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Research Paper

Meta-Analysis: Qualitative Review of Human Resource Management Studies

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Abstract

This article defines a systematic qualitative review and considers how it can advance our knowledge of HRM literature. Those of us who care about people who are in Human Resource Management (HRM) literature rely on data demonstrating the efficacy of various interventions. In order to inform our practice and better understand what works, a solid systematic review can be quite helpful in compiling research evidence. Understanding how people with HRM literature experience their HRM literature and their treatment, in addition to having proof of effectiveness, can be helpful when we are collaborating with them to deliver care that satisfies their requirements. A thorough qualitative systematic review can also produce new insights, frequently illuminating the HRM studies' contribution to literature and can aid in the development of theories. Such a review can provide insight into what like to have long-term HRM literature. The many steps of meta-ethnography, the most popular methodology used for qualitative systematic reviews, are presented in this article. It provides examples of the kinds of discoveries that can result from this method using data from four meta-ethnographies that are pertinent to HRM literature. It demonstrates how new insights could develop and provides an illustration of how chronic musculoskeletal HRM literature can be felt as "an antagonistic fight" in many facets of a person's life. The conclusion of this article is that evidence from qualitative systematic reviews can be used in conjunction with or as a complement to evidence from more quantitative methodologies.

Keywords *Meta-ethnography, qualitative synthesis, qualitative systematic review*

INTRODUCTION

The aim of this study is to define a qualitative systematic review of 8 HRM qualitative studies and investigate how it can advance our knowledge of HRM literature. Bringing together research on a subject, a qualitative systematic review systematically searches for research evidence from primary qualitative research and synthesizes the results. Whether the search needs to be thorough is up for discussion based on a systematic literature review based on eight qualitative reviewed research shown in table 1 as well as the discussion extended based on research like Mammadova (2022), Shiferaw (2022), Capiña (2021), Tilman (2021), Asefa and Kant (2022) to Nurhasanah et al. (2023). The Cochrane Collaboration is credited with developing well-established, explicit methods for conducting systematic reviews of quantitative research. The techniques for conducting qualitative systematic reviews have only lately been devised and are continually changing. The Cochrane Collaboration currently has a Qualitative and Implementation Methodologies Group, which includes a register of protocols, demonstrating how the Cochrane Collaboration recognizes the significance of qualitative research.

LITERATURE REVIEW

For this study, the systematic literature review based on nine works of literature is present in Table 1.

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Table 1. Systematic Literature Review

Author(s)	Title of the study	Methodology	Conclusion	Research Gap
Adula et. al., (2023)	Qualitative Analysis with MAXQDA: Effect of HRM Practices on Organization Performance with Mediation of Employees Work Attitude in Textile Industries of Ethiopia	The study employed content analysis, a qualitative analytical technique. The results of this investigation were made accessible using the MAXQDA 2020 software tool.	The outcomes of the study revealed a significant overlap in the usage of employee commitment and human resource management ideas. The study's findings have led to a better understanding of how organizations can use employee commitment and effective external rewards to draw in motivated workers.	A qualitative evaluation of the interviews identifies research implications in the area of human resource management practices that need to be filled.
Fareed et al. (2019)	What makes HR professionals effective? Qualitative confirmation from telecom segment of a emergent economy	Qualitative study through semi-structured interviews. Detailed but open-ended inquiries (Interview Protocol). Content evaluation.	Nurturing an individual as a human resource is an inclusive procedure of developing, retaining, and enabling key talent and their potential to achieve targets.	The study's findings are only applicable to telecom companies. The theoretical research model needs to be empirically examined. May look at further contextual elements that affect how good HR experts are.
Wood (2021)	Developments in the HRM–Performance Research stream: The mediation researches	Evidence-based approach, formulaic methodology.	The primary issues with black-box research continue to be the incorrect use of additive indexes in relation to the theory of synergistic relationships,	There is a pronounced divide between these researches and those focused on high-involvement management,

			uncertainty surrounding the analysis techniques, insufficient justification for the practices chosen in the empirical investigations, and underrepresentation of employee involvement.	with the majority of respondents inclined towards high-performance work systems.
Azmi & Hashim (2022)	Do HRM practices facilitate innovation? A qualitative study in a developing country.	The use of the qualitative method involved conducting a semi-structured interview with two groups of employees, senior management and executive, in two different categories of public organizations: award-winning and non-award-winning. The gathered data was afterward subjected to a thematic analysis. Thematic and content analysis.	In terms of how public agencies have implemented HRM practices that support innovation, the data demonstrate both variances and commonalities. The public organizations that were recognized for their HRM practices appear to be those who implement local training, offer a wider variety of rewards to their employees, and set a higher bar for innovation in their performance evaluations.	Only 10 public agencies in Malaysia are included in this study. To make the results more thorough, future researchers might want to use a bigger sample size. Social exchange and equity were the only 2 theoretical frameworks employed.
Pahos & Galanaki (2020)	HRM and employee performance for an ageing workforce: A qualitative study	A qualitative method included two semi-structured interviews with the senior management of 16 privately run	There is not always a correlation between professional maturity and age. Because they are more knowledgeable about the subject, applying a practice	Nowadays, for review of literature, the latest methods are available, like MAXQDA software for qualitative data.

