

A meta-analysis of the relationship between burnout and job satisfaction of educational stakeholders *

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Abstract

This meta-analysis study aims to determine the strength (the magnitude and direction) of the relationship between burnout (subscales of *emotional exhaustion*, *depersonalization*, and *personal accomplishment*) and job satisfaction among educational stakeholders. A total of 24 empirical studies meeting the inclusion criteria were included to the study. The number of participants in these studies was 7.491. A total of 68 effect sizes (correlations) were calculated for each of the subscales of Maslach Burnout Inventory and in total. The findings of the study indicate that there is a negative correlation, towards moderate level, -0,44 [95% confidence interval -0,57 to -0,30] (random effect) between job satisfaction and burnout total score. Due to medium heterogeneity, moderator analyses for subscales of burnout were also done.

Keywords: Burnout, Job Satisfaction, Meta-analysis, Maslach Burnout Inventory

Özet

Bu çalışmanın amacı meta-analiz yöntemi ile eğitim paydaşlarının yaşadığı tükenmişlik (*duygusal tükenmişlik*, *duyarsızlaşma* ve *kişisel başarı* alt boyutları) ve iş tatmini arasındaki ilişkinin etki büyüklüğünü ve yönünü belirlemektir. Meta analize Dahil edilme kriterlerini karşılayan 24 ampirik çalışma analize dahil edilmiştir. Bu çalışmalardaki toplam katılımcı sayısı 7.491'dir. Analiz sonucunda Maslach Tükenmişlik Ölçeği toplam puanı ve ölçeğin her bir alt boyutuna ilişkin toplam 68 adet etki büyüklüğü (korelasyon) hesaplanmıştır. Çalışma sonuçlarına göre, ölçek toplam puanı açısından tükenmişlik ile iş doyumunu arasında rastgele etkiler modeline göre orta düzeyde negatif bir korelasyon -0,44 [% 95 güven aralığı için -0,57 ile -0,30

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arası] belirlenmiştir. Ortaya çıkan heterojenliğin olası açıklayıcısı olarak tükenmişlik ölçeği alt boyutları için moderatör analizleri de yapılmıştır.

Anahtar sözcükler: Tükenmişlik, İş tatmini, Meta-analiz, Maslach Tükenmişlik Ölçeği

Introduction

Job satisfaction is one of the most investigated areas affecting the performance of employees at work place. It is also true for educational institutions. Principals, teachers and other involved staff with favorable job satisfaction are one of the most vital assets for schools because satisfaction leads to better teaching, and accomplishment of organizational goals (Judge, Thoresen, Bono and Patton, 2001). Understanding what makes educational stakeholders more satisfied is an important research area in the field of education.

Historically, the term *job satisfaction* was first introduced in 1920s and gained importance in 1930-40s. The literature has very similar definitions of job satisfaction. The common part is that it is a reaction of employees' feeling toward their jobs. Job satisfaction can be described as perception of values in working environments and these values should be in a harmony with the individual's needs (Telman and Ünsal, 2004). It is also defined as an affective reaction to different of aspects related to work (Tziner and Vardi, 1984). Locke (1984) describes it as an emotional state reflecting the employee's affective response to the job situation. Arnold and Feldman (1986) give us a more detailed description of job satisfaction: a comprehensive positive affect that people in an organization have toward their jobs in terms of income, promotion, management style, working conditions and colleagues. Weiss (2002) takes it as one's attitude towards his/her job. According to Locke's Range of Affect theory (1976), it is a difference between what an employee expects from a job and what the employee is getting from the job. As an important factor affecting personal commitment and organizational effectiveness, job satisfaction has been regarded as one of the most commonly studied topics in industri-

al, psychological, and educational areas (Blackburn & Lawrence, 1995).

Social sciences researchers conducted empirical studies to define burnout starting from the early 1980s to the mid-1990s as it became a serious problem in different professions and from then on interest in the subject has increased day by day. Since burnout affects people's physical and emotional well-being, it may lead to lower productivity and effectiveness at work (Maslach et al., 2001). It is defined as a process of adaptation to job stress (Price and Murphy, 1984). Maslach et al., 2001, p. 399) defined burnout as "a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity".

