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How Emotional Intelligence and Adversity Quotient Impact Organizational Citizenship Behavior: A Meta-Analysis

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Original Article

How Emotional Intelligence and Adversity Quotient Impact Organizational Citizenship Behavior: A Meta-Analysis

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Abstract. Every organization wants to survive and develop. Therefore, extra-role behavior, commonly called organizational citizenship behavior (OCB), is required. OCB is absolutely essential for both personal and organizational dynamics. Hence, the objective of this investigation is to ascertain the impact of emotional intelligence (EI) and adversity quotient (AQ) on OCB. This investigation employs quantitative methodologies grounded in a literature review, which are then subjected to meta-analysis. 16 pertinent articles were selected from Scopus, SINTA, and Google Scholar between 2018 and 2024 to conduct a literature review. Meta-analysis using JASP 0.8 4.0 software found that EI and AQ significantly affected OCB, with a correlation coefficient (r) = 0.373 and 0.337 at p -value < 0.01. EI has a stronger influence on OCB than AQ. In addition, this research does not show publication bias, so the publications reviewed genuinely reflect the actual situation. This evidence confirms and strengthens previous relevant research used as the basis of the meta-analysis and offers new things regarding the influence of EI and AQ that significantly influence OCB. Therefore, the findings deserve further discussion among researchers and practitioners in the future.

Keywords: *Adversity quotient, Emotional Intelligence, Organizational Citizenship Behavior, Meta-analysis.*

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Introduction

OCB is crucial for organizational and personal dynamics. For example, Widodo and Gustari (2020) prove that OCB has a major impact on innovative behaviors. Other studies indicated that OCB affects task performance (Yang & Chae, 2022) and contextual performance (Widodo & Yusuf, 2021). OCB also contributes to productivity (Barsulai et al., 2019). Furthermore, it is a fundamental precursor to organizational performance (Notanubun, 2021). Conceptually, OCB encompasses employee efforts that go beyond job duties or organizational standards, such as taking on additional responsibilities, helping colleagues, following organizational procedures, protecting the organization's reputation, and exhibiting patience in the face of adversity (McShane & von Glinow, 2020; Schultz & Schultz, 2020). It also symbolizes the collective endeavors of all members of the organization, which can fortify the connections between members and result in extra-role actions that are advantageous to the organization (Organ, 2018). The theoretical framework of OCB is that employees who exhibit dedication to their organizations and are willing to assist others in enhancing the overall

organizational environment can generate advantageous resources for the organization (Haque et al., 2019). Examples of these voluntary actions include providing assistance to colleagues without expecting recognition or compensation, accepting additional responsibilities without being requested, and offering to mentor new employees (Garg, 2019). These actions highlight the added value that employees provide to the workplace. In order to take advantage of the various resources available to the organization, this theoretical viewpoint encourages organizations to foster an atmosphere that encourages organizational citizenship behavior (Iqbal & Piwovar-Sulej, 2023; Xie et al., 2023). Widodo and Sulistiasih (2023) list five essential criteria for measuring OCB: civic virtue, sportsmanship, conscientiousness, altruism, and civility. Helping others, especially those facing personal difficulties or unfinished organizational duties, is altruistic. Conscientiousness is represented by awareness and conduct that surpass organizational expectations or standards. Sportsmanship includes the ability to tolerate less-than-ideal situations in the workplace. Courtesy is trying to maintain cordial connections with people to avoid confrontations or difficult situations. Civic virtue denotes a dedication to take ownership of the organization's long-term viability and success. Empirically, these aspects can be influenced by EI and AQ.