		businesses in Greece and a focus group with 12 HRM specialists. The content analysis method was used to code both the focus group and the interviews.	improves employee performance. HRM procedures increase employee engagement. The senior employees of today are trained by the younger ones.	So, the author needs to include these.
Collins et al. (2004)	A qualitative analysis of small enterprises' use of human resources management.	54 small business managers and owners were questioned in all. Interviews took place over the phone, lasted between 10 and 25 minutes, and were based on standard interview procedure questions.	Because they were unsure of whether their organisation employed HR procedures at all, the majority of the contacts did not feel comfortable discussing them. Researchers only found support for three fundamental models or philosophies of workforce management in small businesses: Great commitment, autocracy, and professionalism.	Some significant difficulties include a mismatch between the research issue and methodology, a lack of methodological expertise, and a disregard for the conceptual foundations of qualitative methodology.
Basnyat & Clarence (2020)	Employees' perceptions on the relationship between human resource management practices and employee turnover: A qualitative study	In-depth semi-structured interviews with 15 employees who had prior experience working at a variety of hotels in Macau, China, were used to gather the data for this empirical study. The interview	The retention of an organizational culture that helps create a feeling of ownership among employees is highly influenced by employees' turnover intentions. The current study demonstrates that the HR department in hotels	The results of this study were based on the perspectives of employees from a select group of hotels in Macau, limited variations have been obtained. Drawbacks of this study

		data were analysed using the theme analysis method, and the results were then interpreted.	holds a powerful position, and therefore, hotel employees expect their HR department to play greater and more proactive roles in the HRM apart from providing equitable opportunities for their growth	include dependence on the accuracy of the answers as well as their level of commitment in terms of time, money, and potential emotional hardship.
Haddock-Millar et al. (2016)	Green human resource management: a comparative qualitative case study of a United States multinational corporation	50 participants in a multi-case study involving focus groups and semi-structured interviews Directors and managers participated in 23 one-on-one interviews, and frontline employees and managers participated in 8 focus groups.	The findings provide examples of proactive environmental management in all three European countries, as seen in a variety of operational and people-centered activities.	The research was limited to Europe; it does not take into account the parent organization's perspective or the degree to which the parent strategy influences the creation of subsidiary strategies, including the coordination of HR activities.
Zamanzadeh et. al. (2020)	Challenges of human resources management in nursing in Iran: A qualitative content analysis	purposive sampling conducted on 12 Nurses are involved in different professional nursing positions. To this end, the participants' perceptions, opinions,	Professionals could see the difficulties in a range of nursing-related human resources management areas, including job analysis, recruitment, as well as workforce development and retention.	Study findings are based upon the preferences and experiences of respondents, but the researcher's presence during data gathering, which is often unavoidable in qualitative research, can affect the

	beliefs, and attitudes were collected via two focus group sessions.	subjects' responses.

Source: Authors Own Systematic literature review (2023)

RESEARCH METHOD

A meta-analysis program makes it easier to combine and synthesize effect sizes from many researches. The tool is a collection of Microsoft Excel workbooks that, in response to researchers' data, routinely generate all the necessary data, figures, tables, and further. You can download the workbooks from this page. Also, we offer a user manual for the program (Adula & Kant, 2022) as well as a book on how to evaluate the findings of meta-analyses.

As a result of its development, Meta-Essentials is now a tool that can be applied to both education and research. Meta-Essentials is a very user-friendly and intuitive tool, especially for fairly simple meta-analyses (avoid meta-regressions and Meta-SEM, for example).

A meta-analysis is a methodical approach for integrating quantitative results from several empirical researches that investigate how an independent variable (or intervention, or determinant, or treatment) impacts certain outcomes (or dependent variables) (Adula et al., 2023). In the social sciences, meta-analysis is becoming a more popular way to examine hypotheses. It was initially created as a tool for collecting empirical data on a treatment's results in medical and scientific research. But in fact, the assumptions that underlie meta-analytic hypothesis testing are frequently not realized in the social sciences. As a result, meta-analysis is increasingly conducted for different reasons and using more logical theories. Investigating the effect size dispersion is the goal.

FINDINGS AND DISCUSSION

The Forest Plot

The output of each meta-primary analysis is a forest plot, which is graphically represented in Figure 1. On the x-axis of the figure, which is at the top, the effect size scale is presented. The estimated effect size from a study is displayed in each row, with the exception of the bottom row, as a point and (95%) confidence interval. This is the statistically correct way of presenting the results of a single research since it provides an estimate of the range within which the "real" effect (in the population) will most likely occur. Remember that each study in the meta-analysis is regarded as a study of a full probability sample of a particular population. Comparing the observed impact size with results from other research is pointless if no judgments about the population can be taken from the "sample" in that situation; the presumption is not met in the study.

Table 2. Effect size

Study name	Effect size	error Standard	Quantity of observations (for CIs)	Sufficient data	Theoretical Moderator
Fareed et al. (2019)	2.20	0.25	100	Yes	15
Abdul & Hashim (2022)	1.80	0.21	130	Yes	16

Pahos & Galanaki (2020)	1.90	0.27	80	Yes	13
Collins et al. (2004)	2.05	0.14	300	Yes	18
Basnyat & Clarence (2020)	0.05	0.20	95	Yes	20
Wood (2021)	-0.60	0.21	90	Yes	14
Haddock-Millar et al. (2016)	2.00	0.22	120	Yes	19
Zamanzadeh et. al. (2020)	1.80	0.21	130	Yes	13