Recent developments in theory and research emphasize that burnout is a multisubscaleal phenomenon. Maslach and Jackson (1981), who originally developed the mostly used inventory in the literature, argued that it consists of three separate subscales: emotional exhaustion, depersonalization, and (reduced) personal accomplishment. The first subscale emotional exhaustion (EE) results from feelings of intensity and frustration in consequence of individuals' fears that they will not be able to revive previous levels of job performance. The second subscale is depersonalization (DP) and it occurs when individuals distance themselves from their work by creating dehumanizing perceptions of tasks, clients, or colleagues (Kahn, Schneider, Jenkins-Henkelman, & Moyle, 2006; Schaufeli & Enzmann, 1998). The third subscale of burnout is (reduced) personal accomplishment (PA), which can be defined as self-evaluative feelings of incompetence and lack of achievement at working environment (Maslach & Leiter, 2008). High levels of emotional exhaustion and depersonalization together with low levels of personal accomplishment are indicative of burnout (Maslach et al., 1996).

Specific to education, Maslach et al. (1996) noted that teaching is a highly visible profession, as educators provide both direct services to students and indirect services to society (Baldwin, Lunceford, & Vanderlinden, 2005). It is just because teaching professionals are expected to perform their roles beyond teaching (e.g., caretaker and authority) and at the same time meeting a wide range of students' needs. As a result of efforts to achieve these expectations, educators are often suffering from high level of stress, which may later become chronic (Lackritz, 2004), causing some educators to become less effective in their workplaces. For this reason, educators may eventually leave the profession (Harrington & Hunt, 2010; Hogan & McKnight, 2007; Maslach et al., 1996). Many examples of the aspects of burnout can be observed in educational setting. Emotional exhaustion happens when the teacher has a feeling of tiredness and fatigue when emotional energies are drained. Thus, they cannot give their best to students as they once could. Teachers experience depersonalization when they do not have positive feelings about their students. Depersonalization usually develops in response to the overload exhaustion (Maslach & Leiter, 2008). The reduced personal accomplishment or inefficacy occurs when teachers feel and believe that they cannot help the students to learn and grow.

The world is changing, so in order to attune to this new world we need to make necessary systematic changes in education in general and at schools in particular. It is important to ensure the schools' smooth operations, so that they can prepare their students for the challenges of this new world (Schermuly et al. 2011). Educational stakeholders such as teachers, administrators, supervisors and academicians etc. will become less instructors and more organizers of information, giving the students the ability to turn information to knowledge and then into wisdom. They must also try to arouse their student's curiosity, which will help them become lifelong learners.

Future school environments will also be social workplace as it always has been. Therefore any social research topics would be utmost importance if they describe, predict and explain the relationships between employees of educational institutions. Two of such topics are job satisfaction and burnout. So far the researches have showed that decreased job satisfaction prevents people from fully concentrate on their professions, which results in unhappiness towards their jobs. This situation will create an uneasy workplace environment, which is an obstacle for performing the job efficiently (Arslan & Acar, 2013).

The relationship between these two concepts is one of the most studied research topics. However, the findings of these researches yield inconclusive results. Most of these studies show that high job satisfaction is negatively associated with burnout (Abu-Bader, 2000; Himle et al., 1986; Jayaratne and Chess, 1984; Um and Harrison, 1998). Some researchers report moderate levels of negative correlations like -0,63 (Schermyly et al. 2011) or -0,62 (Hoigaard et al., 2012) while others yield rather small coefficients like -0,12 (Okumuş et al., 2013) or -0,22 (Gürbüz, 2008). Analysis about the three subscales of burnout inventory also yield inconclusive results: for example for Emotional Exhaustion (EE) subscale correlations vary from -0,18 (Gençay, 2007) to -0,88 (Gökçe, 2010). Considering these inconclusive results, a synthesized correlation between the concepts is believed to help the research area new insights.

In this study, the meta-analysis method was used to synthesize the correlations between job satisfaction and burnout at educational settings in Turkey and Europe. In a meta-analysis review, individual studies conducted about a certain topic are synthesized thus increasing the sample size; and through comparing and combining more data, it is possible to describe certain characteristics using the obtained effect sizes (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2011). The purpose of this meta-analysis is twofold: The first aim of this

study is to determine the overall magnitude and direction of the effect sizes (correlations) between job satisfaction and burnout across different individual studies. The second aim is to synthesize the correlations between job satisfaction and burnout subscales separately in order to show the relationship in subscale aspect of burnout.

