

Unveiling the Foundations of Moral Courage: A Systematic Framework and Meta-Analysis

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Abstract

The primary aim of this investigation is to provide a well-structured and systematic framework that enhances the comprehension of emerging trends and the key determinants influencing moral courage. This research endeavor addresses a significant gap in the scholarly literature by addressing the absence of a methodical and coherent literature review exclusively dedicated to the examination of moral courage. It assumes the role of a foundational reference for future inquiries in this area. To acquire data, a meticulous systematic review coupled with a comprehensive meta-analysis was conducted, utilizing CMA2 software. This comprehensive review encompasses the time period from 2000 to 2020, ensuring a thorough analysis of the temporal scope. Sample selection followed a multistage process involving identification, screening, competency assessment, and inclusion criteria. Ultimately, 15 Persian articles were deemed suitable for inclusion in the sample, contributing valuable insights to the study. Organizational virtue was found to exert the greatest influence, followed in descending order of significance by determinants such as citizenship behavior, attitude, the sense of duty or obligation, managerial acceptance, social capital, age-related factors, and the provision of support. By exploring the determinants and emerging trends of moral courage, this study contributes to a deeper understanding of this important construct. The findings serve as a valuable resource for researchers and practitioners in the field, facilitating future investigations and interventions aimed at promoting moral courage in various contexts.

Keywords: Moral courage, Systematic review, Meta-analysis, Organizational behavior, Attitude, Meta Analysis

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Introduction

Contemporary scholars and specialists in the realm of organizational ethics currently advocate for a transformative paradigm shift that necessitates a profound evolution of individual personality traits and an in-depth reassessment of personal moral compasses and value-based accountabilities (1). Such a transformative ethos can be regarded as a manifestation of moral courage, a phenomenon of noteworthy significance due to its intrinsic detachment from personal vested interests and its potential to jeopardize one's well-being on various levels, encompassing physical, social, psychological, and financial aspects (2).

The rationale underlying the investigation and exploration of ethical quandaries resides in the aspiration to navigate the present epoch characterized by a pervasive moral crisis. Within the organizational domain, immorality serves as a conspicuous manifestation of this overarching moral quandary. Immoral conduct within organizational contexts has evolved into an imperative concern of overarching societal relevance (3). Such unethical behavior not only besmirches an organization's integrity but also engenders legal obligations and erodes public trust. On a global scale, the economic ramifications of fraud transgress into the trillions of dollars annually, while bribery and corruption persist within both private and public sectors (4). The word courage usually evokes battlefield heroism and is used by ancient philosophers such as Plato and Aristotle(5). There are many definitions of courage in the sources; Courage is defined as the extreme expression of motivation and commitment and is often associated with self-determination, faith, hope, and perseverance, especially when striving for something of intrinsic value at the same time feels fear (6). Moral courage, first introduced in the nineteenth century, is defined as people's willingness to face the pain and dangers of social rejection in the performance of their duties(7). The word moral courage in the Oxford English dictionary is derived from more, which has Latin roots, meaning custom, habit, routine or derivative action. Therefore, moral people are those who usually judge whether an action is good or bad (8). Moral courage is a virtue-based on the force of will that motivates a person by fundamental values. When that person is unable to do the right thing morally, moral courage helps to strive for the ultimate goal, regardless of the consequences, and to do the right thing by following moral principles that are not easy to do (9). Moral courage is defined as the strength of a flexible personality, which provides the necessary conditions for commitment to personal moral principles (10). Moral courage is the distance between knowing one's values and job commitments and acting on them despite risks such as social embarrassment, shame, or job loss(11). In addition to recent definitions of moral courage, this virtue has long been debated since Aristotle's concept of courage. Moral courage is supported as a skill that can be taught(12). Along with emotional reactions, self-efficacy and expectations of results are essential mental processes shaping a courageous moral response. Self-efficacy is a psychological state and refers to a person's self-confidence to perform certain behaviours in certain situations (8).

