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A Meta-Analysis on the Relationship between Job Satisfaction and
Job Performance

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İş Performansı ve İş Tatmini Üzerine Meta-Analiz Çalışması

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Abstract

The purpose of this study is to determine the relationship between job satisfaction and job performance by using meta-analytic research methodology. In a quantitative research paper, researchers focus on a specific correlation between variables or the effect of a specific variable on other variables statistically. This approach is important and necessary for a simple and understandable research paper. In recent years, meta-analytic studies are carried out in order to assess cumulatively the findings of quantitative research. Researchers conduct it in different areas of science to make a general judgement about correlational or causal relationships. Within the framework of this research methodology, this thesis focuses on studies with samples from Turkey specifically and examines the relationship between job satisfaction and job performance. In the process of decision on variables to study meta-analytically, literature review has been conducted about factors that affect organizational and individual performance. In this phase, the studies about the effect and relationship of job satisfaction on job performance were more frequent than the other constructs and it was decided to concentrate on this relationship. The inclusion criteria were as follows: quantitative research with sufficient information for calculation of effect size on samples solely include employees from Turkey. Consequently, 12 articles, one master thesis and one doctorate thesis met these inclusion criteria. Total sample size of 14 studies is 4070. Among these fourteen studies; Akkoç, Çalışkan and Turunç (2012)'s study reported the highest correlation between job satisfaction and job performance ($r=.530, p=.01$). Gürbüz, Erkuş, and Sıgır (2010)'s study has the lowest correlation ($r=.087, p=.05$). Meta-analysis was conducted by using *Comprehensive Meta-Analysis Software* and overall results depicted that there is positive and statistically significant correlation ($r= .315, p= .000, k=14, N= 4070$) between job satisfaction and job performance and the effect size is *medium to large* level (Cohen, 1988). In addition, it was possible to categorize nine studies within 14 papers according to their samples. When six research papers with private sector employees only were investigated, there is positive and statistically significant correlation ($r= .258, p= .000, k=6, N= 1434$) again. According to

Cohen (1988), this is *small to medium* effect. Furthermore, the three research papers out of 14 studies were investigated that included solely public sector employees as sample, the relationship is positive and statistically significant ($r = .339$, $p = .000$, $k = 3$, $N = 341$). According to Cohen (1988), this is *medium to large* effect. In the discussion section, these general and sector specific effect sizes are interpreted and compared with the available meta-analytic research from the international literature. It was observed that these effect sizes ranging between small to large level are consistent with earlier research findings.

Öz

Bu çalışmanın amacı iş tatmini ve iş performansı arasındaki ilişkiyi araştırmaktır. Nicel bir çalışmada, bir araştırmacı değişkenler arasındaki ilişkileri ya da bir değişkenin, diğer değişkenler üzerindeki nedensel etkisini istatistiksel olarak irdeler. Bu istatistiksel yaklaşım, basit ve anlaşılabilir bir analiz ve çalışma için çok önemlidir. Son yıllarda, farklı bilim alanlarında, çeşitli olgular üzerinde yürütülen nicel araştırmalardan elde edilen bulguların kümülatif şekilde değerlendirilmesi ve farklı olgular arasındaki korelasyonel ya da nedensel ilişkilere dair genel bir yargıya varılması için meta-analiz araştırmaları yapılmaktadır. Bu metodoloji çerçevesinde, bu tez kapsamında yürütülen araştırma da spesifik olarak iş tatmini ve iş performansı arasındaki ilişkiye dair Türkiye’den farklı örneklemlemlerle yapılmış nicel araştırmalardan elde edilen bulguları bir araya getirmek amacıyla yapılan bir meta-analiz çalışmasıdır. Bu kapsamda hangi değişkenler arasındaki ilişkiye bakılacağına karar verilme sürecinde, genel anlamda örgütsel ve bireysel performansı etkileyen faktörler üzerine araştırma yapılmıştır. Literatürle ilgili ön araştırma sonucunda, birçok çalışma incelenmiş olup, diğer faktörler ile kıyaslandığında iş tatmininin iş performansı üzerine etkisi ve ilişkisine dair daha fazla sayıda araştırma bulunduğu görülmüş ve bu ilişkiye yoğunlaşılmasına karar verilmiştir. Çalışmaların, meta-analize dahil edilmesi için makalelerin nicel bir çalışma olması ve etki büyüklüğünün hesaplanması için yeterli bilgiye sahip olması ve en önemli kriter olarak, örneklemlemlerinin sadece Türkiye’deki çalışanları içermesi gerekmektedir. Sonuç olarak, 12 makale, bir yüksek lisans tezi ve bir doktora tezi istenen seçim kriterlerini karşıladığı için meta-analiz çalışmasına dahil edilmesine karar verilmiştir. Analize dahil edilen 14 çalışmanın toplam örneklem büyüklüğü 4070’dir. İş tatmini ile iş performansı arasındaki korelasyonu inceleyen bu meta-analiz içerisinde en yüksek korelasyona sahip çalışma, Akkoç, Çalışkan ve Turunç (2012)’nin makalesidir ($r=.530$, $p=.01$). Minimum korelasyona sahip çalışma ise Gürbüz, Erkuş ve Sıgır (2010)’nın makalesidir ($r=.087$, $p=.05$). Meta-analitik çalışma *Comprehensive Meta-Analysis Software* programı kullanılarak yürütülmüştür ve genel sonuçlara dayanarak; iş tatmini ile iş performansı olguları arasında pozitif ve istatistiksel yönden anlamlı bir sonuç ($r=$

.315, $p = .000$, $k=14$, $N= 4070$) elde edilmiş olup, bu ilişki etki büyüklüğü açısından *orta ile büyük* arasındaki bir seviyededir (Cohen, 1988). Ayrıca, 14 çalışma içerisinde dokuz çalışma örneklemi açısından özel ve kamu sektörü olarak gruplanabilmektedir. Örneklemi, özel sektör çalışanlarını içeren altı çalışma, iş tatmini ile iş performansı arasında pozitif ve istatistiksel yönden anlamlı bir sonuç ($r = .258$, $p = .000$, $k=6$, $N= 1434$) vardır; bu ilişkinin etki büyüklüğü *küçük ile orta seviye* arasında nitelendirilmiştir (Cohen, 1988). Örneklemi, kamu sektör çalışanlarını içeren üç çalışmaya ise yine pozitif ve istatistiksel yönden anlamlı bir ilişki olduğunu ($r = .339$, $p = .000$, $k=3$, $N= 341$) ve bu ilişkinin *orta ile büyük* arasındaki bir etki düzeyi olduğunu göstermektedir (Cohen, 1988). Tartışma bölümünde, bu genel ve sektöre özel etki büyüklükleri uluslararası meta-analiz çalışmalarından elde edilen etki büyüklükleri açısından yorumlanmış ve karşılaştırılmıştır. Küçük ile büyük etki büyüklüğü aralığında değişkenlik gösteren bu pozitif ilişki önceki meta-analiz bulguları ile tutarlıdır.

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SECTION 1 – INTRODUCTION

Factors that affect job satisfaction and job performance levels of employees are among the core constructs that industrial and organizational psychologists frequently focus on. Pioneering interest on job satisfaction is attributed to Hoppock (1936)'s research on 500 teachers in United States of America. Hoppock (1936) found that teachers who are more satisfied with their jobs showed high levels of emotional adjustment, lower work monotony, better interpersonal relationships and better work performance (in Bowling & Cucina, 2012).

Moving from these early research attempts, job satisfaction and performance appear to be one of the most extensively studied construct in the literature related to workplace issues. Moreover, over the years researchers started to focus on this relationship via meta-analytic lenses (Davar & RanjuBala, 2012; Iaffaldano & Muchinsky, 1985; Judge, Thoresen, Bono, & Patton, 2001; Petty, McGee, & Cavender, 1984). Details of these meta-analytic studies will be reported in *discussion* section of the present thesis to compare their results with the present research's findings. Following the footsteps of these researchers, the present study aims to investigate the relationship between job satisfaction and job performance meta-analytically in the context of Turkey. To the current researchers' knowledge, there is no meta-analytic study on this relationship done so far in Turkey.

Within the framework of this objective, the following sections will first summarize present studies that matched the inclusion criteria (n=14) for the present meta-analysis. These fourteen studies will be summarized individually. Then meta-analytic results showing the mean correlation between job satisfaction and job performance conducted on these 14 studies will be reported and interpreted.

1. Job Satisfaction

Job satisfaction is one of the most extensively studied construct in the literature related to work place issues. One of the early definition was noted by Churchill, Ford, and Walker (1974) by focusing on salesmen's attitudes shaped by

the characteristics of the job itself and the work environment which are found to be “rewarding, fulfilling, and satisfying, or frustrating and unsatisfying” (p. 258). Beside, Locke (1976) defined job satisfaction as “a pleasurable or positive emotional state resulting from the assessment of one's job or job experiences” (p.1300). He emphasizes the importance of the relationship between job satisfaction and morale by focusing on satisfaction as an individual factor rather than as a group factor. There is numerous research on job satisfaction that guide us to understand this construct properly. Among these, perceived organizational support is one of the factors that researchers emphasize. Kraimer, Wayne, and Jaworski (2001) notes that high level of organizational support provides aid to workers, not only in terms of socio-emotional needs but also in terms of equipment, funding, technology, ideas, and physical assistance. Without such resources, job satisfaction is hard to be experienced, and consequently attaining performance with high quality and quantity is difficult (Eisenberger & Aselage, 2008).

If we summarize the theoretical backgrounds on job satisfaction reported by the studies included in the present meta-analysis, one of the theories covered by the studies included in the current research is Hackman and Oldman (1974)’s Job Characteristics Model which aims to depict how job redesign and job characteristics affect job satisfaction. Hackman and Oldman (1974) argued that intrinsic nature of work leads employees to be satisfied with their jobs. Their pioneering research included 658 employees working on 62 different jobs in seven organizations including blue collar and white-collar employees. They focused on five core job characteristics: (a) task identity, degree to which one can see one’s work from beginning to end; (b) task significance, range of abilities needed to perform a specific job; (c) skill variety, degree to which job allows employees to do different tasks; (d) autonomy, degree to which employee has control and discretion for how to conduct their job; and (e) feedback, degree to which the work itself provides feedback for how employee performs the job. They observed positive correlation between task identity and job satisfaction ($r = .38$, $p = .001$) and between skill variety and job satisfaction ($r = .54$, $p = .001$).

Hackman et al. (1974) was mentioned by Gul and Oktay (2009) which is included in the present meta-analysis.

The second framework that was used by the studies included in the current meta-analysis is based on Bakan and Buyukbese (2004)'s research that aims to operationalize job satisfaction in terms of overall perception of pay, managerial approach, and relationship between employee and employer and its relation with organizational communication. This study included 133 academicians working in the universities of Turkey. Results revealed positive correlation between pay and job satisfaction ($r = .114, p = .01$) and between positive management approach towards employees and job satisfaction ($r = .429, p = .01$). Koç, Yazıcıoğlu and Hatipoğlu (2009) and Yazıcıoğlu (2010)'s articles that are included in the meta-analysis cited Bakan and Buyukbese (2004).

The third theoretical background worth to mention is Babin and Boles (1996) who focus on supervisory support and job satisfaction of employees. They emphasize that positive perceptions of employees towards work have a positive effect on their lives and this triggers job satisfaction and the following that job performance. This study included 261 employees working in restaurants. The positive correlation between job satisfaction and job performance ($r = .20, p = .01$); and between job satisfaction and supervisory support ($r = .32, p = .01$) were observed. There was negative correlation between job satisfaction and role conflict ($r = -.22, p = .01$). Babin et al. (1996)'s perspective was the framework for Erkuş and Fındıklı (2013), and Kale (2015) which are included in the present meta-analysis.

The distinctiveness of these specific theories are clear when we review the diverse tools, because job satisfaction scales are closely connected to job satisfaction theories. Macdonald and MacIntyre (1997) examined specific job satisfaction scales and evolution of these scales over time and they emphasized that pioneers of job satisfaction scales are very important as a manifestation of job satisfaction as a scientific construct. Therefore, theories of job satisfaction and scales of job satisfaction are hard to distinguish. In the method section of this thesis, we will review these tools.

2. Job Performance

Job performance is the amount of output that an employee creates in a determined period. Visveswaran (2000) claims that job performance is related to measurable actions, behaviors and potential outcomes that employees involve in or bring about that are linked with and contribute to organizational goals. To understand what constitutes job performance, researchers have reviewed job performance measures used in different contexts and relied on job analytic techniques to explain the behaviors and the associated dimensions of job performance.

Kahn (1990) theorized that there is a unique aspect of job performance that functions in a more holistic, consistent, and connected manner with other organizational outcomes. According to Kahn (1990), organizational productivity and effectiveness are the most important outcome of job performance when job involvement, job satisfaction, and intrinsic motivation are additional mediators. Furthermore, Greenhouse (1990) claims that psychological well-being of groups or teams are consequences of job performance. Moreover, job performance is frequently studied in terms of organizational determinants such as organizational structure, systems, size and history, performance monitoring and feedback by employer, communication flow between employees, human resource management factors, leadership, group working processes, and job conditions (Hansen & Wernerfelt, 1989).

Kirkman and Rosen (1999) were the most frequently cited researchers by the studies included in the present meta-analysis. They conducted a study to reveal antecedents and consequences of team empowerment. This study included 181 employees who work in textile, technology, and insurance sectors in United States of America. They compared the job performance of team members and team leaders following team empowerment. Results showed that responsibilities given to teams, and team based human resources management policies trigger job performance of members in a team. Kirkman et al. (1999) concluded that team empowerment triggers job performance and increases individual job performance.