EI is commonly defined as the ability to recognize and understand emotions, to be empathetic toward others, to process emotions reflectively rather than reactively, and to control emotions in healthy ways (MacCann et al., 2020). This concept is essential to psychological health since it helps us understand how our emotions might influence our actions (Kumari et al., 2022). It is a modern concept and a crucial area of psychology that significantly impacts many facets of human life, including students' educational experiences (Jan & Anwar, 2019). Perceiving the underlying motivations for their own and others' actions, such as understanding the rationale behind specific actions and knowing how to modify their own and others' behavior to promote success and personal and collective growth, is another skill that people with high EI exhibit exceptionally well (Mahanta & Goswami, 2020). According to Pishghadam et al. (2022), those with higher EI typically have better impulse control, better relationship management abilities, and an enhanced ability to handle stressful situations. In conclusion, EI can be considered an essential aspect of life since it greatly facilitates understanding others and helps manage difficult emotional situations (Garbenis & Palujanskienė, 2021). García-Martínez et al. (2021) assert that a self-reported assessment of EI assesses the perceived effectiveness of emotional processing, which includes components such as self-awareness, self-regulation, motivation, empathy, and relationship management. In order to be self-aware, a person must be aware of their feelings, use this information as a guide when making decisions, accurately assess their abilities, and have a healthy dose of confidence in themselves. Self-regulation is the ability to control one's emotions healthily, be conscious, put off short-term pleasure in favor of long-term objectives, and remain resilient when faced with emotional difficulties. Motivation is the sum of the innate desires that drive and guide people toward their goals, encouraging initiative and hard work and allowing people to grow and persevere in the face of obstacles and disappointments. Empathy is the capacity to empathize with the emotional experiences of others and to take on their perspectives, which promotes harmony among varied people and strengthens interpersonal ties. The skillful handling of emotions in interpersonal relationships is known as relationship management. It involves recognizing situational contexts and social dynamics, interacting with others in a smooth manner, using leadership and persuasion skills, and successfully negotiating and resolving conflicts to promote teamwork. People with high EI are typically better and faster at understanding and controlling their own emotions as well as those of others (Wijekoon et al., 2017). In order to promote personal development and success, they are also likely to understand the underlying causes of both their own and other people's actions,

including the rationale for particular behavioral patterns and strategies for modifying them (Mahanta & Goswami, 2020). Research from studies like Miao et al. (2020), D'Souza et al. (2021), and Perveen et al. (2021) show that EI significantly affects OCB. It implies that EI serves as a precondition for OCB. Therefore, it can hypothesize: EI positively impacts OCB (H₁).

AQ is essential for both individual and organizational survival. In the field of education, it is a critical factor in determining learning behaviors, academic performance, graduate quality, and overall life satisfaction (Singh & Parveen, 2018; Sigit et al., 2019; Puspitacandri et al., 2020). AQ is the capacity of an individual to overcome obstacles and actively engage in efforts to mitigate them (Hastuti et al., 2018). It includes the perseverance individuals display when facing achievement barriers (Suryaningrum et al., 2020). Thus, AQ encompasses the capacity to overcome barriers, respond to challenges, and seize opportunities (Widodo et al., 2022). AQ can be measured using four metrics (Stoltz, 2007): control, original ownership, reach, and endurance (CO2RE). The capacity to affect and direct a certain situation is known as control. Original ownership embodies the capacity to manage emotions, take risks, and resolve disputes. Reach is the ability to identify and express difficulties effectively, allowing participation in various areas of life. The ability to overcome obstacles by creating creative solutions is a component of endurance, which develops the strength needed to face various obstacles. A high AQ enables educators to persevere through hardship, effectively handle major obstacles, and view change as a chance for growth (Ariyanto et al., 2023). In addition, teachers with high AQ are likelier to have excellent OCB (selflessness, diligence, sportsmanship, civility, and civic virtue). For instance, teachers who exhibit a high level of endurance are likely to put in a significant amount of work to go above and beyond organizational standards (conscientiousness) and take responsibility for their behavior inside the workplace (civic virtue). Thus, it can propose a hypothesis: AQ positively impacts OCB (H₂).

