quantitatively. In this context, a holistic
view of the research on leadership and job satisfaction in light of Turkish culture and social characteristics forms a strong component of this study. According to the results of the published research, the following hypotheses were tested during the study:

- $H_1$: Educational leadership has a positive effect on teachers' job satisfaction.
- $H_2$: Leadership style is a moderating variable for the positive effect of educational leadership on teachers' job satisfaction.
- $H_3$: Sampling region is a moderating variable for the positive effect of educational leadership on teachers' job satisfaction.
- $H_4$: The level of the school within the studies analyzed is a moderating variable for the positive effect of educational leadership on teachers' job satisfaction.
- $H_5$: Type of research is a moderating variable for the positive effect of educational leadership on teachers' job satisfaction.
- $H_6$: Publication year of research is a moderating variable for the positive effect of educational leadership on teachers' job satisfaction.

**Method**

**Study Design**

In this study, the effect of educational leadership on teachers' job satisfaction was tested using a meta-analytic design. Meta-analysis is used to gather the results of several independent research studies on certain subjects and apply statistical analysis on the findings acquired (Littel, Corcoran & Pillai, 2008; Petitti, 2000).

**Sample of Studies and Selection Criteria**

In order to determine the studies to be included in the meta-analysis, an in-depth search was made on the Council of Higher Education (YÖK), the Turkish National Academic Network and Information Center (ULAKBİM), and Google Scholar databases. In this phase, the research process was reduced to only certain keywords, titles, and abstracts, based on the terms leadership, and only using job satisfaction, vocational satisfaction, and work satisfaction. The latest date of research included in this study is January 2016. In studies using meta-analysis, all doctoral and post-graduate dissertations, articles published in refereed and non-refereed journals, seminars, notices, and books on the subject to be researched can be used. However, in this study, only doctoral and post-graduate dissertations and articles published in refereed and non-refereed journals were included in the analysis.

Several strategies were used to determine the appropriate research for meta-analysis. First the research process was reduced to certain keywords, titles, and abstracts; and the selection of 41 research articles was formed upon reviewing all the research done on leadership and job satisfaction. Then the research abstracts were reviewed. Upon reviewing the abstracts, 13 of the research articles were excluded according to the criteria stated below. In the second phase, the remaining 28 research
studies were analyzed in detail, and 22 of these articles were found to be appropriate, while the other 6 were deemed inappropriate. Descriptive statistics on those 22 publications are provided in Table 1.

The inclusion criteria defined for this study are:

- To be carried out between 2000 and 2016,
- To include statistical information required for correlational meta-analysis,
- To measure educational leadership,
- To cover sample groups within the borders of Turkey,
- To cover a sample consisting of teachers,
- To be published in refereed journals (for articles).

The exclusion criteria defined for this meta-analysis are:

- Not including any quantitative data,
- Not including any correlation,
- Not accepting the leadership behavior as a measurement unit,
- Not addressing the leadership of a school administrator,
- Use of the same data set in two different research investigations.

Table 1.1
Features of the Studies Included in the Meta-Analysis

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Data (2000–2013) for this research were collected by N. Cogaltay as part of his dissertation, and his academic consultant, E. Karadağ, gave us publishing permission. We thank him for this permission and for all his help.
The number given in sampling region and grade of the school is 23 as the correlation value of two independent samples was given in one of the researches included in this study.

**Coding**

Coding is a data-extracting process during which clear data and data appropriate for research are extracted from the compiled information in the studies. A coding form was created before the analysis, and the coding was carried out in accordance with this form. The main objective of this procedure was to develop a special coding system, which is both general and unique enough not to miss the characteristics of any type of research. In order to determine the reliability of the coding system, two researchers carried out the coding process, and Cohen’s kappa reliability coefficient between the coders was determined to be .94. The coding form created for the study included the following components:

- References of the research,
- Information on sampling,
- Data collection tool(s),
- Information on methodology,
- Quantitative values.

