

The Effect of Leadership on Organizational Burnout

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Abstract The effect of leadership on organizational burnout (OB) was examined in this meta-analysis study. A total of 97 research studies were collected as a result of the review activity, out of which 37 were included in the meta-analysis. The 37 research studies were compiled to obtain a sample size of 17,368 subjects. The analysis results of the *random effect model* showed that leadership has a *small negative effect* on OB. Of the moderators identified for the study, such as sample group/sector, leadership style/approach, publication type, publication year, and the leadership and burnout scales used in the research studies, only the leadership scale was found to be a moderator variable.

1 Introduction

Although the changing conditions of our age have led to increasingly more opportunities for communication and collaboration, it has become necessary for employees to spend more time with others. This situation has resulted in more concentrated human relations and an increase in work tempo (Eren & Durna, 2006). Along with developing technology and an increase in competition, it has made burnout become a serious problem in professional life (Ardıç & Polatçı, 2009) and has also led to a heightened pressure and stress on demands on employees for the provision of quality services. As a result, the psychological health of employees is negatively affected, and the quality of services has suffered with the decrease in organizational productivity (Çalgan, Yeğenoğlu, & Aslan, 2009). In this scope, it can be stated that burnout is widespread among employees working in sectors centered on human relations, such as health, education and similar service sectors.

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Burnout is resulting in an economic loss to society as qualified employees withdraw from the workforce to change jobs, resign or retire early (Çokluk, 2003).

The term 'burnout' was first used by Freudenberger, who defined burnout as 'a state of burnout caused by the exhaustion of inner resources of an individual as a result of being unsuccessful, being worn out, a reduction in energy or strength or a non-satisfaction of demands' (as cited in Ardiç & Polatçı, 2009, p. 22). Maslach and Jackson (1981) offer a similar definition, stating that burnout is the syndrome that presents in the wearing out, exhaustion and desperation of individuals who are continuously working face-to-face with other persons.

The effect of leadership on OB has been shown in many research studies conducted in various fields (Altahayneh, 2013; Başer & Çobanoğlu, 2011; Bolat, 2011; Greco, Laschinger, & Wong, 2006; Güzel & Akgündüz, 2011; Telli, Ünsar, & Oğuzhan, 2012; Uğurluoğlu, Şantaş, & Demirgil, 2013). Because humans are social beings and have a desire to act in a group, leadership behaviors are affected by the attitude of the members of the group. In some groups, an autocratic leadership style may be preferred more often, whereas in some groups, it is necessary to be a democratic leader (Karasu, 2009). Considering the effect of burnout on group members, it is beneficial for the group for the leader of the group to correctly identify the level of burnout of members and to behave accordingly. In conclusion, each group is unique, and it is the responsibility of the leader to ensure the individual development of members of the group while also ensuring that the group performs successfully (Adair, 2009).

This study examined the effect of leadership on OB. Furthermore, the moderator variables, which were expected to have medium effects in this study, are identified as: (1) sample group/sector, (2) leadership style/approach, (3) research publication type, (4) research publication year, (5) the leadership scale and (6) the burnout scale used in research studies. All these variables, along with the results of previous research, were used to test the following hypotheses of this study:

- H₁ Leadership has a negative effect on OB.
- H₂ The sample group/sector is a moderator of the negative effect of leadership on OB.
- H₃ Leadership style/approach is a moderator of the negative effect of leadership on OB.
- H₄ The studies' publication type is a moderator of the negative effect of leadership on OB.
- H₅ The studies' publication year is a moderator of the negative effect of leadership on OB.
- H₆ The leadership scale used in research studies is a moderator of the negative effect of leadership on OB.
- H₇ The burnout scale used in research studies is a moderator of the negative effect of leadership on OB.