Methods

Research Design

This article was written using a systematic literature review methodology. As seen in Figure 1, the papers under analysis came from the search results in the four databases: (1) Francis & Taylor, (2) ResearchGate, (3) Science Direct, and (4) Google Scholar. The author acquired 125 article search results by utilizing the keywords "Emotional Intelligence" AND "Adversity Quotient" AND "Organizational Citizenship Behavior" in the Scholar database. Using the keywords "Emotional Intelligence" AND "Adversity Quotient" AND "Organizational Citizenship Behavior," the author was able to find 57 articles in the ResearchGate database. "Emotional Intelligence" AND "Adversity Quotient" AND "Organizational Citizenship Behavior" were the keywords the author used to search the Science Direct database, and 15 articles were returned. The author then used the terms "Emotional Intelligence" AND "Adversity Quotient" AND "Organizational Citizenship Behavior" to search the Taylor and Francis online database, yielding five article search results. In order to find articles about Organizational Citizenship Behavior, a search of all keywords was carried out on November 10, 2024, at 10:45 local time. A total of 202 items were found after searching the four databases. An initial screening of the articles was conducted to check for duplicate content from other publications. The author cleaned up the references after analyzing six articles that were determined to be identical to other publications. The following author first examined the article titles and abstracts, confirmed the inclusion and exclusion criteria, and eliminated any submissions that did not fit the requirements (see Table 1). Twenty papers were left after the abstracts and titles were examined. After downloading all of the articles, reading them, and deciding whether or not to include them, the author finally filtered the remaining articles on

stage. Only 16 articles satisfied the inclusion criteria the author had previously established after reading every article in its entirety.