**Analyses of Effect Sizes**

Effect size acquired in meta-analysis is a standard measure value used in the determination of the strength magnitude and direction of the relationship in the study (Borenstein, Hedges, Higgins & Rothstein, 2009). The Pearson correlation coefficient \( r \) was determined to be the impact quantity \( ES \) in this study. The correlation coefficient was between \( +1 \) and \( -1 \), so this \( r \)-value was converted into the value stated in Table 3 (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler & Staudte, 2008). In this study (i) all concerned correlations were included in the analysis and accepted as independent studies if all correlations were independent; and (ii) the average of the correlations was used when dependent correlations were given. There were a variety of methods to correct such average correlations; however, most of these methods can result in high correlation estimations (Schyns & Schilling, 2013). In this study, a conservative estimation was used as the average correlation, which creates a conservative estimation of the whole correlation.

There are two main models in meta-analysis: the fixed effects model and the random effects model. In order to determine the model that should be used, one must consider whether the characteristics of the research studies included in the meta-analysis meet the prerequisites (Borenstein et al., 2009; Hedges & Olkin, 1985; Kulinskaya et al., 2008; Littel, Corcoran & Pillai, 2008). The fixed effect model covers (i) the assumption that the research is the same in terms of functionality, and the objective is to estimate the impact quantity for only one defined population. If it is
believed that the research is not equal in terms of functionality, and if generalization
through the estimated impact quantity is wished to be carried out for greater
populations, then the model required is the random effects model. When all conditions
were taken into consideration, the random effects model was applied in the meta-
analysis processes in this study. Comprehensive Meta-Analysis software was used.

**Moderator and Moderator Analysis**

Moderator analysis is an analysis method to find statistical differences between
subgroups and between the average ES of the variables. Moderator analysis in meta-
analysis is planned in accordance with the objective of the study, and the procedures
are applied in accordance with this plan (Littel, Corcoran & Pillai, 2008). The
statistical significance of the difference between moderator variables is tested using
the Q statistic method developed by Hedges and Olkin (1985). In this method, Q is
divided into two variables, $Q_{\text{between}}$ ($Q_b$) and $Q_{\text{within}}$ ($Q_w$), and the analyses are
carried out using these two separate $Q$s. $Q_w$ tests the internal homogeneity of the
moderator variable; while $Q_b$ tests the homogeneity between groups (Borenstein et
al., 2009; Hedges & Olkin, 1985; Kulinskaya et al., 2008). In our study, only the $Q_b$
values were given because only the statistical significance of the differences between
moderators was required.

In this study, five moderator variables were determined, which were thought to
play a role in the mean ES. The first variable was the leadership style; a different style
was approached by each research study, each style was measured, and the
relationship between this type of leadership style and the amount of success was
reviewed. In fact, this moderator variable can be deemed to be the leadership criteria
used. Secondly, the sampling region was determined to be a moderator variable,
considering the groups, with which the research was carried out. Thirdly, the school
level in which the research studies were carried out was determined as a moderator
variable because it was thought to have an effect on the average impact quantity.
Fourth, the type of research was determined to be a moderator variable, considering
the groups with which the research was carried out. Lastly, the publication year of
the study was determined to be a moderator variable, considering the groups with
which the research was carried out.

**Reliability and Validity of the Study**

The credibility of the results is considered to be one of the most important criteria
in a meta-analysis. Reliability and validity are criteria that are commonly used in
studies. Particularly in qualitative research, these concepts are the most important
elements in determining scientificity. In this context, the following ensured reliability
and validity (Karadag, Bektas, Cogaltay, & Yalcin, 2015):

- The studies included in meta-analysis could not be inevitably identical. One
  of the most critical issues is to determine how many of these studies are
  similar. It cannot be assumed that there is an objective methodology, and it
  varies from study to study. In this context, the criteria for inclusion
determined by the researchers are presented in detail in the methodology section.

