



The Relationship of Organisational Trust with Organisational Justice, Organisational Commitment, and Organisational Citizenship Behaviours in Educational Organisations: A Meta-Analysis

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Abstract

The purpose of this study is to determine the mean effect sizes of the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours in educational organisations. In accordance with this purpose, a meta-analysis was conducted that included studies published between 1997 and 2020 with regard to the specified relationships. In total, 34 studies ($N_{total} = 17,271$) were included in the meta-analysis concerning the relationship between teachers' organisational trust and organisational justice perceptions, 35 studies ($N_{total} = 15,874$) for the relationship between organisational trust and organisational commitment, and 27 studies ($N_{total} = 14,991$) for the relationship between organisational trust and organisational citizenship behaviours. The meta-analysis also included studies that examined these variables in terms of their sub-dimensions. The included studies consisted of researches conducted in the United States (USA), China, Indonesia, the Netherlands, Iran, Israel, Canada, Kuwait, Malaysia, Pakistan, Thailand, Taiwan, and Turkey. The examination of funnel plots, Duval and Tweedie's Trim and Fill technique, Orwin's Fail-Safe N analysis, and Egger's regression test confirmed an absence of publication bias. Fisher's z coefficient was used for effect size analyses performed using a random-effects model. The mean effect size of the relationship between organisational trust and organisational justice was determined to be at a high level, whereas the relationship of organisational trust with organisational commitment and organisational citizenship were at a moderate level. The results of the meta-analysis also showed that these relationships did not differ in terms of the sub-groups of grade-level (primary to lower secondary or upper secondary), study-type (article or graduate thesis), or study-year (2010 or before, 2011 to 2015, and 2016 or after), but the relationship of organisational trust with organisational commitment and organisational citizenship significantly differed in terms of country groups (America, Europe, Asia, and Eurasia).

Keywords

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Introduction

In the literature on organisational behaviour, a significant number of studies have been conducted on employees' trust within organisations in recent years. Accordingly, there has been a dramatic increase in the number of studies that have examined the relationships surrounding organisational trust. The vast majority of these studies have aimed at identifying the relationships of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours. However, it is also of significant importance to the field to combine the results of these types of studies in order to produce valid, reliable, and generalisable knowledge with regards to educational organisations. Therefore, the current study presents a meta-analysis of published studies that have examined the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours of teachers. As the concept of trust is of crucial importance both for organisations and for general social living, organisational trust plays a decisive role in the relationships that is dealt together within the scope of this study.

Trust represents a person's belief that they will not be harmed by people or group with whom they interact. The results of the World Values Survey (2020) highlighted the low level of trust among people from certain countries. When trust levels of the countries representing the sample of this meta-analysis were examined through the data of this survey, it was noted that only 27.8% of people from Asian countries (China, Indonesia, Iran, Malaysia, Pakistan, Thailand, and Taiwan), 37% of people from the USA, and only 14% of people from Turkey considered others to be trustworthy in general. However, this proportion was found to be relatively higher in some European countries. For example, 58.5% of people in the Netherlands, from where some studies included in the current meta-analysis study originate, considered others to be trustworthy. Trust is one of the fundamental needs of humans. In the hierarchy of needs, Maslow (1943) evaluated trust as the second basic need following physiological needs. However, the perception of mistrust within societies directs its respective members to form beliefs towards feeling under threat in uncertain situations, and also towards avoiding uncertainties. This case is referred to as 'uncertainty avoidance tendency' (Hofstede, 2001; Hofstede, Hofstede, & Minkov, 2010). In Hofstede's research (Hofstede Insights, 2020), the uncertainty avoidance tendencies of Asian countries and also Turkey, where interpersonal trust is deemed to be low, were revealed to be higher than European countries where interpersonal trust is considered to be relatively high. These findings concur with the results of the World Values Survey (2020). For example, Turkey's uncertainty index score was reported as 85, whereas Pakistan's was 70, Taiwan's was 69, Thailand's was 64, the Netherlands' was 53, and the USA's was 46 out of a possible 100 in the aforementioned research. Given that organisations also form part of a social structure, such a trust/mistrust climate could be asserted to have unavoidable reflections on those organisations.

The perception of mutual trust or mistrust within an organisation could have a positive or negative effect on their employees' behaviours, as well as an effect on the organisation's functional capability (Altınkurt & Yılmaz, 2012). Furthermore, organisational trust could be asserted as the minimum standard of organisational functionality. The most important characteristic of organisations with a high level of mutual trust is the presence of a positive organisational climate. Employees of such organisations may feel able to take risks without fear or anxiety and may also feel free to come up with new ideas themselves (Hoy, 2012). However, organisations that are lacking in trust exhibit the characteristics of a risk society. In risk societies, individuals do not feel themselves to be safe, considering that there is at all times some degree of inherent risk and/or danger posing a threat to their wellbeing (Beck, 2011). Likewise, the trust levels of individuals will likely be low in organisations that exhibit the characteristics of a risk society, which leads to the organisational environment being negatively affected.

The first systematic studies regarding organisational trust in schools were conducted in the early 1980s, which refers to a period when neoliberal politics were seen to reinforce insecurities (Harvey, 2005). Studies on organisational trust could also be asserted to examine the reflections of mistrust resulting from the organisational influence of neoliberal politics. Through pioneering studies conducted within such a scope, the collective trust perceptions of school employees were conceptualised, and a scale was developed for this purpose (Hoy & Kupersmith, 1984, 1985). Developed by Hoy and

Kupersmith (1985) and employed commonly within organisational behaviour literature, this scale emphasises three dimensions of organisational trust, namely: (1) trust in principal; (2) trust in colleagues; and, (3) trust in organisation. In subsequent studies (Hoy & Tschannen-Moran, 1999, 2003), the dimension of trust in stakeholders (students and parents) was added to the scale in order to explain the relationship between organisational trust and student achievement. However, the dimension of trust in organisation was excluded since it was not sufficiently represented among the dimensions.

According to the dimensions of organisational trust, administrators, practices in organisations, and relationships among employees could all play important roles in the creation of organisational trust. Administrators' consistent, sensitive, fair, and honest attitudes (Yılmaz, 2004); the functioning of basic organisational policies such as promotion, performance evaluation, rewarding, and decision-making; the involvement of employees in the decision-making process (Goddard, Tschannen-Moran, & Hoy, 2001); a fair performance evaluation system (Mayer & Davis, 1999); and the openness of communication channels within an organisation (Asunakutlu, 2002) may help to increase employee trust within an organisation. Additionally, the relationship of organisational trust with organisational support (Polat, 2010), organisational health (Zahed-Babelan & Moenikia, 2010), and organisational cynicism (Polat, 2013) was observed in some studies that were conducted within educational organisations. As has been seen, organisational trust is closely related to a number of organisational variables. However, it is found out that the variables that mostly relate to organisational trust are organisational justice, organisational commitment, and organisational citizenship behaviours (Akin & Orman, 2015; Hodge & Ozag, 2007; Hoy & Tarter, 2004; Kılıçlar, 2011; Schwabsky, 2014). In this regard, the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours specific to teachers was examined within the scope of the current meta-analysis study. Of these variables, when dealing with organisational trust and organisational justice, both variables could be asserted to influence each other reciprocally. In other words, if teachers have a perception that the functioning of the organisation is fair, then their perceptions of trust also increase. Alternatively, the more that teachers' levels of trust increase, the more their perceptions of fairness regarding the functioning of the organisation increase. According to Hoy and Tarter (2004), the concepts of trust and justice cannot be separated, i.e., you cannot consider one without the other.

Justice is the basic constituent of all social structures (Rawls, 1999). Therefore, philosophers, politicians, economists, and scientists have put forward various ideas on how wealth, power, assets, and services are distributed within society (Adams, 1965). Drawn from these concepts, the principles of equal rights, opportunities open to all, and the distribution of resources based on common good (Rawls, 1999) have collectively contributed to the development of societies and have also helped to form liveable conditions. As far as organisations are concerned, the same principles could be asserted to be required for the healthy and successful sustainability of an organisation. Affording everyone equal rights, providing opportunities for all, and maintaining justice in the distribution of resources positively contributes to the organisational climate. As such, employees' satisfaction, commitment, trust, and citizenship behaviours increase as a result of organisational justice. As a consequence of this, employees are expected to make a major contribution to the organisation and to help create a positive work environment as well as a strong organisational culture (Altınkurt, 2010).

Organisational justice is comprised of three components; distributional, procedural, and interactional justice. Based on Adams' (1965) theory of justice, *distributional justice* refers to employees' perceptions of fairness with regards to the distribution of organisational resources (Folger & Cropanzano, 1998). In this regard, the employees desire to gain profits in proportion to their contribution to the organisation (Greenberg, 1990). *Procedural justice* is concerned with how decisions on distribution are reached, and how such decisions are then perceived by the affected individuals (Konovsky, 2000). Employees' procedural justice perceptions may differ according to their level of control with respect to the organisational processes and decision mechanisms in play (Greenberg, 1990). Whether employees are actively engaged in these processes and whether these processes function in a fair and just way can affect an employee's perception of fairness within the organisation (Folger & Cropanzano, 1998). In other words, employees' distributional justice perceptions are ultimately affected by their personal gains, whereas their procedural justice perceptions are affected by the ways in which organisational decisions are reached (Folger, 1987). On the other hand, *interactional justice* is an

employee's perception of how they are treated by others. This perception is formed through two basic components; interpersonal sensitivity and social explanation. Whether they are treated with sensitivity, and rational explanations are put forth regarding the affairs of an organisation to its employees can shape the employees' perceptions of interactional justice (Folger & Cropanzano, 1998). As seen, the main causes of distributional, interactional, and procedural justice can differ somewhat. However, the perception of injustice within any of these dimensions generally has a negative effect on the organisation. Employees with a perceived low level of organisational justice may elicit emotions of guilt and/or anger (Greenberg, 1990). As a result, employees' commitment, performance, and citizenship behaviours may be seen to decrease, and their conflict tendencies to increase accordingly (Folger & Cropanzano, 1998).

In the literature, there have been studies published that have investigated the relationship of organisational trust with distributional, procedural, and interactional justice (Cohen-Charash & Spector, 2001; Li & Cropanzano, 2009). Establishing organisational trust and justice could positively affect the attitudes of employees towards their organisation. In this regard, organisational trust is known to be related with employees' commitment to the organisation. In educational organisations where a trust environment is ensured, goodwill in the relations and a healthy school climate might also increase the commitment of the teachers (Akin & Orman, 2015). In this sense, employees trust in their organisation can be a significant predictor of their organisational commitment (Hodge & Ozag, 2007; Top, Akdere, & Tarcan, 2014).

Organisational commitment is a structure formed by the individuals' beliefs in an organisation's goals and values, their efforts for the sake of the organisation, and their willingness to maintain their organisational membership (Mowday, Steers, & Porter, 1978). Within this structure, it is of significant importance for individuals to reflect their energy and loyalty to the environment in which they reside (Kanter, 1968); and as such employees are contributors to the fulfilment of an organisation's goals. In other words, the commitment of members could be considered crucial to an organisation's performance. Commitment is comprised of three components; affective, continuance, and normative commitment. *Affective commitment* implies an employee's emotional attachment to the organisation, identifying themselves with the organisation, and getting involved in the organisation itself and not just its functions. In other words, employees' desires come into prominence and they stay with an organisation with their own willingness. In *continuance commitment*, employees have options to leave or stay with an organisation. Employees make an assessment to the cost of either leaving the organisation or to continue staying there for different reasons based on their own needs. As for *normative commitment*, this is where employees do not have an option to leave or stay with an organisation. In this kind of commitment, they continue to stay with the organisation due to a predefined obligation (Colquitt, LePine, & Wesson, 2019; Meyer & Allen, 1991).

Employees' personal characteristics, their roles within an organisation, their work experience, and the structural characteristic of the organisation can all play a role in an employee's organisational commitment (Çetin, Gürbüz, & Sert, 2015; Mowday, Porter, & Steers, 1982). According to the commitment levels based on such factors, employees may each exhibit different behaviours, and this situation may be evaluated according to Hirschman's (1970) exit-voice-loyalty theory. Based on this theory, an employee's commitment level determines their reaction type in organisational affairs. Employees with a level of high commitment might prefer constructive solutions by choosing voice and loyalty from the exit-voice-loyalty classification. On the other hand, employees with a low level of commitment might display destructive reactions by choosing *exit* and depersonalisation, and may withdraw psychologically and/or physically (Colquitt et al., 2019). In this case, the employee does not provide the expected contribution to the organisation's goals, although they may continue to stay with the organisation.

The exhibition of extra-role behaviours, namely organisational citizenship behaviours, also forms a crucial role in employees' contributions to an organisation's goals. Trust is one of the most important factors affecting employees' organisational citizenship behaviours. This is because trust is a basic need and extra-role behaviours would not be expected from employees in a mistrustful work environment. Employees working in an environment where organisational trust is ensured could be

able to make a collective effort towards the goals of the organisation, express their opinions freely, and take initiatives where appropriate. Cerit (2009) also concluded that teachers can act more collaboratively in schools where organisational trust is ensured. This situation could also increase the extra-role behaviours of teachers. Therefore, employees trust each other in organisations that encourage the display of organisational citizenship behaviours, whereas mistrustful work environments decrease organisational citizenship behaviours (Schwabsky, 2014; Uslaner & Brown, 2005).