Method

Design of the study

The study is based on meta-analysis method. Meta-analysis is a method which collects many individual and independent studies about a certain topic and re-analyzes their findings statistically (Cumming, 2012; Ellis, 2012; Petticrew and Roberts, 2006).

Literature Search

In order to identify all potential studies for inclusion in the quantitative synthesis, a comprehensive systematic search strategy was used. As the databases, ULAKBIM (Turkish Academic Network and Information Center) Social Sciences Database, YOK (Higher Education Council) Doctoral and Master Theses Database, Inonu University Library Central Search, several databases by Ebscohost such as ERIC and HIC, Emerald, Jstor, Web of Science and Google Scholar were searched. The stems of following identifiers or keywords in the title or abstract were used in the separate or combined searches: (In Turkish) *tükenmiş**, *duyarsızlaşma*, *kişisel başarı**, *eğitim**, and *iş doyumunu*; (In English) *burnout*, *exhaustion*, *depersonalization*, *personal achievement*, *education*, and *job satisfaction*. The search included studies available in the academic literature from 2005 until 2014. From initial searches, 720 studies (both theses and articles) were retained for further inspection. As a result only 24 of these studies, compatible with the inclusion criteria, were included in the analyses,

(2 studies from England, 3 studies from Norway, 2 studies from Greece, 1 study from Germany, and the remaining studies from Turkey). Included studies were listed in references with an asterisk (*) sign. When it was clear that multiple sources (e.g., dissertations and journal manuscript) reported about the same data set, the source with more information was included in the analysis.

Inclusion Criteria

In order to be included in the analysis, studies had to meet five of the specific criteria described below:

1-The study examined the association between burnout and job satisfaction and it has to report data with relationship in all three subscales of burnout using a version of MBI.

2-One of the educational stakeholders (teacher, administrator, supervisor, and academician) was chosen as the sample of the study.

3-Study data included statistics that could be transformed in an effect size.

4-The study was available in Turkish or English.

5-The sample was from Turkey and European countries only.

Final database consisted of 24 studies. As a result, 24 included studies yielded 68 effect sizes for each subscale of burnout inventory and a total score of the scale (16 studies giving subscale correlations only, 4 studies giving scale total score only and 4 studies giving both subscale correlation and scale total score), representing a total of 7.491 participants.

Coding of studies

In this study, correlation was used as the effect size. To calculate correlation as an effect size and to get possible moderators, the following information was extracted from each study: coefficients for the correlation between job satisfaction and each subscale of burnout scale, the title of participants (i.e. teacher, administrator, supervisor and academician), the country, year, publication type and sample size.

In addition, all studies were coded into the two moderator categories to be examined: title of participants and the country where the study was conducted. During the coding process, interrater reliability was tested using correlation coefficients and Cohen's Kappa statistics. In case of disagreement between raters, disagreements were discussed and final coding reflected the consensus between the coders.

Meta-analytic procedure

Effect sizes were calculated and analyzed using Comprehensive Meta-Analysis (Version 2.0) software (Borenstein et al., 2005). Effect sizes were weighted according to the inverse of their variance to ensure that more precise estimates influenced overall effect size most heavily and to attenuate the upwardly biased estimates of smaller studies (Hedges & Olkin, 1985). Calculations were based on fixed and random effect model. However, in social studies, random was recommended (Cumming, 2012). Therefore random effect model was applied for this study. Heterogeneity of effect sizes was assessed using Q and I^2 statistics. When these statistics indicate lack of homogeneity, the meta-analytic procedures are repeated in the moderator subgroups.

Publication bias

Due to the bias toward publication of studies with a large sample size and/or significant findings, meta-analyses typically overestimate mean effect size (Borenstein et al., 2009). Four methods were used to test publication bias: Funnel plot, Orwin' *fail-safe N*, Egger Regression and Duval - Tweedie's trim and fill method. These four statistics were chosen because they are widely used and easily understood. The results of the last three methods were given in Table 1.