- Apples and pears can be simultaneously considered as symbols of the limitations and the power of meta-analysis. In this study, while determining the criteria for inclusion and exclusion, the field of study (leadership and teacher job satisfaction) was evaluated by considering all the features together.
- The moderator analyses in the study allowed for some comparisons and for seeing the effect according to the moderators.
- The random effects model was used because the studies included in the meta-analysis could not be functionally equivalent.
- Sensitivity was shown for publication bias in this study. Publication bias was prevented by conducting the study on both published and unpublished studies. In addition, no evidence was observed of publication bias by a funnel plot or tests, and it was determined that effect size was not influenced by publication bias (see the Results section for publication bias findings).
- To determine the reliability of the coding system, two researchers performed the coding process, and Cohen’s Kappa reliability coefficient between the coders was determined to be .96.
- The effect size calculations for each study included in the meta-analysis are presented in the Appendix.

The basic condition for a study that uses sampling to reveal facts is that samples represent the population in the best way. However, regardless of the strength of the sample, it will never be the same as the universe because of sampling errors, which are the total errors that occur incidentally due to the units included or excluded from the sample. If the study had an infinite sample, the sampling error would be zero. In contrast, the samples of the studies included in the meta-analysis were not infinite. Therefore, it was inevitable that a sampling error would occur in the studies. In this context, a random effects model was used instead of a fixed effects model with the assumption that the real effect size was the same in all studies. Additionally, publication bias and the normality of the effect size of the studies were included in the meta-analysis (see: Borenstein et al., 2009).

Results

Assessment of Publication Bias

Publication bias is based on the assumption that research on a definite a better definition can be found in the literature. As research with no statistically significant relations or with low relations is not considered to be valuable enough to be published, the total impact level is affected in a negative way, and average impact quantity increases the non-objectivity (Borenstein et al., 2009; Hanrahan, Field, Jones & Davey, 2013; Kulinskaya et al., 2008). The effect of such partiality in publications, which can also be called lost data, affects the overall research investigation of meta-analysis in a negative way. In this sense, partiality in publications was considered in
meta-analysis studies. For this study, the following questions were asked to analyze partiality in publications:

- Is there any evidence of partiality in the publication?
- Is it possible that the general impact quantity is the result of any partiality in the publication?
- How much of the total impact quantity is affiliated with the partiality of the publication?

In meta-analyses, several calculation methods are used to give statistical answers to the questions covering the possibilities stated above. The most common method is the funnel plot. The answer given by this method may not be accurately objective; however, it offers the opportunity for us to see whether the studies were written with partiality in the publication. A funnel plot of the research included in the meta-analysis of this study is given in Figure 1. In Figure 1, no evidence of the possibility of any effect of partiality in publication was observed. A funnel plot is expected to be asymmetric at a significant level in the case of any partiality in a publication. In particular, intensification (especially on the right) of the line exhibiting the average impact quantity of the research, which is to be intensified at the bottom of the funnel, is the indicator of the possibility of partiality in publication. In this study, no evidence of partiality in the publications was observed in any of the 23 data subjected to meta-analysis.

![Funnel Plot of Standard Error by Fisher's Z](image)

**Figure 1. Impact quantity funnel on partiality in publication**

Even though no partiality in the publications was observed in the funnel plot, the results of Duval and Tweedie’s Trim and Fill test, which was applied to determine the impact quantity related to partiality in publications and acquired with the meta-analysis using the random effects model, are given in Table 2. As seen in Table 2, there is no difference between the impact observed and artificial impact quantity created to fix the impact resulting from the partiality of publications. The research on
each side of the centerline is symmetrical, and this is the indicator of non-difference. As there is no evidence indicating lost data on either side of the centerline, the difference between the fixed impact quantity and observed impact quantity is zero.

Table 2.

<table>
<thead>
<tr>
<th>Imputed studies (right)</th>
<th>Point estimate</th>
<th>CI (Confidence Interval)</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed values</td>
<td>.53</td>
<td>.44 - .61</td>
<td>756.5</td>
</tr>
<tr>
<td>Adjustment values</td>
<td>0</td>
<td>.53</td>
<td>.44 - .61</td>
</tr>
</tbody>
</table>

Overview of the Average Effect Sizes

The results of the meta-analysis between educational leadership and job satisfaction are illustrated in Table 3. The findings support the \( H_1 \) hypothesis, indicating a positive correlation between educational leadership and job satisfaction of teachers. The impact of educational leadership on job satisfaction was found to be .53. This value indicates that educational leadership has a strong impact on job satisfaction.

