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THE RELATION BETWEEN PERCEPTION OF JUSTICE AND THE INTENTION TO LEAVE THE ORGANIZATION – A META-ANALYTICAL STUDY

ABSTRACT: The aim of this meta-analytical study is to examine the connection between distributive and procedural justice and the intention to leave the organization by quantitative synthesis of available empirical research that meet the defined criteria. Searching the literature 126 papers have been found, out of which 58 studies met all the defined criteria. After collecting all studies that had data on the correlation between distributive justice and the intention to leave the organization, the total sample size equaled 20068, while the total sample size of studies that had data on the correlation between procedural justice and the intention to leave the organization equaled 17901.

The results show that distributive and procedural justice is significantly negatively correlated with the intention to leave the organization and that this connection is of moderate intensity. Examination of the file-drawer effect has shown that there was no bias in the selection of studies which are included in the process of meta-analysis. Since the results have shown that there is a very large heterogeneity between the studies that have entered the process of meta-analysis, the moderating effect of the category of the journal in which the studies have been published was examined as well. The results have shown that the weighted magnitudes of the effects do not differ with respect to the category of the journal in which the studies have been published.

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Introduction

The way a person experiences her environment influences a picture she forms of it together with her own emotional and behavioral reactions. Work environment is no exception. One of the most important factors governing an individual's relation to her organization is her experience of justice. We may define justice in an organization as the employee's assessment of being treated equitably at work (Jakopec, 2015). The concept of organizational justice was introduced by Greenberg (Greenberg, 1987), but the first investigations of the concept were carried out in Adams' theory of equality (1965). This theory is about the perception of just distribution of resources by employers. It is based on the concept of social comparison according to which an individual values her position by comparing personal investment and achieved results with investments and results of other people occupying the same or similar positions. This conception gave rise to the notion of *distributive justice* referring to the assessment of just distribution of outcomes (Cropanzano & Folger, 1989). Adams' theory was criticized mostly because it was focused exclusively on the distribution of means, not taking into account procedures and rules leading to outcomes (Leventhal, 1980). In the context of judiciary matters research carried out by Thibaut and Walker (Thibaut & Walker, 1975) showed that the assessment of justice might be much more influenced by procedures adopted for accomplishing outcomes rather than outcomes themselves, consequently they introduced the notion of procedural justice (according to Jakopec and Susanj, 2014). In organizational psychology this concept was introduced by Leventhal (Leventhal, 1980), who pointed out that procedural justice refers to the assessment of practices leading to the distribution of outcomes. He specified six criteria to assess just procedures: consistency, impartiality, and precision, possibility of correcting mistakes, representativeness and morality. This two-factor model dom-

inated research for some time. Bies and Moag (Bies & Moag) added *justice-in-interaction* to this model thus presenting a three-factor model of justice. Justice-in-interaction refers to the quality of interpersonal relations among the employees during the implementation of procedures (Colquitt, Conlon, Wesson, Porter & Ng, 2001); in other words, it covers ways of transmitting information and treating individuals controlled by the decisions of employers (Bies & Moag, 1986). Justice-in-interaction – being closely related to procedures – may be understood as an extended model of procedural justice.

Research shows that employees find that several sources may cause situations which they deem unjust (Cropanzano & Prehar, 2001). Most often they blame immediate supervisors or the organization as a whole. A number of researchers (e.g. Malatesta & Byrne, 1997; Master-son, Lewis, Goldman & Taylor, 2000) show that the perception of justice regarding supervisors is connected with outcomes that are important for supervisors such as confidence in and satisfaction with superiors, while the perception of justice regarding organizations is connected with outcomes important to organizations such as responsible behavior and counterproductive behavior (Jakopec & Susanj, 2014). Investigations point out the significance perception of justice has regarding personal and organizational outcomes such as commitment (loyalty) to the organization (McFarlin & Sweeney, 1992; Randall & Mueller, 1995), identification with the organization (Olkkonen & Lipponen, 2006; Jakopec, Susanj and Stamenkovic, 2013), stress (Judge & Colquitt, 2004), efficiency (Fischer & Smith, 2004; Wulumbwa, Cropanzano & Hartnell, 2009), satisfaction with the job (Al-Zubi, 2010), intention to leave the organization (Paré & Tremblay, 2007; Loi, Hang-yue & Foley, 2006; Cohen-Charash & Spector, 2001) and others.