Table 1. Results of Publication Bias Tests for Each Subscale of Burnout

Subscales of Burnout scale	k	Egger Regression (p value 1-tailed)	Orwin's fail-safe N Studies are needed for "trivial" SMD	Duval and Tweedie's trim and fill (random effect)	
				Studies trimmed (to the right)	SMD Observed (adjusted)
EE	20	0,33	1164 for -0,01 SMD	5	-0,52 (-0,57)
DP	20	0,24	610 for -0,01 SMD	8	-0,28 (-0,38)
PA	20	0,25	667 for 0,01 SMD	5	0,29 (0,36)

First, for the three subscales of burnout (EE, DP and PA), Orwin's *fail-safe N* is 58, 30 and 33 times (respectively) the number of studies included (k=20). Second, for all subscales, trimmed studies' adjusted SMD shows little difference in magnitude and no change in direction. When it comes to Egger Regression test results, p values for all subscales are higher than 0,05 level. All in all, these three tests indicated that there was no publication bias for this meta-analysis.

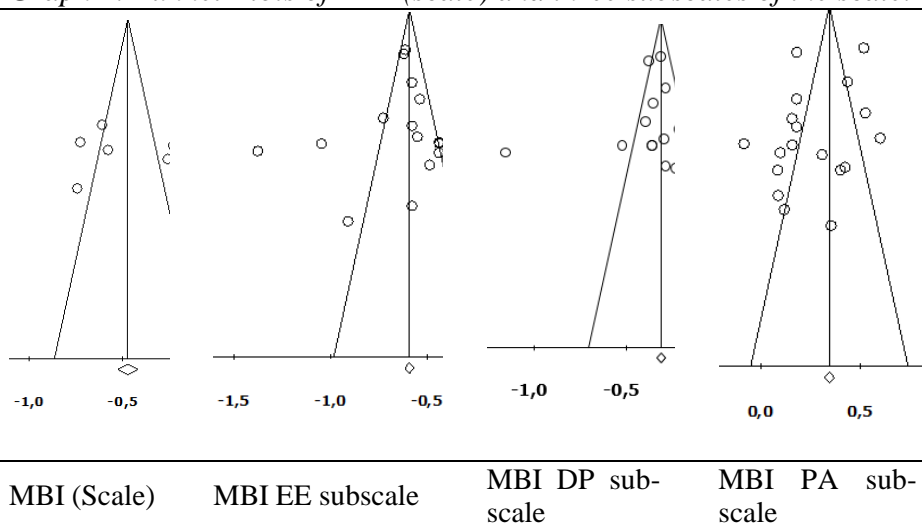
Eight studies included have also a total score of the inventory. Publication bias test results for these eight studies are as follows in Table 2.

Table 2. Test Results of Publication Bias Tests for included studies having MBI-total score

k	Egger Regression (p value 1-tailed)	Orwin's fail-safe N Studies are needed for "trivial" SMD	Duval and Tweedie's trim and fill (random effect)	
			Studies trimmed (to the right)	SMD Observed (adjusted)
8	0,41	371 for -0,01 SMD	0	-0,44 (-0,44)

Funnel plot, a visual evaluation of publication bias, for included studies are given Graph 1 as graphs for both scale and its three subscales.

Graph 1. Funnel Plots of MBI (scale) and three subscales of the scale.

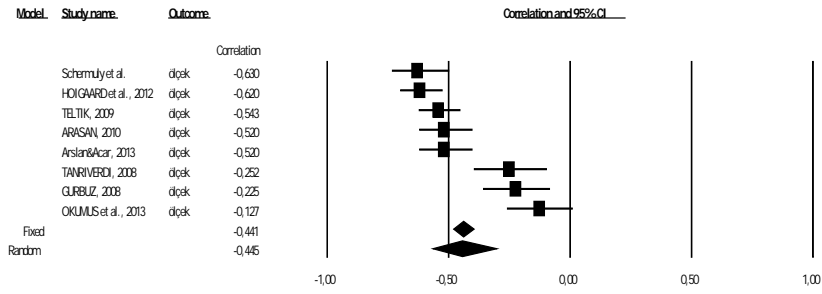


All Graphs show that the majority of the included studies are positioned on both sides of overall effect size symmetrically and towards the upper part of the graph. When there is no publication bias, the included studies are scattered symmetrically on both sides of combined effect size vertical line, whereas in case of publication bias the majority of studies are placed on one side of the line and towards the bottom (Borenstein, Hedges, Higgins, & Rothstein, 2009).