In the moderator analysis, it was observed that the \( H_2 \) hypothesis, indicating the leadership styles to be moderators, was not supported. On the other hand, a positive and significant effect of leadership approaches on job satisfaction was observed. According to the results of the meta-analysis, transformational \( r = .52 \), cultural \( r = .59 \), visionary \( r = .47 \), and instructional \( r = .60 \) leadership styles were found to have a strong effect on job satisfaction. Transformational leadership had the strongest effect. This indicates a direct relationship of the feelings of the followers towards their leaders. No matter how different the impact values between the leadership styles and job satisfaction were, in the moderator analysis carried out in accordance with random effect analysis, the difference of effect between the leadership styles was not found to have any statistically significant difference \( (Q_b = 4.91, p > .05) \).

The findings support the \( H_3 \) hypothesis, indicating that the sampling region has a moderator role on the correlation between educational leadership and job satisfaction. In the moderator analysis, the difference of effect between sampling regions was found to be statistically significant \( (Q_b = 44.63, p < .01) \). Within this scope, the educational leadership was determined to have a strong effect on job satisfaction in the Aegean \( r = .41 \), Central Anatolia \( r = .64 \), Black Sea \( r = .58 \) and Marmara \( r = .49 \) regions, while the effect is moderate in Turkey in general \( r = .31 \). The fact that the effect in Turkey in general is lower compared to the impact coefficients of certain regions should be considered. When the results acquired were analyzed in light of the working conditions, and young teacher assignments to Eastern Anatolia and Southeastern Anatolia, the regional conditions can be argued to have an effect on the low relationship in Turkey in general.

The \( H_4 \) hypothesis indicating that the level and type of school have a moderator role on job satisfaction is not supported. In the moderator analysis, the difference of effects between school levels was determined not to be statistically significance
Within this scope, educational leadership was determined to have a strong effect on job satisfaction at all levels of school (preschool, elementary school, secondary school), included in the meta-analysis. The strongest effect was determined to be in preschools \( r = .69 \), while the lowest effect was in primary school \( r = .48 \). Besides, as it can be seen in Table 3, the findings of the moderator analyses using the variables of publication type \( (H_4) \) and publication year \( (H_5) \) indicated that neither of the variables had a mediating role in the relationship between the school and job satisfaction \( (p > .05) \).

Furthermore, the variances estimated for each moderator variable (leadership style, region, school level and type) in the meta-analysis were determined to be high. This finding indicates that all research included in this study have heterogeneous characteristics.

**Table 3.**

Correlations Between Educational Leadership and Job Satisfaction: The Results of Meta-Analysis