The intention to leave the organization is a process during which an individual wishes, plans and deliberates about quitting the job (Moble, Griffeth, Hand & Meglino, 1979). A number of studies show that the intention to leave the organization is significantly correlated with leaving the organization (Griffeth, Hom & Geatner, 2000; Lambert, Hogan & Barton, 2001; Price, 2001). The departing of good workers is one of the most unwelcome outcomes for employers, since one is forced to

face direct expenses such as loss regarding investments in the employee who left, recruiting and selecting new workers and the costs of their training (Mc Shane, Williams, Schichor & McClain, 1991). The company also faces indirect expenses, besides the direct ones mentioned, such as losing social networks established by the employee who left, burdening employees remaining, decline of morals among employees etc. (Lambert, 2001; Mitchell, MacKenzie, Styve & Grover, 2000; Stohr, Self & Lovrich, 1992). Even if the employee having intention to quit stays in the organization, consequences regarding her performances will be negative (Abbasi, Hollman & Hays, 2008).

A number of studies also investigated the relation between justice perception and intention to leave the organization. The reports from these investigations do not show unambiguous results regarding existence of this relation and its intensity. The results in some investigations show significant and intensive connections between perception of distributive and procedural justice and intention to leave the organization (Cao, Chen & Song, 2013; Khan & Habib, 2011), while others state that there is no significant relation between these variables (Hassan & Hashim, 2011; Tekleab, Takeuchi & Taylor, 2005). A meta-analytical study published in 2001 indicates that there is negative connection of medium intensity between distributive and procedural justice and intention to leave the organization (Cohen-Charash & Spector, 2001).

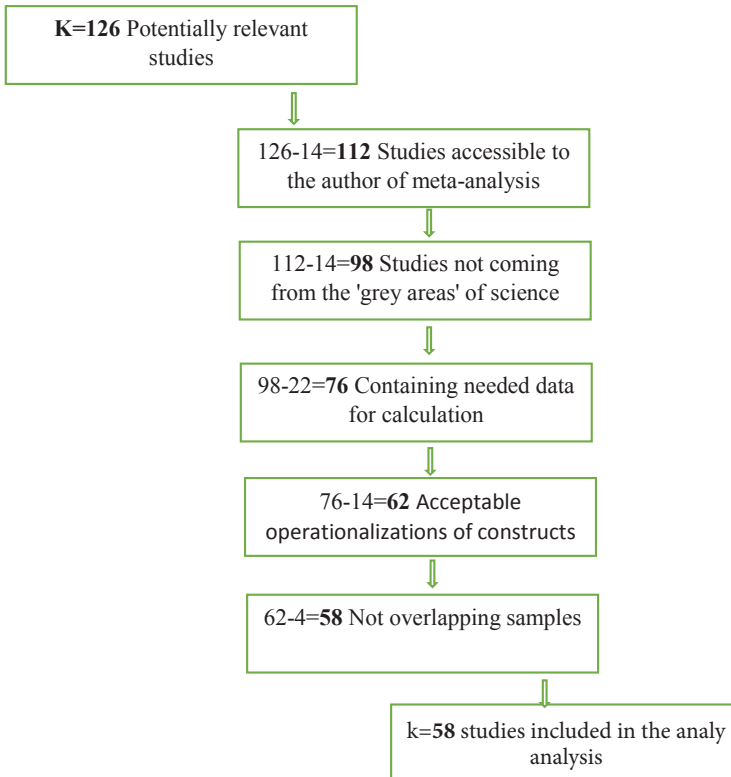
The aim of this study is to investigate the connections between distributive and procedural justice and intention to leave the organization by means of quantitative synthesis of available empirical studies satisfying defined criteria. Although many investigations indicate that justice perception is negatively connected with intention to leave the organization, without integrating the findings it is impossible to conclude unambiguously to the intensity of the connection. Justice-in-interaction is not included in this meta-analytical study, since as a construct it was developed from procedural justice and can be seen as an extended model of it.