Having moral courage is a lifelong commitment. A concept analysis showed that perhaps the most effective teaching of moral courage is the constant subconscious reflection on the basic moral principles behind the decisions and actions(13). Thus, a person's capacity for moral courage varies from person to person based on their experiences(12). Courageous actions in the organization consist of five essential parts: free choice in decision-making for action (on the contrary, I am forced), risk of harm, assessing the risk of being a reasonable and justifiable action, pursuing value goals, conscious action despite fear(14). Leaders often need to make ethical decisions, especially in high-risk areas. In cases where uncertainty and ambiguity are inherent elements of organizational performance, acting on one's ethical principles may mean facing personal danger, social exclusion, or even physical danger (10).

Applicable learning theories in moral decision-making and moral courage include Bandura's Social Cognitive Theory (SCT) and Kolb Experimental Learning Theory. SCT has a multifaceted causal structure in which self-efficacy beliefs operate with known goals, outcome

expectations, environmental barriers, and facilitators regulating human motivation and well-being (12). Through the evaluation process, moral courage is validated as a competency. A model known as the Defining Issues Test (DIT) can evaluate a person's moral development. Defining Issues Test (DIT-2) is one of the most widely used moral development measures(15). Numerous studies have been conducted in the field of moral courage, most of which have descriptively reported the level of moral courage. For example, Sekerka & Bagozzi (2007) examined moral courage in a study entitled Moral courage in the workplace: Moving to and from the desire and decision to act(8). By designing a model, they showed that acting courageously is morally subject to a self-regulation. Osswald et al. (2010), in a study, entitled What is moral courage? Definition, explication, and classification of a complex construct showed that moral courage shares certain aspects with behaviour, heroism and social control(16). However, moral courage should be considered a subset independent of social behaviours and should not be subject to social behaviours such as helping behaviour or heroism. Comer and Sekerka (2017), in a study, entitled Keep calm and carry on (ethically): Durable moral courage in the workplace showed that ideally, all organizations appreciate and support their members' efforts to conduct ethically on behalf of colleagues, customers, the community, and other stakeholders. Khelil et al. (2018), in a study entitled Breaking the silence: An empirical analysis of the drivers of internal auditors' moral courage, found that self-efficacy, flexibility, perceived supervisor support, and independence of internal audit performance have a positive effect on internal auditors' ethical courage(17). However, hope does not show a significant link. Also, we find that women experience higher moral courage than men. Gibson (2019), in a study entitled Longitudinal learning plan for developing moral courage, acknowledged that Bandura's theory of social cognition learning and Kolb's experimental learning theory helps to increase and develop moral courage(12).

To meet these needs, the present study seeks to answer the following questions:

1. What variables have been studied in research on moral courage?
2. Which factors have the most impact in research on moral courage?
3. Are there any inconsistencies in previous studies of moral courage?
4. What is the magnitude of the random and constant effect of variables affecting moral courage?
5. According to the Rosenthal method, is there a publication bias in previous studies?

Research methodology

The research method of this study is meta-analysis. To obtain scientific documents and evidence related to the research topic, an electronic search was conducted independently and in English and using the keyword Moral courage in Science Direct, Scopus and Google Scholar databases. Also, internal databases including SID, Noormgas, Magiran in Persian, and moral courage were reviewed. All searches in this study were conducted among articles published in the period 2000-2020. Articles were reviewed without special restrictions. After compiling a list of searched article titles, the articles with duplicate and unrelated titles were removed. Then the abstracts of articles were reviewed to find appropriate researches. The found articles were examined based on inclusion and exclusion criteria to select the appropriate articles in the next step.

Inclusion and exclusion criteria of articles

Inclusion criteria: Researches that have been done about moral courage. Studies containing a report on moral courage and any related factors affecting moral courage were reviewed.

Exclusion criteria: Abstracts, posters and letters to the editor were excluded from the study. If an article was published several times, it was used only once to in this study. Also, articles in which the direction of the relationship was not clear.