Another theoretical framework belongs to Sigler and Pearson (2000) whose research is about the relationship between organizational culture and employee performance. This study included 212 employees who work in textile sector in Southeastern United States. Sigler et al. (2000) reinterpreted and developed job performance scale of Kirkman et al. (1999). Çöl (2008) investigated the effect of perceived empowerment on job performance following the approach of Kirkman et al. (1999) and Sigler et al. (2000). This study included 403 academicians who work in state universities of Turkey. According to the findings, there is positive correlation between perceived team empowerment and job performance. Çöl (2008) found that team empowerment is composed of three factors: meaning-competence, self-determination, and impact. Results showed that there is positive correlation between meaning-competence and job performance ($r = .555, p = .01$); between self-determination and job performance ($r = .380, p = .01$) and between impact and job performance ($r = .211, p = .01$).

The third theoretical approach that emerges from the studies included in the present meta-analysis is Porter and Lawler (1968)'s. According to Porter et al. (1968), the measure of output rates, performance appraisal of employees by managers, and employees' self-appraisal of their performance are the three indicators of performance. Especially, the performance self-appraisal techniques were found to be beneficial for employees because these techniques encourage employees to take responsibility by letting them to set their own goals.

3. Meta-analysis as a research methodology

Meta-analysis is a statistical method to integrate or aggregate the findings from individual research studies. A high quality meta-analysis is based on the quality of systematic literature review with the coverage of all relevant published and unpublished studies.

Meta-analysis presents a rational and helpful way of dealing with a number of practical difficulties that in normal circumstances we meet to get sense out of diverse findings of multiple studies. Meta-analysis as a research method provides researcher the chance to reach a general conclusion from a variety of related research papers. Meta-analysis has become an important research

methodology in recent years, as statistical analysis seemed necessary to form the meaning out of hundreds of research results.

The “*Meta-analysis*” term was first introduced by Glass in April 1976 in the *American Association for Educational Research Journal*. However, Rosenthal (1963) had made important contributions to quantitative reviews before Glass (1976). Rosenthal in early 1960s began comparing and combining results of studies dealing with experimenter expectancies. In 1976, the year in which Glass’s meta-analysis appeared, Rosenthal had already published a landmark synthesis of findings from 311 studies of interpersonal expectancies. Consistent with Glass (1976)’s suggestions, the *effect size values* became an alternative way to interpret the findings from diverse studies in a cumulative way. Tebala (2015) claims that the annual rate of publication of new meta-analysis and systematic reviews is growing exponentially since 2004s: there are now over 10,000 meta-analysis published every year, which is double the number that appeared in 2004s. As a result, meta-analytic studies are popular nowadays because this method provides overall understanding about the size of effect among the variables and to count and combine possibilities (Koricheva & Gurevitch, 2016).

Even if the discourse of meta-analysis is getting also prevalent in the academic arena in Turkey, as Işık (2014) claimed that there are not many meta-analysis published in Turkey. According to literature search dated January 9, 2014, only twenty-nine published meta-analysis in Turkey emerges in *ULAKBİM Social Science Database* that match the “meta-analysis” keyword. According to this research, twelve research papers from twenty-nine meta-analysis examines individual studies’ effect sizes on related topic and two research papers are just about the techniques of meta-analysis. As reported by this article, this is a major drawback in the field of organizational psychology, because there is no information to aggregate the effect sizes of research done in Turkey (Işık, 2014).

4. Aim of the present study

Job performance and job satisfaction are two major employee behavior and attitude that organizational psychology explores because both have effect on productivity, efficiency of organization itself, and relationship among employees.

Even if meta-analytic research on relationship between job satisfaction and performance is available in international literature, no research was identified in Turkey. Therefore, the present study aims to conduct a meta-analytic research on the relationship between job satisfaction and job performance by targeting the empirical research done in Turkey.

Specifically, the present study will examine previous studies' reported correlation between job satisfaction and job performance and aggregate the results by meta-analysis. The hypothesis of the present study is that job satisfaction will have a positive relationship with job performance.

SECTION II – METHOD

1.Literature Search and Inclusion Criteria

Published journal articles, and unpublished master and doctorate thesis conducted in Turkey were included in this research. Basic criterion of this study was to include the studies with the samples from Turkey. Therefore, international studies were not included. My thesis includes research papers that were published between 2006 and 2015. This meta-analytic study has been completed in more than two years which started in 2015.

As the present study is a meta-analysis conducted within the scope of Turkey, relevant sources for this study were ULAKBİM Social Sciences Databases of TUBITAK (The Scientific and Technological Research Council of Turkey), Council of Higher Education Thesis Center, and Google Academic. The search of these databases was on the period from 25.03.2014 to 26.04.2016.

Initial literature review was solely on “job performance” and its determinants at psychological, individual, and organizational levels. 104 studies were found on the relationship of job performance with various variables like job satisfaction, organizational commitment, leadership style, reward, conflict management, stress, mobbing, job safety and roles, human resources management, training opportunities, organizational culture, behaviour, justice responsibility and support. Table 1 presents the distribution of the studies according to their constructs that they focus on in connection with job performance.

Table 1

Results from Initial Literature Review and Distribution of Studies according to the Constructs Focused in Relation to Job Performance

Major constructs focused in relation to job performance	Total number of studies (k=104)
Job Satisfaction	43
Organizational commitment	12
Leadership	6
Physical conditions	6
Reward	6
Conflict management	5
Career management	5
Stress	4
Job safety	3
Mobbing	3
Organizational responsibility	3
Human resources factor	2
Training opportunities	1
Organizational culture	1
Organizational behaviour	1
Organizational justice	1
Organizational support	1
Job role ambiguity	1

Among these construct, the most frequent one was “job satisfaction” so that the focus of this meta-analysis was decided to be on this issue ($k=43$) in connection to job performance. In the second phase of literature review, I scanned these 43 studies to find direct correlations between job satisfaction and job performance. I excluded other 27 research papers that were not quantitative research or did not report sufficient information for calculation of effect size. Beside, 10 studies had moderator variables and they did not report the direct correlation between job satisfaction and performance so that these did not match inclusion criteria either. The most important inclusion criteria of this meta-analysis is the sampling which must solely include organizations in Turkey because the main purpose of this study is to reveal the level of relationship between job satisfaction and job performance in Turkey. Therefore, those studies that do not have samples from Turkey were excluded. Moreover, studies that were

operationalizing the job performance at individual level and measuring it via self-evaluation were included. Therefore, if the studies were reporting organizational performance measures or if the performance evaluation measures were from a third party like managers, co-workers or customers, these studies were considered out of scope for the present meta-analysis. An example to this is Gürbüz et al. (2008)'s research. The correlation between job satisfaction and job performance was very strong ($r=.732$) compared to other studies and when we elaborated it we recognized that job satisfaction and job performance measures were administered to managers to evaluate their employees. Of course, this creates a remarkable impact in terms of consistency between the perceptions of two different constructs.

In sum, we obtained fourteen studies and Table 2 shows the final 14 studies included in the meta-analysis, type of publication and their sources.

Table 2

List of 14 Studies Included in the Meta-Analysis and Their Sources

Authors	Type of Publication	Journal/Institution	Year	Database
CEYLAN, A. & ULUTURK, Y.H.	Article	Doğuş Üniversitesi Dergisi	2006	ULAKBIM
ALTAŞ, A. & ÇEKMECELIOĞLU, H.G.	Article	Öneri Dergisi	2007	Google Academics
GÜL, H., OKTAY, E., & GÖKÇE, H.	Article	Akademik Bakış	2008	ULAKBIM
GÜL, H. & OKTAY, E.	Article	Selçuk Üniversitesi Sosyal Bilimler Dergisi	2009	ULAKBIM
KOÇ, H., YAZICIOĞLU, İ., & HATİPOĞLU, H.	Article	Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi	2009	ULAKBIM
YAZICIOĞLU, İ.	Article	Bilgi Türk Dünyası Sosyal Bilimler Dergisi	2010	Google Academics
GÜRBÜZ, S., ERKUŞ, A., & SİĞRİ, Ü.	Article	Sosyal ve Beşeri Bilimler Dergisi	2010	Google Academics
AKKOÇ, İ., ÇALIŞKAN, A., & TURUNÇ, O.	Article	Yönetim ve Ekonomi Dergisi	2012	Google Academics
CAPKULAÇ, O.	Master Thesis	Akdeniz Üniversitesi Sosyal Bilimler Enstitüsü, İşletme Ana Bilim Dalı	2013	National Thesis Center
KAHYA, C.	Article	Küresel İktisat ve İşletme Çalışmaları Dergisi	2013	Google Academics

Table 2 (continued)

List of 14 Studies Included in the Meta-Analysis and Their Sources

Authors	Type of Publication	Journal/Institution	Year	Database
ERKUŞ, A. & FINDIKLI, M.	Article	Istanbul Üniversitesi İşletme Fakültesi Dergisi	2013	ULAKBIM
KALKAVAN, S.	Doctorate Thesis	Aydın Üniversitesi Sosyal Bilimler Enstitüsü, İşletme Ana Bilim Dalı	2014	National Thesis Center
KALE, E.	Article	International Journal of Economic and Administrative Studies	2015	ULAKBIM
SÖKMEN, A. & METE S. E.	Article	İktisadi ve İdari Bilimler Fakültesi Dergisi	2015	Google Academics

2. Coding Procedures

Current thesis author and the advisor coded the studies that met the inclusion criteria. *Pearson Correlation Coefficient* (“*r*”) between job performance and job satisfaction was the main effect size measure. Rosenthal and Rosnow (2009) indicated that the “*r*” coefficient is ideal in the situations where researchers want to see direct relationship between two variables. In addition, they claimed that correlation coefficient is a statistical way to quantify the relationship between two variables; it is easy to work out, and to interpret.

The reported correlations and their levels (Table 3) were interpreted according to Cohen (1988)’s criteria as reported by Işık (2014).

Table 3

Pearson Correlation Coefficient “*r*” as Effect Size Index and its Interpretation (*Cohen, 1988*)

Effect size	r
Very large	.70 +
Large	.50
Medium	.30
Small	.10

Table is redesigned from Işık (2014)’s review.

3. Meta-Analytic Procedures

We used *Comprehensive Meta-Analysis Software Program* (v3) to calculate the combined correlations from the fourteen identified studies. This software both allows the estimation for amount of variation attributable to sampling error and artifacts such as untrustworthy data in both the predictor (job satisfaction) and criterion (job performance of employees) variables. It also presents the best estimates of correlations in the lack of measurement error (Wallace, Schmid, Lau, & Trikalnos, 2009).

Addressing statistical heterogeneity is one of the most troublesome aspects of many systematic reviews. The interpretative problems depend on how

substantial the heterogeneity is, since this determines the conclusions from meta-analysis. The statistical values; Q-value and I-squared are used for determining the statistical heterogeneity. Q-value concentrates on the dissimilarity between the individual studies' treatment effects and the common effect. I-squared is for measuring heterogeneity and investigates how much heterogeneity is present (Thompson, 1994). The range of I-squared is between 0% and 100% and it reveals the percentage of total variation across studies arising from heterogeneity (Israel & Richter, 2011). Some researchers suggested a distinction like 25% equals to low heterogeneity, 50% equals to medium heterogeneity, and 75% equals to high heterogeneity (Higgins, Thompson, Deeks, & Altman, 2003). In the case of heterogeneity, meta-analysis has to be based on random model instead of fixed model, which is most of the time the case for social science research where there is high variation across the reported relationships between two or more research construct. Therefore, in the present meta-analysis, level of heterogeneity among the reported correlation coefficients in 14 studies were first tested and the decision to either use fixed or random model based on this.

SECTION III – RESULTS

As the previous section summarized, the main purpose of the current study is to conduct a meta-analysis on the 14 studies that matched the inclusion criteria and to reach a conclusion about the overall relationship between job satisfaction and job performance. This section will summarize each study included in the analysis and will report the results of meta-analysis.

1. Sampling characteristics of the studies included in meta-analysis

Table 4 comprises sample characteristics of the studies included in meta-analysis ($k=14$; $N=4070$).

Table 4

The Sample Characteristics of 14 Studies Included in the Meta-Analysis

Authors	Year	Sample Size	Sector	City	Target Group
CEYLAN, A. & ULUTURK, Y.H.	2006	151	Various sectors	Various cities in Turkey	Employees in private or public sector (no additional information about sample)
ALTAŞ, A. & ÇEKMECELIOĞLU, H.G.	2007	391	Automotive	Sakarya & Koçaeli	Employees from 16 middle and large scale manufacturing organization (sample has not been specified as white/blue collar)
GÜL, H. & OKTAY, E. & GÖKÇE, H.	2008	120	Health services	Tokat	State hospital healthcare employees in one public hospital
GÜL, H & OKTAY, E.	2009	116	Municipality	Karaman	Public (state) employees
KOÇ, H. & YAZICIOĞLU, İ. & HATİPOĞLU, H.	2009	432	Education	Ordu	Teachers in private or public sector (pre-school, elementary, high school, and public continuous education center teachers)
YAZICIOĞLU, İ.	2010	1042	Education	Istanbul, Ankara,& İzmir	Teachers in private or public sector (pre-school, elementary, high school, and public continuous education center teachers)

Table 4 (continued)

The Sample Characteristics of 14 Studies Included in the Meta-Analysis

Authors	Year	Sample Size	Sector	City	Target Group
GÜRBÜZ, S. & ERKUŞ, A. & SİĞRİ, Ü.	2010	112	Information Technology (IT)	Ankara	White collar employees in three IT companies
AKKOÇ, İ. & ÇALIŞKAN, A. & TURUNÇ, O.	2012	348	Software development	Ankara	White collar employees in multiple software companies (number of companies are not reported)
CAPKULAÇ, O.	2013	178	Tourism/Hotel	Antalya	White collar managers
KAHYA, C.	2013	105	Education	Bayburt & Trabzon	Academics in the state universities
ERKUŞ, A. & FINDIKLI, M.A.	2013	572	Various sectors	Various cities in Turkey	Police, doctors, nurses, academics, teachers and laboratory employees
KALKAVAN, S.	2014	229	Insurance	Various cities in Turkey	White collar employees
KALE, E.	2015	176	Tourism/Hotel	Kapadokya & Nevşehir	White collar employees
SÖKMEN, A. & METE S. E.	2015	98	Health services	Ankara	Healthcare and administrative employees in a private hospital

If we review Table 4 in a more systematic way, sample sizes range from minimum 98 to maximum 1042. Table 5, shows that the most frequent range is between 100 and 200 ($n=7$). Large sample studies with more than 400 are less frequent.