2 Method

2.1 Study Design

In this study, the effect of leadership on OB was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *burnout* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (97 research studies) was established including all studies with leadership and burnout in their titles. The abstracts of these studies were reviewed, and all were found appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 64 of the research studies in the pool were found appropriate, and 27 were not found suitable. The descriptive statistics of the 37 research studies to be included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies to the analysis study were:

- To have the statistical information necessary for correlational meta-analysis (n and r , or R^2 values)
- To be a study measuring the correlation between leadership and OB

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on OB
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a

Table 1 Characteristics of the studies included in the meta-analysis

Characteristics	1	2	3	4	Total
Year of Publication	Before 1990	1990–1999	2000–2009	2010 and beyond	–
n	5	3	10	19	37
%	13.5	8.2	27.0	51.3	100
Publication Type	Thesis	Article	–	–	–
n	20	17	–	–	37
%	54.0	46.0	–	–	100
Sample Group/Sector	Health	Education	Sport	Service	–
n	15	9	2	11	37
%	40.6	24.3	5.4	29.7	100

specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 *Statistical Processes*

The impact quantity, as determined through meta-analysis, is a uniformly measured value used to determine the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the impact quantity in this study. Because the correlation coefficient has a value between $+1$ and -1 , the calculated r value was evaluated by converting this value into the value as it appears in the z table (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 to determine which should be adopted for the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) if the correlations were independent, all of the related correlations were included in the analysis and were considered as independent studies; and (2) if there were dependent correlations, then the *conservation estimation* was accepted. A *random effects model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analytic process.

2.5 *Moderator Variables*

To determine the statistical significances among the different moderators of the study, only the Q_b values were used. Six moderator variables that were thought to have a role in average impact size were identified in the study. The first of these considered the *sample group/sector* as a moderator with regard to the relationship between OB and leadership. The second was the *leadership style/approach* because it was thought to have an impact on the average effect of leadership perceptions and OB. The other moderator variables were the *type of research study*, *year of the research*, *leadership scale* and *organizational burnout scale*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence of an effect due to publication bias for the research studies included in the meta-analysis would be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot were there a publication bias. The concentration of plots for the research studies occurring to one side under the line of average impact size, especially at the bottom of the funnel, would be indicative of likely publication bias. In this study, no evidence of partiality of the publications was observed in any of the 37 data subjected to meta-analysis.

Even though no partiality in 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 was acquired through the meta-analysis using the random effects model, are given in Table 2. As can be seen in Table 2, there is no difference between the impact observed and the artificial impact quantity created to fix the impact resulting from the partiality of publications. The research on either side of the centerline is symmetrical, and this is the indicator for no existing difference. Because there is no evidence indicating lost data one either side of the centerline, the difference between the fixed impact quantity and the observed impact quantity is zero.

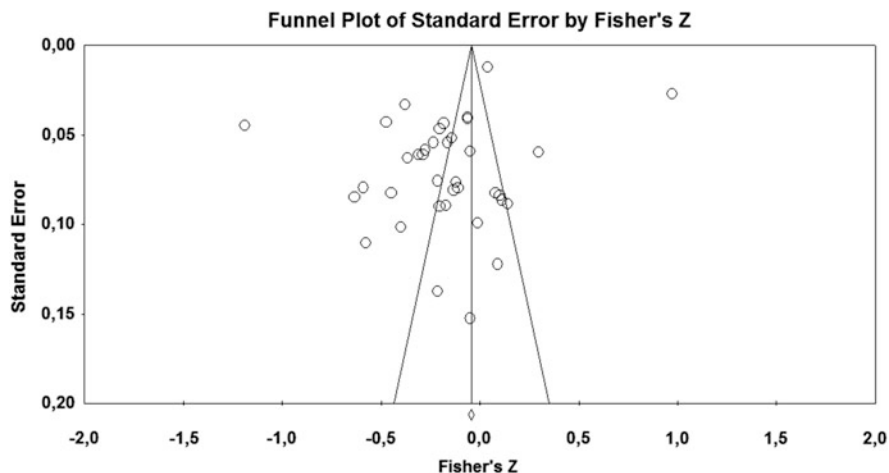


Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie’s trim and fill test results

	Studies trimmed	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed values		-0.17	-0.30	-0.03	2664.1
Adjusted values	0	-0.17	-0.30	-0.03	2664.1

3 Findings

Table 3 shows the results of meta-analysis of leadership and OB. The findings provided support for H₁, which argued for a negative relationship between leadership and OB. The effect size of leadership on OB was calculated as -0.17 . This result shows that leadership has a *small negative effect* on OB (see Cohen, 1988).