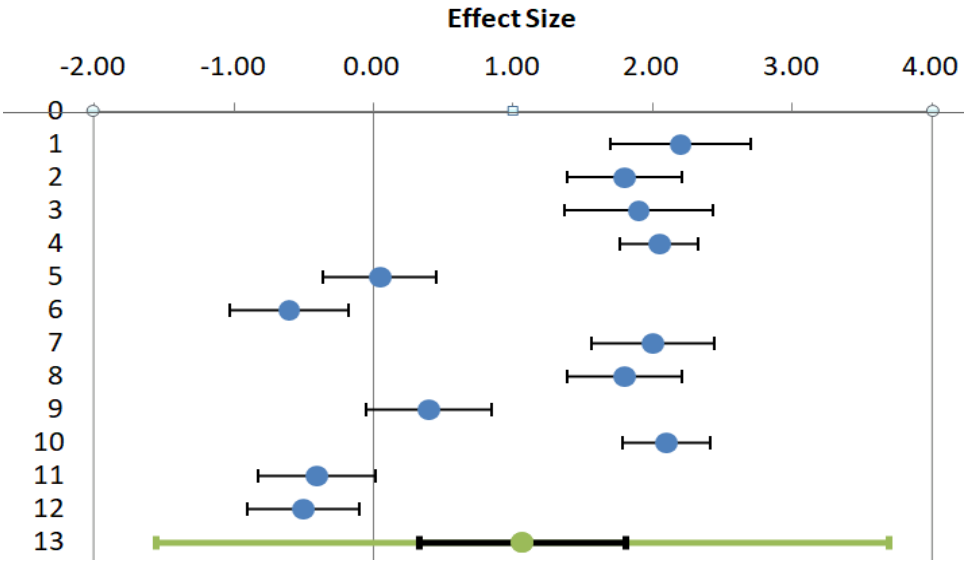

Figure 1. Forest Plot

The point estimate is represented in the forest plot by a smaller or larger bullet. These bullets' proportional sizes show how crucial a study was to the final meta-analytic result. The bottom row, sometimes known as the "summary row," converts the forest plot into a "meta-analysis." The results of the meta-analysis are shown in this row. The two periods that make up this meta-analytic result in Meta-Essentials are both clustered around the same bullet. This bullet shows the "combined" effect size, which is the weighted average effect. The narrower, blacker interval is a confidence interval. The larger green interval serves as a representation of the prediction interval.

Confidence Interval: Testing Hypothesis

When a confidence level of 95% is used, the confidence range for the total effect size in Figure 1 does not contain zero; hence the p-value must be less than.05. This shows that the meta-analytic effect is statistically significant to the use of formal language. If the objective of the meta-analysis is to test the hypothesis that there is an effect, in this situation, the null hypothesis can be rejected and the alternative hypothesis (that there is an effect) is deemed to be more likely. The relevant Z-value and p-values are shown in the column on the left of the forest plot sheet in Meta-Essentials (one-tailed and two-tailed).

Forest plot that present in Figure 1 demonstrates how research findings have been "contradictory" or "ambiguous." Researchers have discovered beneficial effects that are statistically significant. There are statistically significant unfavorable impacts, according to other research. Moreover, some research has produced results that are statistically insignificant. Meta-analysis is

typically used to create a "combined" impact in order to "solve" the issue of inconsistent and seemingly incongruent study results. The overall effect might differ significantly from zero (or not). This kind of standard practice meta-analysis finding is highly valued since it amply addresses the issue of "contradictory" evidence or, more frequently, the issue of "insignificant outcomes." Meta-analysis produces a more valuable and convincing conclusion than a single study since it acts as a more potent significance test.

Table 3. Meta-analysis Random effects Model

Model	**Random effects model**
Confidence level	95%
Combined Effect Size	
Effect Size	1.07
Z-value	3.18
One-tailed p-value	0.001
Two-tailed p-value	0.001
Number of incl. researches	8

Estimating The Extent of Heterogeneity

The Q-statistic, also referred to as "Cochrane's Q," is the weighted sum of squared differences between the observed effects and the weighted average effect. (Borenstein et al., 2009: 109–113 provide details on Q's calculation.) The Q-statistic only captures variation around the average and is not yet used as a measure of heterogeneity. To compute the heterogeneity, Q must be compared to the variation that would be observed if each study utilised a probability sample drawn from the same population. In a meta-analysis, this difference is calculated with two main objectives in mind: (1) it can be subjected to a null hypothesis significance test, and (2) it is used to determine the other measures of heterogeneity. In this case, the p-value is 0.000. The same limitations that apply to all tests of significance also apply to the test of the null hypothesis.

Table 4. Heterogeneity

Q	362.77
p_q	0.000
I^2	96.97%
T^2	1.31
T	1.14

Meta-Analysis Model

A "fixed effect" and a "random effects" model are two options available to a meta-analyst. The "fixed effect" paradigm makes the assumption that any variations in effect sizes shown across research are simply the result of sampling error. In other words, it is presumptive that "heterogeneity" does not exist. Heterogeneity is expected to exist in the "random effects" paradigm. The fixed effect model's underlying assumptions are hardly ever verified. Moreover, the accidental effects replica mechanically converges into a fixed effect model when it would be appropriate to use one, that is, when there is little variation in effect sizes. Consequently, using the random effects model is always advised, and before choosing to utilize it, it is strongly advised to interpret the heterogeneity measurements.

Subgroup Analysis

The forest plot in Figure 1 implies that there are two subgroups in the domain that have distinct "real" effect sizes, as was previously discussed. If this study examined the impact of an intervention, it's possible that the findings come from investigations conducted in many nations. It is feasible to investigate the idea that different subgroups have different effects. Nevertheless, only known traits of the populations under study make this viable. These traits must have been coded and entered on the software's input sheet. It serves as a forest plot on the Subgroup Analysis page for the previously stated investigations.

Table 5. Weighted Effects

N	Study name	Effect Size	Standard error	Weight (fixed)	Weight %	Residual	ES Forestplot
1	Fareed et al. (2019)	2.20	0.25	15.73	8.22%	1.13	2.20
2	Abdul & Hashim (2022)	1.80	0.21	23.33	8.35%	0.73	1.80
3	Pahos & Galanaki (2020).	1.90	0.27	13.97	8.17%	0.83	1.90
4	Collins et al. (2004)	2.05	0.14	49.33	8.49%	0.98	2.05
5	Basnyat & Clarence (2020).	0.05	0.20	24.06	8.35%	-1.02	0.05
6	Wood (2021)	-0.60	0.21	21.89	8.33%	-1.67	-0.60
7	Haddock-Millar et al. (2016)	2.00	0.22	20.17	8.30%	0.93	2.00
8	Zamanzadeh et. al. (2020)	1.80	0.21	23.33	8.35%	0.73	1.80

Table 5's weighted effect differs from that in Figure 1's (1.07), and both the prediction interval and the confidence interval are wider. The differences between the results in these two graphs can be due to the fact that now the average effect and its intervals in Figure 5 were estimated from the segment effects (N=2) and the ones in Figure 1 from the effects in the original trials (N=14). Thus, it is not advised to use data from the subgroup analysis regarding the combined effect and its intervals.