The concept of citizenship has an intellectual heritage in the fields of philosophy, political science, sociology, and in history; a heritage that is also related to civil rights and responsibilities (Graham, 1991; Van Dyne, Graham, & Dienesch, 1994). As seen, citizenship is a concept with strong roots. In terms of organisations, as emphasised by Katz and Kahn (1966), citizenship behaviours cover *extra-role (supra-role) behaviours* which are deemed to be beyond the scope of one's job description (Bateman & Organ, 1983). Accordingly, behaviours such as helping colleagues, tolerating temporary negations, collaborating with administrators in supporting their change suggestions for the sake of the organisation, keeping the working environment clean and tidy, and an inclination towards resolving organisational conflicts are considered as examples of organisational citizenship behaviours. These types of behaviour may stem from an administrator or a member of the working team and may be either organisational or personal in nature. As work within an organisation may become easier due to organisational citizenship behaviours, administrators may benefit through being able to direct their time and effort to other important duties instead (Bateman & Organ, 1983; Organ & Bateman, 1986). Therefore, organisational citizenship behaviours enable organisational performance to be increased, to help organisational outcomes improve both qualitatively and quantitatively, to develop the efficiency and effectiveness of the organisation, and to help increase the satisfaction of those involved within the organisation (Bergeron, 2007).

The common classification of organisational citizenship behaviours seen in the literature is altruism, conscientiousness, sportsmanship, and civic virtue. Of these dimensions, *altruism* is defined as being helpful to others on any organisational matters or affairs. The employee does not anticipate any rewards as a result of altruism. Altruism is comprised of behaviours such as helping new employees to become familiar with the organisation, acting on behalf of colleagues during their absence (e.g., due to health-related absences etc.), and assisting administrators. *Conscientiousness* implies that the employee carries out the expected role behaviours above and beyond the minimum required level (as per the job description). Such behaviours are important for the effective functioning of an organisation. Employees improving their competencies and/or using their time effectively could be regarded as examples of conscientiousness. *Sportsmanship* is defined as an employee avoiding being the subject of a complaint (Bies, 1989; Wan, 2016). Sportsmanship is demonstrated through behaviours such as taking a positive attitude and presenting a constructive approach in undesirable situations (Organ, 1988, as cited in Wan, 2016). *Civic virtue* is defined as struggling to prevent problems occurring or taking action in order to lessen or diminish problems or their impacts (Bies, 1989). However, for employees to be able to exhibit such behaviours, they are required to possess the necessary information about what is going on within the organisation (Wan, 2016). Civic virtue corresponds to an employee maintaining an awareness of current and recent developments within the organisation, and closely following organisational politics as well as working techniques (Yılmaz & Taşdan, 2009). While an increase in each dimension of organisational citizenship behaviours can contribute positively to an organisation, any decrease in these behaviours can be perceived as detrimental to the organisation. However, the concept of citizenship, which is based on strong roots, has recently become weakened in terms of its content and meaning due to the impact of neoliberal policies implemented since 1980. By means of neoliberal policies, organizations now expect employees to obey unconditionally, thereby taking undue advantage of the positive meaning that the concept of citizenship evokes. However, this situation means a violation of the psychological contract to the detriment of the employee. In other words, the concept of citizenship, which has been weakened in terms of its content and meaning due to the impact of neoliberal policies, is desired to be transformed into "temporary" or "partial" citizenship, as emphasised by Standing (2011). When considering the roots of the concept, organisational citizenship should neither mean submission to the organisation nor having become integrated into some form of mechanical solidarity. In other words, within the concept of citizenship established upon rights and

responsibilities, the latter (responsibilities) has become the predominant trait, whilst largely ignoring the former (rights). However, such a citizenship in which rights are kerbed should be considered as a form of exploitation. Citizenship behaviour relates to employees' acting for the sake of an organisation, and as Durkheim (2018) pointed out, this means becoming integrated in a form of organic solidarity. The development of citizenship behaviours therefore necessitates organisations to offer supportive opportunities for all of its employees, which in turn enables organisations to reach their goals more easily where the labour and energy of individuals become effectively employed so that the organisation itself may become more effective.

In the literature, a considerable number of studies have investigated the relationship of organisational trust with organisational justice, organisational commitment, or organisational citizenship behaviours. Among these, some meta-analyses have been conducted that excluded educational organisations and that aimed at identifying the relationship between organisational trust and many different variables. Within these various meta-analyses, the relationship of organisational trust with variables such as leadership (Dirks & Ferrin, 2000), regulation and control, reputation, communication, satisfaction, shared values (Nienaber, Hofeditz, & Searle, 2014), cooperation and conflict (Balliet & Van Lange, 2013a), exchange relationships (Vanneste, Puranam, & Kretschmer, 2014), and punishment, cooperation and technology acceptance (Balliet & Van Lange, 2013b; Wu, Zhao, Zhu, Tan, & Zheng, 2011) were examined. Conducted excluding educational organisations, there have also been meta-analyses that have investigated the relationship of organisational trust with the variables used in the current study, namely, organisational justice, organisational commitment, and organisational citizenship behaviours. Among these studies, the following relationships have been examined: the relationship of *organisation trust* with organisational commitment and organisational identification (Ng, 2015), organisational commitment, identification, and social responsibility (Farooq, Payaud, Merunka, & Valette-Florence, 2014), organisational citizenship (Petrella, 2013); the relationship of *organisational justice* with organisational trust, commitment, job satisfaction, and turnover intention (Li & Cropanzano, 2009), organisational citizenship, job satisfaction, commitment, and trust (Fischer, 2013), citizenship (Fassina, Jones, & Uggerslev, 2008), job satisfaction, commitment, performance, and citizenship (Colquitt, Conlon, Wesson, Porter, & Ng, 2001); the relationship of *organisational commitment* with organisational justice (Spiser-Albert, 2001), organisational citizenship (Çetin et al., 2015), and job satisfaction and organisational citizenship (Shahjehan, Afsar, & Shah, 2019). Among the meta-analyses, the primary studies from Turkey were Ülbeği's (2016) study on the relationship of organisational justice with citizenship, commitment, trust, cynicism, burnout, identification, turnover intention, and job satisfaction; Gürbüz, Ayhan, and Sert's (2016) study of the relationship between organisational justice and organisational citizenship; and Top et al.'s (2014) study on the relationship of organisational commitment with organisational trust, job satisfaction, and leadership.

The literature also includes meta-analysis studies that have investigated both relationships within the dimensions of organisational justice, commitment, and citizenship behaviours, and the relationships between these variables. Among the meta-analyses of *organisational justice* and its dimensions, Cohen-Charash and Spector's (2001) study examined the relationship of organisational justice and its dimensions with organisational trust, job satisfaction, and organisational commitment; whereas Hauenstein, McGonigle, and Fliender (2002) examined the relationship between procedural and distributional justice. In addition, Shao, Rupp, Skarlicki, and Jones (2013) investigated the moderator effect of cultural factors on the relationship between employees' organisational justice perceptions, its dimensions and consequences. Among the meta-analyses of *organisational commitment* and its dimensions, King (2002) examined one-dimensional and three-dimensional organisational commitment models; and Meyer, Stanley, Herscovitch, and Topolnytsky (2002) examined the relationships between affective commitment, continuance commitment, and normative commitment. Additionally, Meyer et al. (2012) conducted a meta-analysis study that examined the relationships between affective commitment, continuance commitment, and normative commitment; whereas Fischer and Mansell (2009) compared employee commitment from an intercultural perspective. Different from these studies, Mathieu and Zajac (1990) evaluated the results of 48 meta-analyses regarding the antecedents, relationships, and the consequences of organisational commitment. Among the meta-analyses of *organisational citizenship* and its dimensions, LePine, Erez, and Johnson (2002) investigated

the relationships between the dimensions of organisational citizenship behaviours. In addition, Carpenter, Berry, and Houston (2014) conducted a meta-analysis study on the organisational citizenship behaviours resulting from individuals' self-evaluation and also of others, whereas Podsakoff, Whiting, Podsakoff, and Blume (2009) conducted a meta-analysis of the personal and organisational consequences of organisational citizenship behaviours.

In addition to the aforementioned studies, there have also been meta-analyses published that examined the effect of demographic variables on organisational trust (Avcı, 2019), organisational justice (Altınkurt, Yılmaz, & Karaman, 2015; Schulz, 2018), organisational commitment (Aven, Parker, & McEvoy, 1993; Aydın, Sarier, & Uysal, 2011; Cohen, 1992, 1993; Çoğaltay, 2015; Dalgıç, 2014), and organisational citizenship behaviours (Yılmaz, Altınkurt, & Yıldırım, 2015). Çoğaltay and Karadağ (2016) conducted a meta-analysis on the relationship of educational leadership with job satisfaction, organisational justice, organisational trust, organisational commitment, organisational citizenship, performance, organisational culture, and organisational climate within educational organisations. However, there has only been a limited number of meta-analysis studies that have focused on the relationship of organisational trust perceptions with organisational justice, commitment, and citizenship behaviours of educational organisation employees. Of these studies, Akar (2018) investigated the relationship of organisational trust with organisational justice, organisational commitment, organisational support, organisational citizenship behaviours, mobbing, job satisfaction, organisational cynicism, organisational silence, and ethical leadership of educational stakeholders (i.e., teachers, school administrators, and academicians) in Turkey. In their study, Arslan and Yıldız (2015) investigated the variables that positively and negatively affected the organisational commitment of teachers in Turkey and examined their relationship with organisational trust. Similarly, Uysal, Sarier, and Çilek (2019) examined the variables that affect the organisational citizenship behaviours of teachers in Turkey; having conducted a meta-analysis on its relationship with organisational trust. However, no meta-analytical studies have been broached that are dealing with the variables covered in the current study and also combining the research results from various countries with a specific focus on teachers. Therefore, different from the studies in the current literature, the current study examines the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours within educational organisations and is specific to teachers, which considers research undertaken in various countries. Therefore, the current study aims to fill an important gap in the literature by holistically evaluating the results of studies published in the relevant subject area and by examining the results of the included studies in terms of various cultures.

Constituting the focus of the current study, variables such as organisational trust, organisational justice, organisational commitment, and organisational citizenship are known to be closely interrelated. For example, it could be asserted that organisational trust and organisational justice would not generally be considered independently of each other, and that organisational trust is a variable that affects both organisational commitment and organisational citizenship. In fact, the relationships between these variables have constituted the subject of many studies to be found in the literature. Combining the results of such studies will contribute to reaching generalisable results in terms of educational organisations. Revealing generalisable relationships between organisational trust and its dimensions, and between the other variables in the study and its dimensions will enable the determination of those variables most related to trust within the school environment. As a result, recommendations will be developed within the current study for the establishment of a trust environment in schools. Additionally, factors that affect these relationships will be determined through subgroup analysis. As such, the current study is considered to make an important contribution to the literature by examining the mean effect sizes of the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours in educational organisations through meta-analysis. Within the scope of this purpose, the current study aims to answer the following research questions:

1. What is the mean effect size of the relationship between organisational trust including its dimensions (trust in the principal, trust in colleagues, trust in stakeholders) and organisation justice including its dimensions (distributional justice, procedural justice, interactional justice)?

2. What is the mean effect size of the relationship between organisational trust including its dimensions and organisational commitment including its dimensions (affective commitment, continuance commitment, normative commitment)?
3. What is the mean effect size of the relationship between organisational trust including its dimensions and organisational citizenship including its dimensions (altruism, sportsmanship, conscientiousness, civic virtue)?
4. At what level do the mean effect sizes of the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours differ in terms of *the country where the study was conducted, grade-level, study-type, and study-year* subgroups?

Method

The aim of this study is to examine the mean effect sizes of the relationships of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours (and their dimensions) in educational organisations through meta-analysis method. Meta-analysis enables the data of various independent studies to be combined both reliably and effectively, and then for overall conclusions to be drawn (Tsagris & Fragkos, 2018).

Data Collection Procedure and Coding

The literature review for the meta-analysis was performed in January 2020, whereas complementary reviews were performed during March 2020 and also in November 2020. The reviews were performed in both English and Turkish languages. In order to access studies for the meta-analysis, EBSCOhost, Web of Science Platform, ERIC, ProQuest, ULAKBİM, and Google Scholar were searched using the following keywords: ['organizational trust' and 'teacher'] and ['örgütsel güven' 'öğretmen']. An advanced search was also performed in the Higher Education Council's Thesis Centre of Turkey (HEC) using the following keywords: ['güven' 'öğretmen'], ['trust' 'teacher'], and ['confidence' 'teacher']. The studies obtained through the searches performed were initially evaluated by their titles and abstracts. During this evaluation, those studies which were conducted outside of educational organisations were not taken into consideration as they did not meet the scope of the current meta-analysis research. Those studies which were related to the subject of the current study were then subjected to close scrutiny. As a result, a total of 252 studies, consisting of 145 articles and 107 graduate theses, were recorded that examined the variables specified for the current study with a sample group consisting of those working within educational organisations. The recorded studies were added to a coding sheet prepared by the researchers. This coding sheet comprised of the following data items: author(s) of the study, study-year, study-type (i.e., graduate thesis, article), sample group type and size, examined variables, data collection tools (with dimensions), grade-level, and the country where the study was conducted.