Results

Graph 2 shows calculated effect sizes and combined effect sizes in fixed and random effect model for each of the included studies that report total scores for MBI.

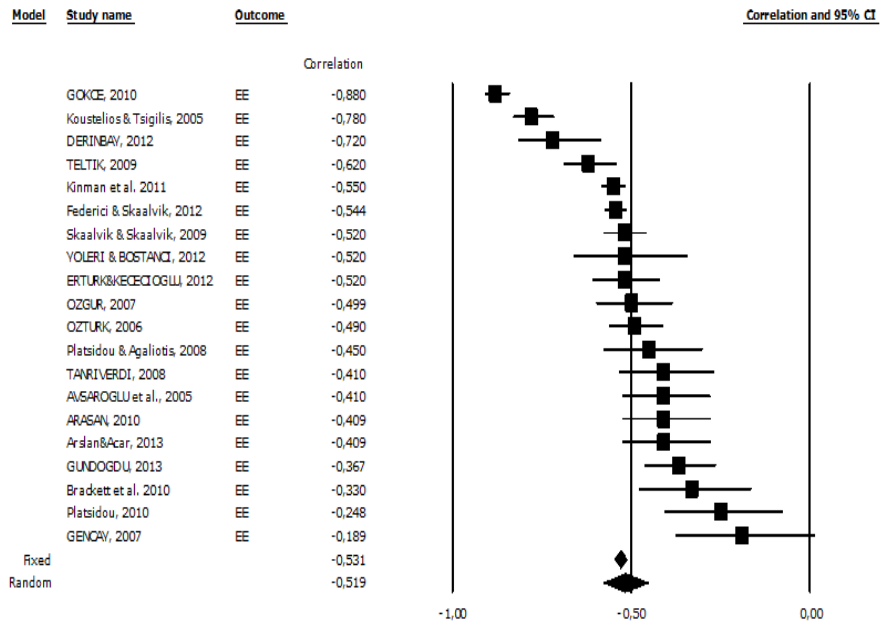
Graph 2. Forest Plot for included studies reporting total Score for MBI (fixed and random effect model)



As seen in Graph 2, the correlations between job satisfaction and burnout vary between -0,63 and -0,27. The combination of these eight correlation coefficients yields a negative nearly moderate level of effect size: -0,441 (fixed effect) and -0,445 (random effect).

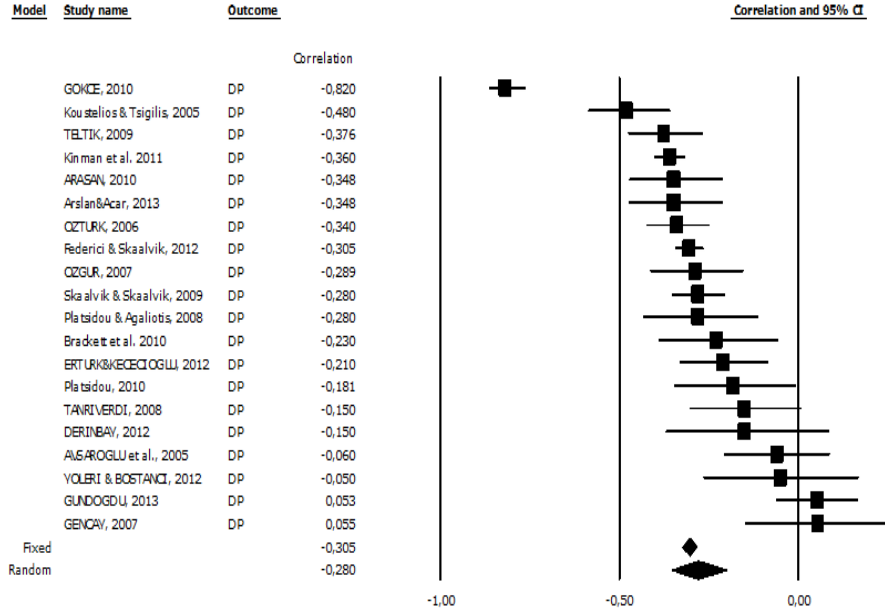
The following three forest plot graphs show the correlations between job satisfaction and each of subscales of burnout (emotional exhaustion – EE, Depersonalization – DP, reduced Personal Accomplishment – PA).