The Method

The search through technical literature and the criteria for inclusion of scientific works in the process of meta-analysis

The search through the literature was carried out in March 2020. The basic criterion of the search was that the papers were written in English or in Serbian/Croatian/Bosnian and that they are available integrally, so that the methodological quality of the study can be established. The search started by typing in the following words, or combinations of them on Google Scholar: *organizational justice, turnover intentions, intentions to leave*. After typing the key words in English, 22 pages were searched and 82 papers got concerning these constructs; on the other hand, when key words were typed in Serbian/Croatian/Bosnian no results were found connecting these constructs. The search carried out up to 22 pages. Having finished the search on Google Scholar, we started searching other data bases such as Ebsco, Science Direct, Wiley Online Library and Hrčak Srce. Through Ebsco data base 30 potentially relevant papers are found; on Science Direct 3 papers met the criteria; in this base all the pages available after typing in the key words were searched. In Wiley Online Library base 14 papers were found that potentially satisfy the criteria; 11 pages were searched, but after page 8 no paper was found that would contain key words in the title. Hrčak Srce base offered no papers concerning this field of interest. It is important to notice that during searching these bases the papers already found on Google Search were not taken into consideration. Altogether 126 papers were found using this method. In order to make selection from the papers that would be subjected to meta-analysis some additional criteria were defined: 1) the paper as a whole has to be published in languages known to the author of meta-analysis (English or Serbian); papers that only have abstracts written in English are eliminated, since it is not possible to establish the methodological quality of the study. After elimination of the papers unavailable integrally and those not written in English, 112 papers remained. 2) The study had to be published in a scientific journal. The results of investigations made public on conferences, as well as those that are parts of master studies or doctoral dissertations are eliminated from further analysis. After eliminating studies that do

not satisfy this criterion 98 remained. 3) The next step eliminated works that lack data of correlation coefficient; in total 22 papers did not satisfy this criterion, so after eliminating those, 76 remained. 4) The fourth criterion eliminates works which lack adequate operationalization thus eliminating studies presenting only data on correlation between intention to leave the organization and the composite score of organizational justice; moreover, those that lack the variable for intention to leave the organization, having data regarding the actual number of people that had left instead, and finally, those that investigated intention to stay in the organization. In all, there were 14 of such kind and having eliminated these, 62 remained. 5) In the last step, four more were eliminated that had overlapping samples.



Graph 1 The procedure of including/excluding studies in the meta-analysis

Variables

Leventhal (Leventhal, 1980) defines *distributive justice* as assessment of just (equitable) distribution of outcomes independently from the criteria of assessment such as needs, equality, contributions, or some combination of such factors. Procedural justice can be defined as perception of the procedural component of the system that regulates the process of distribution (Leventhal, 1980). Both distributive and procedural justice are operationalized by means of achieved score on questionnaires concerned with perceiving distributive and procedural justice in organizations (self-reporting scales). Higher scores indicate higher level of perceived justice both distributive and procedural.

The intention to leave the organization is defined as the employee's conscious and intentional readiness to leave the organization in which he or she works (Tett & Meyer, 1993). Operationalizations are considered acceptable in case a questionnaire investigates the intention to leave the organization; in this meta-analysis the studies using instruments measuring actual leaving from organizations are considered unacceptable. Higher scores obtained in the questionnaire indicate increasing readiness to leave the organization.

The category of journals – Considering impact factor a journal had when publishing a paper, journals are categorized the following way: 1-no impact factor, 2-M23, 3-M22 i 4-M21.

The sample

58 studies in all satisfied the criteria to be included in the meta-analysis. Considering the fact that some studies had more than one sample and that some contained correlation between procedural justice and intention to leave the organization and some, on the other hand, between distributive justice and intention to leave the organization, by scanning the studies we collected 53 items of data about correlation between distributive justice and intention to leave the organization and 58 items of data about correlation between procedural justice and intention to leave the organization.

All the studies entering the procedure of meta-analysis are published between 2001 and 2019. 78.4% published in journals with no impact factor, 6.9% in journals of category M23, 4.5% in journals of category M22 and 10.3% in journals categorized as M22.

All the studies included in the meta-analysis were written in English, but the research was carried out in Europe, Asia, Australia and in the USA, hence one may claim that there is cultural diversity of the sample.