The results of the moderator analysis showed that H₂, which predicted that the sample group/sector would be a moderator of the negative effect of leadership on OB, was not supported. However, it was seen in the studies included in the meta-analysis that leadership has a small effect on the education sector [$r = -0.27$] and a medium effect on athletes [$r = -0.52$]. In comparison, it was not found that leadership has an effect on the OB of employees of the service and health sectors. The strongest effect was seen for athletes. Although the effect sizes of leadership on OB differed, the moderator analysis conducted according to the random effect model found no statistically significant difference between the various sample groups ($Q_b = 3.43, p > 0.05$).

The findings did not support H₃, which predicted that leadership style/approach would moderate the effect of leadership on OB. The moderator analysis showed that the difference between the effect size of leadership styles is not statistically significant ($Q_b = 2.64, p > 0.05$). Furthermore, it was found that no leadership style/approach had significantly moderated the effect of leadership on OB.

The findings did not provide support for H₄, which predicted that the studies' publication year is a moderator of the effect of leadership on OB. Although the moderator analysis did not show a statistically significant difference in the effect sizes of the sample groups ($Q_b = 0.88, p > 0.05$), the effect size of research studies [$r = -0.23$] on leadership on OB is low.

The research did not support H₅, which predicted that the studies' publication year would be a moderator of the effect of leadership on OB. The moderator analysis did not find a statistically significant difference in the effect size of the studies' publication year ($Q_b = 1.54, p > 0.05$). A small effect was found for publications dated 2010 and beyond as a result of the meta-analysis [$r = -0.25$] concerning the effect of leadership on OB. In contrast, no statistically significant effect was found for leadership on OB in regards to publications in the other year categories ($p > 0.05$).

The findings showed that studies included in the meta-analysis that used leadership scales moderated the effect of leadership on OB, supporting H₆. The moderator analysis found that the effect sizes of leadership scales used in the research studies were statistically significant ($Q_b = 111.06, p < 0.05$). In this scope, the ALQ [$r = -0.22$], ELQ [$r = -0.40$], HDS [$r = -0.42$] and SOF [$r = -0.44$] used in the meta-analysis were found to have a small effect, whereas the NMAS [$r = 0.75$] and Rafferty and Griffin [$r = -0.56$] had a medium effect, and SLS [$r = -0.83$] had a large effect. The frequently used MLQ scale in leadership studies was found to have a small effect [$r = -0.11$].

Table 3 Findings of the correlations between leadership and OB: Results of meta-analysis

Variable	k	N	r	CI (Confidence interval)		Q	Q _b
				Lower limit	Upper limit		
Organizational burnout (OB)	37	17,368	-0.17**	-0.30	-0.03	2664.10*	3.43
Moderator [Sample group/sector]							
Education	9	1,639	-0.27**	-0.49	-0.01		
Service	11	3,529	-0.13	-0.36	0.09		
Health	15	11,953	-0.08	-0.27	0.12		
Sport	2	247	-0.52**	-0.81	-0.01		
Moderator [Leadership style/approach]							2.64
Authentic	3	957	-0.22	-0.59	0.22		
Dysfunctional	1	150	-0.42	-0.84	0.33		
Empowering	1	273	-0.30	-0.79	0.44		
Transformational	16	11,477	-0.16	-0.35	0.02		
Servant	3	1,181	-0.40	-0.70	0.02		
General Leadership	13	3,330	-0.07	-0.28	0.14		
Moderator [Publication type]							0.88
Article	17	13,038	-0.23**	-0.41	-0.04		
Thesis	20	17,368	-0.11	-0.29	0.07		
Moderator [Year of publication]							1.54
Before 1990	6	1,028	-0.01	-0.37	0.35		
1990–1999	3	645	-0.08	-0.55	0.41		
2000–2009	10	4,742	-0.13	-0.40	0.15		
2010 and beyond	18	10,953	-0.25**	-0.44	-0.04		
Moderator [Leadership scales]							111.06*
ALQ	3	957	-0.22**	-0.40	-0.02		
ELQ	2	358	-0.40*	-0.59	-0.16		