Table 6. Random effects (Tau separate for subgroups)

Meta-analysis model	
Between subgroup weighting	Random effects
Within subgroup weighting	Random effects (Tau separate for subgroups)
Confidence level	95%

Analysis of variance	Sum of squares (Q*)	df	p
Between / Model	131.21	1	0.000
Within / Residual	7.31	8	0.703
Total	129.86	9	0.000
Pseudo R^2	94.45%		

Table 7. Researches and subgroups on the Subgroup Analysis

#	Study name / Subgroup name	Effect Size	Weight	Q	I^2	T^2	T	PI LL	PI UL
1	Fareed et al. (2019)	2.20	0.085						
2	Abdul & Hashim (2022)	1.80	0.13						
3	Pahos & Galanaki (2020).	1.90	0.08						
4	Collins et al. (2004)	2.05	0.27						
5	Haddock-Millar et al. (2016)	2.00	0.11						
6	Zamanzadeh et. al. (2020)	1.80	0.13						
7	jjjj	2.10	0.21						
8	**AA**	**1.99**	**0.50**	**3.14**	**0.00**	**0.00**	**0.00**	**1.86**	**2.12**
9	Basnyat & Clarence (2020).	0.05	0.20						
10	Wood (2021)	-0.60	0.20						
11	iiii	0.40	0.19						
12	kkkk	-0.40	0.20						
13	llll	-0.50	0.20						
14	**BB**	**-0.21**	**0.50**	**15.25**	**0.74**	**0.12**	**0.35**	**-1.3**	**0.90**
15	Combined effect size	0.90		362.77	0.97	1.31	1.14	-3.3	5.09

It does seem plausible to treat at least one of the subgroups as a homogeneous population, despite the fact that it appears wrong in this case to assume that the entire set of research may be considered as research of one (homogeneous) population. Table 7 includes extra details in addition to the four homogeneity variables for each of the two subgroups. 8 for subgroup AA is zero, indicating that in a homogeneous population, all researches in this subgroup have estimated the same "real" effect size (AA). The effect is estimated at 1.99 (95% CI: 1.88-2.10).

Table 8. "Real" Effect Size

#	Study name	Effect size	CI limit	Lower	CI limit	Upper	Weight
1	Fareed et al. (2019)	2.20		1.70		2.70	8.22%
2	Abdul & Hashim (2022)	1.80		1.39		2.21	8.35%
3	Pahos & Galanaki (2020).	1.90		1.37		2.43	8.17%
4	Collins et al. (2004)	2.05		1.77		2.33	8.49%
5	Basnyat & Clarence (2020).	0.05		-0.35		0.45	8.35%
6	Wood (2021)	-0.60		-1.02		-0.18	8.33%
7	Haddock-Millar et al. (2016)	2.00		1.56		2.44	8.30%
8	Zamanzadeh et al. (2020)	1.80		1.39		2.21	8.35%

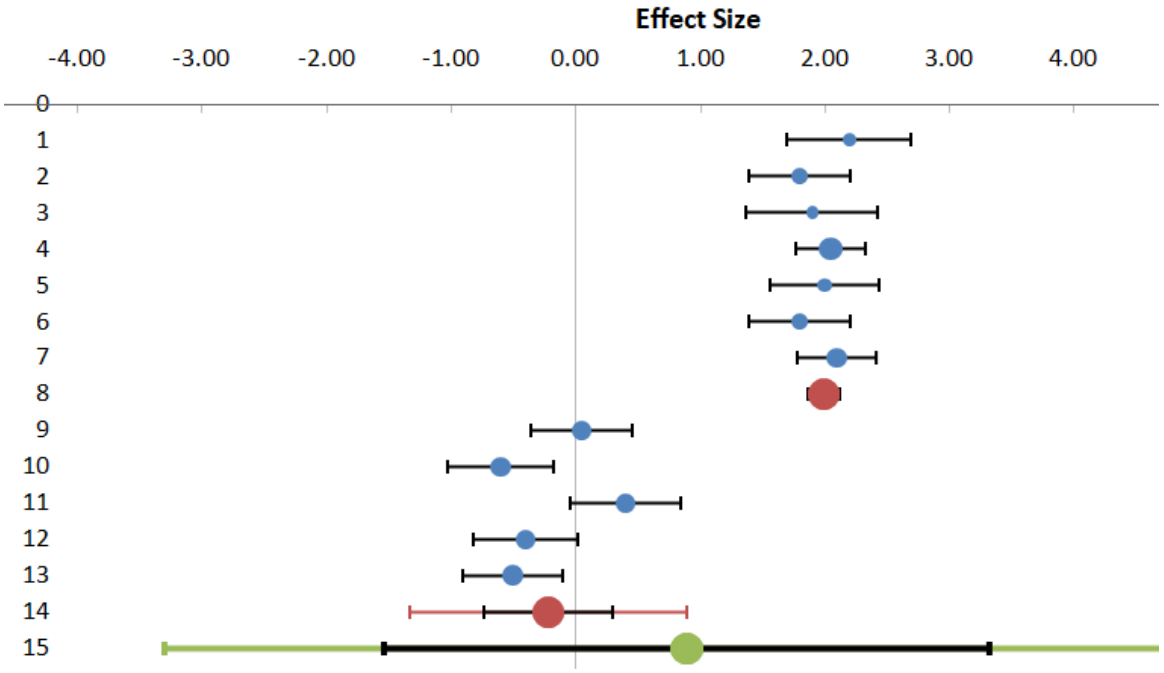

Figure 2. 'Forest plot with researches and subgroups' part of the Subgroup Analysis

Also, there are two different types of forest plots: one with research, subgroups, and combined effects and the other with simply subgroup and combined effects, which improves the comparison of Individual research are represented by blue dots in these plots, subgroups are represented by red dots, and the overall effect size is shown by a green dot. Also, while the confidence interval is displayed in black, the prediction intervals for the subgroups and aggregate effect size are provided in their respective colors. Observe that the first subgroup's confidence interval is so narrow that it nearly fully vanishes beneath the red dot.