Criteria for selecting and evaluating the quality of articles

First, a list of titles of all articles in the databases was prepared, and after controlling the selection, the relevant titles were reviewed. The related articles were then entered into the research process independently. At first, 138 articles were selected and reviewed, of which 120 articles were excluded based on duplication and lack of inclusion criteria. In the end, 15 eligible articles were thoroughly reviewed (Figure 1).

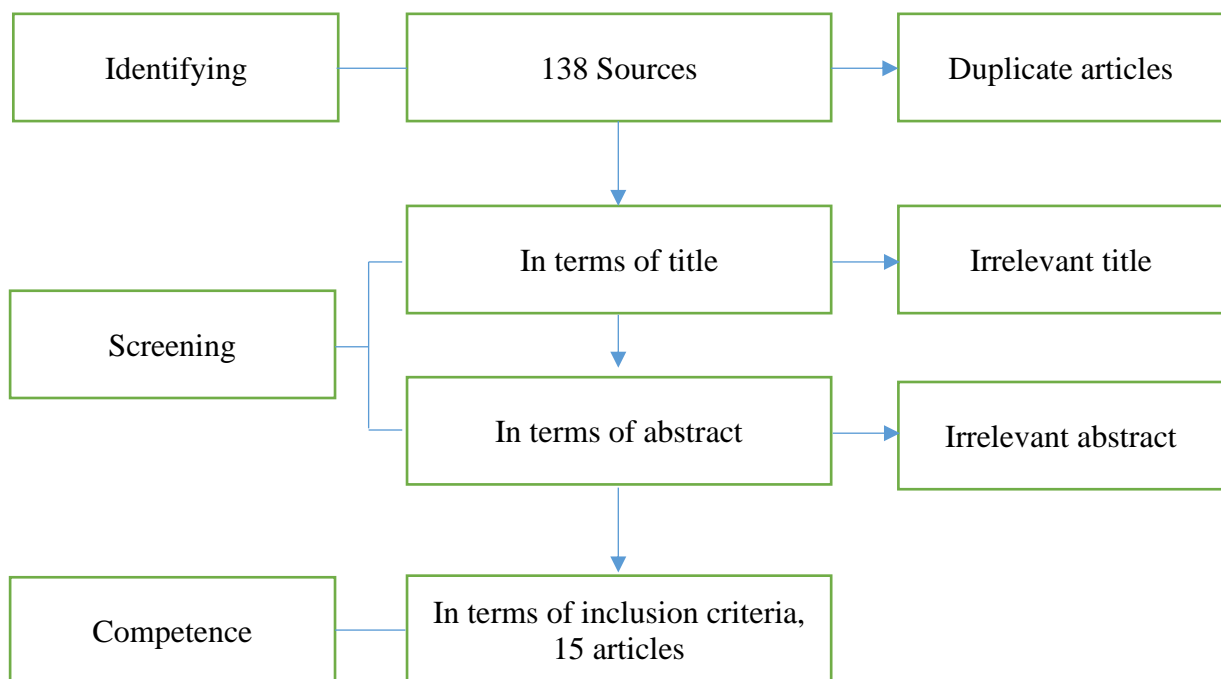


Figure 1. Standard diagram of the search process and selection of related articles

Data extraction

With the authors' names, year and title, the selected research is as follows (Table 1).

Table 1. Articles used in the research

Item	Title	Authors (Year)
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1	Investigating the effect of poisonous leadership on organizational silence with the mediating variable of moral courage	Mohammad Zaheri et al. (2019)
2	The moral courage of nurses in educational and therapeutic centers	Yamada et al. (2019)
3	Investigate the relationship between attitude and practical commitment to prayer with moral courage in nurses working	Taghadosi et al. (2020)
4	The Drivers Affecting Internal Auditors' Moral Courage	Safarzadeh & Karimdad (2020)
5	Investigation of moral courage and its predictive factors in nurses of Baqiyatallah hospital	Khajevandi et al. (2020)
6	Canonical analysis of professional moral courage and social capital	Ghalavandi & Koushki (2020)
7	The effect of the managers' legitimacy of the organization on the Whistleblowing intention with the role of mediator of moral courage	Sepahvand et al. (2020)

Data were extracted using a standard information extraction form. This form included the characteristics: first author name, year, geographical area, design tool, sample size and final research results. After completing this form, the results from reviewing the articles using cma2 software were analyzed, summarized, and reported (Table 2). In this study, which examined internal studies, 3410 statistical samples have been studied, and the highest frequency is related to Tehran.