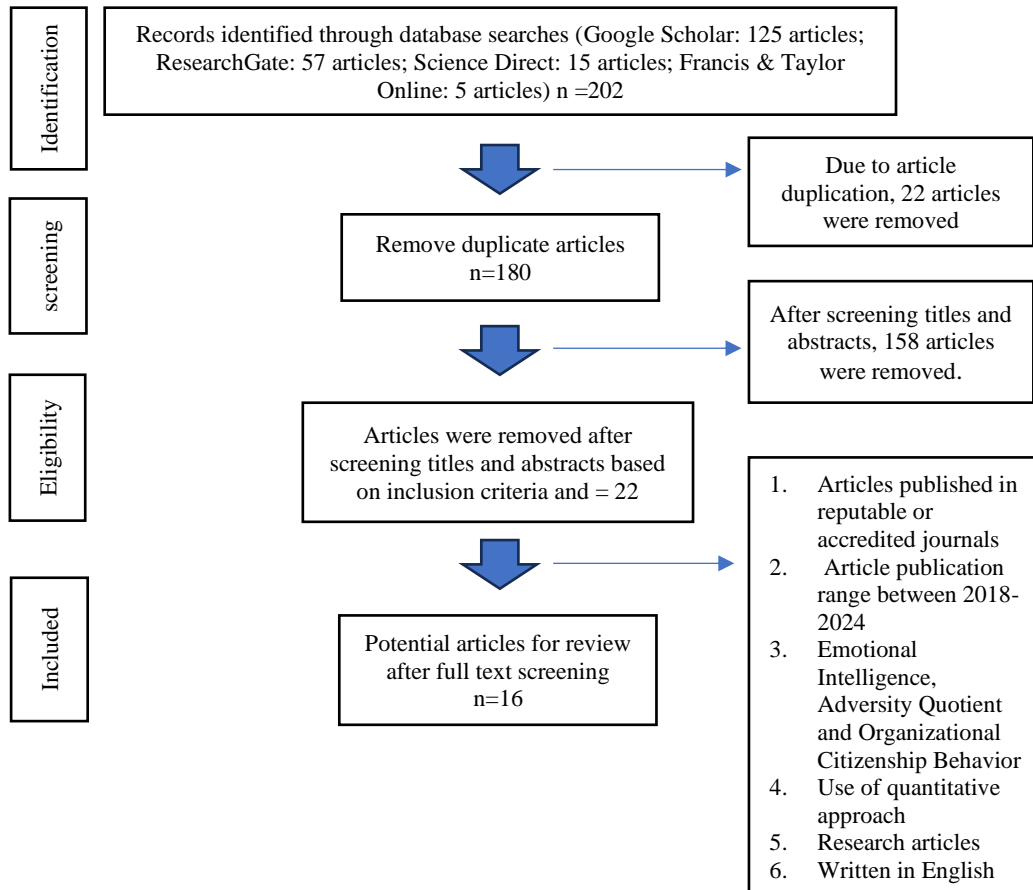


Figure 1. Flowchart of the article selection process

The quantitative meta-analysis approach was used in this investigation. [Mueller et al. \(2018\)](#) state that a statistical technique known as quantitative meta-analysis combines two or more linked research to provide a blend of quantitative data. In a meta-analysis, researchers synthesize data without changing the experiment; it is a retrospective observational study. Research articles that address the connection between EI, AQ, and OCB are the source of the condensed data. In order to concentrate the findings of this extensive investigation, research articles were selected based on a variety of criteria. These criteria included: (1) articles that are searchable through online international journal search databases such as Google Scholar, DOAJ, and others; (2) publications from various countries; (3) publications in English; (4) publications indexed by Google Scholar, SINTA, and Scopus; (5) publications from 2018 to 2024; (6) publications with a *r* or *t* value that elucidates the relationship between EI, AQ, and OCB; and (7) a minimum of 16 samples were examined. The objective of meta-analysis is to ascertain which papers should be incorporated ([Tawfik et al., 2019](#)). The hypothesis for a meta-analysis study is, therefore, highly beneficial in establishing the inclusion and exclusion criteria that must be promptly employed to identify pertinent papers ([Higgins et al., 2019](#)).

Data Coding

Coding is the most critical prerequisite for meta-analysis, as it simplifies the process of data capture and interpretation (Malički et al., 2021). The instrument utilized in this meta-analysis was a coding category page. The coding provides a detailed explanation of the characteristics of the articles that were utilized, such as the year of publication, the country of origin of the study, the publishing sample (n), the correlation value (r), the t-value, the Z, and the SE remarks, which involve journal data from other nations. Table 1 illustrates the distribution of the publications.

Table 1: Comparison of 16 studies based on n, r, and t value, 2018–2024

No	Study	Country	n	R	t	Z	SE
EI on OCB							
1.	Albdareen (2024)	Jordan	304	0.408	7.766	0.433	0.058
2.	Edwar & Sulastri (2023)	Indonesia	178	0.240	3.281	0.245	0.076
3.	Nosheen et al. (2023)	Pakistan	252	0.307	5.100	0.317	0.063
4.	Oktaviana & Safitri (2023)	Indonesia	40	0.348	2.290	0.363	0.164
5.	Santa et al. (2023)	Colombia	180	0.483	7.363	0.527	0.075
6.	Selanno et al. (2023)	Indonesia	86	0.225	2.113	0.229	0.110
7.	Widodo & Sulistiasih, (2023)	Indonesia	250	0.151	2.410	0.152	0.064
8.	Yusuf et al. (2023)	Indonesia	67	0.244	2.025	0.249	0.125
9.	Yadav & Chauhan (2023)	India	385	0.490	11.004	0.536	0.051
10.	Meniado (2020)	Saudi Arabia	37	0.664		0.800	0.171
AQ on OCB							
1.	Ariyanto et al. (2023)	Indonesia	118	0.612	8.345	0.713	0.093
2.	Nurbianta et al. (2022)	Indonesia	227	0.383	6.210	0.403	0.067
3.	Singh & Parveen (2018)	India	339	0.279	5.340	0.287	0.055
4.	Sobandi et al. (2021)	Indonesia	108	0.237	2.509	0.241	0.098
5.	Sulistiasih & Widodo (2022)	Indonesia	469	0.120	2.610	0.120	0.046
6.	Widodo et al. (2022)	Indonesia	589	0.294	7.450	0.303	0.041