Table 9. "Subgroup" Effect Size

#	Study name / Subgroup name	Effect Size	CI LL	CI UL	Weight
1	Fareed et al. (2019)	2.20	1.70	2.70	0.085
2	Abdul & Hashim (2022)	1.80	1.39	2.21	0.13
3	Pahos & Galanaki (2020).	1.90	1.37	2.43	0.08

4	Collins et al. (2004)	2.05	1.77	2.33	0.27
5	Haddock-Millar et al. (2016)	2.00	1.56	2.44	0.11
6	Zamanzadeh et al. (2020)	1.80	1.39	2.21	0.13
7.	Basnyat & Clarence (2020).	0.05	-0.35	0.45	0.20
8.	Wood (2021)	-0.60	-1.02	-0.18	0.20
	Combined effect size	**0.90**	**-1.53**	**3.33**	

Moderator Analysis

An output scatter plot with a regression line and a table with many statistics make up the Moderator Analysis.

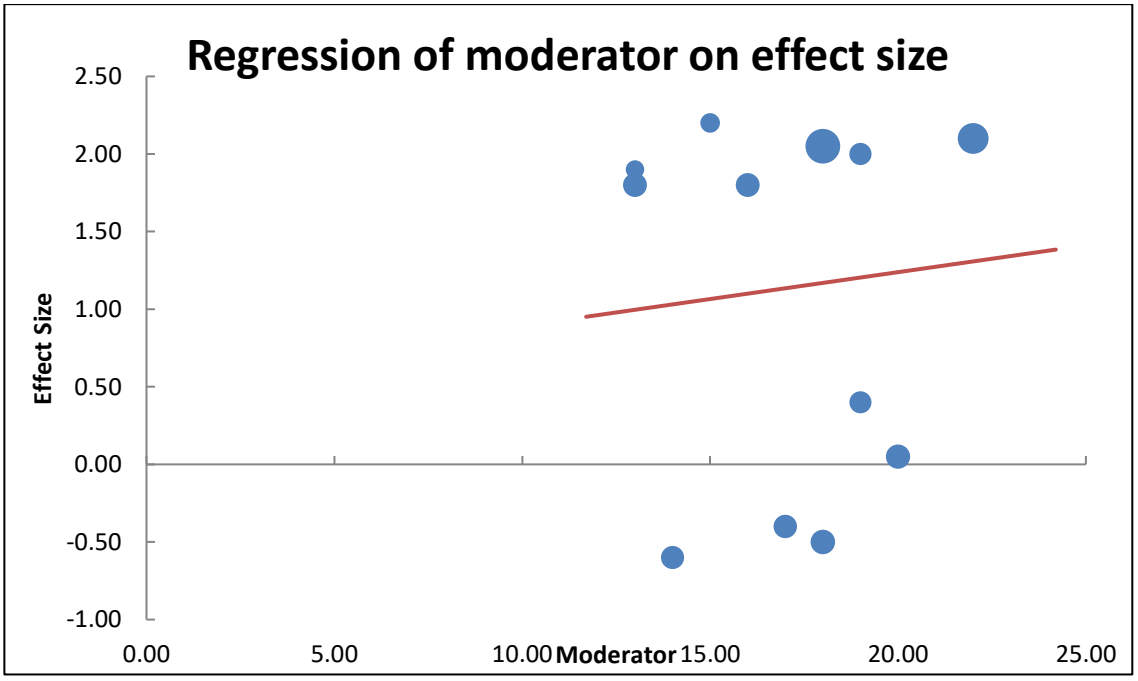

Figure 3. Moderator Analysis

The coefficient (B) of the slope, which assesses how the moderator and study impact size relate to one another, is the most significant outcome of this regression. This is also depicted in the graph by a regression line that is drawn through the regions where the study effect sizes were shown against the moderator values. Keep in mind that the weighting of the dots is indicated by their size. Nonetheless, the dot sizes appear to be equal in the example since each study is given roughly the same weight.

Table 10. Coefficient (B) of the slope, Intercept, and Moderator Analysis

	B	SE	CI LL	CI UL	β	Z-value	p-value
Intercept	0.55	0.38	-0.28	1.37		1.45	0.146
Slope	0.03	0.02	-0.01	0.08	0.09	1.63	0.102

Despite the fact that Meta-Essentials produced the statistics that are typically shown in a regression analysis, it is not advisable to place a lot of emphasis on the results because there are very few data points (researches). The researcher should start by interpreting the scatter plot rather than the line that has been drawn through it, as with any regression analysis. For instance, it is evident from the scatter plot that there is no discernible relationship between the moderator and

the reported effect sizes. The "insignificant" outcome of a regression weight significance test in this instance serves as a confirmation of this.

Table 11. Moderator Effect Size

Study name	Effect Size	Moderator	Weight
Fareed et al. (2019)	2.20	15.00	5.28%
Abdul & Hashim (2022)	1.80	16.00	7.84%
Pahos & Galanaki (2020).	1.90	13.00	4.69%
Collins et al. (2004)	2.05	18.00	16.57%
Basnyat & Clarence (2020).	0.05	20.00	8.08%
Wood (2021)	-0.60	14.00	7.35%
Haddock-Millar et al. (2016)	2.00	19.00	6.78%
Zamanzadeh et. al. (2020)	1.80	13.00	7.84%

Publication Baseness Analysis

A field of study's body of research is likely to contain several biased researches. The fact that nearly all HRM experiments are a research of convenience samples of students is the best-known example of this selection bias. It is highly improbable that tests with HRM volunteers would provide comparable effect sizes. HRM experiments may have low levels of variability since they all focus on the same population, which could be one explanation. For the straightforward reason that a meta-analysis can only infer conclusions from its input and not from what is missing in that input, it is impossible to discover this potential selection bias in a meta-analysis of the research that have been done.