Graph 3. Forest Plot for included studies for EE Subscale of MBI (fixed and random effect model)



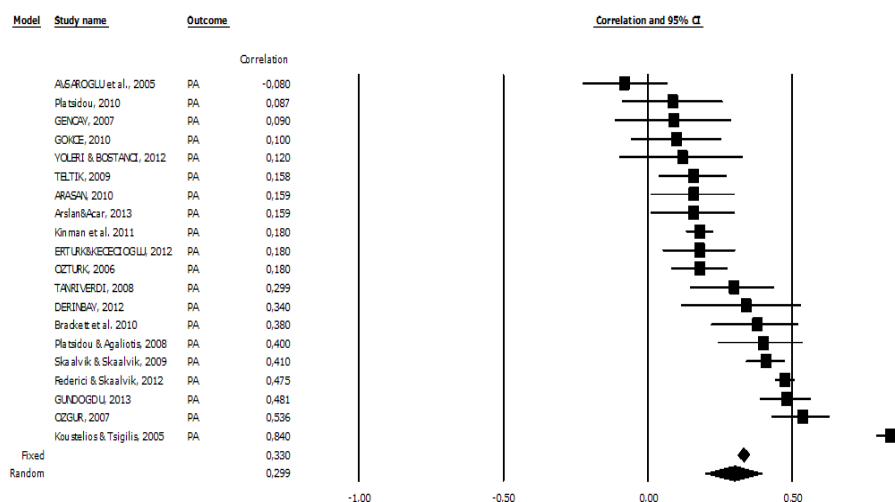
As seen in Graph 3, the correlations between job satisfaction and emotional exhaustion subscale of burnout vary between -0,88 and -0,18. The combination of these 20 correlation coefficients yielded a moderate level of negative correlation: -0,531 (fixed effect) and -0,519 (random effect).

Graph 4. Forest Plot for included studies for DP Subscale of MBI (fixed and random effect model)



As seen in Graph 4, the correlations between job satisfaction and depersonalization subscale of burnout vary between -0,82 and 0,05. The combination of these 20 correlation coefficients yielded a small level of negative effect size: -0,305 (fixed effect) and -0,280 (random effect).

Graph 5. Forest Plot for included studies for PA subscale of MBI (fixed and random effect model)



As seen in Graph 5, the correlations between job satisfaction and reduced Personal Accomplishment subscale of burnout vary between -0,08 and 0,84. The combination of these 20 correlations yielded a small level of positive effect size: 0,330 (fixed effect) and 0,229 (random effect).

The main objective of the present meta-analysis was to assess overall effect size - the correlation between burnout (with three subscales) and job satisfaction of educational stakeholders. Random effect model results can be found in Table 3.

Table 3. Burnout-Job satisfaction meta-analysis main analyses (Random Effect Model)

	k	n	R	Z	p	95% CI	Q	p	I ²
MBI total score	8	1.425	-0,44	-5,686	0,000	-0,567; -0,304	68,560	0,000	89,79
EE	20	6.813	-0,52	-13,171	0,000	-0,579; -0,454	206,215	0,000	90,78

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DP	-	-6,680	0,000	-0,356; -0,201	200,747	0,000	90,53
PA	0,28	-5,560	0,000	0,197; 0,395	341,623	0,000	94,43

Notes: EE=Emotional Exhaustion. DP=Depersonalization. PA=(Reduced) Personal Achievement. k=the number of studies. n=sample. Z=Z Score. CI=Confidence Interval

The mean effect size EE subscale is -0,52 ($p<.05$) with a 95 % confidence interval of -0,58 to -0,45. For DP subscale it is -0,28 ($p<.05$) with a 95 % confidence interval of -0,36 to -0,20 and for PA subscale it is 0,30 ($p<.05$) with a 95 % confidence interval of 0,20 to 0,40. All correlation in Table 4 are statistically significant.