Data Analysis

Analysis of the research sample's characteristics, data coding, conversion of t values to r correlation values, effect size heterogeneity test, mean effect size or summary effect computation, funnel and forest plot creation, hypothesis testing, and publication bias verification were done. A correlation meta-analysis was conducted using data from 16 articles that Google Scholar, SINTA, and Scopus indexed. Effect sizes fall into two categories based on Cohen's effect size criteria (Cohen et al., 2020). A mild effect is expressed as $< 0+/-0.1$, a modest effect as $< 0+/-0.3$, a moderate effect as $< 0+/-0.5$, a strong effect as $< 0+/-0.8$, and a very strong effect as $\geq 0+/-0.8$. JASP 19.0, the research program used in this study, has many helpful features for anyone interested in statistical data analysis and interpretation. It provides alternatives for Cohen's criteria, allows assumption testing, and may be installed on various computer operating systems.

Results and Discussion

EI on OCB

Different values of r and t were derived for every investigation based on examining ten publications using particular criteria. Before conducting the heterogeneity test, the researchers

transformed all research publications with no r-value from their t-value to r-values. Table 2 presents the heterogeneity test results, while Table 3 presents residual heterogeneity estimates.

Table 2: Heterogeneity test

	Q	df	p
Omnibus test of Model Coefficients	47.687	1	< 0.001
Test of Residual Heterogeneity	39.906	9	< 0.001

Table 3: Residual heterogeneity estimates

	Estimate	95% Confidence Interval	
		Lower	Upper
τ^2	0.020	0.006	0.108
τ	0.143	0.078	0.329
I^2 (%)	77.267	50.167	94.752
H^2	4.399	2.007	19.055

According to the heterogeneity above the test results, I^2 (%) is approximately 100%, indicating heterogeneity among the ten effect sizes of the examined studies, with $Q = 39.906$ and $p < 0.001$. τ^2 or $\tau > 0$. In addition, the summary effect or mean effect magnitude was investigated, and publication bias was tested using a random effect approach. Results of the summary effect or mean effect size analysis are presented in Table 4.

Table 4: Summary effect or mean effect size

	Estimate	Standard Error	Z	p	95% Confidence Interval	
					Lower	Upper
Intercept	0.373	0.054	6.906	< 0.001	0.267	0.478

Through the use of the random effect model, the study discovered a high positive correlation between EI and OCB ($Z = 6.906$; 95% CI [0.267; 0.478]). The study demonstrated that a p-value of less than 0.001 supports a significant relationship between EI and OCB, and H_1 was approved. There was a correlation ($r_{RE} = 0.373$) between EI and OCB in the week category. Furthermore, the investigation results are displayed using a visually appealing graphical technique called forest plots. Plots (dots) at particular intervals provide an estimated combined effect, making comparing research using forest plots easier.

The forest plot chart for the ten research in question is displayed in Figure 2. According to the forest plot chart, the impact sizes of the examined research vary from 0.01 to 1.14. A funnel plot was created next. In meta-analyses, a scatter diagram called Begg's funnel plot is used to visually identify potential publication bias (symmetrical or asymmetrical research samples). The funnel plot chart for the ten studies under examination is displayed in Figure 3. It is difficult to detect publication bias from the funnel plot chart alone because of the symmetry or asymmetry of the developed model; therefore, more research using the Egger test is required. The results of the Egger test are shown in Table 5.