Table 5

Distribution of 14 Studies according to Their Sample Sizes

Sample size ranges	Frequency of the studies
98-105	2
112-229	7
348-391	3
432-572	1
1042	1

Most frequent sectors are education ($n=3$), health services, tourism/hotel, and the combination of various sectors ($n=2$ for each) (Table 6).

Table 6

Distribution of 14 studies according to Sectors of Their Samples

Sectors	Frequency of the studies
Education	3
Health services	2
Tourism/Hotel	2
Various sectors	2
Automotive	1
Information Technology (IT)	1
Insurance	1
Municipality	1
Software development	1

As Table 7 shows studies most frequently are working with the white-collar employees ($n=4$). However, majority of the published journal articles do not elaborate the sample characteristics, which is a critical drawback to compare and generalize the results of a particular study.

Table 7

Distribution of 14 Studies according to Their Targeted Samples

Targeted samples	Frequency of the studies
White collar employees	4
Healthcare employees	2
Teachers	2
Employees (white/blue collar unknown)	2
Police, doctors, nurses, academicians, teachers, and laboratory employees	1
Public (state) employees	1
White collar managers	1
Academicians	1

Table 8 elaborates the demographic characteristics of the samples in 14 studies included in the meta-analysis. As the Table 8 depicts the samples of 14 studies had the mean age of 33.3 (SD=5.96) ranging between 26 and 43 years. According to the samples' sex distribution, we see that mean ratio of males is 60.7% (SD=15.25; min.=35%, max.=81%) and ratio of females is 39.3% (SD=15.13; min.=19%, max.=65%). The coding procedure covered the proportion of participants who have university and higher education as the Table 8 shows. The distribution of participants with university and higher education had the range between 17% and 100% with the mean of 64.6% (SD=28.56). Of course, consistent with this, the proportion of participants with education lower than university degree ranges between 0% and 83% (M=35.4%; SD=28.56).

Table 8

Demographic Characteristics of the Samples in the 14 Studies Included in the Meta-Analysis

Authors	Year	Return rate (%)	Mean Age (SD)	Sex (%)	Education (%)
CEYLAN, A. & ULUTURK, Y.H.	2006	98%	No information about mean age	No information about frequencies	No information about frequencies
ALTAŞ, A. & ÇEKMECELIOĞLU, H.G.	2007	100%	No information about mean age	73% male- 27% female	58% university and higher education
GÜL, H. & OKTAY, E. & GÖKÇE, H.	2008	68%	No information about mean age	No information about frequencies	No information about frequencies
GÜL, H & OKTAY, E.	2009	78%	43 (SD=.92)	74% male 26% female	38% university and higher education
KOÇ, H. & YAZICIOĞLU, İ & HATİPOĞLU, H.	2009	74%	32 (SD=.56)	61% male 39% female	100% university and higher education
YAZICIOĞLU, İ	2010	92%	26 (SD= .89)	58% male 42% female	100% university and higher education
GÜRBÜZ, S. & ERKUŞ, A. & SİĞRİ, Ü.	2010	No information about return rate	No information about mean age	81% male 19% female	41% university and higher education
AKKOÇ, İ., ÇALIŞKAN, A., & TURUNÇ, O.	2012	85%	No information about mean age	67% male 33% female	62% university and higher education

Table 8 (continued)

Demographic Characteristics of the Samples in the 14 Studies Included in the Meta-Analysis

Authors	Year	Return rate (%)	Mean Age (SD)	Sex (%)	Education (%)
ÇAPKULAÇ, O.	2013	82%	34 (SD= 1.13)	70% male 30% female	64% university and higher education
KAHYA, C.	2013	56%	29 (SD= .78)	68% male 32% female	100% university and higher education
ERKUŞ, A. & FINDIKLI, M.A.	2013	No information about return rate	No information about mean age	No information about frequencies	No information about frequencies
KALKAVAN, S.	2014	67%	32 (SD= 1.35)	46% male 54% female	66% university and higher education
KALE, E.	2015	72%	No information about mean age	65% male 35% female	17% university and higher education
SÖKMEN, A & METE S. E.	2015	No information about return rate	27 (SD= .95)	43% male 57% female	No information about frequencies

2. Measurement tools used by the studies included in meta-analysis

Table 9 summarizes the job satisfaction and job performance scales utilized as data collection tool and this section shortly describes them.

2.1. Job Satisfaction scales used by the fourteen studies of present meta-analysis

All of job satisfaction scales used by the studies included in the present meta-analysis was gathered by searching the papers cited them, and communicating with researchers who conducted these studies in Turkey. These tools in Turkish and English are available in Appendices.

2.1.1. Minnesota Job Satisfaction Scale by Weiss, Dawis, England, and Lofquist (1967)

Weiss, Dawis, England, and Lofquist (1967) created short and long form versions of Minnesota Job Satisfaction Scale (MSQ). Long form consists of 100 items and each item is related to a reinforcer in the work environment. On the other hand, short form consists of 20 items. Short version of this scale was translated to Turkish. English and Turkish versions of MSQ has five points scale and English version is categorized as ‘very satisfied, satisfied, neutral, dissatisfied and very dissatisfied’. The items of scales are about participation to decision-making process, the chance to do things for other people, pay, the working conditions, the feeling of accomplishment, and company policies (*Appendix A*). Among the studies included in the present meta-analysis, Ceylan and Ulutürk (2006) and Gül, Oktay, and Gökçe (2008) used MSQ.

2.1.2. Index of Job Satisfaction by Brayfield, and Rothe (1951)

Brayfield and Rothe (1951) developed a global job satisfaction scale named as Index of Job Satisfaction. Purpose of this scale is providing global appraisal of job satisfaction, which is applicable to various occupations. This scale includes 18 items. Gürbüz, Erkuş, and Sığı (2010), and Kahya (2013) used five items. The items of this scale are about working with enthusiasm and willingness, getting tired of doing work, finding the job fun, and satisfying from job itself (*Appendix B*). This scale was translated to Turkish by Gürbüz et al. (2010) and Kahya (2013).

2.1.3. Job Satisfaction scale by Bakan and Büyükbeşe (2004)

Bakan and Büyükbeşe (2004) conducted a study that on relationship between organizational communication and job satisfaction among academicians. They developed their own scale to measure job satisfaction. This scale contains 23 items. English and Turkish versions have five points scale between strongly agree and strongly disagree. The items of this scale are about the issues as follow: communication of problems to management team; good communication between employee and peers; job fit to qualifications of employees; justice in respect of career upgrading and pay; and management support for employees' career path and personal development (*Appendix C*). Koç, Yazıcıoğlu, and Hatipoğlu (2009), and Yazıcıoğlu (2010) used this scale.

2.1.4. Job Satisfaction scale by Babin and Boles (1996)

Babin and Boles (1996) used a scale of nine items with English and Turkish version have five point scale; strongly agree, agree, neutral, disagree, and strongly disagree in their research on the relationship between supervisory support and job satisfaction of employees. The items of this scale are about whether the job is boring, unpleasant, uninteresting, and disappointing for employee. Majority of the items' discourse was more on dissatisfaction than satisfaction (*Appendix D*). Erkuş et al. (2013) used three items of this scale as Kale (2015) used six items. Erkuş et al. (2013) translated this scale to Turkish and Kale (2015) revised later.

2.1.5. Job Satisfaction scale by Hackman and Oldham (1974)

Hackman and Oldham (1974)'s research was on the relationship between job redesign, job characteristics, and job satisfaction. This scale includes 14 items and Turkish version of this scale has five points scale. The original version of this scale has seven points scale; strongly agree, agree, slightly agree, neutral, slightly disagree, disagree, and strongly disagree. The items of this scale are about pay, career path in working life, personal development, harmony with peers in workplace, employee-employer relationship, future expectations, and attitude of managers (*Appendix E*). Gül et al. (2009) translated to Turkish and used this scale in their research.

2.1.6. Job Satisfaction scale by Arnett (1999) / Judge, Woolf, and Hurst (2009)

Arnett (1999) conducted a study on how stress affects job satisfaction among white-collar employees and developed a job satisfaction scale to reveal the relationship between stress and job satisfaction. Besides, Judge, Woolf, and Hurst (2009) evaluated and reshaped Arnett (1999)'s scale and conducted a study relationship between emotional labor and job satisfaction. Scale of Judge et al. (2009) includes five items with five points scale; strongly agree, agree, neither, disagree, and strongly disagree. English and Turkish version have five-point scale. The items of this scale are about whether the job is satisfying, enthusiastic, or boring for employees (*Appendix F*). Akkoç, Çalışkan, and Turunç (2012) translated this scale to Turkish and used two items out of five in their study.

2.1.7. Job Satisfaction scale by Lytle (1994) / Kim, Leong, and Lee (2005)

Kim, Leong, and Lee (2005) conducted a study to reveal how service orientation affects job satisfaction, organizational commitment, and intention of leaving among waiters who works in restaurants. Kim et al. (2005) reshaped job satisfaction scale of Lytle (1994). Turkish version of this scale includes six items with five points scale. The items of this scale are about whether related job is pleasant and satisfying for employee (*Appendix G*). Çapkulaç (2013) translated to Turkish.

2.1.8. Job Satisfaction scale by Cammann, Fichman, Jenkin, and Klesh (1983)

Cammann, Fichman, Jenkin, and Klesh (1983) conducted a study on the relationship between organizational commitment and job satisfaction among medical doctors. This scale includes three items and English and Turkish version have five points scale. English version is categorized as strongly agree, agree, neither, disagree, and strongly disagree. The items of this scale are about whether related job is satisfying for employees and items investigate whether employees like their job (*Appendix H*). Kalkavan (2014) translated to Turkish and used this scale.

2.1.9. Job Satisfaction scale by Miller and Medalia (1955)

Miller and Medalia (1955)'s research is related to the relationship between leadership and job satisfaction among military organizations. This scale includes five items and English and Turkish version have five points scale. English version is categorized as strongly agree, agree, neither, disagree, and strongly disagree. The items of this scale are about whether related job is beneficial for employee and whether related job is correct choice for career of employee (*Appendix I*). Sökmen et al. (2015) translated to Turkish and used this scale.

2.1.10. Job satisfaction scale by Rusbult, Farrell, Rogers, and Mainous (1988)

Rusbult, Farrell, Rogers, and Mainous (1988)'s study is related to employee loyalty to organization and job satisfaction. This scale includes five items with five points scale; as strongly agree, agree, neither, disagree, and strongly disagree. The items of this scale are about whether wage is adequate and satisfactory (*Appendix J*).

3.1. Job Performance scales used by the fourteen studies of present meta-analysis

The job performance scales of fourteen studies of present meta-analysis, which were gathered by searching the literature and communicating with the researchers who conducted these studies in Turkey are summarized again in Table 9 and in the following sub-sections.

3.1.1. Job performance scale by Kirkman, and Rosen (1999) and Sigler, and Pearson (2000)

Kirkman et al. (1999) developed a job performance scale and Sigler et al. (2000) Redesigned. English version has seven items; strongly disagree, moderate disagree, slightly disagree, neutral, slightly agree, moderate agree, and strongly agree. Turkish version has five point scales. The items of this scale are about the general evaluation of completing the tasks on time, attaining the job related objectives and quality standards, solving problems quickly (*Appendix K*). This scale is the most frequently used job performance survey among the studies included in the current meta-analysis. Çöl (2008) translated Kirkman et al. (1999)

and Sigler et al. (2000)'s job performance scale to Turkish. Altaş et al. (2007), Gül et al. (2008), Gül et al. (2009), Koç et al. (2009), Gürbüz et al. (2009), Yazıcıoğlu (2010), Akkoç et al. (2012), and Kahya (2013) which are among the studies included in the present meta-analysis used this scale to collect data on employee performance

3.1.2. Job performance scale by Gürkanlar (2010)

Gürkanlar (2010) searched the relationship between working hours, balance between job and family and the aspects of job performance among academicians and administrative employees in the universities. Gürkanlar (2010) developed 11 item surveys with five points scale ranging as inadequate, need to develop, adequate, good, and excellent. The items of this scale are about planning of job itself, performance of verbal and written communication, sustainability of job quality and quantity, and getting on well with other employees (*Appendix L*). Çapkulaç (2013) as one of the publication included in the present meta-analysis used this scale. .

3.1.3. Job performance scale by Porter, and Lawler (1968)

Porter and Lawler (1968) investigated the relation between organizational structure, job attitudes and job behavior. Porter et al. (1968)'s job performance scale with five items with five points scale ranging from inadequate, need to develop, adequate, good, and to excellent are about getting on well with other people in workplace, ability to finish their work, and attaining job goals on time (*Appendix M*). Kalkavan (2014) translated this scale to Turkish.

3.1.4. Job performance scale by Bush, Ortinau, and Hair (1990)

Bush, Ortinau, and Hair (1990) evaluated retail salesperson's performance with three-item survey. Five point scale ranges from strongly agree to strongly disagree. The items of this scale are about completing the tasks in a short time and time management skills (*Appendix N*). This scale's translation to Turkish was done by Erkuş et. al. (2013).

3.1.5. Job Performance scale of Sökmen and Mete (2015)

Sökmen and Mete (2015)'s research is about harassment, intention to leave, and job satisfaction. Sökmen et al. (2015) developed six item surveys with

five points scale ranging as strongly agree, agree, neutral, disagree, and strongly disagree. The items of this scale are about showing effort more than expected and learning and adaptation capability (*Appendix O*). Sökmen et al. (2015) from the present meta-analysis used this scale.