Table 2. Standard information extraction form for Persian articles

Item	Main Findings	Sample	Location	The first author (year)
1	Nurses' work experience had a positive and significant relationship with moral courage and beyond surrender.	Convenience sampling 151	Tehran	Moosavi (2017)
2	There was a significant relationship between age, nursing management experience and moral factor dimension multiple values.	Convenience sampling 131	Tehran	Moosavi1 (2016)
3	Moral courage significantly affects organizational silence and the mediator variable's role in the relationship between poisonous leadership and organizational silence.	Morgan table (random cluster sampling) 196	Hamedan	Mohammad Zaheri (2019)
4	A positive and significant relationship was found between age, work experience, marital status and moral courage.	Simple random 305	Urmia	Namadi (2019)
5	The relationship between the two variables of attitudes and practical commitment to prayer for nurses	Multi-stage random 400	Kashan	Taghadosi (2020)

and nurses' moral courage was statistically significant.

Explanatory findings, the size of the effect of factors affecting moral courage

To perform a meta-analysis and combine the research results, test statistics must be converted to effect size values. The formulas mentioned are given in Table 3.

Table 3. Formulas for converting test statistics to effect size

Statistics	R	F	T	z	D	X ²	F	T
The formula for converting to r or d	$d = \frac{2r}{\sqrt{1-r^2}}$	$d = \frac{2\sqrt{F}}{\sqrt{df(error)}}$	$d = \frac{2t}{\sqrt{df}}$	$r = \frac{z}{\sqrt{z^2 + N}}$	$r = \frac{d}{\sqrt{d^2 + 4}}$	$r = \frac{\sqrt{X^2}}{\sqrt{n}}$	$r = \frac{\sqrt{F}}{\sqrt{F + df(error)}}$	$r = \frac{\sqrt{t^2}}{\sqrt{t^2 + df}}$

The effect size r is used here. The interpretation of the effect size is according to Table 4.

Table 4. Interpretation of effect size

Effect size	r	d
Low	.1	.2
medium	.3	.5
High	.5	.8

Table 5 shows the distribution of effect size, low limit, high limit and significance of each research hypothesis separately for each study.

Table 5. Effect size

Article	Independent variable	Effect size	Low limit	High limit	Z-Value	P-Value
1	Moral distress	-.44	-.525	-.346	-8/314	.000
2	Organizational virtue	.74	.678	.791	14.938	.000
3	Organizational virtue	.17	.005	.326	2.017	.044
	Citizenship behaviour	.42	.274	.546	5.259	.000
4	Moral sensitivity	.15	.029	.267	2.423	.015
5	Age	.175	.064	.282	3.073	.002
6	Social capital	.43	.278	.561	5.162	.000
7	Age	.3	.135	.448	3.502	.000
	work experience	.25	.087	.404	2.890	.004
8	Age	.31	.153	.452	3.766	.000
9	Attitude and obligation to prayer	.42	.288	.537	.785	.000
10	Moral Distress	-.166	-.272	-.056	-2.936	.003
11	work experience	.180	.023	.328	2.224	.025
12	Poisonous leadership	-.273	-.398	-.139	-3.938	.000
13	Efficacy	.192	.064	.313	2.924	.003
	Flexibility	.203	.076	.324	3.100	.002
	Support	.386	.270	.491	6.130	.000
	Independence	.140	.011	.265	2.130	.033
	Hope	.187	.059	.309	2.853	.004
14	Employment status	.165	.022	.302	2.263	.024