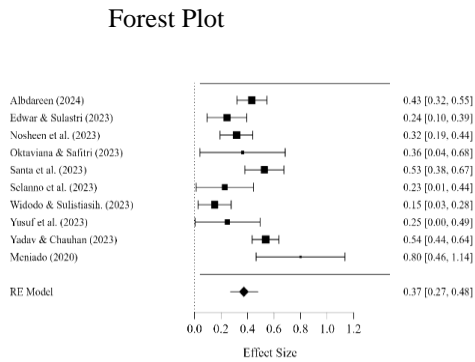


Figure 2: Meta-analysis forest plot

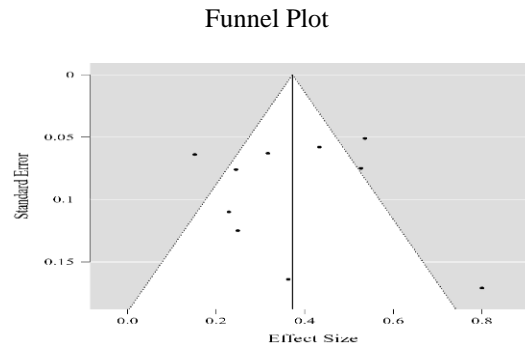


Figure 3: Funnel plot after trim-fill diagnosis

Table 5: Regression test for funnel plot asymmetry (Egger’s Test)

	Z	p
sei	0.577	0.564

Table 5 demonstrates that $Z = 0.577$, with a significance level of $p > 0.05$. The funnel plot's symmetry is confirmed. As a result, this meta-analysis study is not influenced by publication bias.

AQ on OCB

In Table 6, the heterogeneity test results are presented, and Table 7 estimates residual heterogeneity.

Table 6: Heterogeneity test

	Q	df	p
Omnibus test of Model Coefficients	18.334	1	< 0.001
Test of Residual Heterogeneity	37.532	5	< .001

Table 7: Residual heterogeneity estimates

	Estimate	95% Confidence Interval	
		Lower	Upper
τ^2	0.032	0.010	0.240
τ	0.180	0.098	0.490
I^2 (%)	90.256	73.168	98.563
H^2	10.263	3.727	69.577

The six effect sizes of the studies under consideration were heterogeneous, as indicated by the previous heterogeneity test results: $Q = 37.532$ with $p < 0.001$, τ^2 or $\tau > 0$, and I^2 (%) at approximately 100%. Finally, a publication bias test was conducted using a random effect approach, and the mean effect size or summary effect was estimated. The results of the summary effect or mean impact magnitude analysis are presented in Table 8.

Table 8: Summary effect or mean effect size

	Estimate	Standard Error	Z	p	95% Confidence Interval	
					Lower	Upper
Intercept	0.337	0.079	4.282	< 0.001	0.183	0.491

According to research findings utilizing the random effect model ($Z = 4.282$; 95%CI [0.183; 0.491]), there is a significant positive correlation between AQ and OCB. The p-value of less than 0.001 makes it clear that there is a significant correlation between AQ and OCB in this study. This is corroborated by research findings that were obtained through the use of the random effect model. Thus, H_2 was approved. According to research findings utilizing the random effect model, AQ and OCB have a substantial positive correlation, and this association is included in the week category ($r_{RE} = 0.337$). Furthermore, the investigation results are displayed using a visually appealing graphical technique called forest plots. Plots (dots) at particular intervals provide an estimated combined effect, making comparing research using forest plots easier.

Figure 4 shows the forest plot chart for the six studies that were reviewed. The forest plot chart indicates that the impact sizes of the reviewed studies range from 0.03 to 0.90. The following plot constructed was a funnel plot. A scatter map called Begg's funnel plot is used in meta-analyses to visually detect possible publication bias in symmetrical or asymmetrical study populations. For the five examined research, the funnel plot chart is shown in Figure 6. Since the resulting model is either symmetrical or asymmetrical, it is difficult to identify publication bias from the funnel plot chart alone. Therefore, additional research using the Egger test is necessary. Table 9 presents the Egger test results.