<table>
<thead>
<tr>
<th>Concepts</th>
<th>k</th>
<th>N</th>
<th>r</th>
<th>CI Lower Limit</th>
<th>CI Upper Limit</th>
<th>Q</th>
<th>Qb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leadership</strong></td>
<td>23</td>
<td>10,000</td>
<td>.53*</td>
<td>.44</td>
<td>.61</td>
<td>756.5*</td>
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<tr>
<td><strong>Moderator [Leadership Styles]</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Transformational</td>
<td>9</td>
<td>3527</td>
<td>.52*</td>
<td>.35</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural</td>
<td>4</td>
<td>2822</td>
<td>.59*</td>
<td>.47</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional</td>
<td>2</td>
<td>2192</td>
<td>.60*</td>
<td>.35</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visionary</td>
<td>2</td>
<td>643</td>
<td>.47*</td>
<td>.40</td>
<td>.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>816</td>
<td>.25</td>
<td>-.37</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderator [Region]</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>44,63*</td>
<td></td>
</tr>
<tr>
<td>Aegean Region</td>
<td>4</td>
<td>1267</td>
<td>.41**</td>
<td>-.01</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Anatolia R.</td>
<td>7</td>
<td>3081</td>
<td>.64*</td>
<td>.56</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Sea Region</td>
<td>4</td>
<td>2531</td>
<td>.58*</td>
<td>.44</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey in General</td>
<td>1</td>
<td>1159</td>
<td>.31*</td>
<td>.26</td>
<td>.36</td>
<td></td>
<td></td>
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<tr>
<td>Marmara Region</td>
<td>7</td>
<td>1962</td>
<td>.49*</td>
<td>.38</td>
<td>.59</td>
<td></td>
<td></td>
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<tr>
<td><strong>Moderator [Education level]</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>13</td>
<td>5723</td>
<td>.48*</td>
<td>.36</td>
<td>.60</td>
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<tr>
<td>Others</td>
<td>3</td>
<td>617</td>
<td>.55*</td>
<td>.28</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-school</td>
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<td>315</td>
<td>.69*</td>
<td>.41</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>5</td>
<td>3345</td>
<td>.59*</td>
<td>.40</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderator [Type of research]</strong></td>
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<td></td>
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<td></td>
<td></td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>Doctoral Dissertation</td>
<td>2</td>
<td>829</td>
<td>.53*</td>
<td>-.04</td>
<td>.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Dissertation</td>
<td>17</td>
<td>6790</td>
<td>.56*</td>
<td>.47</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific Article</td>
<td>4</td>
<td>2381</td>
<td>.51*</td>
<td>.28</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderator [Publication year of researches]</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>.44</td>
<td></td>
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<td>2006</td>
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<td>1501</td>
<td>.53*</td>
<td>.31</td>
<td>.69</td>
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<td>591</td>
<td>.53*</td>
<td>.21</td>
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<tr>
<td>2009</td>
<td>2</td>
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<td>.28</td>
<td>-.09</td>
<td>.58</td>
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<td>2010</td>
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<td>1077</td>
<td>.57*</td>
<td>.26</td>
<td>.77</td>
<td></td>
<td></td>
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<tr>
<td>2011</td>
<td>3</td>
<td>1187</td>
<td>.60*</td>
<td>.37</td>
<td>.77</td>
<td></td>
<td></td>
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<tr>
<td>2012</td>
<td>2</td>
<td>653</td>
<td>.68*</td>
<td>.43</td>
<td>.84</td>
<td></td>
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<tr>
<td>2013</td>
<td>2</td>
<td>637</td>
<td>.38*</td>
<td>.02</td>
<td>.65</td>
<td></td>
<td></td>
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<tr>
<td>2014</td>
<td>4</td>
<td>1706</td>
<td>.64*</td>
<td>.45</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>1711</td>
<td>.39*</td>
<td>.04</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion

The objective of this meta-analysis is to quantitatively analyze the relationship results acquired from the research analyzing the relationship between educational leadership and job satisfaction. The narrow confidence intervals in the meta-analysis indicate that the results of the research included in this study are reliable. This finding can be understood as significant in terms of making more reliable decisions on the tendency and strength of the relationship-related results acquired by meta-analysis.