15	Managers acceptance	.304	.183	.417	4.476	.000
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As shown in Table 5, after calculating the effect size of 21 variables related to moral courage and based on Cohen's guide table (Ghazi Tabatabai and Dadahir, 2010) on the amount of low, medium or high effects, the variables were categorized. These variables have a stronger relationship and a more decisive role in the amount of moral courage than the variables that are in the following categories. Therefore, in the first place, to increase moral courage, more attention should be paid to these variables. Medium effect size, these variables have a decisive role in the amount of moral courage after the first category variables. Low effect size, moral courage is weakly determined by these variables. A significant effect is statistically significant in determining the level of moral courage of all variables (P-value less than 0.05, the absolute value of Z more than 1.96). In analyzing these effect sizes, it should be noted that the number of studies based on which the effect size determined for all variables was not the same. As a result, these effect sizes do not have the same validity. More research to be done in the future will make it possible to calculate and estimate each variable's effect size with more research. To combine the results affecting moral courage, the effect size of the selected research variable is presented in the form of the amplitude of effect intensity change in Table 6.

Table 6. Frequency distribution of effect size classes of variables

The amplitude of effect intensity change	Frequency percentage	Frequency
Effect intensity below 0.3 (low)	57.14	12
Between 0.3 and 0.5 (medium)	38.09	8
0.5 and above (high)	4.77	1
Total	100	21

The average effect of factors affecting moral courage

The average effect of the factors affecting moral courage is determined by considering the fixed effect model and the random effect model in Table 7. These average values represent the effect size of the 21 effect sizes previously extracted from 15 studies. The fixed-effect model and the random effect model are both significant (P-value less than 0.05). The Q statistic, which shows the heterogeneity between the meta-analyzed studies, is statistically significant (Q = 410.324, P-Value = 0.000, df = 20). The random effect model is a more appropriate indicator in this meta-analysis than the fixed-effect model, and the results of the random effect model should be interpreted.

Table 7. The average effect of factors affecting moral courage

P-Value	df	Statistics Q	P-Value	Z-Value	High limit	Low limit	Effect size r	Type of effect
.000	20	410.224	.000	12.208	.213	.155	.184	Fixed effect
			.002	3.111	.339	.088	.231	Random effect

The sensitivity analysis test in this study shows that none of the studies significantly affect the results' significance, and none of them are omitted.

Evaluation of publication bias

Publication bias means that a meta-analysis does not include all the studies conducted on the subject under study. Meta-analysis may only study sources within a particular language; Meta-

analysis may be weak in selecting sources and ignoring many valuable sources of information, selecting sources that have been repeatedly cited or published more than once in various forms(18). Another study and analysis conducted in this study were examining the publication status and bias of research data. Studies performed by meta-analysis may lead to erroneous conclusions, which may be related to the publication of positive results or non-publication of negative results. Of course, not paying proper attention to the studies' results or not paying attention to the differences in the studies' quality is an essential factor that can play a role in the publication's bias. Even the use of multiple and different tests and failure to observe the correct scoring in data coding and failure to properly examine the agreement coefficient in such studies also play a role in errors in meta-analysis studies. Therefore, one of the essential parts in conducting meta-analysis studies is to investigate publication bias status due to publication of published research and non-publication of some research and the types of errors mentioned. In the presence of publication bias, the meta-analysis results will also be affected, and thus the conclusions will be distorted and erroneous. In this research, a funnel chart has been used to identify the publication bias. According to this chart, the effect of the intervention obtained from each study is plotted against the sample size of that study. According to the logic of funnel charts, researchers with low standard error have no publication bias and accumulates at the top of the funnel. However, conversely, researchers with high standard error accumulate at the funnel's bottom and their publication bias increases. Also, if there is no publication bias, the chart becomes symmetrical around the effect size summary.