In the examination of each record included on the coding sheet, the studies undertaken on organisational trust that were specific to educational organisations were found to have been conducted with organisational justice, organisational commitment, organisational citizenship, leadership, job satisfaction, organisational support, and organisational climate. In this regard, the theoretical background of the current study was considered, and specific criteria were then determined for the inclusion of 252 coded studies in the meta-analysis. These criteria were as follows: (1) Studies must be either a peer-reviewed journal article or a graduate thesis, completed/published between 1995 and 2020 (note: where an article was produced from a thesis, the thesis was preferred due to reduced likelihood of publication bias and the probability of obtaining usable data); (2) Studies must determine the relationship of organisational trust with organisational justice, organisational commitment, or organisational citizenship behaviours of teachers; (3) Studies must provide *either* sample sizes and correlation coefficients *or* other statistics so as to compute these values; (4) Data collection tools employed must determine organisational trust, organisational justice, organisational commitment, and organisational citizenship behaviours of teachers. These criteria were then also used as the exclusion criteria of the current meta-analysis research. Studies not meeting these criteria were excluded from the meta-analysis. One reason for including articles and theses but not conference abstracts/proceedings

and research reports is that both articles and theses are accessible through databases, smart search platforms, and search engines. Another reason is that articles undergo peer-reviewed evaluation and theses are subject to institutional jury evaluation. However, it is relatively ambiguous as to whether or not research reports and some published conference and symposium abstracts/proceedings are subjected to a satisfactorily rigorous process of review; hence, these studies were decided to be excluded from the meta-analysis.

After determining the inclusion/exclusion criteria, complementary searches were performed against the EBSCOhost, Web of Science Platform, ERIC, ProQuest, ULAKBİM, and Google Scholar using the following keywords: ['organizational trust' and 'organizational justice' and 'teacher'], ['organizational trust' and 'organizational commitment' and 'teacher'], ['organizational trust' and 'organizational citizenship' and 'teacher'], ['güven' 'adalet' 'öğretmen'], ['güven' 'bağlılık' 'öğretmen'], ['güven' 'vatandaşlık' 'öğretmen']. Additionally, an advanced search was performed using the Higher Education Council's Thesis Centre of Turkey (HEC) using the following keywords: ['güven' 'adalet' 'öğretmen'], ['güven' 'bağlılık' 'öğretmen'], ['güven' 'vatandaşlık' 'öğretmen'], ['trust' 'justice' 'teacher'], ['trust' 'fairness' 'teacher'], ['trust' 'commitment' 'teacher'], and ['trust' 'citizenship' 'teacher']. Also, the references of the studies recorded in the initial search were scanned and any cited studies that might also be suitable considering the inclusion criteria were examined as well. As a result, 24 articles and 12 graduate theses were accessed through the first complementary search (performed in March 2020), and 13 articles and one graduate thesis was accessed through the second complementary search (performed in November 2020). Subsequent to these two rounds of complementary searches, the total number of studies recorded on the coding sheet increased to 302, which was comprised of 182 articles and 120 graduate theses overall. Through further examination based on the aforementioned exclusion criteria, 201 studies which had not investigated the relationship of organisational trust with organisational justice, organisational commitment or organisational citizenship behaviours of teachers were excluded from the meta-analysis. Of the remaining 101 studies, six were excluded as they had not reported the correlation coefficients or any other statistics necessary for computing these same values, and nine studies were excluded as they were articles produced from theses (in this case, it was the theses that were included in the meta-analysis). Accordingly, the current meta-analysis study was conducted with a total of 86 independent studies. In some of the included studies, the relationship of organisational trust was investigated using more than one variable. Two studies investigated the relationship of organisational trust with both organisational justice and organisational commitment (Alazmi & Alenezi, 2020; Ting, 2014); three with organisational justice and organisational citizenship (Kouchi, Hashemi, & Beshlideh, 2016; Polat, 2007; Zeinabadi, 2013); three with organisational commitment and organisational citizenship (Thomsen, Karsten, & Oort, 2015, 2016; Uzun, 2018); and one with organisational justice, organisational commitment, and organisational citizenship (Laçinoğlu, 2010). Additionally, one study concerning organisational citizenship (Dede, 2017) had used two independent samples. Due to these studies, intra-class correlation coefficient was analysed in order to determine whether or not any dependency problem existed. Whilst a coefficient close to '0' depicts there being no dependency between effect sizes, a coefficient close to '1' indicates the presence of such a dependency. In case of a high intra-class correlation coefficient having been observed, a multilevel (meta-analysis) approach is suggested to be used (Şen & Akbaş, 2016). In the current study, the intra-class correlation coefficient was computed as being .037 ($p > .05$). As this correlation coefficient was close to 0, it was decided that the dependency was not considered to be important. As a result, a total of 97 effect sizes were attained from the 86 independent studies included in the meta-analysis. Meeting the inclusion criteria, 34 studies were used to compute the mean effect size of the relationship between organisational trust and organisational justice, 35 between organisational trust and organisational commitment, and 27 studies between organisational trust and organisational citizenship. However, as one of the studies regarding the relationship between organisational trust and organisational citizenship (Dede, 2017) included two independent samples, the number of effect sizes totalled 28 whilst the number of studies was 27. The Preferred Reporting Items for Systematic reviews and Meta-Analyses, or PRISMA (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009), presents the principles for the reporting process of meta-analyses, and was utilised throughout the current study. As the PRISMA report suggests, a flowchart depicting the search and selection of the examined studies is presented in Figure 1.

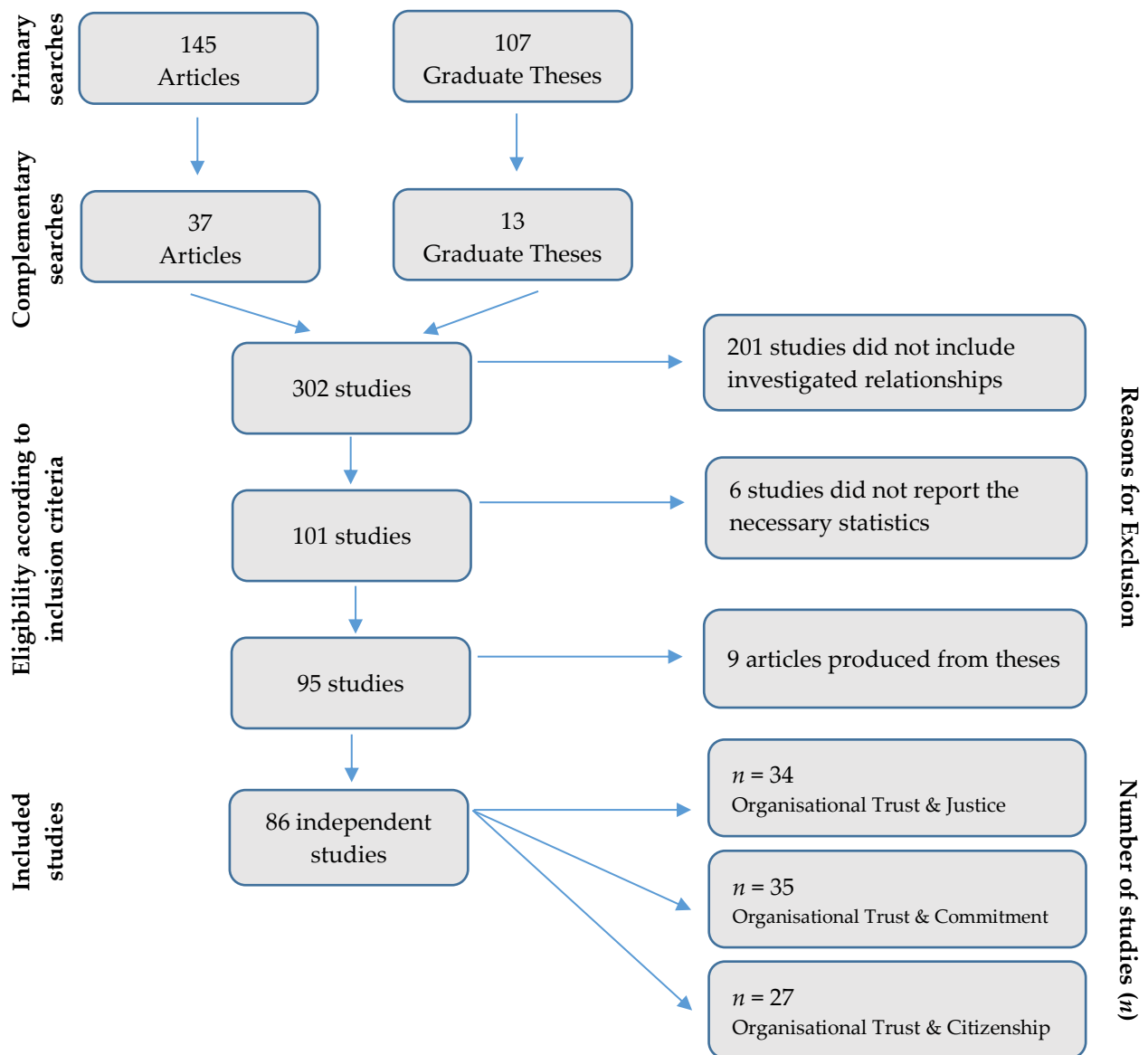


Figure 1. PRISMA flowchart of search and selection process of studies

Studies about the subject of research should be accurately searched and the validity, reliability, and completeness of accessed studies should be inspected by the coders of the study (Stewart & Kamins, 2001). In this regard, the studies related to the variables used in the current study were first searched for by three researchers from the field of Educational Administration, and then the studies returned from the searches were recorded on a coding sheet prepared by the researchers. All of the recorded studies were then examined in accordance with the aforementioned inclusion and exclusion criteria by all of the researchers in prearranged meetings and those studies meeting the specified inclusion criteria were decided upon. Data from the studies that were deemed to meet the inclusion criteria were independently recorded on separate coding sheets by three researchers and intra-class correlation of these values were established as being .91. Through consensus meetings held to discuss any differences found among the recorded effect size values, the data were rechecked in order to ensure that it had been coded completely and accurately ($r = 1.00$). In the study, subgroups to explain the differences between effect sizes were decided upon after the computation of mean effect sizes and level of heterogeneity. Data regarding the decided subgroups were also added to the coding sheet independently by the three researchers, and intra-class correlation of these values were established as being .94. Through a consensus meeting held for the data of the subgroups, it is ensured that all of the data had been coded completely and accurately ($r = 1.00$).

Included Studies

In total, 34 studies were included in the meta-analysis in terms of each study having examined the relationship between organisational trust and organisational justice, 35 between organisational trust and organisational commitment, and 27 between organisational trust and organisational citizenship. In addition, the meta-analyses were conducted for the studies that had examined the aforementioned variables in terms of their sub-dimensions, as well. The total sample size of the included studies was 17,271 in terms of the relationship between organisational trust and organisational justice, 15,874 for the relationship between organisational trust and organisational commitment, and 14,991 for the relationship between organisational trust and organisational citizenship. The characteristics of the included studies are presented in Table 1. In order to facilitate the readability of following tables and figures, the concepts of organisational trust, organisational justice, organisational commitment, and organisational citizenship were expressed as simply 'trust', 'justice', 'commitment', and 'citizenship'.