Table 12. Funnel Plot Effect Size

Study Name	Effect Size	Standard Error
Fareed et al. (2019)	2.20	0.25
Abdul & Hashim (2022)	1.80	0.21
Pahos & Galanaki (2020).	1.90	0.27
Collins et al. (2004)	2.05	0.14
Basnyat & Clarence (2020).	0.05	0.20
Wood (2021)	-0.60	0.21
Haddock-Millar et al. (2016)	2.00	0.22
Zamanzadeh et al. (2020)	1.80	0.21

Meta-Essentials provides six different analyses that could indicate publishing bias. An example of a study is a funnel plot. When measured with comparable accuracy, observed effect sizes are thought to be more or less symmetrically distributed around the total effect size (i.e., with similar standard error). As was already indicated, it is predicted that outcomes farther from the null will outnumber those closer to it. In the given scenario, this is not the case. According to the Trim-and-Fill approach, there are no imputed data points; hence the funnel plot manifested that no asymmetry existed in the allocation of effect sizes. The Trim-and-Fill approach was, on the other hand, attributed to single or supplementary lessons and thereafter modified the overall effect size for the possible missing research.

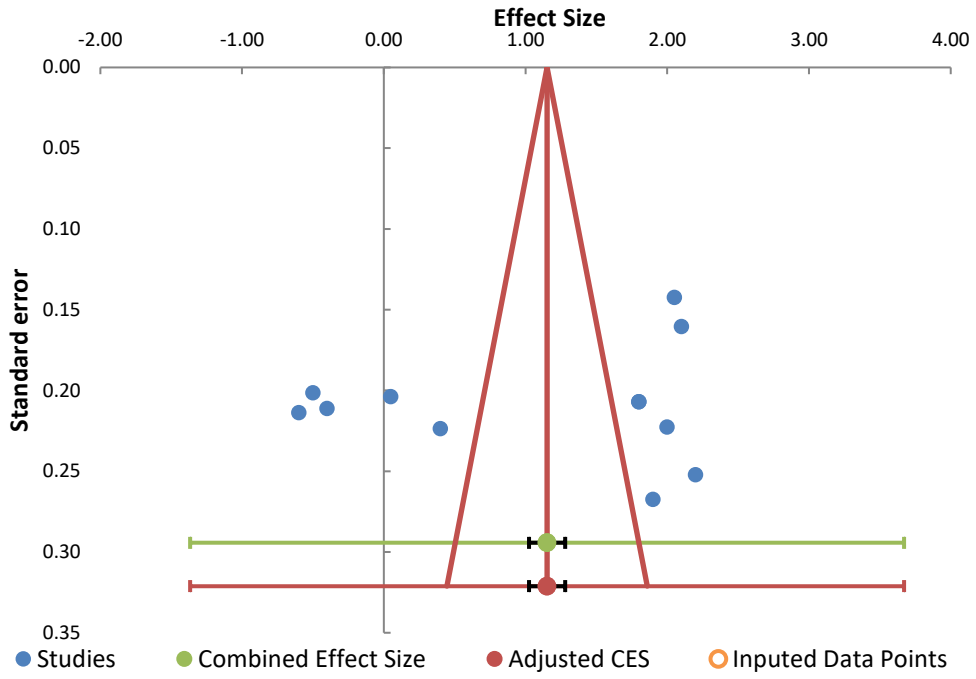

Figure 4. Funnel Plot

The author selects either the "Linear" estimator (also known as L0+) or the "Leftmost/Rightmost Run" estimator (also known as R0+). Additionally, they can decide whether to search for studies on the "Left" or "Right" side of the combined impact size that were not included in the meta-analysis. After the trim-and-fill is triggered, Meta-Essentials will determine an adjusted joint effect size and correct heterogeneity procedures. The original collection of studies that made up the adjusted statistics was expanded to incorporate the information points that were attributed to them.

Table 13. Funnel lines

Diagnoals	x	y
Left	0.45	0.32
Middle	1.15	0.00
Right	1.86	0.32
Mid line	x	y
Lower	1.15	0.00
Upper	1.15	0.32

Table 14. Funnel plot display

CI (Bar)	0.13
PI (Bar)	2.52
Plot (SE)	0.29

Table 15. Trim and Fill plot display

CI Bar (adjusted)	0.13
PI Bar (adjusted)	2.52

Table 16. Combined Effect Size Iterations

1st Trimmed combined effect size	
Effect Size	1.15
Heterogeneity	
Q	362.77
T^2	1.30
Missing researches	0
2nd Trimmed combined effect size	
Effect Size	1.15
Heterogeneity	
Q	362.77
T^2	1.30
Missing researches	0
3rd Trimmed combined effect size	
Effect Size	1.15
Heterogeneity	
Q	362.77
T^2	1.30
Missing researches	0

Begg and Mazumdar Rank Correlation Test, Egger Regression

The Egger regression gives "the degree of funnel plot asymmetry," according to the intercept from the regression of standard normal deviates versus accuracy (Egger, Smith, Schneider, & Minder, 1997, p. 629). The output on this sheet includes the t-test findings as well as this intercept (and its confidence interval) (t-value and p-value).

Table 17: Egger Regression

	Estimate	**SE**	**CI LL**	**CI UL**
Intercept	-9.09	9.61	-30.23	12.05
Slope	2.95	1.93	-1.30	7.19
t-test	-0.95			
p-value	0.366			

The correlation between the rankings of effect sizes and their variances is used in the Begg and Mazumdar rank correlation test (Begg & Mazumdar, 1994, p. 1088). This table shows the rank correlation (Kendall's Tau a), the dissimilarity among concordant and discordant ranks (x-y), a z-value, and a p-value for this correlation.