As expected, the results of meta-analysis revealed that the educational leadership has a strong positive effect on the job satisfaction of teachers. This was expected because in the research articles, leader behaviors are frequently discussed as a measure to affect the job satisfaction of employees (Bogler, 2001; English, 2011; Griffith, 2004; Zigrang, 2000). In the meta-analysis of 311 studies in the databases of Science-Direct, ProQuest, and EbscoHost by Cakmak, Oztekin and Karadag (2015), it has been found that leadership affects job satisfaction on a medium-level. This medium-level effect in 311 international studies may be the result of the participants from various social and cultural contexts having different perceptions of leadership and job satisfaction. The fact that this study included only a Turkish sample may explain the large effect of leadership on job satisfaction. When the studies on the job satisfaction of teachers in Turkey (Celebi, 2012; Degirmenci, 2006; Tura, 2012; Yildirim, 2001) have been examined, it has been seen that the teachers’ job satisfaction levels are quite high on the internal and external factors except for salaries and wages. Accordingly, the employees’ perceptions of job satisfaction levels over average can be seen as the reason for the large effect of leadership on job satisfaction. For example, the relationship of employees with administrators is one of the hygiene factors of the two-factor theory developed by Herzberg (Herzberg, Mausner, & Snyderman, 1959). Furthermore, in Maslow’s hierarchy, the self-confidence level is stated to be directly connected with the attitudes of the administrators (Spector, 1996). The type of behavior resulting from this relationship is expected to depend on the constructive or destructive behavior of the administrators. Job satisfaction has a positive correlation with constructive leadership behavior and a negative correlation with destructive behavior (Einarsen, Aasland & Skogstad, 2007; Kellerman, 2004; Schyns & Hansbrough, 2010; Schyns & Schilling, 2013). The findings of our study support this statement. In all of the research included in the study, the relationship between constructive leadership (transformational and cultural, etc.) and job satisfaction was tested and the result was found to be positive. In another study using meta-analysis, analyzing the relationship between destructive leadership behaviors and job satisfaction proved that the tendency of the relationship was negative (Schyns & Schilling, 2013) and this result supports the findings of our study.
The reason behind this high positive relationship can be explained in two different ways. First of all, the positive attitude of constructive leaders towards their employees, by valuing them, supporting them, and offering effective solutions for problems, contribute to the success of the employees and eventually to greater job satisfaction. Secondly, the constructive leaders are role models for their followers, and they motivate them. In this case, the employees do not hesitate to follow their leader, follow the path offered by their leader on their own will, and are happier (Bass, 2000; Hawkins, 2011; Yukl, 2008). Most research on job satisfaction show parallel findings with the results that leadership increases the motivation of employees (Burns, 1978) and job satisfaction in turn (Kouzes & Posner, 2002). This finding is also similar to the results of many studies showing a positive relationship between leadership and job satisfaction (Brown, 1989; Chen, 2005; Karadag, Ciftci, & Bektas, 2015; Madlock, 2008; Parkinson, 2008).

The results revealed that educational leadership has a positive and strong correlation with the job satisfaction of teachers, who were found to have a positive attitude towards leaders who had constructive leadership behaviors. Particularly in the bureaucratic Turkish educational system, teachers tend to have a more positive attitude towards those administrators attempting to reform the schools. In our study, transformational leadership was found to have the greatest effect on job satisfaction. Although it had the greatest effect, this finding depends on the personal support and attention given by the transformational leaders to their followers. This kind of leadership includes behaviors such as making sure the employees are carefully listened to, cared for, their personal requirements and interests considered, and in which a supportive atmosphere is created within the organization (Bass, 1999; Bass & Riggio, 2006; Burns, 1978; Leithwood, 1992; Yukl, 1999).

However, another point that should be considered is the low effect of communicative leadership on job satisfaction, in terms of the leadership approaches that were analyzed as moderator variables and compared to other leadership styles, because the communicative behaviors of school leaders were expected to have a wide relationship with the job satisfaction of teachers. In light of this finding, the communicative behaviors of the school administrators can be deemed negative or perceived in a negative manner by teachers (Drucker, 1974; Pradhan & Chopra, 2008; Stronge, Richard & Catano, 2008). It can be concluded that the communicative leadership approaches were not enough in themselves to bring about job satisfaction in teachers. This is due to the little correlation that exists between the two, as it is hard to obtain a cause-effect relationship from the findings of the study, and the fact that there are several other variables besides communicative leadership that have an effect on job satisfaction (Cunningham & MacGregor, 2000; Dirks & Ferrin, 2002; Ferrat, 1981; Locke, 1976). In addition to the communicative leadership approach, transformational, cultural, educational, paternalistic, and constructive leadership styles were also determined to have a positive and strong relationship on job satisfaction.

In research carried out in the Aegean, Central Anatolia, Black Sea, and Marmara regions that covered regional variables, in one of the moderator variables determined
for meta-analysis, leadership was determined to have a positive and strong correlation with job satisfaction as expected. But in the nationwide research covering all regions of Turkey, the same relationship was determined to be lower compared to other regions; and it can be concluded that the reason behind this is the difficult social, economic, and geographical conditions of the Eastern and Southeastern Anatolia regions.