3.1.6. Job Performance scale of Choo (1986)

Choo (1986)'s focus was on harassment, intention to leave, and job satisfaction. Choo (1986) developed nine items surveys with five points scale ranging as strongly agree, agree, neutral, disagree, and strongly disagree. The items of this scale are about quantity and quality of product or service, adaptation to new situations, professional capabilities, implementation and coordination abilities and ability to get on with other employees (*Appendix P*). We see this scale in Ceylan et al. (2006)'s which is one of the publications in the present meta-analysis.

Table 9

Measurement Instruments, Tools, and Scales of the 14 Studies Included in the Meta-Analysis

Authors	Year	SCALES			
		Job satisfaction measures and developers	Job performance measures	Job satisfaction measure' translation to Turkish	Job performanace measures' translation to Turkish
CEYLAN, A. & ULUTURK, Y.H.	2006	Minnesota Job Satisfaction Scale by Weiss et al. (1967)	Choo (1986)	Turkish MSQ Form	Ceylan et al. (2006)
ALTAŞ, A. & ÇEKMECELIOĞLU, H.G.	2007	Rusbult, Farrell, Rogers & Mainous (1988)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Altas et al. (2007)	Çöl (2008)
GÜL, H. & OKTAY, E. & GÖKÇE, H.	2008	Minnesota Job Satisfaction Scale by Weiss et al. (1967)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Turkish MSQ Form	Çöl (2008)
GÜL, H. & OKTAY, E.	2009	Hackman & Oldham (1974)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Gül et al. (2009)	Çöl (2008)
KOÇ, H. & YAZICIOĞLU, İ. & HATİPOĞLU, H.	2009	Bakan & Büyükbeşe (2004)	Çöl (2008)	Bakan & Büyükbeşe (2004)	Çöl (2008)
YAZICIOĞLU, İ.	2010	Bakan & Büyükbeşe (2004)	Çöl (2008)	Bakan & Büyükbeşe (2004)	Çöl (2008)

Table 9 (continued)

Measurement Instruments, Tools, and Scales of the 14 Studies Included in the Meta-Analysis

Authors	Year	SCALES			
		Job satisfaction measures and developers	Job performance measures	Job satisfaction measures' translation to Turkish	Job performance measures' translation to Turkish
GÜRBÜZ, S. & ERKUŞ, A. & SİĞRI, Ü.	2010	Brayfield & Rothe (1951)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Gürbüz et al. (2010)	Çöl (2008)
AKKOÇ, İ. & ÇALIŞKAN, A. & TURUNÇ, O.	2012	Arnett (1999) / Judge, Woolf, & Hurst (2009) / Chen, Ku, Shyr, & Chou (2009)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Akkoç et al. (2012)	Çöl (2008)
ÇAPKULAÇ, O.	2013	Lytle (1994) / Kim, Leong, and Lee (2005)	Gürkanlar (2010)	Çapkulaç (2013)	Gürkanlar (2010)
KAHYA, C.	2013	Brayfield & Rothe (1951)	Kirkman & Rosen (1999) / Sigler & Pearson (2004)	Kahya (2013)	Çöl (2008)
ERKUŞ, A & FINDIKLI, M.A.	2013	Babin & Boles (1996)	Bush, Ortinau & Hair (1990)	Erkuş et al. (2013)	Erkuş et al. (2013)
KALKAVAN, S.	2014	Cammann, Fichman, Jenkin, & Klesh, 1983)	Porter –Lawler (1968)	Kalkavan (2014)	Kalkavan (2014)
EMINE, K.	2015	Babin & Boles (1996)	Kirkman & Rosen (1999) / Sigler & Pearson (2000)	Kale (2015)	Çöl (2008)
SÖKMEN, A. & METE, E.S.	2015	Miller & Medalia (1955)	Sökmen et al. (2015)	Sökmen et al. (2015)	Sökmen et al. (2015)

If we review Table 9 systematically, job satisfaction scale of Brayfield and Rothe (1951), Bakan and Büyükbeşe (2004), and Minnesota Job Satisfaction scale by Weiss et al. (1967) were the most frequently used tools by the studies included in the present meta-analysis. Tablo 10 present the summary descriptives of job satisfaction tools.

Table 10

Distribution of 14 Studies according to Scales Used to Measure Job Satisfaction

Job Satisfaction Scales	Frequency of the studies
Minnesota Job Satisfaction Scale by Weiss et al. (1967)	2
Bakan & Büyükbeşe (2004)	2
Babin & Boles (1996)	2
Brayfield & Rothe (1951)	2
Arnett (1999) / Judge, Woolf, & Hurst (2009) / Chen, Ku, Shyr, & Chou (2009)	1
Lytle (1994) / Kim, Leong, & Lee (2005)	1
Cammann, Fichman, Jenkin, & Klesh (1983)	1
Miller & Medalia (1955)	1
Hackman & Oldham (1974)	1
Rusbult, Farrell, Rogers, & Mainous (1988)	1

Moreover, as Table 11 shows we see that job performance scale of Kirkman and Rosen (1999) was the most prevalently used tool ($k=7$ studies).

Table 11

Distribution of 14 Studies according to Scales Used to Measure Job Performance

Job Performance Scales	Frequency of the studies
Kirkman & Rosen (1999) / Sigler & Pearson (2000)	7
Çöl (2008)	3
Gürkanlar (2010)	1
Porter-Lawler (1968)	1
Sökmen et al. (2015)	1
Choo (1986)	1

4. Summary of the studies included in the meta-analysis

Studies in this meta-analysis can be categorized in terms of which organizational settings the data collection was realized in. During the process of meta-analysis, I have noticed that type of organizations as private vs. public was noticeable differentiation to categorize the designated studies of the current meta-analysis. In this section, 14 studies will be summarized by being grouped under these major categories.

4.1. Studies with the private sector employee samples

This section includes six studies which have samples of private sector employees. These studies are Altaş et al. (2007)'s article and Gürbüz, Erkuş, and Sıgır (2010)'s article, Akkoç et al. (2012)'s article, Çapkulaç (2013)'s master thesis, Kalkavan (2014)'s doctorate thesis, and Kale (2015)'s article.

4.1.1. Altaş and Çekmecelioğlu (2007)'s research on relationship among job satisfaction, organizational commitment, and job performance

The sample included 391 white-collar employees who work in automotive industry located in Sakarya. Job satisfaction scale by Rusbult, Farrell, Rogers, and Mainous (1988) and job performance scale of Kirkman and Rosen (1999) was used in this study.

a) Major findings by Altaş et al. (2007)

Organizational commitment has statistically significant and strong positive correlation with job performance. In addition, there is significant correlation between organizational commitment and organizational citizenship behavior. There is statistically significant positive correlation between job satisfaction and job performance. The results further revealed that organizational citizenship behaviors mediate the effects of job satisfaction on job performance.

b) Result to be included in the current meta-analysis from Altaş et al. (2007)

The correlation between job satisfaction and job performance is .399 ($p=.00$). According to Cohen (1988), there is medium to large correlation between job performance and job satisfaction.

4.1.2. Gürbüz, Erkuş, and Sıgır (2010)'s research on the relationship of core self-evaluation with job satisfaction and job performance

The purpose of this study is to explore the relationship between job performance, job satisfaction, self-efficacy, self-esteem, neuroticism, and locus of control. The sampling of 112 white-collar employees who work in a software development company that is located in Ankara. Job satisfaction scale was developed by the authors of this study and job performance scale was Kirkman and Rosen (1999)'s measure.

a) Major findings in Gürbüz et al. (2010)

Core self-evaluation is a phenomenon related to how individuals see and evaluate themselves that include self-efficacy and self-esteem. Employees who have high levels of self-efficacy and self-esteem are more satisfied with their work and high level of job satisfaction triggers job performance in positive way. There is statistically non-significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Gürbüz et al. (2010)

The correlation between job satisfaction and job performance is .087 ($p > .05$). According to Cohen (1988), the effect size is very small.

4.1.3. Akkoç, Çalışkan, and Turunç (2012)'s research on the effect of development culture and perceived organizational support on job satisfaction and job performance and the mediating role of trust

White-collar employees (N=348) who work in software companies located in Ankara was the sample for this study. Job satisfaction scale was developed by Arnett et al. (1999), Judge et al. (2009) and Chen et al. (2009). Job performance scale was developed by Kirkman et al. (1999) and Sigler, and Pearson (2000).

a) Major findings in Akkoç et al. (2012)

Perceived organizational support and development culture affected the job satisfaction and job performance in a positive and statistically significant way. In addition, trust factor is a mediator between job satisfaction and job

performance. There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Akkoç et al. (2012)

The correlation between job satisfaction and job performance is .530 ($p=.01$). According to Cohen (1988), this is medium to large correlation.

4.1.4. Çapkulaç (2013)'s master thesis on the effect of managers' emotional intelligence on job satisfaction and job performance

The sample of 178 white-collar managers from private sector tourism companies located in Antalya was targeted in this research. Job satisfaction scale was the one that Lytle (1994) and Kim, Leong, and Lee (2005) developed. Gürkanlar (2010) developed job performance scale.

a) Major findings by Çapkulaç (2013)

There was no significant relationship between emotional intelligence and job satisfaction. The research also includes the effects of emotional intelligence on job performance and job satisfaction and result of this analysis reveal that there is negative but non-significant correlation between emotional intelligence and job satisfaction but non-significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Çapkulaç (2013).

The correlation between job satisfaction and job performance is .141 ($p=.061$). According to Cohen (1988), this is small to medium effect.

4.1.5. Kalkavan (2014)'s doctorate thesis on the effect of coaching behavior of managers on job satisfaction, organizational commitment, and organizational performance in the context of various organizational cultures

The sample of this doctorate thesis contained 229 white-collar employees who work in insurance companies in different cities of Turkey. Job satisfaction scale was Cammann, Fichman, Jenkin, and Klesh (1983)'s tool. Job performance scale was the one developed by Porter, and Lawler (1968).

a) Major findings in Kalkavan (2014)

There is positive but non-significant correlation between organizational commitment and job satisfaction and significant correlation between organizational performance and job performance. There is statistically non-significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Kalkavan (2014)

The correlation between job satisfaction and job performance is .102 ($p=.124$). According to Cohen (1988), the effect size of this relationship is small to medium.

4.1.6. Kale (2015)'s research on the effect of leader and peer support on job performance and the mediating role of job and life satisfaction

The sample consisted of 176 white-collar employees employed in the hotels located in Nevsehir-Kapadokya. Job satisfaction scale was from Babin and Boles (1996)' research. Job performance scale was Sigler et al. (2000)'s.

a) Major findings by Kale (2015)

When we focus on the correlation results for the variables, there is a significant relationship between job satisfaction and life satisfaction. Job satisfaction has a positive influence on job performance and life satisfaction. The results of the survey show that leadership support increases both job satisfaction and life satisfaction.

b) Result to be included in the current meta-analysis from Kale (2015)

The correlation between job satisfaction and job performance is .197 ($p=.05$). According to Cohen (1988), this is small to medium correlation.

4.2. Studies with the sample from public sector organizations

This category has three studies that have samples from public sector employees. These studies are Gül, Oktay, and Gökçe (2008)'s article; Gül and Oktay (2009)'s article; and Kahya (2013)'s article.

4.2.1. Gül, Oktay, and Gökçe (2008)'s research on the relationship between job performance, job satisfaction, organizational commitment, intention to leave, and stress.

The sample of 87 public sector employees who works in Tokat State Hospital took place in this research. Job satisfaction scale was Minnesota Job

Satisfaction Survey. Job performance scale was developed by Kirkman et al. (1999) and Sigler et al. (2000).

a) Major findings by Gül et al. (2008)

There is no significant relationship between organizational commitment and stress. Negative correlation between job performance and intention to leave, and between job performance and organizational stress was reported. Additionally, there is a negative relationship between stress and job performance. There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Gül et al. (2008)

The correlation between job satisfaction and job performance is .374 ($p=.01$). According to Cohen (1988), there is medium to large correlation between job performance and job satisfaction.

4.2.2. Gül and Oktay (2009)'s research on the relationship between job performance, job satisfaction, wage, and career

The sample of this research is the 116 public sector employees in Karaman Governorship. Job satisfaction scale was Hackman et al. (1974)'s. Sigler et al. (2000)'s and Kirkman et al. (1999)'s job performance scale was used.

a) Major findings by Gül et al. (2009)

There is non-significant relationship between career and job satisfaction. Yet the same study indicates a positive relation between job satisfaction and job performance parallel to that in literature. Separately, there is not direct relationship between job performance and expectation from life. Job satisfaction is a moderator in the relationship between job performance and pay. There is statistically non-significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Gül et al. (2009)

The correlation between job satisfaction and job performance is 0.154 ($p>.06$). According to Cohen (1988), this is small to medium correlation.

4.2.3. Kahya (2013)'s research on mediating role of job satisfaction in the relationship between organizational cynicism and job performance

The sampling of this study includes 105 academicians from Bayburt Technical University and Karadeniz Technical University. Job satisfaction scale of Brayfield and Rothe (1951). Sigler et al. (2000)'s and Kirkman et al. (1999)'s tools were used in order to measure job performance.

a) Major findings by Kahya (2013)

The research results show that organizational cynicism partially and negatively affected job performance. Job satisfaction had a full mediating effect on the relationship between organizational cynicism and job performance. There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Kahya (2013)

The correlation between job satisfaction and job performance is 0.476. ($p < .01$). According to Cohen (1988), medium to large correlation was observed.

4.3. Studies with the samples that are not specified either as public or private sector

This section includes five studies that did not explicitly report the targeted samples. These studies are Ceylan et al. (2006)'s; Koç, Yazıcıoğlu, and Hatipoğlu (2009)'s; Sökmen and Mete (2015)'s; Yazıcıoğlu (2010)'s; Erkuş and Fındıklı (2013)'s article.

4.3.1. Ceylan and Ulutürk (2006)'s research on relationship between job performance, job satisfaction, role ambiguity and role conflict

The sample consisted of 151 public or private sector employees in various sectors from different cities in Turkey. Minnesota Job Satisfaction Survey and Choo (1986)'s job performance scale was used.

a) Major findings by Ceylan et al. (2006)

The role conflict has negative correlation with job performance. According to the results of the research is role conflict and role ambiguity reduces both job satisfaction and job performance. There is positive significant correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Ceylan et al. (2006)

The correlation between job satisfaction and job performance is 0.342 ($p=.01$). According to Cohen (1988), this is medium to large effect size.