Table 1. Characteristics of Studies Included in the Meta-analysis

		Trust & Justice (n = 34)	Trust & Commitment (n = 35)	Trust & Citizenship (n = 27)
Study type	Article	28	21	17
	Master's Thesis	3	8	3
	Doctoral Dissertation	3	6	7
Study year	1997	-	1	-
	2002	-	-	1
	2004	1	-	-
	2005	-	-	1
	2007	2	1	2
	2008	-	1	1
	2009	-	2	1
	2010	3	3	1
	2011	2	-	3
	2012	1	1	1
	2013	2	1	3
	2014	2	4	2
	2015	2	5	4
	2016	4	2	2
	2017	5	2	1
	2018	3	3	2
	2019	5	3	-
2020	2	6	2	
Grade level	Preschool	-	1	-
	Primary school (PS)	7	3	9
	Lower Secondary School (LSS)	3	-	4
	Upper Secondary School (USS)	5	10	7
	PS & LSS	5	8	3
	PS & LSS & USS	14	13	4

Table 1. Continued

		Trust & Justice (<i>n</i> = 34)	Trust & Commitment (<i>n</i> = 35)	Trust & Citizenship (<i>n</i> = 27)	
Study country	America	USA	3	4	6
		Canada	-	1	-
	Asia	China	-	1	-
		Indonesia	-	2	1
		Iran	5	-	5
		Israel	-	1	3
		Kuwait	1	1	-
		Malaysia	2	-	1
		Pakistan	2	-	-
		Thailand	1	-	-
		Taiwan	1	1	-
		Europe	Netherlands	-	2
	Eurasia	Turkey	19	22	9

Publication Bias

Publication bias refers to studies published in a specific subject with a low-level representation of all studies conducted on that subject area (Card, 2011; Littell, Corcoran, & Pillai, 2008). Similarly, publication bias is the situation where the possibility of a study's publication on a certain subject is related to its effect size and its statistical significance (Dias, Ades, Welton, Jansen, & Sutton, 2018). In this regard, publication bias may become evident as a result of certain studies not yielding the expected statistically significant results, and for that reason, either researchers would not be willing to publish the findings or scientific journals reject the publication of such studies (Makowski, Piraux, & Brun, 2019). Therefore, a high-level publication bias within a meta-analysis could lead to the mean effect size being reported quite differently from what it actually is (Borenstein, Hedges, Higgins, & Rothstein, 2009) and may also lead to the quality (accuracy) of the mean effect size being adversely affected (Pecoraro, 2018). For this reason, the potential for publication bias was examined in the current meta-analysis prior to determining the mean effect sizes. Funnel plots, Orwin's Fail-Safe N analysis, Duval and Tweedie's Trim and Fill, and Egger's regression test were used in order to examine the potential for publication bias in the current meta-analysis. The aforementioned analyses were conducted for the relationships between both the specified variables and the sub-dimensions of these variables.

Model Selection

Following the examination of publication bias in the meta-analysis, the statistical model used in the computation of mean effect sizes was selected. Based on the level of variance among studies, the main approaches used in effect size computations are fixed effect and random effects models (Pigott, 2012). The fixed effect model indicates the combined studies' homogeneity, with the exception of their sample sizes, whereas the random effects model emphasises the variety of parameters among the studies (Cumming, 2012). Random effects model is based on the assumption that estimation of effects regarding different studies is only the result of a similar distribution (Deeks, Higgins, & Altman, 2008). When computing mean effect size in this model, various conditions are taken into consideration such as effect size, participant characteristics, the duration, extent, and design of a study, as well as sampling error within studies (Littell et al., 2008). When choosing the model in meta-analyses, the sample characteristics of studies included in the analysis and inferences to be drawn should also be considered. The fact that sample characteristics of studies conducted in the social sciences can be affected by various parameters indicates that it is more appropriate to use the random effects model. Additionally, the inferences to be drawn through random effects model are stated to be beyond the studies included within a meta-analysis (Field, 2003; Field & Gillett, 2010). For this reason, using the random effects model also contributes to the generalisability of the study data. The specified criteria for choosing

statistical models indicated that the model should be chosen a-priori (before analysis) and according to the nature of the planned meta-analysis (Borenstein, Hedges, & Rothstein, 2007; Littell et al., 2008). In this regard, it was decided to use random effects model taking into consideration that the teachers in the sample of this meta-analysis were from numerous different countries and cultures, and that sample characteristics, designs, and the scope of the included were all varied.

Heterogeneity

Meta-analysis enables the examination of a particular study subject based on various parameters by putting forward the degree of variety among included studies. In this regard, the current study examined whether or not the studies included in the meta-analysis were heterogeneous. The heterogeneity of the combined studies was identified with the Q test and I^2 values. The Q test evaluates the possibility of random distribution of differences among the observed results (Deeks et al., 2008). Where the established Q value exceeds the χ^2 value computed by the degree of freedom, this indicates the heterogeneity of mean effect sizes (Card, 2011; Shadish & Haddock, 2009). Being complementary to the Q test, the I^2 value shows the heterogeneity level of mean effect sizes (Cleophas & Zwinderman, 2017). I^2 values greater than 75% are interpreted as having a high level of heterogeneity (Cooper, Hedges, & Valentine, 2009).

In case of heterogeneity among the studies included in the meta-analysis, the reasons for heterogeneity can be examined according to various characteristics of the included studies and may be interpreted by way of subgroup analysis (Deeks et al., 2008). When determining the subgroups, it is taken into consideration that they appear among the included studies of the meta-analysis in sufficient numbers and that they adequately explain the differences revealed among the results of the included studies. Thus, in this current meta-analysis, heterogeneity for the relationship of organisational trust with organisational justice, organisational commitment and organisational citizenship behaviours within educational organisations was foreseen to be explained using the subgroups of country group, educational grade level, study type, and study year. Considering that the number of effect sizes computed for the sub-dimensions of the aforementioned variables would be inadequate, subgroup analyses were subsequently conducted on the main variables of the study.

Interpreting Effect Sizes

For the reason that the variance is affected by the correlation coefficients (r) in meta-analysis studies (Borenstein et al., 2009), and especially in cases where the correlation values among the included studies appear close to one another, Pearson correlation coefficient should be converted to Fisher z coefficient in order to conduct the analyses (Makowski et al., 2019). Therefore, Pearson correlation coefficients were first converted to Fisher z and then re-converted back (to r) after completing the analyses in order to report the relationships and confidence intervals. Computed mean effect sizes were then reported in the correlation coefficient (r). If the correlation coefficient mean effect size was $r < \pm.10$, it was interpreted as being very low (Cohen, Manion, & Morrison, 2007); $\pm.10 \leq r < \pm.30$ as low; $\pm.30 \leq r < \pm.50$ as medium; and, $\pm.50 \leq r$ as high effect size (Cohen, 1988). To what degree subgroups such as the country group, grade level, study type, and study year differed in the relationships between the main variables of the current study was determined by $Q_{between}$ test, χ^2 value based on the degree of freedom, and also p value. The research data were analysed according to CMA v2 (Comprehensive Meta-Analysis Software Version 2).

Results

This purpose of the current study was to determine the mean effect sizes of the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours according to the views of teachers. In the study, the potential of publication bias was examined prior to effect size analyses. Initially, the potential publication bias was visually evaluated using *funnel plots* and *trim and fill technique*. This evaluation was performed both for the aforementioned variables and also for their sub-dimensions. However, due to the restrictions associated with the reporting of findings, Figure 2 presents funnel plots based only upon the relationship of organisational trust with (a) organisational justice, (b) organisational commitment, and (c) organisational citizenship.

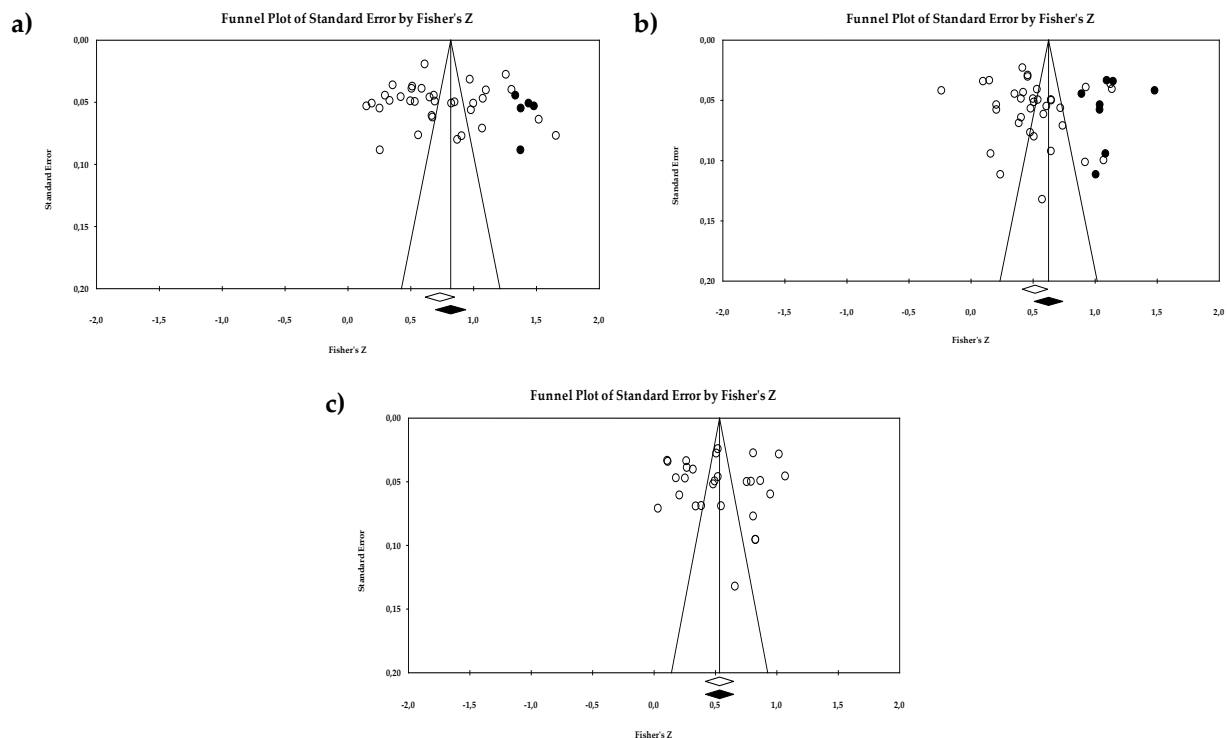


Figure 2. Funnel plots of mean effect sizes regarding the relationship of organisational trust with a) organisational justice, b) organisational commitment, and c) organisational citizenship

In order to be able to disregard publication bias based on funnel plots, the effect sizes should be symmetrically scattered around both sides of the standardised error axis of the mean effect size (Borenstein et al., 2009). When the funnel plots shown in Figure 2 were examined, the effect sizes were seen to symmetrically scatter around the standardised error axis in general, although some of the studies were revealed to negatively affect the symmetry. Due to comments in the literature regarding funnel plot symmetry being subjective (Card, 2011), and also that it can be difficult to reach a decision regarding publication bias based on funnel plots (Lipsey & Wilson, 2001; Pigott, 2012), the potential for publication bias was also examined by other techniques. In Figure 2, the empty circles in the funnel plots, created by the *trim and fill technique*, show the studies included in the meta-analysis, while the filled circles show the studies required to be included in the meta-analysis in order to decrease the potential publication bias. The funnel plots show that the inclusion of five more studies for the relationship between *organisational trust* and *organisational justice* (see Figure 2a), and eight between *organisational trust* and *organisational commitment* (see Figure 2b) would be adequate to decrease the publication bias of the current meta-analysis. On the other hand, the last funnel plot (see Figure 2c) indicates there being no need for the inclusion of additional studies in the meta-analysis in order to decrease publication bias regarding the relationship between *organisational trust* and *organisational*

citizenship (see Figure 2c). Taking into consideration that 34 studies for the relationship between *organisational trust* and *organisational justice*, and 35 between *organisational trust* and *organisational commitment*, were included in the meta-analysis, and considering the results of other publication bias analyses, the suggestions for additional studies to be included were able to be ignored.

The *trim and fill technique* can also be used to define the new (adjusted) axis of a funnel plot when a meta-analysis including the filled studies is conducted (Duval & Tweedie, 2000; Higgins & Green, 2008). The empty diamond symbols in the figures portray the observed mean effect size, whereas the filled diamonds represent the adjusted mean effect size. It could therefore be stated that no important change in the axes of diamond symbols was observed. However, the funnel plots should be backed up with additional techniques as they might lead to subjective comments (Littell et al., 2008). For this reason, the possibility of publication bias was statistically examined using Orwin's Fail-Safe N analysis, Duval and Tweedie's Trim and Fill, and Egger's regression test (see Table 2).

Table 2. Results of Publication Bias Tests

Relationships between variables	Orwin's	Duval & Tweedie's		Egger's Test (<i>p</i>)
	Fail-Safe N (.01 Fisher <i>z</i>)*	Trimmed	Observed (Filled)	
Justice and Trust	2,443	5	.624 (.673)	.967
Justice - Trust in the Principal	1,200	2	.731 (.701)	.926
Justice - Trust in Colleagues	277	0	.390 (.390)	.810
Justice - Trust in Stakeholders	107	0	.342 (.342)	.786
Trust - Distributional Justice	713	0	.488 (.488)	.385
Trust - Procedural Justice	1,104	2	.546 (.593)	.195
Trust - Interactional Justice	1,138	0	.652 (.652)	.318
Commitment and Trust	1,677	8	.474 (.554)	.511
Commitment - Trust in the Principal	872	3	.486 (.545)	.922
Commitment - Trust in Colleagues	147	1	.384 (.350)	.165
Commitment - Trust in Stakeholders	143	1	.365 (.341)	.006
Trust - Affective Commitment	615	0	.480 (.480)	.975
Trust - Continuance Commitment	57	2	.075 (.027)	.647
Trust - Normative Commitment	340	2	.391 (.327)	.159
Citizenship and Trust	1,446	0	.488 (.488)	.949
Citizenship - Trust in the Principal	440	0	.341 (.341)	.639
Citizenship - Trust in Colleagues	556	0	.565 (.565)	.720
Citizenship - Trust in Stakeholders	479	0	.455 (.455)	.249
Trust - Altruism	179	0	.346 (.346)	.814
Trust - Sportsmanship	84	1	.202 (.229)	.149
Trust - Conscientiousness	106	0	.224 (.224)	.860
Trust - Civic Virtue	170	0	.331 (.331)	.800

*.01 was used as the threshold value

In Table 2, the possibility of publication bias was examined regarding the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship (and also their sub-dimensions). Orwin's Fail-Safe N analysis shows the number of studies required to decrease the mean effect size below that of a trivial value (Orwin, 1983). A high value of *N* indicates that the mean effect size of the relationship would not equal to zero by excluding some studies and that the possibility for publication bias was very low (Şen & Yıldırım, 2020). The fact that the *N* value was revealed to be higher than the tolerance value, based on the number of effect sizes ($N > 5k + 10$) (Mullen, Muellerleile, & Bryant, 2001), indicates that no publication bias was observed in the current study. Duval and Tweedie's Trim and Fill technique showed that the exclusion of studies that negatively affected the funnel plot symmetry from the meta-analysis, or inclusion of their exact

symmetrical equivalents, made no significant difference to the mean effect size. The statistically insignificant Egger’s test results also indicated that no publication bias was observable in the meta-analysis. The publication bias analyses referred to a high internal validity of mean effect sizes, and a representation adequacy of studies conducted in the subject area. Subsequent to an examination of the potential publication bias, the mean effect sizes regarding the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours was determined.