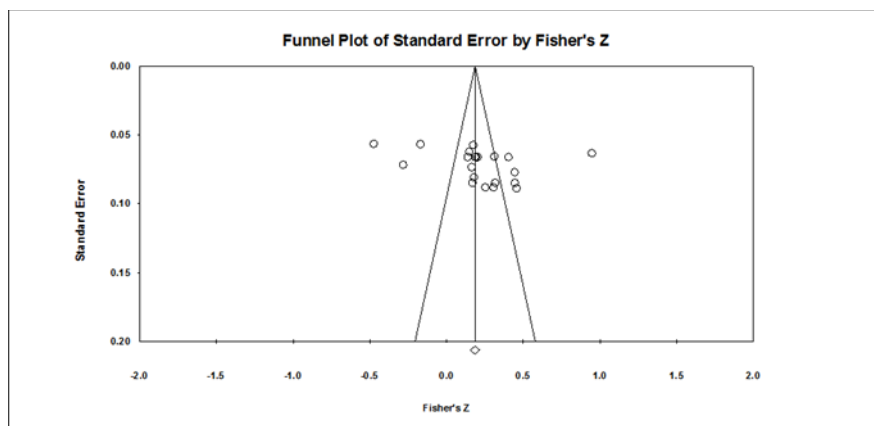


Figure 2. bias chart

Begg & Mazumdar rank correlation test

This test examines the publication bias and symmetry of the data in the funnel chart. Studies are ranked based on error rate and effect size. According to P-Value's value in this test, the study is not biased, and the size distribution of the effects of studies is symmetric (P-Value = 0.0908).

Egger test

This test is also used to examine the publication emission effectiveness on meta-analysis. In this test, as the absolute width of the origin increases, the P-value decreases. According to the P-Value value in this test, the study is not biased, and the size distribution of the effects of studies is symmetric (P-Value = 0.121).

Missing Studies and the Trim & Fill Method

One of the most common forms of missing data in meta-analysis is missing studies in the literature search process. The method of correction and adjustment of Duval and Tweed (2000) is based on the funnel chart's asymmetry. This method creates the size of the missing studies'

effects in the funnel chart and then estimates the average size of the effects based on the hypothetical data. According to the data analysis in the left part, seven studies were hypothetically added, and the results were reviewed.

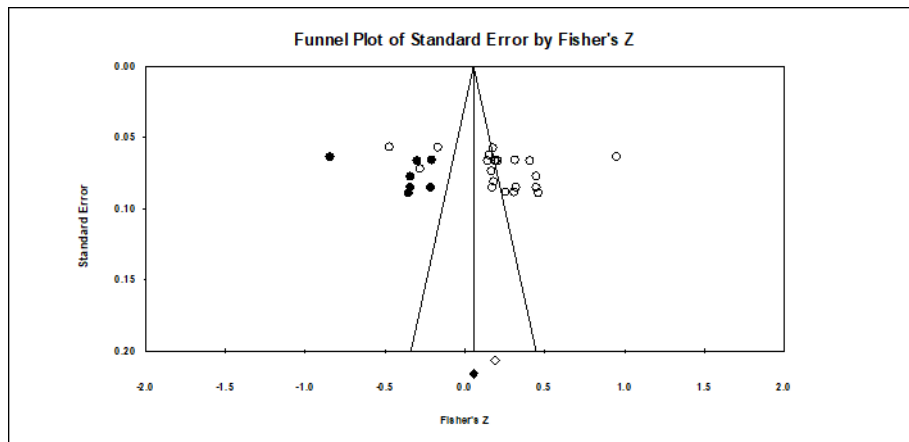


Figure 3. Bias adjustment chart

Error-free N method

The error-free N evaluates the impact of studies excluded from the meta-analysis. This statistic assumes that the number of studies excluded from the meta-analysis has the magnitude of the effects that affect the studies' medium effect size included in the meta-analysis. For this purpose, this statistic calculates the number of studies included in the meta-analysis to zero the missing studies' effects.