4.3.2. Study done by Koç, Yazıcıoğlu, and Hatipoğlu (2009)'s on teachers' job satisfaction and job performance

Sample includes 432 teachers from Ordu. Bakan et al. (2004)'s job satisfaction scale and Çöl (2008)'s job performance scale were used.

a) Major findings by Koç et al. (2009)

There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis Koç et al. (2009)

The correlation between job satisfaction and job performance is .465 ($p=.000$). According to Cohen (1988), this is medium to large correlation.

4.3.3. Yazıcıoğlu (2010)'s research on the relationship between job satisfaction and performance in the samples of Turkey and Kazakhstan

The purpose of current study is to explore the relationship between job performance and job satisfaction. The sample is composed of 1042 teachers who work in public or private sectors located in Istanbul, Ankara and Izmir, and 420 teachers in Kazakhstan. Job satisfaction scale by Bakan et al., (2004) and job performance scale by Çöl (2008) were used.

a) Major findings by Yazıcıoğlu (2010)

There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Yazıcıoğlu (2010)

The correlation between job satisfaction and job performance is .38 ($p=.000$) for the sample from Turkey. According to Cohen (1988), this is medium to large correlation.

4.3.4. Erkuş and Fındıklı (2013)'s research on the effect of psychological capital on job satisfaction, job performance, and intention to leave

The sample of 572 police, doctors, nurses, laboratory assistants, and academicians from various public or private organizations participated in this study. Job satisfaction scale by Babin, and Boles (1996), and job performance scale by Bush, Ortineu, and Hair (1990) was used.

a) Major findings by Erkuş et al. (2013)

Psychological capital is positively correlated with job satisfaction and job performance and there is negative relationship between psychological capital and intention of leave. There is statistically significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Erkuş et al. (2013)

The correlation between job satisfaction and job performance is .36 ($p=.01$) which is medium to large effect size according to Cohen (1988).

4.3.5. Sökmen and Mete (2015)'s research on workplace bullying's effect on job performance, job satisfaction, intention to leave, and harassment

Sample includes 98 healthcare and administrative employees who work in private hospital that is located in Ankara. Miller and Medalia (1955)'s job satisfaction scale and Sökmen et al. (2015)'s job performance scale were used.

a) Major findings in Sökmen et al. (2015).

Employees who are victims of low-level harassing behavior from leaders show higher job performance and low probability of intention to leave than those exposed to a high degree of harassing behavior. Similarly, low-level harassing behavior from leaders triggers job satisfaction in positive way. There is statistically non-significant positive correlation between job satisfaction and job performance.

b) Result to be included in the current meta-analysis from Sökmen et al. (2015)

The correlation between job satisfaction and job performance is .188 ($p=.063$) and that is small to medium effect (Cohen, 1988).

4.4. Summary of the statistical results from the 14 studies included in meta-analysis

Table 12 depicts the correlations of job satisfaction and performance as reported by 14 studies. If we review Table 12 in a systematic way, correlation coefficients between job satisfaction and job performance is positive in all of the studies. Five studies have non-significant positive correlation; and the rest found a statistically positive and significant relationship.

Table 12

Reported Correlation Levels between Job Satisfaction and Job Performance in the 14 Studies Included in the Meta-Analysis

HYPOTHESIS TESTINGS								
Authors	Year	Mean (SD)		Direction of relationship	Pearson Correlation Coefficient (r)	Interpretation of effect sizes according to Cohen (1988)	p-value	CI - Confidence Interval
		Job satisfaction	Job performance					
CEYLAN, A. & ULUTURK, Y.H.	2006	71.11 (SD=10.15)	45.87 (SD= 11.12)	+	.342	Medium to large	.01*	.99
ALTAŞ, A. & ÇEKMECELIOĞLU, H.G.	2007	4.18 (SD=.38)	3.62 (SD= .58)	+	.399	Medium to large	.000*	.99
GÜL, H & OKTAY, E & GÖKÇE, H.	2008	3.37 (SD=.79)	3.90 (SD= .86)	+	.374	Medium to large	.001*	.99
GÜL, H. & OKTAY, E.	2009	3.57 (SD=1,08)	4.10 (SD= 1,01)	+	.154	Small to medium	.06	.95
KOÇ, H & YAZICIOĞLU, İ & HATİPOĞLU, H.	2009	3.57 (SD=.51)	4.10 (SD= .68)	+	.465	Medium to large	.000*	.99
YAZICIOĞLU, İ.	2010	3.72 (SD=1,30)	2.76 (SD= .52)	+	.380	Medium to large	.000*	.99
GÜRBÜZ, S. & ERKUŞ, A. & SİĞRİ, Ü.	2010	3.93 (SD=.68)	4.14 (SD= .63)	+	.087	Very small	p>.05 (Exact p-value has not been reported)	.95

* Statistically significant results

Table 12 (continued)

Reported Correlation Levels between Job Satisfaction and Job Performance in the 14 Studies included in the Meta-Analysis

HYPOTHESIS TESTINGS								
Authors	Year	Mean		Direction of relationship	Pearson Correlation Coefficient(r)	Interpretation of effect sizes according to Cohen (1988)	p-value	CI - Confidence Interval
		Job satisfaction	Job performance					
AKKOÇ, İ. & ÇALIŞKAN , A. & TURUNÇ, O.	2012	No information		+	.530	Large	.01*	.99
ÇAPKULAÇ, O.	2013	No information		+	.141	Small to medium	.061	.95
KAHYA, C.	2013	2.90 (SD=1.43)	2.29 (SD= .87)	+	.476	Medium to large	.01*	.99
ERKUŞ, A. & FINDIKLI, M.A.	2013	3.70 (SD=1.30)	3.63 (SD= .85)	+	.360	Medium to large	.01*	.99
KALKAVAN, S.	2014	4.50 (SD=.75)	4.2 (SD= .86)	+	.102	Small to medium	.124	.95
KALE, E.	2015	No information	No information	+	.197	Small to medium	.05*	.95
SÖKMEN, A. & METE, S.E.	2015	No information	No information	+	.188	Small to medium	.063	.95

* Statistically significant results

Majority of the studies (Table 13) had the correlations between .342 to .476 ($k=7$ studies); then, five studies ($k=5$ studies) had correlation between .102 and .197 and; and only one study with large effect size ($r=.53$) and one with very small effect size ($r=.087$).

Table 13

Distribution of 14 studies according to Effect Sizes

Pearson Correlation Coefficient	Effect size interpretation according to Cohen (1988)	Frequency of the studies
.05 – .10	Very small	1
.10 – .29	Small to medium	5
.30 – .49	Medium to large	7
.50 +	Large	1

5. Results from the meta-analysis of 14 studies' correlational observations

The previous section presented the review of the correlational findings from fourteen studies conducted in Turkey on the relationship between job performance and job satisfaction. The data including the Pearson Correlation Coefficients, and sample sizes were entered to Comprehensive Meta-Analysis program. Effect sizes were calculated in order to attain conclusive understanding of overall mean relationship between job satisfaction and job performance obtained from the designated 14 studies with diverse results (Table 14).

Table 14

Data from 14 studies Entered to Comprehensive Meta-Analysis Software

<i>k</i> =14	<i>r</i>	Sample size
Ceylan, A. & Uluturk, Y.H. - 2006	.342	151
Altaş, A. & Çekmecelioğlu, H.G.- 2007	.399	391
Gül, H., Oktay,E., & Gökçe,H. - 2008	.374	120
Gül,H. & Oktay, E. - 2009	.154	116
Koç, H.,Yazıcıoğlu, İ., & Hatipoğlu, H-2009	.465	432
Yazıcıoğlu, İ. - 2010	.380	1042
Gürbüz, S., Erkuş, A., & Sıgır, Ü. - 2010	.087	112
Akkoç,İ., Çalışkan , A., & Turunç, O. - 2012	.530	348
Çapkulaç, O. - 2013	.141	178
Kahya, C. - 2013	.476	105
Erkuş, A & Findikli, M.A. – 2014	.360	572
Kalkavan, S.- 2014	.102	229
Kale, E. - 2015	.197	176
Sökmen, A. & Mete, E.S. – 2015	.188	98
		N=4070

Table 15 shows the results of the meta-analysis. First as Table 15 shows, *Q-value* as the indicator of heterogeneity of current study is 45.566 ($p=.000$). The statistically significant result of *Q-test* reveals that the studies' reported correlations are heterogeneous. Therefore, *random effect model* is more valid indicator for the present study.

In random model and meta-analysis with small sample sizes, *I-squared* should be the preferred as the heterogeneity measure (Levine & Hullett, 2012). *I-squared* is higher than 75% ($I^2 = 75,897$) that indicates high heterogeneity. Therefore, the preference of random effect model is once more validated.

According to Table 15, total sample size of fourteen studies is 4070 from various public or private sector organizations. As the random effect model shows, the mean correlation between job performance and job satisfaction based on the results of 14 studies is significant and positive ($r=.315$; $Z=7.945$; $p=.000$) and has a medium to large size of effect. Comparatively, effect size is .354 ($Z=23.414$; $p=.000$) according to fixed results. As a conclusion, for 4070 employees who

work in Turkey, overall correlation between job satisfaction and job performance is .315 ($p=.000$, $Z=7.945$, $k=14$).

Table 15

Result of the Meta-Analysis ($k=14$)

		Model	
		Fixed	Random
Effect size and 95% confidence interval	<i>Point estimate r</i>	.354	.315
	<i>Lower limit</i>	.327	.241
	<i>Upper limit</i>	.381	.385
Test of null (2-Tail)	<i>Z-value</i>	23.414	7.945
	<i>p-value</i>	.000	.000
Heterogeneity	<i>Q-value</i>	45.566	
	<i>df (Q)</i>	13	
	<i>p-value</i>	.000	
	<i>I-squared</i>	75.897	

As seen in Figure 1 and Figure 2, all of studies have positive correlation between job satisfaction and job performance. Lower and upper limits of these studies and p and Z values are present in Figure 1 and Figure 2. Additionally, confidence intervals at 95% shows how much these studies are statistically precise. Largest interval is observed in Sökmen et al. (2015)'s paper which has the lower limit of -.011 and upper limit of .373. On the other hand, narrowest interval is obtained in Yazıcıoğlu (2010)'s study (lower limit=.327; upper limit=.431).

Figure 1

Fourteen Studies of Meta-Analysis with Effect Size Calculations and Overall Effect Size based on Random Model with 95% Confidence Interval

Model	Study name	Statistics for each study					Correlation and 95% CI				
		Correlation	Lower limit	Upper limit	Z-Value	p-Value	-1,00	-0,50	0,00	0,50	1,00
	CEYLAN, A. & ULUTURK, Y.H. (2006)	0,342	0,193	0,476	4,335	0,000				+	
	ALTAS, S.S. & CEKMECELIOGLU, H.G. (2007)	0,399	0,312	0,479	8,321	0,000				+	
	GUL, H. & OKTAY, E. & GOKCE, H. (2008)	0,374	0,177	0,542	3,603	0,000				+	
	GUL, H. & OKTAY, E. (2009)	0,154	-0,029	0,327	1,650	0,099			+		
	KOC, H. & YAZICIOGLU, Y. & HATIPOGLU, H. (2009)	0,465	0,388	0,536	10,432	0,000				+	
	YAZICIOGLU, Y. (2010)	0,380	0,327	0,431	12,895	0,000				+	
	GURBUZ, S. & ERKUS, A. & SIGRI, U. (2010)	0,087	-0,100	0,268	0,911	0,363			+		
	AKKOC, Y. & CALISKAN, A. & TURUNC, O. (2012)	0,530	0,450	0,602	10,961	0,000				+	
	CAPKULAC, O. (2013)	0,141	-0,006	0,282	1,878	0,060			+		
	KAHYA, C. (2013)	0,476	0,313	0,612	5,230	0,000				+	
	ERKUS, A. & FINDIKLI, M.A. (2013)	0,360	0,286	0,429	8,990	0,000				+	
	KALKAVAN, S. (2014)	0,102	-0,028	0,229	1,539	0,124			+		
	KALE, E. (2015)	0,197	0,051	0,335	2,625	0,009			+		
	SOKMEN, A. & METE, E.S. (2015)	0,188	-0,011	0,373	1,854	0,064			+		
Random		0,315	0,241	0,385	7,945	0,000				+	

Figure 2

Fourteen Studies of Meta-Analysis with Effect Size Calculations and Overall Effect Size based on Fixed Model with 95% Confidence Interval

Model	Study name	Statistics for each study					Correlation and 95% CI				
		Correlation	Lower limit	Upper limit	Z-Value	p-Value	-1,00	-0,50	0,00	0,50	1,00
	CEYLAN, A. & ULUTURK, Y.H. (2006)	0,342	0,193	0,476	4,335	0,000				+	
	ALTAS, S.S. & CEKMECELIOGLU, H.G. (2007)	0,399	0,312	0,479	8,321	0,000				+	
	GUL, H. & OKTAY, E. & GOKCE, H. (2008)	0,374	0,177	0,542	3,603	0,000				+	
	GUL, H. & OKTAY, E. (2009)	0,154	-0,029	0,327	1,650	0,099				+	
	KOC, H. & YAZICIOGLU, Y. & HATIPOGLU, H. (2009)	0,465	0,388	0,536	10,432	0,000				+	
	YAZICIOGLU, Y. (2010)	0,380	0,327	0,431	12,895	0,000				+	
	GURBUZ, S. & ERKUS, A. & SIGRI, U. (2010)	0,087	-0,100	0,268	0,911	0,363				+	
	AKKOC, Y. & CALISKAN, A. & TURUNC, O. (2012)	0,530	0,450	0,602	10,961	0,000				+	
	CAPKULAC, O. (2013)	0,141	-0,006	0,282	1,878	0,060				+	
	KAHYA, C. (2013)	0,476	0,313	0,612	5,230	0,000				+	
	ERKUS, A. & FINDIKLI, M.A. (2013)	0,360	0,286	0,429	8,990	0,000				+	
	KALKAVAN, S. (2014)	0,102	-0,028	0,229	1,539	0,124				+	
	KALE, E. (2015)	0,197	0,051	0,335	2,625	0,009				+	
	SOKMEN, A. & METE, E.S. (2015)	0,188	-0,011	0,373	1,854	0,064				+	
Fixed		0,354	0,327	0,381	23,414	0,000				+	

6. Meta-analysis of the studies targeting private sector versus public sector employees

During the meta-analysis of data on 14 studies overall it was noticeable that studies with public sector employee samples reported higher correlations between job satisfaction and job performance than studies with sample of private sector employees.