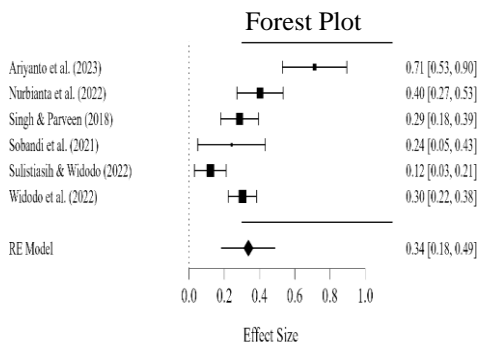


Figure 4: Meta-analysis forest plot

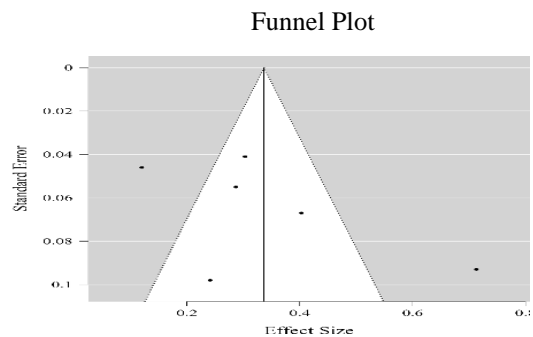


Figure 5: Funnel plot after trim-fill diagnosis

Table 9: Regression test for funnel plot asymmetry (Egger's Test)

	Z	p
sei	1.371	0.170

Table 9 indicates that $z = 1.371$ and $p > 0.05$. It illustrates the funnel plot's symmetry. Consequently, this meta-analysis study is not affected by publication bias.

Discussion

Based on 16 research results analyzed using meta-analysis, it is proven that EI and AQ significantly affect OCB. It means that high EI and AQ can increase OCB. The results of the

effect size analysis show that the influence of EI is greater than that of AQ, but the influence of both is classified as moderate. Consequently, EI needs to be considered more in influencing OCB than AQ. These findings confirm the findings of previous researchers that EI influences OCB (e.g., Albdareen, 2024; Nosheen et al., 2023; Oktaviana & Safitri, 2023; Edwar & Sulastri, 2023), and AQ has a significant relationship with OCB (e.g., Ariyanto et al. al., 2023; Sulistiasih & Widodo, 2022; Nurbianta et al., 2022). In addition, the symmetric shape of the funnel plot and Egger's test did not reveal any publication bias in this study. In order to ascertain the significance of the sources employed, the quality of pertinent research methods, the accuracy of research conclusions, and the impact of varying sample sizes on conclusions with minimal bias, publication bias analysis is necessary. Therefore, studies not included in this study had similar results to studies included as samples in this meta-analysis. Under these conditions, there is no need to doubt that EI and AQ are crucial determinants of OCB. It means that when EI and AQ are increased, it will have implications for increasing OCB. For example, when employees' EI is improved, for instance, through training or workshops, it can improve their OCB, which is reflected in organizational/community virtues, sportsmanship, conscientiousness, altruism, and politeness in work and organizational activities. Likewise, improving employees' control capacity, reach, and endurance can also stimulate their sportsmanship, awareness, and altruism.

Conclusion

This research uses a meta-analysis approach to determine the influence of EI and AQ on OCB. The research results show that EI and AQ significantly affect OCB. Both have a moderate influence, but the strength of EI is stronger than AQ. Consequently, EI needs to be considered more in influencing OCB than AQ. Furthermore, this research does not exhibit publication bias, ensuring that the publications reviewed accurately reflect the current situation. It implies that the publications exhibit the same sample, despite their origins in distinct scientific disciplines. This evidence confirms and strengthens previous relevant studies that were used as the basis for the meta-analysis and offers new things regarding the influence of EI and AQ on OCB based on various previous relevant studies. These findings provide theoretical contributions for future researchers, who can use the results of this meta-analysis with samples from different research publications and larger numbers to find more theories regarding the relationship between EI and AQ with OCB. The findings of this meta-analysis also provide practical implications for organizational and management practitioners as a reference in developing employee OCB through the EI and AQ perspectives.

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