HDS	1	150	-0.42**	-0.67	-0.07
SLS	1	506	-0.83*	-0.91	-0.68
Self	1	295	-0.27	-0.55	0.07
LBDQ	3	549	-0.13	-0.33	0.07
LEAD	2	277	-0.05	-0.31	0.20
LEAD-S	1	105	-0.01	-0.37	0.35
LOQ	1	283	0.29	-0.05	0.57
LSII	1	46	-0.05	-0.45	0.37
LSS	1	162	-0.53*	-0.74	-0.22
MLQ	12	10,340	-0.11**	-0.21	-0.01
NMAS	1	1,377	0.75*	0.56	0.86
PM-LAS	1	379	-0.14	-0.45	0.20
Rafferty&Griff	1	142	-0.56*	-0.76	-0.25
SBDQ	1	161	-0.11	-0.44	0.25
SERV*OR	1	530	-0.18	-0.48	0.15
SLP	1	145	0.10	-0.26	0.43
SOF	1	550	-0.44*	-0.67	-0.13
TAQ-II	1	56	-0.21	-0.56	0.21
Moderator [Burnout scales]					5.30
ABQ	2	247	-0.52	-0.83	0.03
Clouse-Whitak	1	156	-0.13	-0.75	0.62
GNBI	1	256	-0.35	-0.84	0.45
Self	1	100	-0.38	-0.85	0.43
MBI	29	15,634	-0.12	-0.27	0.03
MBI&OLBI	1	142	-0.56	-0.90	0.22
SOF	1	550	-0.44	-0.86	0.36
Tedium	1	283	0.29	-0.50	0.81

* $p < 0.01$, ** $p < 0.05$

The findings did not support H_7 , which predicted that the burnout scales used in the research studies would moderate the effect of leadership on OB. The moderator analysis found that the effect size of the burnout scales used in the research studies was not statistically significant ($Q_b = 5.30, p > 0.05$). Furthermore, it was found that no burnout scale significantly moderated the effect of leadership on OB.

Conclusion

A total of 37 research studies were included in this study to examine the effect of leadership on OB. A sample size of 17,368 subjects was used in the study. Of the moderators identified for the study, such as sample group/sector, leadership style/approach, publication type, publication year, and the leadership and burnout scales used in the research studies, only the leadership scale was found to be a moderator variable. In addition, it was seen that the findings that leadership had a negative effect on OB were congruent with other research studies (Bolat, 2011; Broome, Knight, Edwards, & Flynn, 2009; Cerit, 2008; Telli et al., 2012; Uğurluoğlu et al., 2013).

In the moderator analysis, it was found that the sample group/sector is not a moderator variable. Within the sample groups, employees of the education and sport (athletes) sectors showed the greatest differences. Because superior-subordinate relations were found in student-teacher and teacher-principal relations in the education sector, and a similar situation was found for athletes (coach-trainer), the interaction between leaders-followers is greater. In addition, education (Karahan & Balat, 2011; Üstüner, Demirtaş, Cömert, & Özer, 2009) and sports (Cengiz, Aytan, & Abakay, 2012) are, by their nature, sectors in which it is important to perform successfully in regards to perceptions of high self-competence. The positive relationship between the perception of high self-competence and the interaction between leader-follower and a negative effect for burnout has been shown (Bolat, 2011). In conclusion, it is thought that high self-competence perception has a relationship with the significant difference found with employees of the education sector and athletes.

Of the leadership styles/approaches considered, no significant differences were found for any. These findings are an indication that neither of the leadership styles/approaches can be accepted as a general approach to be applied to members. As previously stated, leadership behaviors are shaped according to the current conditions, location and time and the general structure of the organization (Karasu, 2009). Hence, according to the situational leadership approach, different situations require a certain leadership style, and a leader is considered successful to the extent that she adapts her approach to the situation. In this approach, the leader displays two main behaviors according to the development level of their subordinates: *supportive* and *directive* (Northouse, 2010). This argument can be used to explain

(continued)

why no leadership styles/approaches have been shown to have a significant effect on OB: because each leadership behavior found to be appropriate for different situations will have a negative effect on OB.

There is no significant difference between the research studies in regards to their year of publication. That is, the year of publication is not a moderator in the negative effect of leadership on OB. However, the publications of 2010 and beyond are significant within this category. The significant difference found can be explained by methodological knowledge, literature knowledge in regards to leadership and OB and the number of researchers in the field throughout the years.

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