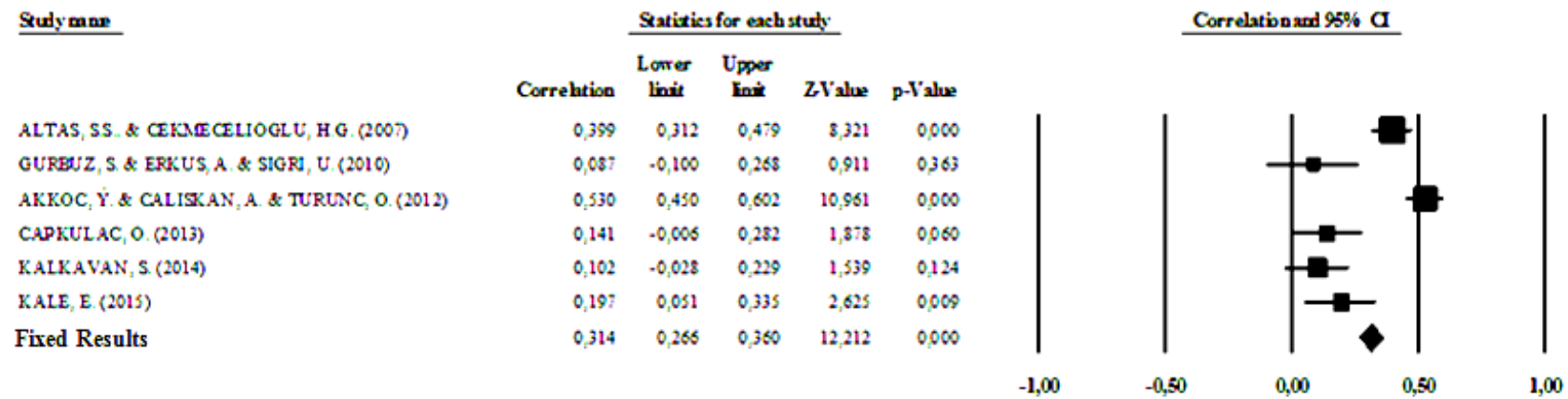
Therefore, I have decided to examine and calculate the mean effect sizes by focusing on the sub-samples of studies as private and public sector

6.1. Meta-Analysis of studies with the sample of private sector employees

Six studies are under this category: Altaş et al. (2007), Gürbüz et al. (2010), Akkoç et al. (2012), Çapkulaç (2013), Kalkavan (2014), and Kale (2015). Figure 3 and Figure 4 show the analysis of these six studies.

Figure 3

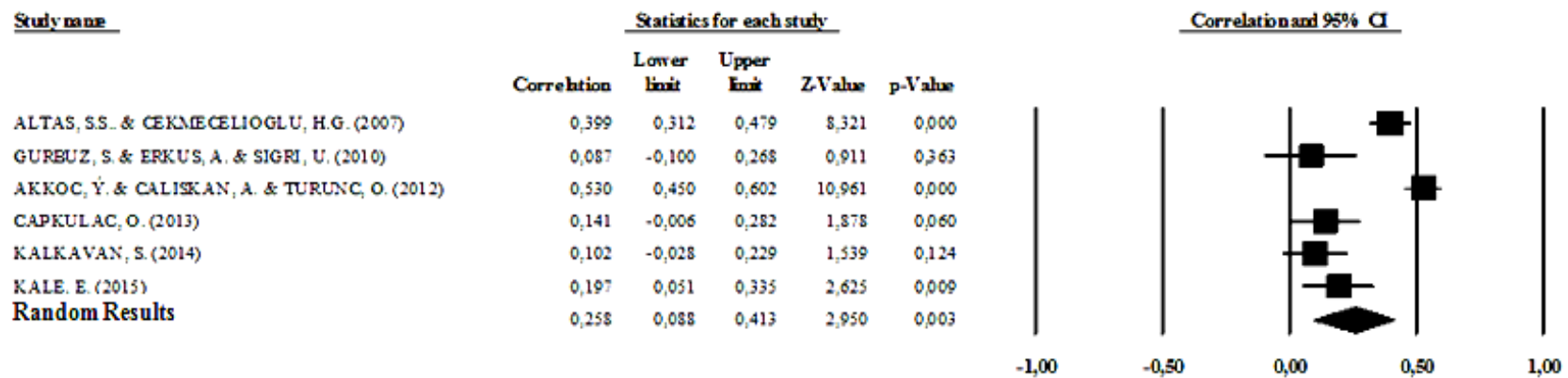
Meta-Analysis of Six Studies with Sample from Private Sector – *Fixed Model*



Meta Analysis

Figure 4

Meta-Analysis of Six Studies with Sample from Private Sector – *Random Model*



Meta Analysis

Fixed model shows that there is significant and positive correlation ($r=.314$, $p=.000$, $Z= 12.212$, $k=6$) and random model shows that there is significant and positive correlation ($r=.258$, $p=.000$, $Z= 2.950$, $k=6$) for private sector employees.

As a result, there is positive correlation between job satisfaction and job performance ($r=.258$, $p=.000$, $Z= 2.950$, $k=6$). According to Cohen (1988), this is small to medium effect (Işık, 2014).

According to Table 16, meta-analysis of studies with the sample of private sector employees is heterogeneous because I -squared value shows that there is medium to high level heterogeneity ($I^2 = 70.544$).

Table 16

Result of the Meta-Analysis regarding to Private Sector Employees ($k=6$)

		Model	
		Fixed	Random
Effect size and 95% confidence interval	<i>Point estimate r</i>	.314	.258
	<i>Lower limit</i>	.266	.088
	<i>Upper limit</i>	.360	.413
Test of null (2-Tail)	<i>Z-value</i>	12.212	2.950
	<i>p-value</i>	.000	.000
Heterogeneity	<i>Q-value</i>	43.256	
	<i>df (Q)</i>	5	
	<i>p-value</i>	.000	
	<i>I-squared</i>	70.544	

6.2. Meta-Analysis of Studies with the sample of Public Sector Employees

Three studies from my meta-analysis fit to this category. These studies are Gül et al. (2008), Gül et al. (2009), and Kahya (2013).

As a result, there is positive correlation between job satisfaction and job performance ($r= .339$). According to Cohen correlation analysis, there is medium to large effect.

Fixed model shows that there is significant and positive correlation ($r=.333$, $p=.000$, $Z= 5.978$, $k=3$) and random model shows that there is significant and positive correlation ($r=.339$, $p=.000$, $Z= 3.179$, $k=3$) for public sector employees.

As a result, there is positive correlation between job satisfaction and job performance ($r=.339$, $p=.000$, $Z= 3.179$, $k=3$). According to Cohen (1988), this is medium to large effect (Işık, 2014).

According to Table 17, meta-analysis of studies with the sample of private sector employees is not heterogeneous because I squared value show that there is low level heterogeneity ($I^2 =48.566$). Q-value still indicates the existence of variance therefore random model should be the indicator for the effect size for the public sector sample as well.

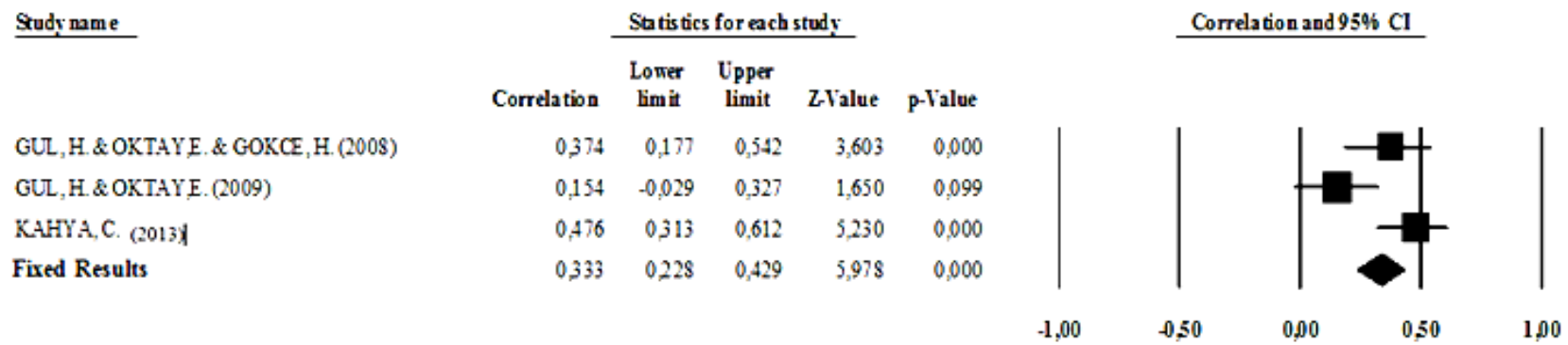
Table 17

Result of the Meta-Analysis regarding to Public Sector Employees ($k=3$)

		Model	
		Fixed	Random
Effect size and 95% confidence interval	<i>Point estimate r</i>	.333	.339
	<i>Lower limit</i>	.228	.134
	<i>Upper limit</i>	.429	.516
Test of null (2-Tail)	<i>Z-value</i>	5.978	3.179
	<i>p-value</i>	.000	.000
Heterogeneity	<i>Q-value</i>	22.563	
	<i>df (Q)</i>	2	
	<i>p-value</i>	.000	
	<i>I-squared</i>	48.566	

Figure 5

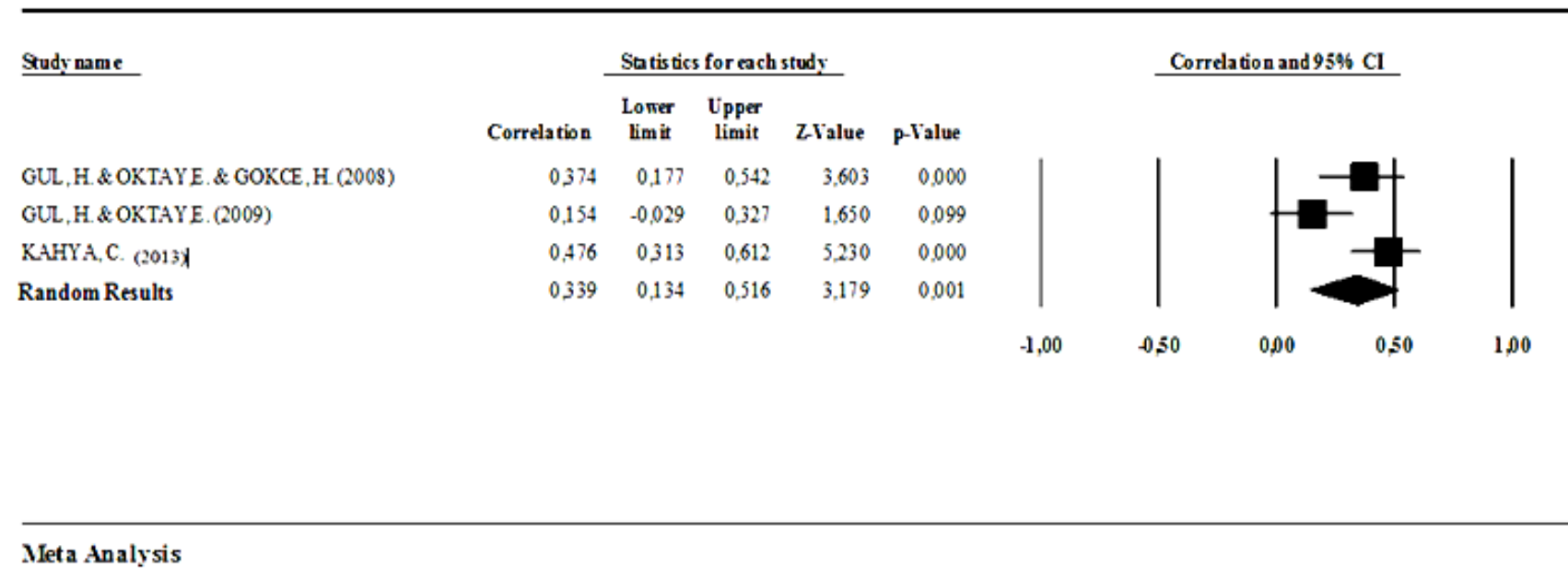
Meta-Analysis of Three Studies with Sample from Public Sector – *Fixed Model*



Meta Analysis

Figure 6

Meta-Analysis of Three Studies with Sample from Public Sector – *Random Model*



In summary (Table 18), overall meta-analytic result presents that correlation between job satisfaction and job performance is .315 ($p=.000$). When studies are examined with samples from private sector, correlation between job satisfaction and job performance is .258 ($p=.000$). Public sector studies, correlation between job satisfaction and job performance is .339 ($p=.000$) according to random model. Therefore, the highest relationship between job satisfaction and performance appears in the sub-sample of studies with employees from public sector. Then the effect obtained from all studies follows and the lowest effect is in the studies focusing on employees from private sector.