Relationships Between Organisational Trust and Organisational Justice

The first purpose of the current study was to determine the mean effect size of the relationship between teachers’ organisational trust and organisational justice perceptions. In accordance with this purpose, the forest plot concerning the mean effect size is illustrated in Figure 3, while the statistics concerning the aforementioned variables and their sub-dimensions are presented in Table 3.

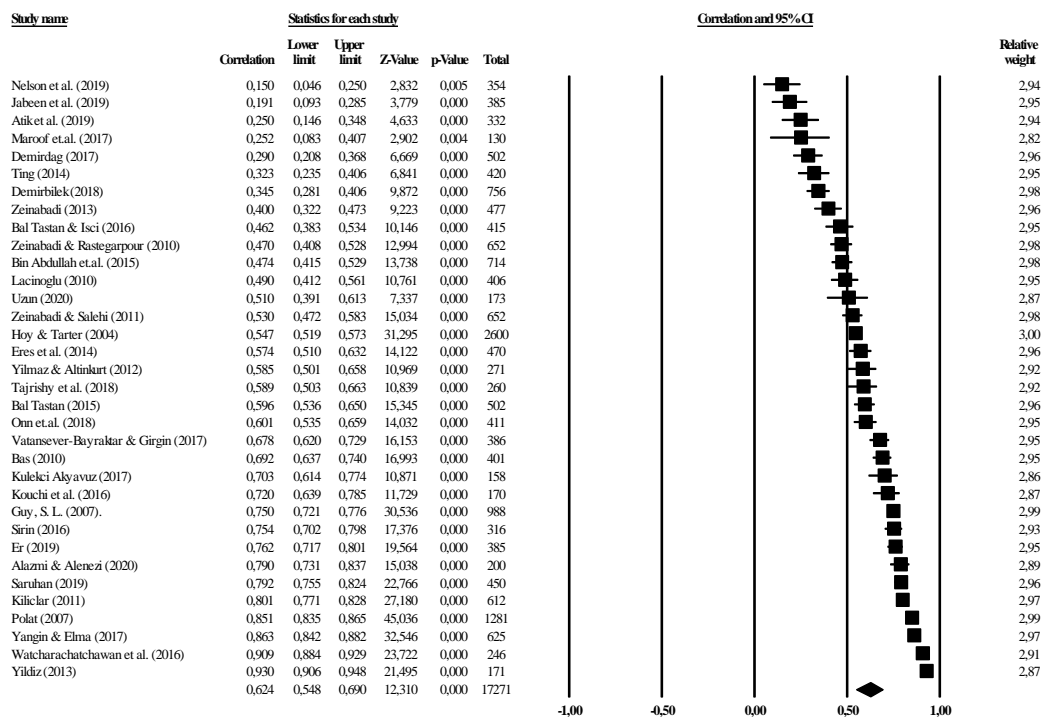


Figure 3. Forest plot of the relationship between organisational trust and organisational justice

Table 3. Statistics for the Relationship between Organisational Trust and Organisational Justice

Variables	k	Ntotal	ESmean	Serror	ESlower	ESupper	Z	p
Trust- Justice	34	17,271	.624	.037	.548	.690	12.310	.00
Justice - Trust in the Principal	13	8,892	.731	.024	.671	.782	15.430	.00
Justice - Trust in Colleagues	7	5,331	.390	.028	.259	.506	5.507	.00
Justice - Trust in Stakeholders	3	1,660	.342	.009	.246	.431	6.640	.00
Trust - Distributional Justice	13	6,186	.488	.070	.311	.633	4.922	.00
Trust - Procedural Justice	17	8,005	.546	.052	.414	.656	6.963	.00
Trust - Interactional Justice	14	6,811	.652	.059	.527	.750	7.892	.00

k: Number of effect sizes; Ntotal: Total sample size; ESmean: Mean effect size (r)

Serror: Standard error; ESlow – ESUp: ESmean upper and lower bounds; p: Statistical significance of ESmean

Within the forest plot shown in Figure 3, the square symbols represent the effect sizes, the horizontal lines indicate 95% confidence intervals of effect sizes, and the diamond symbol refers to the mean effect size. When the forest plot was examined, it was observed that the upper and lower bounds of the effect sizes were close to each other in general, and also that the study weights were similar to

one another. This similarity of study weights infers that the included studies' contribution to mean effect size were similar. As can be seen in Figure 3, the study of Nelson, Hegtvedt, Haardorfer, and Hayward (2019) was found to have the lowest effect size, whereas the study by Yıldız (2013) had the highest. The forest plot shown in Figure 3 revealed that all of the included studies and the mean effect size were in the direction of positive. According to both the forest plot shown in Figure 3 and the mean effect size statistics presented in Table 3, the results of the current meta-analysis, which included 34 effect sizes, showed that the mean effect size of the relationship between organisational trust and organisational justice was at a high level ($r = .624$). In terms of the dimensions of organisational trust, organisational justice was related the most to trust in the principal ($r = .731$), followed by trust in colleagues ($r = .390$), and trust in stakeholders ($r = .342$), in respective order. In addition, in terms of the dimensions of organisational justice, organisational trust was related to interactional justice ($r = .652$) the most, followed by procedural justice ($r = .546$) and distributional justice ($r = .488$), respectively.

Relationships Between Organisational Trust and Organisational Commitment

The second purpose of the current study was to determine the mean effect size of the relationship between teachers' organisational trust perceptions and their organisational commitment. In this regard, the forest plot concerning the mean effect size is illustrated in Figure 4, while the statistics concerning the aforementioned variables and their respective sub-dimensions are presented in Table 4.

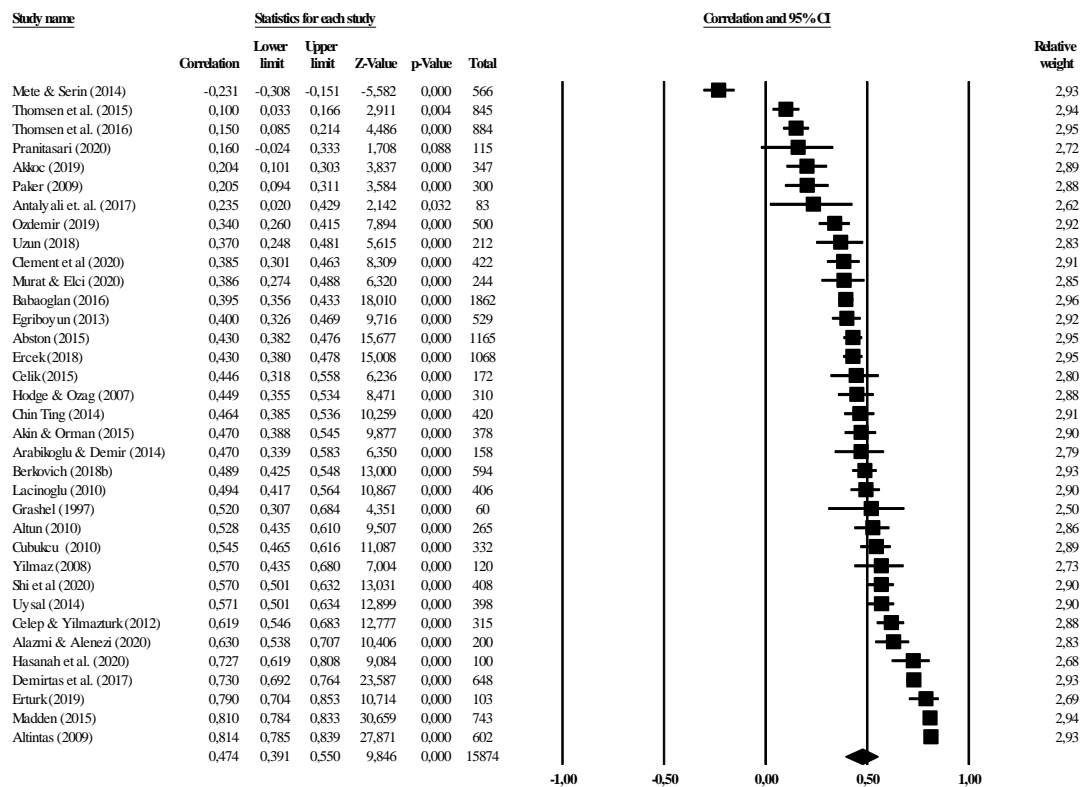


Figure 4. Forest plot of the relationship between organisational trust and organisational commitment

Table 4. Statistics for the Relationship Between Organisational Trust and Organisational Commitment

Variables	k	Ntotal	ESmean	Serror	ESlower	ESupper	Z	p
Trust- Commitment	35	15,874	.474	.029	.391	.550	9.846	.00
Commitment - Trust in the Principal	17	7,315	.486	.045	.357	.597	6.601	.00
Commitment - Trust in Colleagues	5	2,059	.384	.051	.180	.557	3.563	.00
Commitment - Trust in Stakeholders	4	1,214	.365	.006	.292	.434	9.145	.00
Trust - Affective Commitment	12	4,188	.480	.086	.271	.646	4.178	.00
Trust - Continuance Commitment	10	3,374	.076	.020	-.048	.197	1.202	.00
Trust - Normative Commitment	10	3,374	.391	.051	.212	.545	4.085	.00

When the forest plot shown in Figure 4 was examined, it was observed that the upper and lower bounds of the effect sizes were close to each other in general, and that the study weights were similar to one another. This similarity of study weights infers that the included studies' contribution to the mean effect size was found to be similar. As can be seen in Figure 4, the study of Thomsen et al. (2015) was found to have the lowest effect size, whereas that of Altıntaş (2009) had the highest. The forest plot shown in Figure 4 revealed that all of the included studies except for one (Mete & Serin, 2014) and the mean effect size were in the direction of positive. Also, according to the forest plot shown in Figure 4 and also the mean effect size statistics presented in Table 4, the results of the current meta-analysis that included 35 effect sizes showed that the mean effect size of the relationship between organisational trust and organisational commitment was found to be at a medium level ($r = .474$). In terms of the dimensions of organisational trust, organisational commitment was related the most to trust in the principal ($r = .486$), followed by trust in colleagues ($r = .384$), and the trust in stakeholders ($r = .365$), respectively. In addition, in terms of the dimensions of organisational commitment, organisational trust was found to be related to affective commitment ($r = .480$) the most, followed by normative commitment ($r = .391$), and continuance commitment ($r = .076$), respectively.

Relationships Between Organisational Trust and Organisational Citizenship

The third purpose of the current study was to determine the mean effect size of the relationship between teachers' organisational trust perceptions and their organisational citizenship behaviours. In this regard, the forest plot concerning the mean effect size is illustrated in Figure 5, while the statistics concerning the aforementioned variables and their sub-dimensions are presented in Table 5.