According to the findings on the level of school, one of the moderator variables, the preschool level, was determined to have the highest and strongest correlation with job satisfaction. On the other hand, the lowest correlation was found to be for teachers teaching special education, and this was also an expected result. The student profile for receiving training in special educational organizations could be the main reason for this low correlation compared to the other grades.

According to the results of the meta-analysis, only the sampling region was determined to have a statistical significance among the moderator variables determined. The fact that only positive leadership styles and job satisfaction were covered by the study may have had an effect on the results obtained. So, future meta-analytic studies can be designed to include negative leadership attitudes and outputs received from schools. For organizational outputs, negative leadership approaches may occasionally explain the reasons better than the positive leadership ones. Finally, this context should be considered, studies should be designed to include positive and negative leadership styles, and other organizational outputs covering job satisfaction should be conducted with meta-analysis as they are likely to obtain more detailed information for explaining related concepts.

One of the most important issues the school leaders should focus on is the organizational behavior. The concept of job satisfaction, which takes an important place in the literature of organizational behavior, can be contributed to positively by school leaders. Job satisfaction is affected by many internal and external factors. Hence, having been found to have a strong effect on the job satisfaction in this study, the leadership behaviors of school managers are referenced by the job satisfaction levels of the teachers, which are quite complex in nature. Since this result supports the view referred to often in the literature that school managers should have leadership behaviors, the educational services for the school managers to have leadership behaviors should have a qualitative nature as well as quantitative amounts. The effect of leadership behaviors on the employees’ job satisfaction will contribute to the school culture in the event that school managers perform those behaviors. This study conducted in the Turkish context may be considered a valid and reliable source for increasing the level of awareness of the effect of leadership behavior on school culture.

Limitations and Directions for Future Research

This research was conducted using data obtained from primary resources. The most significant disadvantage of the present research was likely the correlational nature of the studies from which the data were obtained. It is not objective to claim
that the results obtained can exactly explain the causal effects when considering that
the qualitative studies more effectively explain the nature of educational leadership.
Furthermore, the fact that the majority of the studies regarding educational
leadership and teacher job satisfaction were correlational indicates the existence of a
potential method bias.

It was not possible to reach all studies, despite the strategies developed to access
the studies to be included in the present meta-analysis. This was due to two reasons.
First, the full texts of some studies were not accessible through the databases
searched. Hence, presumably, some studies thought to include the data suitable for
the present research were not accessed. Second, because the publication language of
the studies included in the present research was limited to Turkish, studies
published in other languages were not accessed. Although there was not a statistical
result indicating a publication bias, the absence of publication bias was not ensured
because it was not possible to access the unpublished studies. The fact that the
sample of the present research consisted of studies published from 2000–2016 was
another limitation of the research.

Through the findings obtained as a result of the analyses, suggestions can be
listed as follows:

• With reference to the positive effect of educational leadership on job satisfaction,
  the necessary precautions should be taken into consideration to make the
  stakeholders adopt the educational leadership behaviors with the aim of
  accomplishing the instructional aims of the school.

• It has been found that most of the studies included in this research did not report
  the correlation coefficient (r). For this reason, researchers should report findings
giving way to meta-analysis instead of just providing a single finding.

• Further studies using meta-analysis should take into consideration studies
  published in different languages to reveal cultural differences.

References

*References marked with an asterisk indicate studies included in the meta-analysis.
The in-text citations to studies selected for meta-analysis are not followed by
asterisks.