The analysis of data

Since the objective of this study is to establish the link between distributive and procedural justice and the intention to leave the organization, as the measure of effect magnitude Pearson's correlation coefficient is used; as weight, the sample size of examinees in SPSS program by choosing the option Weight Cases; further data analysis is carried out in Jamovi statistical program (Jamovi 1.1.9). This meta-analytical study is concerned with papers dealing with samples from different countries and these include persons working in different industries (oil industry, marketing, health service...), occupying different positions (management, executive...), having different educational experience. To use a variable effect model, therefore, seemed more appropriate.

For calculating percentage of real variance Hunter and Schmidt's method is used.

For assessment of heterogeneity the parameters of Cochran's Q test (indicator of heterogeneity significance) and I^2 statistics (assessing the total percentage of total variability due to heterogeneity) is applied.

In order to ascertain whether there was bias in choice of studies entering the meta-analysis procedure FSN (Fail-Safe N Analysis) was carried out, which shows how many studies should have been included indicating lack of any statistically significant links between distributive justice and intention to leave the organization to render the total amount of effect magnitude insignificant. Next to the results of the analysis a symmetry graph is presented showing total measure of effect magnitude.

To ascertain whether the category of journal in which the studies are published is a significant moderator regarding the relation of distributive and procedural justice and intention to leave the organization, an analysis of moderation is carried out, before which, by means of one-directional ANOVA, it is tested whether there are significant differences between weighted effect magnitudes and the category of journal in which the paper was published.

The results

We are going to present here the results of meta-analysis of studies about the connection between distributive and procedural justice and intention to leave the organization, the analysis of sample heterogeneity, the analysis of *file-drawer effect* and the analysis of moderation.

On table 1 (see addendum) the papers are listed that satisfied the criteria to be accepted in the meta-analysis.

The results presented on table 2 indicate that there exists a significant connection between distributive justice and intention to quit. This correlation is of moderate intensity (Cohen, 1992). Heterogeneity indicators suggest that application of random effect model is justified, since they point to highly marked heterogeneity among the studies that entered the process of meta-analysis.

Significant Cochran's Q test ($Q=427.51$; $df=52.00$; $p<0.001$) indicates heterogeneity of the sample. About 91% of total variability among the effect magnitudes obtained in research can be put down to true heterogeneity among the studies, rather than to a sampling mistake (Huedo-Medina, Sánchez-Meca, Marín-Martínez, & Botella 2006). Both statistics are sensitive to the number of studies entering the meta-analysis; however, since in this meta-analysis more than 20 papers is included – what can be considered as the lower limit of acceptability for justification of interpreting these statistics – their parameters are appropriate to be interpreted (Huedo-Medina et al., 2006).

Table 2. Results of meta-analysis of studies about the connection between distributive justice and intention to leave the organization

	k	N	\bar{r}	CID	CIG	Tau²	I²	Q
Distributive justice	53	20068	-.36	-.41	-.32	.03	90.57%	427.51

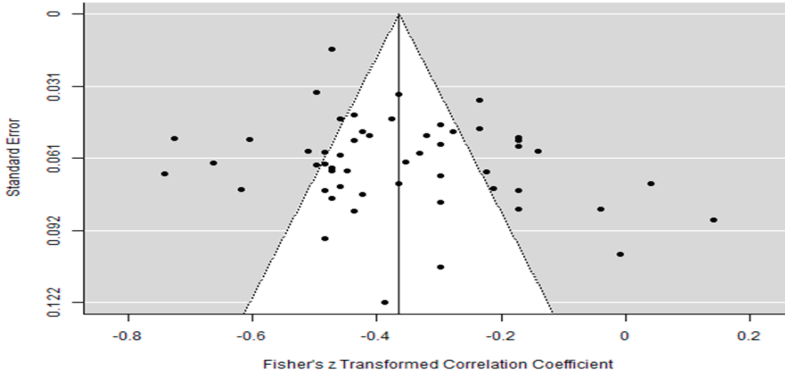
N = sample magnitude; \bar{r} = weighted average effect magnitude; CID- lower limit of reliance interval; CIG-upper limit of reliance interval; Tau² = true variance; I² = percentage of total variability due to heterogeneity; Q = heterogeneity significance indicator.