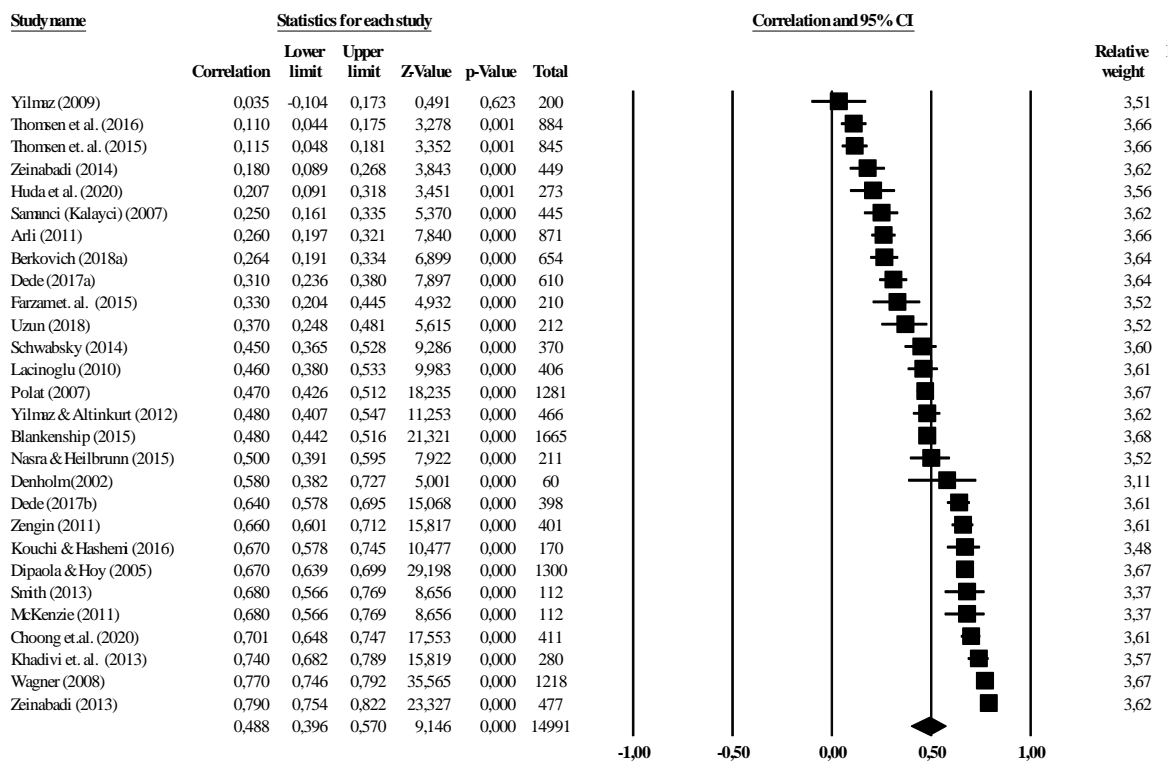


Figure 5. Forest plot of the relationship between organisational trust and organisational citizenship *

*In one study (Dede, 2017) among all ($n = 27$) regarding the relationship between organizational trust and organizational citizenship, two independent samples existed, and for this reason, the effect sizes were reported as Dede (2017a) and Dede (2017b) in the forest plot ($k = 28$).

Table 5. Statistics for the Relationship Between Organisational Trust and Organisational Commitment

Variables	<i>k</i>	<i>N</i> _{total}	ES _{mean}	S _{error}	ES _{lower}	ES _{upper}	Z	<i>p</i>
Trust- Citizenship	28*	14,991	.488	.032	.396	.570	9.146	.00
Citizenship - Trust in the Principal	14	7,725	.341	.019	.245	.431	6.603	.00
Citizenship - Trust in Colleagues	10	5,575	.565	.061	.418	.684	6.439	.00
Citizenship - Trust in Stakeholders	8	2,983	.455	.128	.186	.660	3.184	.00
Trust - Altruism	5	3,605	.346	.024	.203	.475	4.545	.00
Trust - Sportsmanship	5	3,605	.202	.008	.110	.291	4.262	.00
Trust - Conscientiousness	5	3,605	.224	.011	.119	.323	4.142	.00
Trust - Civic Virtue	5	3,605	.331	.012	.230	.425	6.132	.00

When the forest plot shown in Figure 5 was examined, it was observed that the lower and upper bounds of effect sizes were close to each other in general, and that the study weights were found to be similar to one another. This similarity of study weights infers that the included studies' contribution to the mean effect size was similar. As can be seen from Figure 5, the study of Yılmaz (2009) was found to have the lowest effect size, whereas the study of Zeinabadi (2013) had the highest. The forest plot shown in Figure 5 showed that all of the included studies and the mean effect size were in the direction of positive. According to the forest plot shown in Figure 5 and the mean effect size statistics presented in Table 5, the results of the current meta-analysis including 28 effect sizes showed that the mean effect size of the relationship between organisational trust and organisational commitment was at a medium level ($r = .488$). In terms of the dimensions of organisational trust, organisational citizenship was related the most to trust in colleagues ($r = .565$), followed by trust in stakeholders ($r = .455$), and then trust in the principal ($r = .341$), respectively. In terms of the dimensions of organisational citizenship, organisational trust was related to altruism ($r = .346$) the most, followed by civic virtue ($r = .331$), then conscientiousness ($r = .224$), and sportsmanship ($r = .202$), respectively.

Subgroup Analyses

Subsequent to the mean effect size analyses performed in the current meta-analysis, it was identified whether or not the included studies were heterogeneously distributed. The heterogeneity of the combined effect sizes was identified using *Q* test and *I*² values, and which showed that the studies investigating the relationship of organisational trust with organisational justice [$Q_{(34)} = 1,941.149$, $p = .00$; $I^2 = 98.300$], organisational commitment [$Q_{(34)} = 1,414.633$, $p = .00$; $I^2 = 97.597$], and organisational citizenship behaviours [$Q_{(27)} = 1,317.934$, $p = .00$; $I^2 = 97.951$] of teachers had a high level of heterogeneity. The heterogeneity of the combined studies was attempted to be explained using the characteristics of the included studies. In this regard, the last purpose of the current study was to determine how the relationships of organisational trust with organisational justice, organisational commitment, and organisational citizenship differed in terms of the *country where the study was conducted*, the *(educational) grade level*, the *study type*, and the *study year* subgroups. In the comparison of the countries where each of the studies had been conducted, the countries were grouped according to their continental location as the number of studies were inadequate to compare on purely a country-by-country basis. The reason that Turkey was considered under a separate continental grouping is that Turkey is geographically located in Eurasia and has both socioculturally similar and dissimilar characteristics to both European and Asian countries. However, only Turkey was included in this grouping for the studies included in this meta-analysis. For this reason, the term Turkey rather than Eurasia was used throughout both the Findings and the Discussion sections. In this regard, the statistics regarding the comparison of the specified relationships in terms of the country groups are presented in Table 6.

Table 6. Distribution of Effect Sizes in terms of Country Groups and Heterogeneity Tests

Relationships	Country groups	CI (95%)			Heterogeneity tests				
		<i>k</i>	ES _{mean}	ES _{lower}	ES _{upper}	<i>df</i>	χ^2	Q_B	<i>p</i>
Trust & Justice	Eurasia (Turkey)	19	.671	.644	.982	2	5.991	2.528	.283
	Asia	12	.565	.464	.816				
	America (USA)	3	.524	.225	.939				
Trust & Commitment	Eurasia (Turkey)	22	.471	.382	.641	3	7.815	64.637	.000
	Europe (Netherlands)	2	.126	.076	.176				
	Asia	6	.525	.443	.724				
Trust & Citizenship	America (USA & Canada)	5	.545	.293	.931				
	Eurasia (Turkey)	10	.411	.312	.562	3	7.815	70.699	.000
	Europe	2	.112	.066	.160				
	Asia	10	.518	.356	.792				
	America (USA)	6	.654	.582	.981				

As can be seen from Table 6, the relationship between organisational trust and organisational justice did not differ significantly in terms of the country groups, with the heterogeneity value (Q_B) having not exceeded the χ^2 value determined by the degree of freedom ($p > .05$). However, the relationship of organisational trust with organisational commitment and organisational citizenship was found to have differed significantly, with the heterogeneity value (Q_B) having exceeded the χ^2 value ($p < .05$). In terms of the country groups, the results of the Q test indicate heterogeneity of the relationship of organisational trust with organisational commitment and organisational citizenship. According to Table 6, the relationship between organisational trust and organisational justice was found to be the highest in Turkey and the lowest in America. However, the relationship of organisational trust with organisational commitment and organisational citizenship was found to be highest in America and lowest in Europe.

The grade levels of the studies included in the meta-analysis consist of the following groups; preschool, primary school, lower secondary school, primary-lower secondary schools, upper secondary school, and primary-lower secondary-upper secondary schools. When conducting the subgroup analysis, the studies conducted either in primary or lower secondary schools were grouped as *primary-lower secondary schools* in order to interpret the data correctly, and also to ensure data loss was minimised. As there was only one study conducted in the preschool group, in terms of the relationship between organisational trust and organisational commitment, this group was excluded from the subgroup analysis. In addition, the effect sizes produced from the studies conducted across all grade levels (primary-lower secondary-upper secondary) or which had not specified the grade level were also excluded from the subgroup analysis. The statistics regarding the comparison of the specified relationships in terms of grade level are presented in Table 7.

Table 7. Distribution of Effect Sizes in terms of Grade Level and Heterogeneity Tests

Relationships	Grade level	CI (95%)			Heterogeneity tests				
		<i>k</i>	ES _{mean}	ES _{lower}	ES _{upper}	<i>df</i>	χ^2	Q_B	<i>p</i>
Trust & Justice	Primary - Lower Secondary	15	.598	.490	.687	1	3.841	.012	.912
	Secondary	5	.612	.321	.798				
Trust & Commitment	Primary - Lower Secondary	11	.445	.251	.604	1	3.841	.019	.890
	Secondary	10	.462	.274	.616				
Trust & Citizenship	Primary - Lower Secondary	17	.542	.447	.624	1	3.841	1.522	.217
	Secondary	7	.389	.125	.602				

As can be seen from Table 7, the relationship of teachers' organisational trust with organisational justice, commitment, and citizenship behaviours was not found to have differed significantly in terms of grade level, with the heterogeneity value (Q_B) having not exceeded the χ^2 value determined by the degree of freedom ($p > .05$). However, the relationship of the teachers' organisational trust perceptions with organisational justice and organisational commitment was found to be lower at the primary-lower secondary grade level, whereas the relationship between organisational trust and organisational citizenship behaviours was higher at the primary-lower secondary grade level. The statistics regarding the comparison of the specified variables in terms of *study type* are presented in Table 8.

Table 8. Distribution of Effect Sizes in terms of Study Type and Heterogeneity Tests

Relationships	Study type	CI (95%)			Heterogeneity tests				
		<i>k</i>	ES _{mean}	ES _{lower}	ES _{upper}	<i>df</i>	χ^2	Q_B	<i>p</i>
Trust & Justice	Article	28	.605	.581	.823	1	3.841	1.044	.307
	Graduate Thesis	6	.700	.573	1.163				
Trust & Commitment	Article	21	.451	.356	.615	1	3.841	.496	.481
	Graduate Thesis	14	.508	.399	.720				
Trust & Citizenship	Article	17	.464	.336	.669	1	3.841	.454	.500
	Graduate Thesis	11	.524	.421	.742				

As can be seen from Table 8, the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours was not found to differ significantly in terms of the study type, with the heterogeneity value (Q_B) having not exceeded the χ^2 value determined by the degree of freedom ($p > .05$). As can be seen, the studies included in the meta-analysis were either articles or graduate theses, and this did not cause any difference to the mean effect sizes. However, the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship was found to be reported higher for graduate theses. The statistics regarding the comparison of specified variables in terms of *year groups* are presented in Table 9.

Table 9. Distribution of Effect Sizes in terms of Year Groups and Heterogeneity Tests

Relationships	Year groups	CI (95%)			Heterogeneity tests				
		<i>k</i>	ES _{mean}	ES _{lower}	ES _{upper}	<i>df</i>	χ^2	Q_B	<i>p</i>
Trust & Justice	2010 or before	6	.659	.537	1.046	2	5.991	.253	.881
	2011-2015	9	.648	.526	.941				
	2016 or after	19	.588	.526	.896				
Trust & Commitment	2010 or before	8	.537	.370	.830	2	5.991	.706	.703
	2011-2015	11	.444	.247	.707				
	2016 or after	16	.461	.384	.614				
Trust & Citizenship	2010 or before	7	.495	.647	.703	2	5.991	.624	.732
	2011-2015	13	.516	.408	.733				
	2016 or after	8	.434	.259	.672				

As can be seen from Table 9, the relationship of teachers' organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours was not found to differ significantly in terms of the study years, with the heterogeneity value (Q_B) having not exceeded the χ^2 value determined by the degree of freedom ($p > .05$). However, it was notable that the level of relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours was relatively lower for those studies conducted during or after 2016 in comparison to those conducted during or prior to 2010.