The last three columns (heterogeneity analysis) in Table 4 provide evidence that potential moderators are present for included studies. The Q statistics are all significant ($Q_{MBI}=68,560$, $p<.05$; $Q_{EE}=206,215$, $p<.05$; $Q_{DP}=200,747$, $p<.05$; $Q_{PA}=341,623$, $p<.05$) and I^2 statistics indicate 89,79%, 90,78 %, 90,53 % and 94,43 % respectively, suggesting the presence of moderators, along with the potential effects of other artifacts. For MBI Scale total score analysis, there are not enough studies to do moderator analysis. Moderator analyses were performed for three subscales of burnout scale.

Moderator Analyses

To assess whether various moderators moderate burnout-job satisfaction correlation is another objective of the study. Moderators of the study were the title of participants (i.e. teacher, administrator, supervisor and academician) and the country (studies done in EU countries vs. Turkey). The results of moderator analysis, in random effect model, can be seen in Table 4.

Table 4. Moderator analyses for three subscales of MBI (Random Effect Analysis)

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Moderators	k	d	95% CI	Q_b	p
<i>Emotional Exhaustion</i>					
Title of participants*	18			3,39	0,06
Academician	5	-0,63	-0,74; -0,49		
Teacher	13	-0,48	-0,57; -0,38		
Country	20			0,01	0,91
EU Countries	7	-0,51	-0,62; -0,40		
Turkey	13	-0,52	-0,60; -0,44		
<i>Depersonalization</i>					
Title of participants*	18			2,71	0,10
Academician	5	-0,41	-0,56; -0,23		
Teacher	13	-0,24	-0,34; -0,13		
Country	20			0,26	0,61
EU Countries	7	-0,31	-0,43; -0,17		
Turkey	13	-0,26	-0,36; -0,16		
<i>Personal Accomplishment</i>					
Title of the participants ^a	18			1,38	0,24
Academician	5	0,17	-0,06; 0,39		
Teacher	13	0,33	0,20; 0,45		
Country	20			4,58	0,03*
EU Countries	7	0,43	0,28; 0,57		
Turkey	13	0,22	0,09; 0,34		

*p<.05

^a If subgroup is fewer than 3, the studies were not included into the analysis. Thus subgroups of administrator (k=1) and supervisor (k=1) were excluded.

As it can be seen in Table 4, for Personal Accomplishment subscale, “country” seems to be a moderator. Country moderates the correlation between PA subscale of burnout and job satisfaction. For the studies conducted in EU countries this correlation is statistically stronger than that of studies conducted in Turkey, (0,43 and 0,22 respectively).

Discussion

This study aimed to synthesize the findings of the studies which investigated the relationship between job satisfaction and burnout in educational stakeholders (teachers, administrators, supervisors and academicians) using meta-analysis method. To this end, a total of 24 studies from Turkey and European countries (England, Norway, Greece and Germany) published between 2005 and 2014 were included into the meta-analysis. The number of participants involved in these studies was 7.491.

The correlation between job satisfaction and burnout (total score) was -0,44 [95% CI -0,56 to -0,30] in *Random Effect Model*. For Emotional Exhaustion subscale of burnout, it was -0,52 [95% CI -0,57 to -0,45]; for depersonalization subscale, it was -0,28 [95% CI -0,35 to -0,20]; for (reduced) personal accomplishment subscale, it was 0,30 [95% CI 0,19 to 0,39]. All four results are statistically significant ($p=0,0000$) alike and interpreted according to *Random Effect Model* results.

Consistent with the existing body of knowledge, emotional exhaustion and depersonalization are negatively correlated with burnout, while personal accomplishment is correlated positively (Koustelios & Tsigilis, 2005). Taken together, a possible interpretation of the analyses of the two concepts is that there may be a reciprocal relation between job satisfaction and burnout. The results of a similar meta-analysis study is in line with the present findings: EE -0,31 (95% CI -0,19 to -0,44), DP -0,44 (95% CI -0,31 to -0,57) and PA 0,29 (95% CI -0,16 to 0,42) (Lee and Ashforth, 1996).

While some studies ($k=8$) reported total scores from MBI, the majority of studies (20) used MBI subscale scores. Although indicating high heterogeneity ($I^2=89,79\%$), for MBI total score, moderator analyses could not be performed due to limited number of studies.