Table18. Begg & Mazumdar's rank correlation test

Δx-y	-5
Kendall's Tau a	-0.08
z-value	-0.34
p-value	0.366

Standardized Residual Histogram

Histogram (Standardized Residual) was founded on the notion that the standardized residuals, also known as the z-scores of individual research, are anticipated to pursue a normal

distribution around the total effect size. One might bin the residuals and plot them against a typical normal distribution to determine whether the effect sizes contain any outliers. The proportion of residuals in each of the nine bins, which are made up of standardized residuals, defines the tallness of the bar.

Table 19. Inverse Standard Error Result

Study name	Inverse standard error	Z-value
Fareed et al. (2019)	3.97	8.72
Abdul & Hashim (2022)	4.83	8.69
Pahos & Galanaki (2020).	3.74	7.10
Collins et al. (2004)	7.02	14.40
Basnyat & Clarence (2020).	4.91	0.25

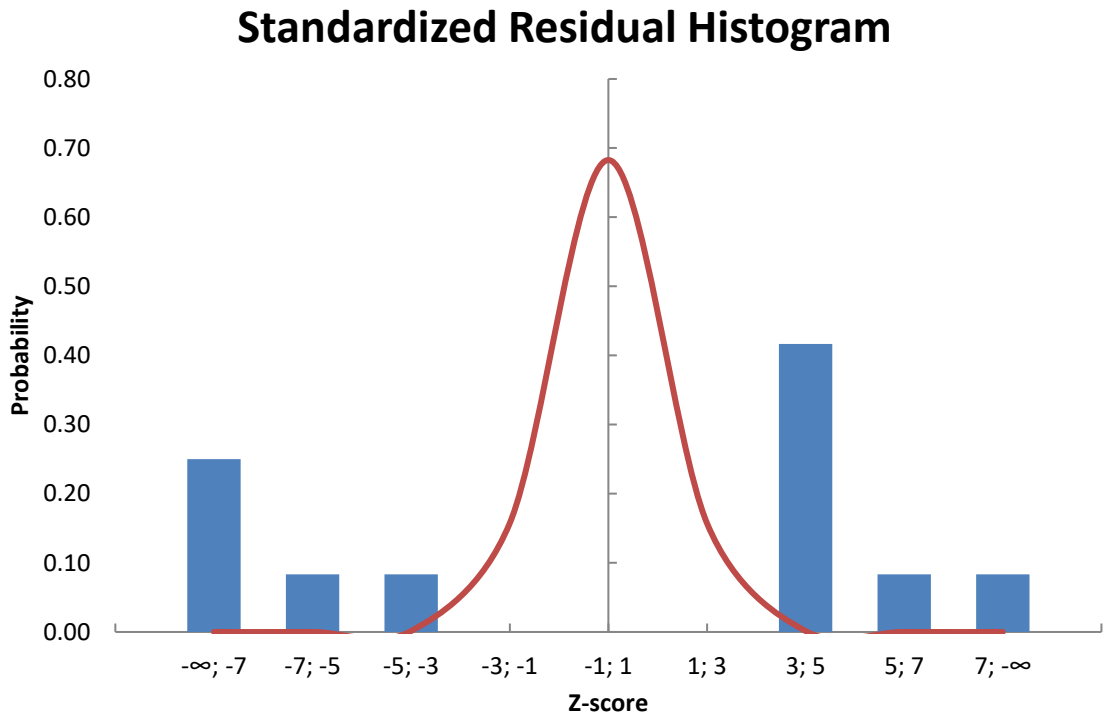

Figure 5. Standardized Residual Histogram

Galbraith Plot

The Galbraith plot, also known as the radial plot, functions primarily by performing an unweighted regression of z-scores on the contrary of the standard error through intercept restricted to zero (Galbraith, 1988). To find outliers in the effect sizes, use this figure. The two (lighter-colored) confidence interval lines are expected to contain 95% of the research's results. A map, a table with regression estimates, and a table containing research are supplied by Meta-Essentials.

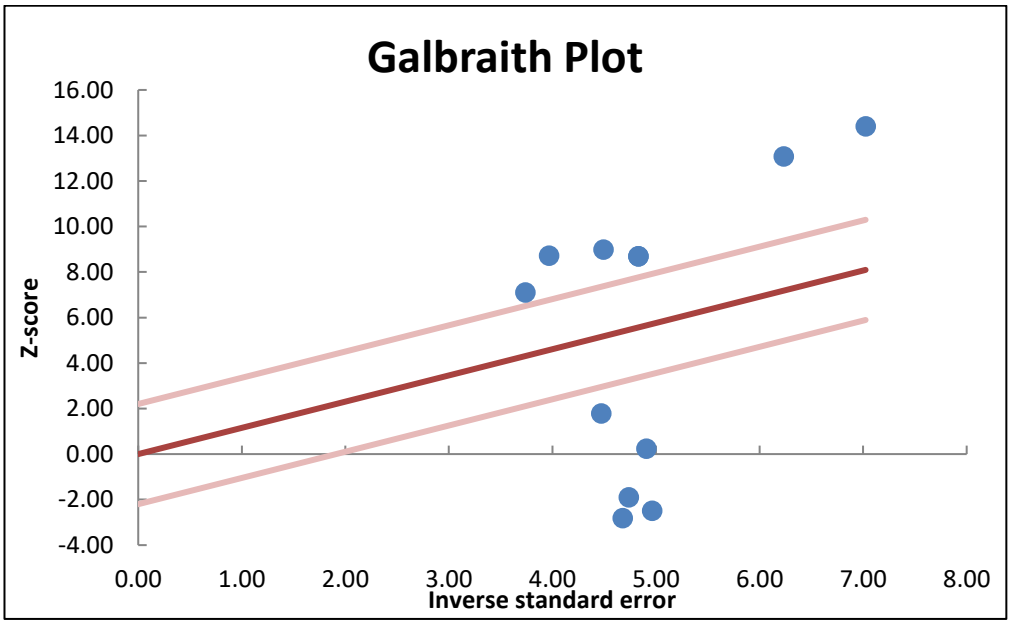

Figure 6. Galbraith Plot

Table 20. Result of Regression

Study name	Normal Quantile	Sample Quantile
Fareed et al. (2019)	0.79	4.62
Abdul & Hashim (2022)	0.10	3.69
Pahos & Galanaki (2020).	-0.10	3.19
Collins et al. (2004)	1.61	7.56
Basnyat & Clarence (2020).	-0.53	-5.20
Wood (2021)	-1.10	-8.10
Haddock-Millar et al. (2016)	0.53	4.34