Conclusion, Discussion and Suggestions

In this study, it is aimed to determine the mean effect sizes of the relationship of organisational trust with organisational justice, organisational commitment, and organisational citizenship behaviours (and their dimensions) within educational organisations. For this purpose, studies that had investigated the relationship of teachers' organisational trust perceptions with organisational justice ($n = 34$), organisational commitment ($n = 35$), and organisational citizenship behaviours ($n = 27$) in various countries were included in the meta-analysis. Though the number of included studies in terms of the relationship between organisational trust and organisational citizenship behaviours was (n) 27, the total number of computed effect sizes (k) was 28, as one of the included studies consisted of two independent samples. The total (combined) sample size of all the included studies was 17,271 in terms of organisational trust and organisational justice, 15,874 in terms of organisational trust and organisational commitment, and 14,991 in terms of organisational trust and organisational citizenship. The increase in the number of studies dealing with the specified variables since the 2000s was found to be remarkable from the study's findings. In addition, it is noteworthy that most of the included studies were from Turkey, America, and Asian countries, with only two studies regarding the investigated relationships having been conducted in European countries (and notably, both studies were from the same author). This situation may be interpreted as that effectively implemented neoliberal policies have resulted in a critical problem area of trust in America, Turkey, and Asian countries in comparison to European countries where they could be considered as a relatively social state, as neoliberalism is an economic model based on mistrust, insecurity, and uncertainty (Harvey, 2005; İnsel, 2015; Sennett, 2017). The results of the World Values Survey (2020) also support this interpretation. According to the survey's results, people living in America, Turkey, and in Asian countries, where neoliberal policies have been implemented effectively, trust one another far less in comparison to those living in European countries. Another reason for this situation may be that Turkey and other Asian countries have closer links and are more similar to the American tradition of academy. In this tradition, it is more common to employ quantitative research methods based on a positivist perspective. Though this situation could be considered as a limitation in terms of generalisability of this meta-analysis, the total sample size of the combined studies and the diversity by country (USA, China, Indonesia, the Netherlands, Iran, Israel, Canada, Kuwait, Malaysia, Pakistan, Thailand, Taiwan, and Turkey) contribute to the generalisability of the results.

As a result of the research, the mean effect size ($r = .624$) of the relationship between teachers' perceptions of organisational trust and organisational justice was determined to be at a high level. In this regard, the teachers' perceptions of organisational justice could be interpreted as being strong in cases where their perceptions of organisational trust are also strong. If teachers have a belief that their administrators are behaving fairly towards them, then their trust in the organisation would also likely increase. The same could be said vice versa; where teachers' trust levels increase, they may believe more in the fairness of the school administrators' practices. As Hoy and Tarter (2004) also emphasised, there is a two-way relationship between organisational trust and justice. In other words, when organisational trust, which is based on healthy social relations, is strong, then a fair working environment could be formed at first; and when there is an increase in organisational justice perceptions, organisational trust could also potentially increase.

The current research results were found to be in accord with the meta-analysis study conducted by Ülbeği (2016), which examined the relationship between organisational trust and organisational justice perceptions of employees in Turkey ($r = .783$), and also Akar's (2018) study that was specific to the employees of education institutions in Turkey ($r = .70$). When the 34 studies included in the current meta-analysis about the relationship between organisational trust and organisational justice were examined, the relationship was observed to be at a low level in only five of the examined studies (Atik, Demirtaş, & Aksoy, 2019; Demirdağ, 2017; Jabeen, Ishaque, Khakwani, Luqman, & Irshad, 2019; Maroof, ul Mabood, Mehmood, & Ahmad, 2017; Nelson et al., 2019), but were at either a moderate or high level in all remaining studies. The high-level relationship between organisational trust and organisational

justice revealed in the current study indicates that one of the two concepts would be unquestionable without the other. The fact that teachers perceive the relations, existing practices, and the distribution of resources as fair would likely increase their trust in organisation. The existing literature also reveals that organisational justice can enable employees to develop a positive attitude towards their organisation's administrators, to reduce their negative attitudes towards the organisation, and to improve their organisational trust (Jiang, Gollan, & Brooks, 2017; Pučetaitė & Lämsä, 2008; Yılmaz & Altınkurt, 2012a). This situation could be stated as a contribution to the formation of a positive business environment, and thereby a strong organisational culture (Altınkurt, 2010). As a result, this would likely increase an employee's organisational commitment and corresponding citizenship behaviours (Folger & Cropanzano, 1998).

According to the subgroup analyses that aimed to explain the differences among the included studies regarding the relationship between organisational trust and justice, this relationship was not found to differ in terms of study type, grade level, or study year in which the research was conducted; whereas, it was found to differ in terms of the country (of research) groupings. This relationship was found to be higher among those studies conducted in Turkey ($r = .671$) over those conducted in Asian countries ($r = .565$) or in America (USA) ($r = .524$). This situation may be explained according to the cultural characteristics of the societies concerned. According to Hofstede's (2001) study on national cultures, risk avoidance is a predominant feature of the Turkish culture. Individuals living in societies with a high-level risk avoidance are more aggressive, emotional, and intolerant of uncertainties in comparison with societies with a low-level risk avoidance (Vitell, Nwachukwu, & Barnes, 1993). Shao et al. (2013) examined the moderator effect of cultural factors on the relationship between employees' perceptions of organisational justice and its results in their meta-analysis that included 190,000 employees from 32 different countries. In their study, the effect of organisational justice on organisational trust was concluded to be higher for employees in countries with a high-level risk avoidance culture. Similarly, Fischer (2013) conducted a meta-analysis study on 54,100 employees from 36 different countries and found that distributive justice had a higher impact on trust in societies with a high-level risk avoidance culture. Employees in a high-level risk avoidance culture would likely react stronger to organisational justice perception as they need more fair environments that are largely free from uncertainty. The current meta-analysis also revealed that the relationship between organisational trust and organisational justice perceptions of teachers was relatively higher in Turkey, where a high-level of risk avoidance is observed. Therefore, in cases where organisational justice is ensured, teachers in Turkey will likely have greater confidence in the organisation, when compared to teachers in either American or Asian countries. Risk avoidance refers to structural problems and also an unhealthy bureaucracy. By its very nature, the perception of organisational justice cannot be considered independently of the general climate of a country. When considered specifically in terms of schools, even if the school administrators, who are expected to be the providers of justice, are able to affect the perception of justice through the strengths of their personal effort, their employees' perceptions of justice are unlikely to differ from the trust or distrust of that country's citizens in accordance with the country's general justice system. The reason for this is that it is the central bureaucracy, or the rules imposed by the central bureaucracy, that holds responsibility for the appointment of the school administrators. Employees' lack of trust in the competence of appointed administrators can also be considered as a kind of risk avoidance standpoint in order to protect themselves. The study of Altınkurt and Aysel (2016) drew attention to the scenario whereby the appointment of school administrators in Turkey is largely not based on their competences, but upon patronage relations that hold influence in the process. In Ziblim's (2020) study on the power distance of teachers in Turkey and Ghana, the power distance perceptions of teachers in both countries were found to be at a high level, which is also consistent with Hofstede's (2001) study. A high-level power distance perception causes injustices to be accepted as the norm or as a natural phenomenon (Hofstede, 1983, 2001). A high value of power distance, especially in the dimensions of acceptance of power and acquiescence of power (Ziblim, 2020), seems to explain the risk avoidance tendencies of teachers.

In the current meta-analysis, organisational justice was found to be related the most to trust in administrators ($r = .731$), followed by trust in colleagues ($r = .39$), and trust in stakeholders ($r = .342$) based on the sub-dimensions of organisational trust. Administrators play a crucial role in ensuring organisational justice due to the decisions they hold responsibility for making, and also due to their influence on the quality of relations and the distribution of resources within the organisation. Therefore, this finding is considered to be an expected result of the study. Hoy and Tarter (2004) stated that when teachers have trust in their administrator, they also perceive the organisation as being fair. In their research, Hoy and Tarter found a high-level ($r = .72$) relationship between trust in administrators and organisational justice. In the current study, organisational trust was found to be related to interactional justice ($r = .652$) the most, followed by procedural justice ($r = .546$), and distributive justice ($r = .488$) based on the sub-dimensions of organisational justice. In their meta-analysis of employees from various organisations, Cohen-Charash and Spector (2001) reported a moderate-level relationship between organisational trust and interactional justice ($r = .35$), procedural justice ($r = .48$), and distributive justice ($r = .43$), which are all close to each other. Similarly, in their meta-analysis dealing with employees in East Asia, Li and Cropanzano (2009) established that there was a moderate and close relationship between organisational trust and distributive justice ($r = .39$), and also with procedural justice ($r = .48$). In this current meta-analysis, although there were moderate-level relationships found to exist between organisational trust and distributional justice ($r = .488$), there were high-level relationships revealed between organisational trust and procedural justice ($r = .546$), and also with interactional justice ($r = .652$). The reason for this finding may be that the current research was conducted with employees of educational organisations. Interactional justice emphasises the communication process within the organisation, and thereby necessitates respect and honesty in mutual relations. In addition, interactional justice is more concerned with administrators' attitudes towards teachers. The fact that organisational trust was mostly found to be associated with interactional justice among the sub-dimensions of justice in the current meta-analysis indicates that administrators' approaches are considered as more important in teachers' perceptions of organisational trust.

In the current meta-analysis, the mean effect size of the relationship between teachers' organisational trust and organisational commitment was determined to be at a medium ($r = .474$) level. In this regard, it could be stated that when teachers' perceptions of organisational trust are high, their organisational commitment is also found to be high. In both Akar's (2018) meta-analysis conducted on educational organisations' employees ($r = .51$) and Arslan and Yıldız's (2015) meta-analysis on teachers ($r = .33$), the relationships between organisational trust and organisational commitment were found to be at a high level and medium level, respectively. When the 35 studies on the relationship between organisational trust and organisational commitment were examined in the current meta-analysis, the relationships were observed to be at a low level in seven included studies (Akkoc, 2019; Antalyalı, Dumlupınar, & Özkul, 2017; Mete & Serin, 2014; Paker, 2009; Pranitasari, 2020; Thomsen et al., 2015, 2016), but at a moderate or high level in the remaining studies that were examined. As a result, the moderate (or close to high-level) relationship found in this meta-analysis between organisational trust and organisational commitment shows that trust may therefore play a crucial role in the formation of organisational commitment. The reason for this is suggested to be that teachers' beliefs in the trustworthiness and honesty of their institutions' administrators, relevant stakeholders, and also their teaching colleagues could act to strengthen their ties with the organisation. Similarly, Hodge and Ozag (2007) stated that organisational trust within the school environment can reduce the threats perceived by teachers, and thus increase their perception of organisational commitment. In the literature, the results of studies conducted outside of the educational organisation setup have also been seen to concur with this finding. In the studies conducted by Top et al. (2014) on healthcare workers, Farooq et al. (2014) on manufacturing workers, and Ng (2015) on employees from various organisations, organisational trust was established to be a statistically significant predictor of organisational commitment. This situation is expected to positively contribute to the organisation as, if employees place their energy and commitment (Kanter, 1968) to their organisation, they will likely make more of an effort to improve its conditions. As stated by Colquitt et al. (2019), employees do not withdraw themselves psychologically

or physically, but work to improve the conditions within the organisation by opting to utilise their 'voice' (Hirschman, 1970).

According to the subgroup analyses that aimed to explain the differences among the included studies regarding the relationship between organisational trust and organisational justice, this relationship was determined to differ significantly according to the country groups. This relationship was found to be at a higher level among studies conducted in America (USA and Canada) ($r = .545$), when compared to those conducted in Asian countries ($r = .525$) and also in Turkey ($r = .471$). However, this relationship was seen to be at a low level among studies conducted in Europe (Netherlands) ($r = .126$). In addition, the relationship between organisational trust and organisational citizenship was similarly seen to differ. This relationship was found to be at a higher level among studies conducted in America ($r = .654$) in comparison to studies conducted in Asian countries ($r = .518$) and also in Turkey ($r = .411$). However, it is notable that this relationship was seen to be at a low level in Europe ($r = .112$). One suggested reason as to why the relationship between organisational trust and commitment was found to be relatively higher in America in the current meta-analysis is that societies in both the USA and Canada have individualistic culture characteristics. Fischer and Mansell (2009), in their meta-analysis studies based on a cross-cultural comparison of employee commitment, found that affective commitment, continuance commitment, and normative commitment were all affected by individualism and the power distance levels of countries. Higher level of collectivism was paired with higher level of normative commitment, while higher level of power distance was paired with both higher level of continuance and normative commitment. Meyer et al. (2012) stated that cultural values and practices can explain the variance in normative commitment the most, followed by affective commitment, but it cannot explain the variance in continuance commitment. Doney, Cannon, and Mullen (1998) stated that trust level can be higher, and relationships can be stronger in a collectivist culture, whereas trust levels may be found to be lower and relationships can be weaker in an individualistic culture. The behaviours of individuals in collectivist cultures are determined by the norms of the social structure to which they belong, rather than their own personal attitudes (Triandis, 2001). Therefore, it may be said that organisational commitment and citizenship behaviours within collectivist cultures could stem not only from trust, but also from the characteristics of the culture itself. On the other hand, employees prioritising their own interests and goals within individualistic societies could be asserted to react stronger to organisational trust. Therefore, in the USA and Canada, which are both societies with individualistic characteristics, it is thought that enabling trust, which is not the dominant characteristic of either countries' culture, may lead to increased commitment as well as increased citizenship behaviours. The literature includes studies that have examined the moderator role of the individualist-collectivism culture according to various organisational variables, though not directly related to the variables examined in the current meta-analysis. The results of such studies have also shown that these relationships are at a higher level within individualistic cultures. For example, Shao et al. (2013) concluded through their meta-analysis that the relationship between organisational justice and organisational citizenship was higher in countries where an individualistic culture was dominant. In addition, Erdogan and Liden (2006) concluded that the relationship between organisational justice and leader-member interaction was lower amongst employees within a culture that was significantly collectivist in nature.