Rosenthal Method: Rosenthal described the logic of his method in his 1991 book. In this way, he assumes that the average effect in hidden and unpublished studies is zero ($Z = 0.000$); Then; based on this assumption, he estimates the number of studies with a mean of zero that can change the overall level of significance to a non-significant level. Based on the presented results, it is possible to estimate the resilience of studies related to moral courage against publication bias. Nine hundred nineteen studies with the non-significant effect are needed to significantly change the size of the studies' combined effect from non-significant to significant. According to the Rosenthal method's findings, if the number of missing studies is more significant than five times the estimated number of studies plus 10, then it can be said that the studies are resistant to publication bias ($N_f > 5N + 10$). The results of this study are reported in Table 8.

Table 8. Estimation of publication bias in studies of moral courage by Rosenthal method

Result	Number of studies	Alpha	P-Value	Z	Number of effect size
There was no bias	919	.05	.000	13.110	21

Discussion and Conclusion

This research undertakes an extensive examination of the extant literature pertaining to the determinants of moral courage, delineating the variables and their respective magnitudes of influence. Notably, employees often abstain from engaging in vital organizational activities, with one such behavior being the reporting of instances of mismanagement. This reticence can be attributed to the precarious nature of informal or temporary employment contracts, which render individuals susceptible to the discretionary decisions of their supervisory authorities. Consequently, individuals are compelled to overlook myriad managerial issues and deficiencies. Concurrently, prior investigations have underscored the pivotal role of

organizational virtues in shaping employee conduct. Hence, the cultivation of moral courage emerges as a pivotal criterion, enabling individuals to manifest morally courageous behaviors even in the face of organizational opposition. Furthermore, it can significantly aid senior management in the formulation of strategic plans, policy development, and program evaluation. Scholarly consensus largely supports the notion that moral courage can be cultivated (19-21), a finding consistent with international research outcomes (12, 22).

Notably, a substantial correlation has been substantiated among individual, environmental, managerial, occupational, and organizational factors (1). Predominantly, research has delved into the individual and organizational dimensions of this construct (8). Elevated levels of moral courage have been associated with influential factors, such as high moral standings (23-27). The augmented scores in moral courage can be attributed to the substantial organizational support and job security afforded to personnel. Interestingly, nurses exhibit varying degrees of moral courage, with some studies identifying them as displaying high moral courage (28, 29), while others categorize their levels as weak (30). Discrepancies in these findings are attributable to factors such as the moral climate within the organization, managerial backing, apprehension of social ostracism, and the organization's stance on moral courage (24). Pernicious leadership, characterized by traits such as narcissism and the denigration of subordinates, contributes to a climate of organizational silence. Such leaders, through their deleterious behavioral attributes, corrode the organizational ethos and moral values, diminishing employees' resolve to combat administrative and fiscal malfeasance and impeding their resilience (31).

Furthermore, the acceptance of managers plays a significant role in cultivating employees' moral courage in the fight against corruption. This acceptance may be related to the managers' expertise, their engagement with influential external stakeholders, or their charismatic influence (32, 33). These findings are consistent with previous research outcomes (Reference 34), corroborating the perspective of moral courage experts who assert that professional moral courage is synonymous with the ability to uphold intrinsic ethical principles, act in the best interests of others, and do so irrespective of personal threats (8). Furthermore, there exists a connection between organizational virtues and citizenship behavior with moral courage and its subcomponents (35, 36).

Findings from this study underscore the determinants of moral courage. Organizational virtue emerges as the most salient influential factor, enabling organizations to bolster and amplify the moral courage of their workforce. This moral virtue serves as a catalyst, strengthening and manifesting professional competence. In light of the pivotal role of moral courage and its repercussions on behavioral conduct, organizational managers should prioritize the removal of associated barriers. To enhance managerial moral courage during employee recruitment and hiring, particular attention should be directed toward critical psychological traits and cognitive demographics. Simultaneously, the optimization of the work environment should center on heightened employee support. Consequently, it stands to reason those individuals possessing greater moral courage are more likely to expose transgressions.

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