The results of Fail – Safe N analysis are showed on table 3. According to Rosenthal (Rosenthal, 1991) to avoid file-drawer effect indication FSN should be $\geq 5k+10$ ($\geq 5*53+10=275$). In this study FSN=44738 and that shows that no file-drawer effect was present, in other words, the meta-analysis should have included 44738 studies showing absence of significant effects in order to render the meta-statistics insignificant. These results support the conclusion that there was no bias in the choice of studies to be included in this meta-analysis. This can be seen on graph 2 showing that the studies included are mostly uniformly distributed around the vertical axis.

Table 3: Fail – Safe N Analysis

FSN	p
44738	<.001

Funnel Plot



Graph 2: The asymmetry of studies about connection between distributive justice and intention to leave the organization included in the meta-analysis.

The results displayed on table 4 indicate negative statistically significant connection of moderate intensity between procedural justice and intention to leave the organization. Significant Cochrane's Q test ($Q=635.15$; $df=57.00$; $p<0.001$), as well as values of I^2 statistics, show exceptionally high level of heterogeneity among the studies that entered the process of meta-analysis.

Table 4. The results of meta-analysis of studies about the connection between procedural justice and intention to leave the organization

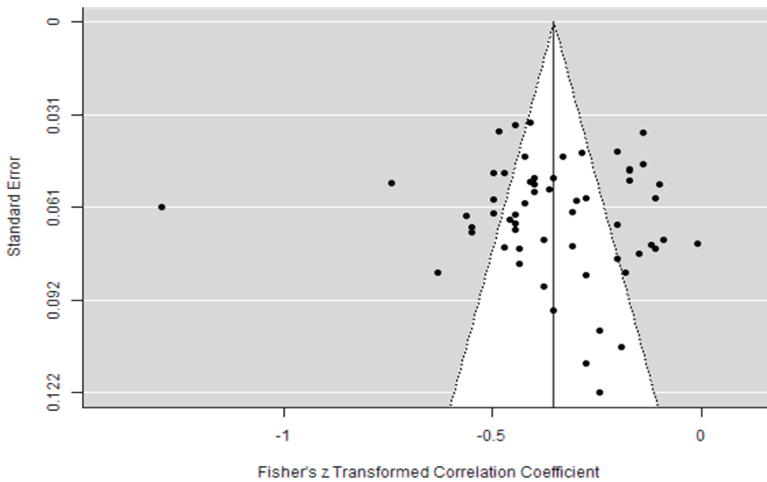
	k	N	\bar{r}	CID	CIG	Tau ²	I ²	Q
Proce- dural justice	58	17901	-.35	-.41	-.30	.04	91.59%	635.15

N = magnitude of sample; \bar{r} = weighted average effect magnitude; CID- lower limit of reliance interval; CIG-upper limit of reliance interval; Tau²= true variance; I² = percentage of total variability due to heterogeneity; Q = heterogeneity significance indicator

The results presented on table 5 show that there was no file-drawer effect in case of selecting studies about connection between procedural justice and intention to leave the organization entering the process of meta-analysis. The results indicate that 44346 studies had to be included showing no significant connection between procedural justice and intention to leave in order to render the assessment of effect magnitude insignificant (table 5). We can see on graph 3 that all the studies except one are uniformly distributed around the vertical axis. In the study of Khan and Habib (Khan & Habib, 2011) a very high correlation between procedural justice and intention to leave the organization is obtained ($r=-.86$). This study is published in a journal without impact factor and did not pass the reviews usual for journals with some impact factor, so it may be concluded that one of the reasons of such high correlation is perhaps a lower methodological quality of the study. Despite this difference, the analysis of asymmetry is in the shape of upside-down funnel indicating impartiality in sample selection.

Table 5: Fail – Safe N Analysis

FSN	p
44346	<.001



Graph 3: The asymmetry of studies included in meta-analysis

The analysis of moderation effect

Considering the very high level of heterogeneity among the studies that entered the process of meta-analysis – which were not a consequence of sample selection mistake – it is significant to investigate the influence of moderation variables (Sanchez-Meca & Marin-Martinez, 2010). As a potential moderation variable the category of journal which published the study has been recognized (1-no impact factor, 2 -M23, 3-M22, 4-M21). In order to establish whether weighted effect magnitudes differ with respect to the category of journal that published the study two one-directional ANOVAS are carried out (for distributional and procedural justice).