In order to examine studies regarding the relationship between organisational trust and organisational commitment according to the grade level subgroup, Arabikoğlu and Demir's (2014) study, which was conducted at the preschool level, and also those studies conducted with more than one grade level, were removed from the current meta-analysis, and the analyses then subsequently repeated. In this case, the mean effect size of the studies conducted within upper secondary schools ($r = .462$) was observed to be higher than those conducted in primary and lower secondary schools ($r = .445$). Therefore, a trust environment created in upper secondary schools could be asserted to have a greater effect on teachers' commitment levels. As primary schools are relatively smaller in size, they generally have a smaller number of teachers, and the teachers stay together with the same group of students, and their parents, for a considerably longer time. Thereby, close relationships established

within the school environment could help to ensure that organisational commitment develops naturally according to the contribution of such an environment. However, teachers in upper secondary schools have fewer opportunities to remain and interact with both the same set of students and their parents, when compared to the setup of most primary school teachers.

In the current meta-analysis, organisational commitment was found to be related to trust in administrators ($r = .486$) the most, followed by trust in colleagues ($r = .384$), and trust in stakeholders ($r = .365$), respectively, according to the sub-dimensions of organisational trust. In this regard, teachers' organisational commitment might stem from their trust in their own organisation's administrator, rather than trust in their colleagues or the stakeholders of the organisation. As previously mentioned, this finding was an expected result of the current study because administrators have a generally greater influence on their employees since it is they who hold the power. Berkovich (2018a), in his research with 654 primary school teachers in Israel, concluded that teachers with a high level of confidence in their administrators had a higher level of organisational commitment that was found to be statistically significant. In the literature, employees' trust in administrators has been shown to be related to numerous variables such as organisational justice (Hoy & Tarter, 2004), school success (Price, Moolenaar, Tschannen-Moran, & Gareis, 2015), school effectiveness (Hoy, Tarter, & Witkoskie, 1992), and job satisfaction (Van Maele & Van Houtte, 2012). When these variables are considered as being related to organisational commitment, it may be asserted that trust in an administrator could have an effect on employee's organisational commitment through a mediation of many variables. This situation might be the reason behind the current meta-analysis' finding of relatively higher-level relationship between organisational commitment and trust in administrator.

In this meta-analysis, organisational trust was found to be related to affective commitment ($r = .480$) the most, followed by normative commitment ($r = .391$), and then continuance commitment ($r = .076$), respectively, according to the sub-dimensions of organisational commitment. Affective commitment may stem from an employee's commitment to the goals and values of the organisation they work for, rather than from some external obligation or from any relation to the cost associated with leaving the organisation. Employees with an affective commitment to their organisation may identify themselves with the organisation; therefore, it would be understandable that a higher relationship may exist between organisational trust and affective commitment when compared to the other commitment types. The reason for this is that teachers who have trust in their organisation could be asserted to identify themselves with the values and goals of the organisation; in other words, they establish affective commitment. Other studies in the literature have concurred with this result. In a research study conducted by Nyhan (1999) regarding public employees, and also a study by Jiang et al. (2017) on university employees, they each concluded that organisational trust significantly predicted affective commitment.

From the current meta-analysis, the mean effect size of the relationship between teachers' organisational trust and organisational citizenship behaviours was determined to be at a moderate ($r = .488$) (close to high) level. In this regard, it could be stated that in cases where teachers' perceptions of organisational trust are high, their organisational citizenship behaviours are also strong. In other words, if employees have trust in the organisation they work for, then they could exhibit extra role behaviours for the benefit of the organisation. A moderate-level relationship was also revealed in Akar's (2018) meta-analysis on the relationship between organisational trust and organisational citizenship behaviours of educational employees ($r = .43$), and Uysal et al.'s (2019) study with teachers ($r = .46$). On the other hand, Petrella (2013), through a meta-analysis of studies conducted from 2002 onwards, concluded that a low-level ($r = .11$) relationship existed between organisational trust and organisational citizenship behaviours of employees. The relatively high-level relationship between organisational trust and organisational citizenship behaviours both in the current meta-analysis and in other meta-analyses conducted within educational organisations indicates that employees of educational organisations may exhibit a reduced level of citizenship behaviours when they perceive themselves to be exposed to some element of risk. When 27 of the studies included in the current meta-analysis about the relationship

between organisational trust and citizenship behaviours were examined, it was observed that these relationships were at a low level in six of the studies (Arlı, 2011; Samancı Kalaycı, 2007; Thomsen et al., 2015, 2016; Yılmaz, 2009; Zeinabadi, 2014), but at a moderate or high level in remaining studies. In conclusion, the moderate- (close to high) level relationship between organisational trust and organisational citizenship behaviours emerged in the current meta-analysis revealed that trust plays a critical role in the emergence of organisational citizenship behaviours. In the literature, numerous researchers have defined trust as an individual's willingness to be vulnerable while being at risk (Mayer, Davis, & Schoorman, 1995; Mayer & Gavin, 2005). As emphasised in this definition, teachers' feeling safe under risk conditions could contribute to their extra-role behaviours, which after all are beyond the scope of their job description. On this, Tschannen-Moran (2003) drew attention to trust being necessary in order for employees to exhibit citizenship behaviours.

Reflections of economy politics on management understanding as well as on organisations could also influence the shaping of concepts such as trust and justice within educational organisations. Especially in light of the changes generated by neoliberal policies after 1980 within the understanding of organisational management, these could direct the practices of managers as well as the expectations from their employees. Along with neoliberal policies, concepts such as entrepreneurship, profitability, competition, flexible employment policies, and accountability come to prominence within organisational management. In order for organisations to become more 'efficient', the autonomy of employees is often reduced, while their responsibilities and accountabilities are correspondingly increased. However, this situation can leave employees unprotected and more open to being sacrificed (Brown, 2018). Examining the effects of the new management approach on higher education in England, Deem (1998) emphasised that this kind of management increased managerial control, whilst reducing cooperation, trust, and autonomy. The research also revealed that administrators in universities can place pressure on academics to undertake more education and research activities with fewer resources. Similarly, Simkins (1999) stated that managers can distribute management power beyond traditional bureaucratic power, yet today's employees can be weakened as much as a result of the changes in organisation management. As a result, a management approach that prioritises competition could bring about unfair practices under the guise of introducing 'efficiencies' and thereby undermine the trust of the employees. With employment policies that emphasise flexibility, the long-term commitment of employees to an organisation is no longer always the prime requirement; however, they are expected to exhibit extra-role behaviours as much as possible. Such an expectation from employees is either deemed to be 'temporary' or 'partial' citizenship (Standing, 2011). In other words, employees are expected to be firmly committed to the goals of their organisation and to show extra role behaviours, rather than to be constantly or permanently committed to a single organisation. The subgroup analyses in terms of the study years conducted within the scope of the current meta-analysis also supports this concept. As such, implemented neoliberal policies have increasingly reflected upon organisations over the years, resulting in a weakening of the relationship between organisational trust with organisational commitment and organisational citizenship. Indeed, the differences found in this meta-analysis amongst year groups, even if not statistically significant, supports this idea by indicating that the mean effect size of the studies during and since 2016 were lower than those during or prior to 2010.

According to the subgroup analyses that aimed to explain the reported relationship differences amongst the included studies, grade level, study type, and study year were all determined not to have resulted in any statistically significant difference in terms of study results. However, the country groups (where the studies were conducted) were found to significantly differentiate the results of the study. It is notable that the relationship between organisational trust and citizenship behaviours was found to be relatively higher in the USA, whilst it was lower in Turkey. This situation may have stemmed from the individualistic culture characteristics of society in the USA, as previously mentioned. Ensuring organisational trust in societies with individualistic cultural characteristics could be asserted as a means to facilitating organisational citizenship behaviours. Another reason for this may be due to the relatively high-level of trust in authority in Western societies as the result of the legitimisation of authority by rational-legal grounds. Weber (1948) revealed that authority can be legitimised according to three basic

ideals, which are traditional, charismatic, and rational-legal. Rational-legal authority is the type of authority that is replaced with traditional and charismatic authority types in relatively modern Western societies. According to Giddens (2010), in modern Western societies where power is legitimised by rational-legal authority, the wide area of freedom of authority gives way to a belief in legalised rules and personal rights, and as a result can increase the trust in authority. When it is considered that individuals' perceptions of organisational trust are not independent of their trust in authority, it is a predicted result that organisational trust increases organisational citizenship behaviours more in Western societies.

In the current meta-analysis, organisational citizenship was found to be related to trust in colleagues ($r = .565$) the most, followed by trust in stakeholders ($r = .455$), and then trust in administrators ($r = .341$), respectively, from the sub-dimensions of organisational trust. This result indicates that teachers' organisational citizenship behaviour is mostly due to their trust they have in their colleagues. The fact that teachers' extra-role behaviours generally necessitate collaboration with colleagues might be the reason behind the relatively higher relationship between trust in colleagues and organisational citizenship behaviours. Furthermore, the relatively higher relationship between the altruism dimension of organisational citizenship and organisational trust, which emerged in this meta-analysis and is mentioned also in the next paragraph, supports this interpretation. Similarly, DiPaola and Hoy (2005a) stated that teachers with a higher degree of self-confidence due to recognising the support of their colleagues might themselves take risks and be willing to exhibit extra-role behaviours. Moreover, Yılmaz and Altınkurt (2012a), in their research with 466 secondary school teachers in Turkey, reached the conclusion that organisational citizenship relates mostly to trust in colleagues among the sub-dimensions of organisational trust.

In the current study, organisational trust was found to be associated with altruism ($r = .346$) the most, followed by civic virtue ($r = .331$), conscientiousness ($r = .224$), and then sportsmanship ($r = .202$), respectively, from the sub-dimensions of organisational citizenship. In this respect, teachers' perceptions of trust in their organisation may mostly be related to their sportsmanship behaviours. Although altruism is a behaviour exhibited towards others within an organisation, it could also contribute to the effectiveness of the group by increasing the performance of the individual (Organ, 1988, as cited in DiPaola & Hoy, 2005b). Teachers who feel more secure in their organisation could contribute further through collaboration with their colleagues. The fact that organisational citizenship is mostly related to trust in colleagues out of the sub-dimensions of organisational trust, which is another finding of the current meta-analysis, goes to support this result. Other studies in the literature concur with this finding. For example, Nielsen, Hrivank, and Shaw (2009), in their meta-analysis of 38 research studies that included 3,097 employees, concluded that performance was mostly related to the altruism dimension of organisational citizenship behaviour. In addition, Podsakoff et al. (2009) stated that altruism, as a dimension of organisational citizenship, was closely related to job satisfaction.

When the results of the current meta-analysis were evaluated in general, it was seen that organisational trust was respectively related to organisational justice, organisational citizenship, and organisational commitment. In Akar's meta-analysis (2018), which examined studies on the relationship between organisational trust and numerous variables in Turkey between 2008 and 2018, a higher relationship was also found to exist between organisational trust and organisational justice when compared to the relationship between organisational trust with organisational commitment and citizenship. One of the reasons why the relationship between organisational justice and organisational trust may be higher than the other two variables is that the interactional justice sub-dimension of organisational justice and the trust in administrator sub-dimension of organisational trust are closely related to each other. As such, these two dimensions were found to be the most associated with the total scores of organisational trust and justice. In the literature, interactional justice is stated as being mostly related to the administrators' behaviours (Jiang et al., 2017). Among the studies included in the current meta-analysis, the number of effect sizes from the same samples and their intra-class correlation coefficients were found to be low. For this reason, the dependency between effect sizes was decided to

be neglected. Accordingly, organisational trust is claimed to be related to organisational justice the most, followed by organisational citizenship, and then organisational commitment, respectively. In this regard, researchers in the future are recommended to examine the dependency status, before meta-analysis, in case more than one effect size may be obtained from the same sample, and then to employ a multilevel modelling approach where appropriate (Şen & Akbaş, 2016; Şen & Yıldırım, 2020).

Based on the results of the current meta-analysis, administrators of educational organisations could be asserted to have a crucial role to play in ensuring organisational trust. The fair approaches of administrators and their justness they exhibit in their professional relations have an important place in establishing teachers' trust. In this sense, school administrators should treat teachers fairly and sensitively, and to afford appropriate importance to both respect and honesty in their professional relations in order to increase teachers' organisational trust levels. In establishing organisational trust in the school environment, it is important to distribute resources fairly and also to include teachers in the decision-making processes. In addition, empowering teachers both structurally and psychologically may contribute to the presence of organisational trust. Increasing organisational trust in such ways may then contribute to increases in teachers' organisational justice and commitment, and to their exhibition of increased organisational citizenship behaviours. As a result, this situation may both increase teachers' motivation and also meaningfully contribute to the quality of education within that organisation. It should be noted that the current meta-analysis was limited to determining the relationship of teachers' organisational trust perceptions with organisational justice, organisational commitment, and organisational citizenship behaviours. In line with the results obtained by the review of the available literature and the coding of the included studies, it could be suggested that further meta-analysis studies be designed in order to examine the relationship of organisational trust perceptions of teachers or other educational employees with variables such as leadership, job satisfaction, organisational support, and organisational climate.

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