*Agirdas, Y. (2014). Resmi liselerde dağıtımci liderlik ile is doyumu arasındaki ilişkini
  öğretmen görüşlerine dayalı olarak incelenmesi: Corum ornegi [The examination of
  the relationship between distributed leadership and job satisfaction in public
  high schools based on the opinions of the teachers: Case of province of

*Altintas, O. C. (2009). Duygusal zekâ elemanlarının liderlik tarzları ve örgütsel sonuçlar
  üzerindeki etkisi: Isparta ili ilkokul okullarında bir uygulama [The effect of
  emotional intelligence on leadership styles and organizational results: an
  application in the primary schools of Isparta]. (Unpublished doctoral
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Eğitim Liderliği ve Öğretmenlerin İş Doyumu: Türkiye’deki 2000-2016 Yearsındaki Araştırmalar Üzerine Bir Meta-Analiz Çalışması

Atıf:

Özet


**H1.** Okul yöneticilerinin liderlik davranışları ile öğretmenlerin iş doyumu arasında pozitif bir ilişki vardır.

**H2.** Liderlik stilleri, eğitim liderliği ve öğretmenlerin iş doyumu arasında ki pozitif ilişkide moderatördür.

**H3.** Örneklem bölgesi, eğitim liderliği ve öğretmenlerin iş doyumu arasında ki pozitif ilişkide moderatördür.

**H4.** Eğitim kademesi, eğitim liderliği ve öğretmenlerin iş doyumu arasında ki pozitif ilişkide moderatördür.

**H5.** Araştırmanın türü, eğitim liderliği ve öğretmenlerin iş doyumu arasında ki pozitif ilişkide moderatördür.

**H6.** Araştırmanın yılı, eğitim liderliği ve öğretmenlerin iş doyumu arasında ki pozitif ilişkide moderatördür.


**Bulgular ve Sonuçlar:** Tablo 3’de eğitim liderliği ve iş doyumu arasındaki meta-analiz sonuçları yer almaktadır. Bulgular, eğitim liderliği ve öğretmenlerin iş doyumu arasında pozitif bir ilişki olduğuna yönelik belirlenen $H_1$ hipotezini destekledi. Eğitim liderliğinin iş doyumu üzerindeki etki değeri .53 olarak hesaplandı. Bu değer eğitim liderliğinin öğretmenlerin iş doyumu üzerinde geniş düzeyde bir etkiye sahip


olduğunu göstermektedir. Yapılan moderatör analizinde, liderlik stillerinin moderatör olduğuna ilişkin belirlenen $H_2$ hipotezini desteklememesi görüldü. Buna karşın bütün liderlik yaklaşımlarının iş doyumu üzerinde pozitif ve anlamlı etkisi saptandı. Meta-analizde dahl edilen çalışmalarda elde edilen liderlik stillerinden dönüşümcü $r=.52$, kültürel $r=.59$, vizyoner $r=.47$ ve öğretimsel $r=.60$ liderliğin iş doyumu üzerinde geniş düzeyde etkiye sahip olduğu görüldü. Buna karşın örneklem bölgelerinin eğitim liderliği ve iş doyumu arasındaki ilişkiyi desteklediği Moderatör rol oynamış da $H_3$ hipotezini desteklemektedir. Yapılan moderatör analizinde örneklem bölgesinin etkisi etkisi istatistiksel olarak anlamlı bulundu ($Q_b=44.63, p<.05$). Bu kapsamda Ege $r=.41$, İç Anadolu $r=.64$, Karadeniz $r=.58$ ve Marmara $r=.49$ bölgelerinde eğitim liderliği iş doyumu üzerinde geniş; Türkiye genelinde $r=.31$ yürütülen çalışmada ise eğitim liderliği iş doyumu üzerinde orta düzeyde bir etkiye sahiptir. Ayrıca meta-analize dahl edilen diğer moderatör değişkenler (eğitim kademesi, araştırmanın türü ve yılı) üzerine oluşturan hipotezler desteklenmemiştir.


Anahtar sözcükler: Liderlik, eğitim liderliği, iş doyumu, meta-analiz.
Appendix.

Summary of studies characteristics in the analysis results

<table>
<thead>
<tr>
<th>Study name</th>
<th>Correlation</th>
<th>Lower</th>
<th>Upper</th>
<th>Z-Value</th>
<th>P-Value</th>
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Correlation matrix showing the relationship between variables for each study, along with the correlation coefficients, lower and upper bounds, Z-values, and P-values. The total number of studies included in the analysis is 400.