Table 18

Comparison of Effect Sizes from Overall Meta-Analysis, Private and Public Sector Studies

	Overall meta-analysis (k=14)	Private sector studies (k=6)	Public sector studies (k=3)
Random model	.315 ($p=.000$)	.258 ($p=.000$)	.339 ($p=.000$)
Fixed model	.354 ($p=.000$)	.314 ($p=.000$)	.333 ($p=.000$)

As mentioned in Table 18, meta-analysis for public sector studies has three research papers. In normal conditions, literature claims that at least two studies are enough to conduct a meta-analysis. According to Valentine, Pigott and Rothstein (2010), it may not be ideal for reaching a general conclusion but significance tests like effect sizes and their precision can be beneficial for a reliable meta-analytic conclusion. As a result, at least two studies are enough for doing a meta-analysis.

SECTION IV – DISCUSSION and CONCLUSION

This study comprises fourteen research papers on the relationship between job satisfaction and job performance conducted in Turkey. Among these, five studies have non-significant positive correlation and the rest found a statistically positive and significant relationship. Akkoç et al. (2012) found large correlation between the overall job performance and job satisfaction as seven articles found medium to large correlation (Ceylan et al., 2006, Altaş et al., 2007; Gül et al., 2008; Koç et al. (2009); Yazıcıoğlu (2010); Kahya (2013); Erkuş et al., 2013). Five articles found small to medium correlations (Gül et al., 2009; Capkulaç 2013; Kalkavan, 2014; Kale, 2015; Sökmen et al., 2015). Gürbüz et al. (2010) reported very small correlation. The best way to interpret the results from the present meta-analysis is to compare it with the findings from earlier studies. Table 19 depicts the results of earlier meta-analytic research in comparison to the current one.

Petty, McGee, and Cavender (1984) conducted one of the early meta-analytic research on this issue. This study included 16 empirical studies from 1964 to 1983. Findings showed positive correlation between job satisfaction and job performance ($r = .31$, $p = .01$). According to Cohen (1988), this is medium to large effect (Işık, 2014). Overall results of this study is very similar to the present meta-analysis both in terms of the number of publications included in the meta-analysis and also in terms of observed size of effect ($r = .315$, $p = .000$).

Moreover, Iaffaldano and Muchinski (1985) conducted another meta-analysis that included 74 empirical studies of job satisfaction and job performance from 1971 through 1983. Findings showed that the best estimate of the true population correlation between job satisfaction and job performance was small to medium ($r = .17$, $p = .05$), but statistically significant. Iaffaldano and Muchinski (1985)'s effect size is lower than what the present meta-analysis reported.

Furthermore, we see Judge, Thoresen, Bono, and Patton (2001)'s very comprehensive meta-analysis with 312 empirical studies of job satisfaction and job performance from 1985 through 2000. Findings show that the best estimate of the true population correlation between satisfaction and performance was

statistically significant ($r=.30$, $p=.01$) which is medium to large correlation (Cohen, 1988; Işık, 2014).

Recently, Davar and Ranjubala (2012) conducted another meta-analysis on this issue with 48 empirical studies from 1971 to 2008. Their findings showed that there is positive correlation between job satisfaction and job performance ($r=.292$, $p=.05$) which is medium effect (Işık, 2014). Comparatively, this is lower than the present studies' reported effect size.

Table 19

Comparison of the Effect Sizes on the Relationship between Job Satisfaction and Job Performance from the Present Meta-Analysis and Earlier International Meta-Analyses

	Petty et al. (1984)	Iaffaldano et al. (1985)	Judge et al. (2001)	Davar et al. (2012)	The present study (2017)
Studies' year range	1964-1983	1944-1983	1949-2000	1971-2008	2006-2015
Type of studies ^a	P	P	U & P	P	U & P
# of studies	16	74	254	12	14
# of correlations ^b	20 ^d	217 ^e	312 ^d	48 ^e	14 ^d
Combined <i>N</i>	3140	12192	54417	2714	4070
Uncorrected effect	.23	.146	.18	.248	.315
Corrected effect ^c	.31	.172	.30	.292	- ^f

^a P=Published vs U=Unpublished

^b The number of studies that these meta-analysis is not equal to number of correlations included in the analysis. Researchers included the correlations obtained from sub-samples and/or correlations between the sub-dimensions of job satisfaction and job performance.

^c Corrected effect: Researchers corrected their observed mean correlations caused from sampling error, range restriction, error of attenuation, unreliability of the measures used.

^d These meta-analyses met the assumption for independence of correlations; i.e., each correlation is coming from an individual sample even if one research contained multiple samples so that multiple correlations were input from a single study.

^e These meta-analyses had the multiple correlations from a single sample so that independence of correlations included in the meta-analysis could not be attained.

^f For the current meta-analysis, mean correlations could not be corrected because studies did not consistently report the reliability information for their scales.

Judge et al. (2001) mentions that Petty et al.'s (1984) meta-analysis is not one of the frequently cited research probably because it was based on limited number of papers and only on published studies. They also criticize Iaffaldano and Muchinski (1985)'s analysis and the lower effect size that they reported.

Judge et al. (2001) posit that Iaffaldano and Muchinski (1985)'s reported effect size is misleading. They notes that several biases can be listed. Firstly, they only included published research findings. Therefore, it causes selection bias. Then, independence assumption of meta-analysis (Hunter & Schmidt, 1990) was violated since Iaffaldano et al. (1985) included more than one correlation from a single sample. We see that one to eight correlations from each study was added to Iaffaldano et al. (1985)'s analysis. Moreover, their analysis was based on the average of the correlations between the job facets as indicator of job satisfaction and performance. Judge et al. (2001) highlight that this approach decreases the overall effect size obtained from meta-analysis. Instead, they recommend calculating an aggregate job satisfaction score and then calculation of the correlations. Therefore, they concluded, "In sum, there are a number of reasons to believe that .17 is not the best estimate of the true relationship between overall job satisfaction and job performance" (p.382). Moving from this critical scope, they conducted their own meta-analysis with larger sample of both published and unpublished studies and by taking care of the abovementioned drawbacks.

In these earlier meta-analyses, we recognize that the effect sizes are corrected against the potential reliability problems caused by the job performance measures. Based on Viswesvaran, Ones, and Schmidt (1996)'s recommendation, interrater reliability is better estimate than internal consistency and Judge et al. (2001) also criticize earlier researchers from this scope. Therefore, they propose that their research's overall corrected correlation at moderate level (corrected $r = .30$) is a better estimate of the relationship between job satisfaction and job performance. In our current research, we could not get systematic reporting about the reliability of the measures therefore we are only able to compare our uncorrected coefficient with the other research findings. However, from the earlier studies we recognize that correction increases the level of effect size so that our result can be considered a more stringent estimate than the other research's corrected estimates. In sum, we conclude that our overall effect size obtained from the studies with samples from Turkey is very similar to Judge et al. (2001)'s frequently cited results.

If we elaborate Davar and Ranjubala (2012)'s research, we see that only published studies from international and Indian journals are included in their analysis. However, they overlooked the independence of correlations principle; therefore, their results contain bias too in that respect. However, this research gives a chance to compare our findings with a local sample other than western societies. Davar and Ranjubala (2012) conducted moderator analysis in order to compare the effect sizes from foreign studies and Indian studies. They reported that studies with Indian samples ($k=14$) had mean effect size at .395 as the foreign studies' level ($k=34$) was at .25. As a meta-analysis with a local sample of Turkey, the reported effect size at .35 is again similar to Davar and Ranjubala (2012)'s research findings.

Moreover, Table 19 also presents the year range of the current and earlier meta-analyses. Judge et al. (2001) investigated published or unpublished studies from 1949 to 2000 with the widest range. Overall, all studies bring a conclusive perspective for the range of 1949-2015 and the level of relationship between job satisfaction and job performance seems consistent over time at moderate level.

In the present meta-analysis, analysis on papers according to their targeted samples as private sector or public sector employees was conducted as well. Indeed, this is an attempt of testing moderator role of sample characteristics. As mentioned in result section, correlation between job satisfaction and job performance in public sector ($r=.339$, $p=.000$, $Z= 3.179$, $k=3$) is higher than private sector ($r=.258$, $p=.000$, $Z= 2.950$, $k=6$). Both of these effect sizes are within the range of earlier meta-analysis. However, the reasons of effect size difference between public and private employees worth to investigate in future studies.

To the best of author's knowledge, this is the first meta-analytic study on the relationship between job satisfaction and job performance conducted in Turkey with consistent effect sizes in comparison to previous research. The results would be functional for both academics and practitioners as a benchmark to compare results from individual research and practical initiatives taken to improve conditions to maximize job satisfaction. They may elaborate the findings in order

to understand the mutual relation between satisfaction and performance. It is clear that satisfaction-performance relation does not reflect a large effect. Especially in real life organizational context, employee motivation and performance is frequently considered as the manifestation of job satisfaction. The current research result is confirming this expectation slightly; however, it also shows that satisfaction and performance are sophisticated constructs that require comprehensive and robust analysis. Studies included in the current meta-analysis showed that various individual and situational factors have effect as a moderator or mediating variable on the relationship between job satisfaction and job performance (Ceylan et al., 2006; Çapkulaç, 2013; Gül et al., 2012; Sökmen et al., 2015). To list few, emotional intelligence, interpersonal relations, education level, stress, organizational commitment, psychological well-being, and rewarding systems in working environment might be some of the moderators. Current analysis only focused on direct relation between satisfaction and performance, future studies need to be done in order to understand this complex and dynamic relationship.

In the present study, although the expectation was different, only fourteen studies met the inclusion criteria. Even if at the initial literature review phase, numerous studies matched the criteria, remarkable number of them dropped. Future studies may investigate especially unpublished studies more comprehensively to expand the coverage.

One of the difficulties of this research was the difficulty to reach high quality reporting of the statistical results. Fagard, Staessen, and Thijs (1996) highlights that asymmetric and different effect size of research papers may rise from differences in methodological quality. They mention that trials of lower quality research papers may tend to show the larger effects in meta-analysis. In addition, the limited communication with the authors of the studies that took part in the current meta-analysis was a problem as well. I contacted them to get Turkish and English versions of the measures, however, some cases did not return, others replied very late, or one provided inconsistent information that did not match the content of the article that we were interested in.

Furthermore, none of the research included in the current meta-analysis from Turkey investigated job performance with objective operational measures. All papers used self-reported and perceptual job performance measures. However, this created a consistency in the calculation of effect size because objective and subjective performance grading is one of the moderators that researchers focus on and try to understand the level of variance this factor. In this sense, this is advantageous. Future studies may investigate the recent studies with objective performance measures.

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Appendix A

Turkish and English versions of Minnesota Job Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967) used by Ceylan et al. (2006) and Gül et al. (2008).

MİNNESOTA İŞ DOYUM ÖLÇEĞİ

Şu anda bulunduğum iş ile ilgili düşüncelerim				
1	2	3	4	5
İşimden hiç hoşnut değilim	İşimden hoşnut Değilim	İşimle ilgili kararsızım	İşimden hoşnudum	İşimden çok hoşnutum
1		Beni her zaman meşgul etmesi bakımından		
2		Tek başıma çalışma olanağımın olması bakımından		
3		Ara sıra değişik şeyler yapabilme şansımın olması bakımından		
4		Toplumda "saygın bir kişi" şansını bana vermesi bakımından		
5		Amirimin karar vermedeki yeteneği bakımından		
6		Amirimin emrindeki kişileri idare tarzı bakımından		
7		Vicdanıma aykırı olmayan şeyler yapabilme şansımın olması bakımından		
8		Bana sabit bir iş olanağı sağlaması bakımından		
9		Başkaları için bir şeyler yapabilme olanağına sahip olabilmem bakımından		
10		Kişilere ne yapacaklarını söyleme şansına sahip olmam bakımından		
11		Kendi yeteneklerimle bir şeyler yapabilme şansımın olması bakımından		
12		İş ile ilgili alınan kararların uygulanmaya konulması bakımından		
13		Yaptığım iş karşılığında aldığım ücret bakımından		
14		İş içinde terfi olanağımın olması bakımından		
15		Kendi kararlarımı bana uygulama serbestliği vermesi bakımından		
16		Kendi yeteneklerimi kullanabilme şansını bana sağlaması bakımından		
17		Çalışma şartları bakımından		
18		Çalışma arkadaşlarımla birbirleri ile anlaşmaları bakımından		
19		Yaptığım iyi bir iş karşılığında takdir edilmem bakımından		
20		Yaptığım iş karşılığında duyduğum başarı hissinden		

On my present job, this is how I feel about				
1	2	3	4	5
Very dissatisfied	Dissatisfied	Neutral	Very satisfied	Dissatisfied
Frequency				
1	Being able to keep busy all the time			
2	The chance to work alone on the job			
3	The chance to do different things from time to time			
4	The chance to be "somebody" in the community			
5	The way my boss handles his/her workers			
6	The competence of my supervisor in making decisions			
7	Being able to do things that don't go against my conscience			
8	The way my job provides for steady employment			
9	The chance to do things for other people			
10	The chance to tell people what to do			
11	The chance to do something that makes use of my abilities			
12	The way company policies are put into practice			
13	My pay and the amount of work I do			
14	The chances for advancement on this job			
15	The freedom to use my own judgment			
16	The chance to try my own methods of doing the job			
17	The working conditions			
18	The way my co-workers get along with each other			
19	The praise I get for doing a good job			
20	The feeling of accomplishment I get from the job			

Appendix B

Turkish & English version of Job Satisfaction scale of Brayfield and Rothe (1951)
used by Grbz et.al. (2010) and Kahya (2013)

İŞ TATMİN ÖLÇEĞİ

Turkish version of Grbz et al. (2010)

	Kesinlikle Katılmıyorum	Katılmıyorum	Ortadayım	Katılıyorum	Kesinlikle Katılıyorum
1. Şimdilik işimin beni tatmin ettiğini söyleyebilirim.					
2. Diğer insanların birçoğuna göre işimde mutlu olduğumu düşünüyorum.					
3. Yaptığım işi gerçekten eğlenceli bulurum.					
4. İş günlerimin çoğunda işimi şevk ve istekle yapıyorum.					
5. Çoğu zaman yaptığım işten sıkılıyorum.					