However moderator analyses were carried out for included studies giving correlations for three subscales of MBI. All three subscales' heterogeneity level were high (EE, $I^2=90,78$ %; DP, $I^2=90,53$ %; PA, $I^2=94,43$ %).

The results of moderator analysis for *title of participants* revealed that correlation between job satisfaction and EE subscale was -0,63 for academicians (k=5), whereas it was -0,48 for teachers (k=13); for DP subscale, the correlation was -0,41 for academicians (k=5), whereas it was -0,24 for teachers (k=13); for PA subscale the correlation was 0,17 for academicians (k=5), whereas it was 0,33 for teachers (k=13). Between-groups analysis results revealed no statistically significant difference between academicians and teachers for all subscales (EE, $Q_b=3.39$, $p=0.06$; DP, $Q_b=2.71$, $p=0.10$; PA, $Q_b=1.38$, $p=0.24$). Based on this finding it can be concluded that the correlation between job satisfaction and burnout's three subscales is not statistically affected by title of participants (academicians and teachers).

The results of moderator analysis for *country* revealed that correlations between job satisfaction and EE subscale of burnout was -0,51 for studies conducted in EU countries (k=7), whereas it was -0,52 for studies conducted in Turkey (k=13); for DP subscale, the correlation was -0,31 for EU countries (k=5), whereas it was -0,26 for Turkey (k=13); for PA subscale the correlation was 0,43 for EU countries (k=5), whereas it was 0,22 for Turkey (k=13). Between-groups analysis results revealed no statistically significant difference between EU countries and Turkey for two subscales (EE, $Q_b=0.01$, $p=0.91$; DP, $Q_b=0.26$, $p=0.61$). However, for the third subscale, (reduced) Personal Accomplishment, analysis indicates statistical significance between the groups (PA, $Q_b=4.58$, $p=0.03$). Based on this finding it can be concluded that the correlation between job satisfaction and burnout's two subscales (EE and PA) is not statistically affected by country (EU countries and Turkey), yet that of third subscale, (reduced) Personal Accomplishment was affected. In EU countries the correlation between job satisfaction and PA subscale of burnout was stronger than

that of Turkey's. As the correlations differ by country, some questions arise about the reasons for this difference. This difference could be explained by the cultural differences between citizens of different countries, differences in training or education standards in different countries, or differences in employment practices or law.

The results of this meta-analysis may motivate policy makers to consider how educational policies may improve the well-being of stakeholders. It has some practical significance for human resources departments of educational institutions because it has implications for how burnout is treated in the workplace. Burnout syndrome is not a sudden situation; on the contrary, it is a cluster of symptoms developing slowly and insidiously (Yoleri & Bostancı, 2012). Moreover, ignoring burnout symptoms cause it to advance making it unable to cope with. Thus, it is vital to know the symptoms of burnout and to take necessary precautions by diagnosing on time. Educational stakeholders should be surveyed regarding their job satisfaction at regular intervals, and ones with lower job satisfaction should receive special attention. We know that a decrease in job satisfaction could precede emotional exhaustion and could therefore serve as a rapid alert system (Yoleri & Bostancı, 2012).

Another recommendation can be for faculty of education, which give training to educational stakeholders. Burnout should be a topic in teacher education because it could establish a professional mental readiness for managing emotional challenges in their professional career. So, burnout prevention information in new teacher training programs should be included.

The present meta-analysis synthesized the correlation between the two concepts. Previous meta-analysis confirm the results of this meta-analysis. We now know the correlations' magnitude and direction between job satisfaction and burnout. For future studies, it would be useful to conduct longitudinal of experimental studies to clarify the causal effect between the two concepts. Specifically, it is recommended that tests for nonlinear relationships be conducted in individual studies.

The results of the meta-analysis depended on the results of the studies on which it was based. This study was limited by its dependence on the data provided by original researchers. Two limitations of the present study should be kept in mind when interpreting its results. The first of these concerns the characteristics of the sample. Only four groups from educational stakeholders were chosen for this study, which prohibits the generalizability of the findings to other educational stakeholders. The second limitation is the number of included studies, especially from European countries. Future studies may add new studies from European countries to replicate the meta-analysis adding more studies on the subject.

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