The results show that there is no statistically significant difference between average weighted effect magnitude neither for distributive justice with respect to the impact factor of the journal ($F(3, 49), =.68, p > 0.05$), nor for procedural justice ($F(3, 54), =.03, p > 0.05$). The results of values of average correlation by groups of studies according to impact factor are presented on tables 6 and 7.

Table 6. The analysis of weighted average effect magnitude for distributive justice with respect to the impact factor of the journal

Impact factor of the journal	The number of studies	\bar{r}
Bez IF	38	-.34
M23	3	-.40
M22	4	-.32
M21	8	-.33

Table 7. The analysis of weighted average effect magnitude for procedural justice with respect to the impact factor of the journal

Impact factor of the journal	The number of studies	\bar{r}
Bez IF	40	-.33
M23	5	-.33
M22	4	-.30
M21	9	-.33

The results show that there is no moderating effect of the category of journal that published the study neither on the relation between perceived distributive justice and intention to leave the organization ($\text{Tau}^2=.02, p>.05$), nor on the link between procedural justice and intention to leave the organization ($\text{Tau}^2=.03, p>.05$).

Discussion

The aim of this meta-analytical study has been to quantitatively integrate the results of previous studies which did not yield unambiguous results about the nature and intensity of the link between distributive and procedural justice and intention to leave the organization (Cao et al, 2013; Khan & Habib, 2011; Hassan & Hashim, 2011; Tekleab et al, 2005), in order to investigate this relation between justice perception and intention to quit.

The results show that procedural and distributive justice are significantly negatively connected with the intention to quit and that this connection is of moderate intensity; in this respect, it is consonant with the results of the meta-analytical study by Cohen and Spector (Cohen-Charash & Spector, 2001).

These results indicate that the employees' assessment of being treated fairly at work, of the procedures for distributing outcomes being equitable and of the distribution of outcomes themselves can have significant effects on their decision to leave or stay in the organization. These results may be significant, moreover, for those organizations which have high rate of fluctuation, because they suggest that there is a need – especially in the organizations resolved to preserve their personnel – to focus on creating procedures conducive to just distribution of outcomes.

It was established that there was no bias in the selection of studies to enter the process of meta-analysis, however, these results should be taken with some caution because of the marked intensity of heterogeneity among the studies. All the examinees in these investigations are on the active list, but the kind of work they do, the countries where they live and work, their gender, the positions they occupy and many other

variables can be potential effect moderators of their justice perception in the organization they intend to leave.

The results have showed that weighted effect magnitudes do not differ with respect to the category of journal in which studies were published, indirectly suggesting that the methodological quality of the studies had no significant effects as to the values of investigated meta-statistics. Since the source of journal category has not appeared as a significant moderator, it would be significant to study potential sources of heterogeneity further.

From the methodological point of view it can be observed that the authors of the studies that entered the process of meta-analysis used various instruments for measuring the three constructs, which could be a contributing factor to such a high level of heterogeneity.

Although bias in the selection process of studies that were accepted for meta-analysis has been analyzed and it has been concluded that there was no file-drawer effect, it should be noticed that only studies written in English were accepted in the meta-analysis hinting at some presence of bias after all. Moreover, master theses, doctoral dissertations and conference reports did not enter in the process of meta-analysis, which would be a good thing to do in some future investigation – to avoid bias in sample selection (Lau, Ioannidis, Terrin, Schmid, & Olkin 2006). In any case, accepting these kinds of investigations would open the question of methodological standards of studies not subjected to independent reviews and that remains controversial.

One more limitation of this study needs to be mentioned. Most of the works analysed - 78.4% - were published in journals which do not have impact factor; therefore, there remains a possibility that some studies accepted in the meta-analysis do not satisfy the highest methodological standards.

In spite of limitations and cautionary remarks in interpreting results, this meta-analytical study reveals the importance of its subject by showing preliminary results considering connection between organizational justice and intention to leave the organization. In our day, going away of highly qualified and well trained personnel has serious consequences for an organization. Investigating factors influencing the

decision of employees to leave the company can be of considerable significance for managers and organizational psychologists whose job is to create a favorable ambience to retain most qualified workers. The results of this and previous meta-analytical studies indicate that organizational justice should be approached as a significant factor that may determine the decision of the employee to leave the organization.

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ADDENDUM: STUDIES INCLUDED IN THE META-ANALYSIS

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