Turkish version of Kahya (2013)

	Kesinlikle Katılmıyorum	Katılmıyorum	Ortadayım	Katılıyorum	Kesinlikle Katılıyorum
Şimdilik işimin beni tatmin ettiğini söyleyebilirim.					
Mutluluğu işimdeyken buluyorum.					
Yaptığım işi gerçekten eğlenceli bulurum.					
İşimi severek yapıyorum.					
İşimi tatsız buluyorum.					

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.For now, I can say that my work satisfies me.					
2.For most other people, I think I'm happy in my job.					
3.I find my job really fun.					
4.I work with enthusiasm and willingness in most of my working days.					
5.I often get tired of doing my work.					

Appendix C

Job Satisfaction scale of Bakan, and Büyükbeşe (2004) used by Koç et al. (2009) and Yazıcıoğlu (2010)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Tamamen katılmıyorum
1. Problemlerimi rahatlıkla üst makamlara iletebiliyorum.					
2. Beni ilgilendiren her konuda bilgilendiriliyorum.					
3. Ders planlaması gibi beni etkileyen tüm faaliyetlerde fikrim alınır.					
4. Yaptığım işteki yetki ve sorumluluklarım açık bir şekilde belirlenmiştir.					
5. Bilgi ve yeteneklerime uygun bir iş yapmaktayım.					
6. Yaptığım işkişisel gelişimime katkı sağlamaktadır.					
7. Sadece kendi işimin gerektirdiği faaliyetlerle uğraşmaktayım					
8. Sevdiğim bir işi yapmaktayım					
9. Yaptığım iş beklentilerimi karşılamaktadır.					
10. Yaptığım işte yaratıcılığımı kullanabiliyorum.					
11. Yöneticimin görevini layıkıyla yapabilecek yeterlilikte olduğu inancındayım.					
12. Yöneticimin kendi görev ve sorumluluklarını tam olarak yerine getirdiğini düşünüyorum					
13. Yöneticimin adil olduğu inancındayım.					
14. Yöneticimin dürüst olduğu inancındayım					
15. Yöneticimin kurumun ve çalışanların çıkarlarını düşündüğü inancındayım.					
16. Yöneticimin her şartta bana destek olacağından kuşkum yok.					
17. Hak ettiğim maaşı alıyorum.					
19. Bölümümdeki diğer çalışanlar ile ortak çalışmalar yapabilirim.					
20. Herhangi bir problemim olduğunda çalışma arkadaşlarım bana yardımcı olurlar.					
21. Çalışma arkadaşlarımla iyi ilişkiler içerisindeyim.					
22. Çalışma arkadaşlarım konularında uzman kişilerdir.					
23. Şirketim benim için bir prestij kaynağıdır.					

Appendix D

Turkish and English versions of Job Satisfaction scale of Babin, and Boles (1996)
used by Erkuş et al.(2013) and Kale (2015)

Turkish version of Erkuş et al. (2013)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1.Yaptığım işten oldukça tatmin oluyorum.					
2.Yaptığım işten sıkılıyorum.					
3.Çoğu zaman, işe istemeyerek gidiyorum.					

Turkish version of Kale (2015)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. Yaptığım işten hoşnut değilim.					
2. Şu anda yaptığım işten memnunum.					
3. Çoğu zaman, işe istemeyerek gidiyorum.					
4. Yaptığım iş hiç ilgi çekici değildir.					
5. Yaptığım işten çok rahatsızlık duyuyorum.					
6. Yaptığım işten gerçekten zevk alıyorum.					

	Strongly agree	agree	neutral	disagree	Strongly disagree
1. I consider my job unpleasant.					
2. I'm often bored with my job.					
3. I feel fairly well satisfied with my present job.					
4. Most of the time, I have to force myself to go to work.					
5. I definitely dislike my work.					
6. Most days I am enthusiastic about my work.					
7. My job is pretty uninteresting.					
8. I find real enjoyment in my work.					
9. I am disappointed I ever took this job.					

Appendix E

Turkish and English versions of Job Satisfaction scale of Hackman, and Oldham (1974) used by Gul et al. (2009)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. Sahip olduğum iş, bana güvenli bir gelecek sağlar.					
2. Sahip olduğum iş, yeterli derecede maaş ve terfi olanağı sağlar.					
3. Sahip olduğum iş, kişisel gelişim olanağı sunar.					
4. Çalışma ortamımdaki kişilerden memnunum.					
5. Amirlerim herkese karşı eşit ve saygılıdır.					
6. İşimi yaparken, amirlerim tarafından takdir edildiğimi hissedirim.					
7. İş yerimde, ekip arkadaşlarımı daha iyi tanıma fırsatına sahibim.					
8. Amirlerim beni destekler ve bana yol gösterir.					
9. Almakta olduğum maaşım sadece yaptığım iş karşılığında verilmektedir.					
10. İş yerimde, yaptığım iş ile ilgili kişisel istek ve düşüncelerimi uygulamaya dökabiliyorum.					
11. İşin kendisi ile ilgili gelecek beklentilerimi fark etmemde ve tanımlamamda iş ortamım ve amirlerim bana yardımcı olmaktadır.					
12. İş yerimde, takım arkadaşlarımı iş konusunda yardım etme fırsatına sahibim.					
13. İş yerimde, sıkı bir ekabet ortamı bulunmaktadır.					
14. İş yeri yönetiminin çalışanlara karşı tavrı pozitifdir.					

	Strongly disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1. My work helps me to have a confident future.						
2. This work provides me sufficient pay and chance to promote.						
3. My work provides me personal progress and promotion.						
4. I'm in harmony with my peers and people I'm in connection with.						
5. Managers are just and respectful to all employees.						
6. I always feel that I'm appreciated when doing my work						
7. I have the chance to know my business companions in a more close way.						
8. My manager supports and guides me.						
9. I believe that the pay I get for my work is just.						
10. I have the chance to exercise my independent thoughts and behavior in my work.						
11. My workplace permits me to realize my future expectations.						
12. I have the chance to help my business companions in my workplace.						
13. I have the chance to compete in my workplace.						
14. Attitude of the management in my workplace is positive.						

Appendix F

Turkish and English versions of Job Satisfaction scale Judge, Woolf and Hurst (2009) used by Akkoç et al. (2012)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. İşimden tatmin olduğumu hissediyorum.					
2. İşimden heyecan duyuyorum.					

	Strongly disagree	disagree	neutral	Agree	Strongly agree
1. I feel satisfied with my job.					
2. I feel enthusiastic about my job.					
3. The day at work seems like it will never end.					
4. I hope to continue working at the company after I graduate.					
5. I feel happy at work.					

Appendix G

Turkish version of Job Satisfaction scale of Lytle (1994) used by apkula (2013)

	Tamamen Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle katılmıyorum
1. Tm koşullar göz önünde bulundurduğunda, şimdiki görev ve sorumluluklarımdan son derece memnunum.					
2. Her şeye yeniden başlamak durumunda olsaydım, yine aynı işi seçerdim.					
3. İyi bir arkadaşım benimki gibi bir iş ile ilgilendiğini söylese ona bu işi tavsiye ederdim.					
4. Şu andaki işim idealimdeki işim ile oldukça uyuyor.					
5. Şu andaki görev ve sorumluluklarım, bu işi seçtiğimde beklentisi içerisinde olduğum iş tarzına uyuyor.					
6. Genel olarak işimi oldukça seviyorum.					

**English version of this scale neither could be found in literature nor was provided by the authors of the specified article.*

Appendix H

Turkish and English version of Job Satisfaction scale of Cammann, Fichman, Jenkin, and Klesh (1983) used by Kalkavan (2014)

	Tamamen Katılıyorum	Katılıyorum	Ne katılıyorum / Ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
1. İşimden her yönüyle memnunum.					
2. İşimi genelde sevmem.					
3. Şu anki işimde çalışıyor olmaktan genel anlamda memnunum.					

	Strongly agree	Agree	Neither	Disagree	Strongly disagree
1. I am satisfied with everything from my work.					
2. I generally dislike my job.					
3. I feel fairly well satisfied with my present job.					

Appendix I

Turkish and English version of Job Satisfaction scale of Miller and Medalia (1955) used by Sökmen et al. (2015)

	Tamamen Katılıyorum	Katılıyorum	Ne katılıyorum / Ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
1. İşyerinde yaptığım işten ziyade diğer işleri yapmaktan daha çok tatmin oluyorum.					
2. Yaptığım iş bana ilgi çekici geliyor.					
3. Yaptığım iş genellikle faydalıdır.					
2. Yaptığım işin bana uygun olduğunu düşünüyorum.					
3. Eğer imkânım olursa, işyerinde aynı ücret karşılığında başka bir iş yapacağım.					

	Strongly Agree	Agree	Neutral	Disagree	Stringly Disagree
1. I am more satisfied than doing other work in the workplace.					
2. The work I do is interesting to me.					
3.The work I do is often useful.					
4. I think my job is right job for me.					
5. If I have the opportunity, I will do another job at the workplace for the same fee.					

Appendix J

Job Satisfaction scale of Rusbult, Farrell, Rogers, and Mainous (1988)* used in the study, used by Altas et al. (2007).

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. My wage is adequate when compared with other employees.					
2. My wage is satisfactory.					
3. My wage is adequate in my sector when compared with other job sectors.					

**Turkish version of this scale could not be found in literature and was not provided by the author of the article.*

Appendix K

Turkish and English versions of Job Performance scale of Kirkman, and Rosen (1999) and Sigler, and Pearson (2000) used by Altaş et al. (2007), Gul et al. (2008), Gul et al. (2009), Koç et al. (2009), Gürbüz et.al. (2009), Yazıcıoğlu (2010), Akkoç et al. (2012), and Kahya (2013).

	Tamamen Katılıyorum	Katılıyorum	Ne katılıyorum / Ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
1. Görevlerimi tam zamanında tamamlarım.					
2. İş hedeflerimi fazlasıyla ulaşıyorum.					
3. Sunduğum hizmet kalitesinde standartlara fazlasıyla ulaştığımdan eminim.					
4. İşimle ilgili bir problem oluştuğunda en hızlı şekilde çözüm üretirim.					

	Strongly disagree	Moderate disagree	Slightly disagree	Neutral	Slightly agree	Moderate agree	Strongly agree
1. I accomplish my duties on time.							
2. I overachieve my work objectives.							
3. I am sure I overachieve service quality standards.							
4. I solve problems in the quickest and most efficient manner possible.							

Appendix L

Job Performance scale of Gürkanlar (2010) used by Çapkulaç (2013)

	Yetersiz	Geliştirilmesi gerekli	Yeterli	İyi	Mükemmel
1. Yaptığım işin miktarını sürdürme performansım					
2. Yaptığım işin kalitesini sürdürme performansım					
3. Sözlü iletişim performansım					
4. Yazılı iletişim performansım					
5. Mesleki beceri (ustalık) ve uygulama performansım					
6. Kurumun politika ve prosedürlerine uyma performansım					
7. İşleri planlama ve örgütleme (düzenleme) performansım					
8. Bana verilen yeni veya farklı görevlere uyum sağlama performansım					
9. Kurumda çalışan diğer kişilerle geçinme performansım					
10. Kurum dışındaki paydaşlarla ilişki başarımları					
11. Çalışanlara nezaret etme performansım					

Appendix M

Turkish and English versions of Job Performance scale of Porter, and Lawler (1968) used by Kalkavan (2014)

	Yetersiz	Geliştirilmesi gerekli	Yeterli	İyi	Mükemmel
1. Genel anlamda iş performansım					
2. Başka insanlarla geçinebilme becerim					
3. İşimi zamanında bitirebilme becerim					
4. İş performansımın niteliği					
5. İşimin hedeflerine ulaşmamdaki başarıım					

	Inadequate	Need to be developed	Adequate	Good	Perfect
1. My job performance in the general sense					
2. Ability to get on well with other people in workplace					
3. Ability to finish my work on time					
4. Qualification of my job performance					
5. Achievement in reaching job goals					

Appendix N

Turkish and English versions of Job Performance scale of Bush, Ortinau, and Hair (1990) used by which is Erkuş et al. (2013)

	Kesinlikle katılmıyorum		Ne katılıyorum / ne katılmıyorum		Kesinlikle katılıyorum
1. Görevlerimi kısa sürede tamamlarım					
2. Zamanımı bir çok çalışandan daha iyi yönetirim					
3. İş performansım diğer çalışanlardan iyidir.					

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I complete my tasks in a short time.					
2. Time management skill is better than other employees.					
3. My job performance is better than other employees.					

Appendix O

Job Performance scale of Sökmen and Mete (2015) used by Sökmen et al. (2015)

	Tamamen Katılıyorum	Katılıyorum	Ne katılıyorum / Ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
1. İşletmenin başarısına yardımcı olabilmek için benden normal olarak beklenenin üzerinde çaba sarfetme arzusundayım.					
2. Bulunduğum işletmede çalışmayı sürdürebilmek için, hemen hemen her türlü görevi kabul ederim.					
3. Çalıştığım işletme, iş performansı açısından bana en iyi şekilde ilham vermektedir.					
4. Bana göre, bu işletme çalışılabilecek olası işletmelerin en iyisidir.					
5. Görevimi yerine getirirken hiç zorlanmam.					
6. Yöneticilerimin verdiği yeni görevlere hemen uyum sağlayarak çalışırım.					

Appendix P

Job Performance scale of Choo (1986)* used by which is Ceylan et al. (2006)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I am satisfied with the quantity and quality of our products at work.					
2. I am very satisfied with my ability to guide others.					
3. I am satisfied with my ability to adapt to new situations					
4. I am satisfied with all of the responsibilities I shoulder and take a positive approach to them.					
5. I am satisfied with my professional capabilities and duties at work.					
6. I am satisfied that I carry out my responsibilities in accordance with company policies and processes.					
7. I am satisfied with my implementation and coordination abilities at work.					
8. I am satisfied with my ability to get on with other people where I work.					
9. I am satisfied with my ability to get on with external clients.					

**Turkish version of this scale neither could be found in literature nor provided by the author of the article.*