Regression estimate				
	Estimate	SE	CI LL	CI UL
Intercept (fixed at 0)	0.00			
Slope	1.15	0.06	1.02	1.28

Normal Quantile Plot

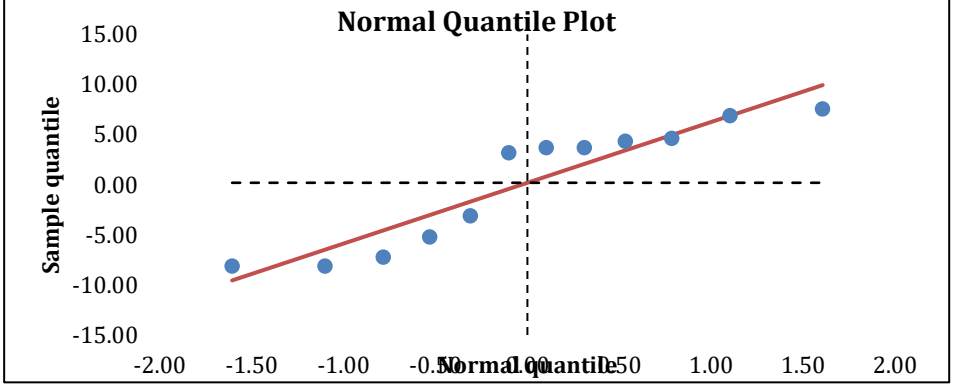

Figure 7. Normal Quantile Plot

To evaluate the normality of data, normal quantile plots (also known as Q-Q plots) are also utilized (Wang & Bushman, 1998). The data points should be roughly on a straight line, which would show that the data are dispersed according to a conventional normal distribution. A table comprising research, a graphic, regression estimates, and an input option for calculating sample quantiles make up this component of Meta-Essentials. The calculated normal quantile, sample quantile, and research names are shown in the table. These normal and sample quantiles are shown on the plot along with a regression line. The user has the choice to base the sample quantiles on "Standardized residuals" or "Z-scores" using the input option.

Table 21. Failsafe tests

Rosenthal	
Overall Z-score	19.51
Failsafe: N	1492
Ad-hoc rule	Not Implemented
Gleser & Olkin	
Number of unpublished research	0.0
Orwin	
Criterion: value ES_C	0.04
Mean fail-safe researches ES_{FS}	0
Failsafe:N	259
Fisher	
Failsafe:N	8604
P (Chi-square test)	0.000

1. **Tests for failsafe-N**
   Many estimates of the Failsafe figures are included in the Publication Bias Analysis sheet's last section. Imagine that a lot of other research are not published for any given study to serve as an illustration. Suppose that the results of these extra researches are negligible or that their impact sizes are close to zero. The failsafe number then calculates the approximate number of such extra research needed to make the combined effect size from the included and additional research inconsequential or nearly zero.
2. **Rosenthal**
   A test of combined importance is used to determine a Failsafe-N, which was first introduced by Rosenthal (1979). The amount of missing research with an average z-value of zero that should be included to render the total effect size statistically negligible is known as the failsafe number (see Figure 26 for an example). The Rosenthal (1979) rule for determining whether the number estimated is little (TRUE) or large is referred to as the "ad-hoc rule" (FALSE).
3. **Olkin & Gleser**
   An estimation of the number of unreported results is given by Gleser and Olkin (1996) (see Figure 27 as an illustration). It is predicated on the idea that, among a population of effect sizes, the research in the meta-analysis has the highest significance (i.e., the smallest p-values). The projected number of unpublished research is based on the size of the meta-greatest analysis's p-value. Although there is no way to determine if this number is small or large, it might be compared to the number of research that were actually taken into account in the meta-analysis.
4. **Orwin**
   Instead of focusing on p-values, Orwin (1983) takes a somewhat different approach by

examining effect sizes. The user establishes a threshold value for the total effect size for this approach. The user has the option to provide any value that will render the meta-conclusion analysis arbitrary (ESC) (see Figure 28 for an example).

Second, the user controls the mean of the imputed research (ESFS). The number of research having an average effect size (ESFS) that would bring the overall effect down to the threshold value will then be the failsafe number (ESC).

5. **Fisher**

Fisher (1932) also proposed the fourth and final failsafe number approach, which is also based on a test of the combined importance (see Figure 29 for an example). It is based on the natural logarithm sum of the p-values from the meta-analysis research. A Chi-Square distribution with degrees of freedom twice the number of papers included in the meta-analysis can be used to test the number.

CONCLUSIONS

It is possible to synthesize and assess the findings of research regarding an effect that has been conducted, published, and then critically retrieved, read, and evaluated by the researcher using the statistical tool known as meta-analysis. The collection of results that were generated and retrieved is what all of the meta-findings analyses relate to. Due to the arbitrary methods used to choose populations (or "samples") for the various research, these results are subject to an unknown amount of selection bias. Many times, some of the most obvious biases might be identified, for instance, when research literature consists primarily of student experiment findings and does not include effects in the "real world." As a result, any interpretation of meta-analytic data should start with a clear statement concerning populations that have not yet been the subject of empirical research but in which various effects may have been observed.

There may be suggestions made for more study in populations that have not previously been studied. Meta-analysis aids the investigation of the applicability of potential modifiers by providing estimates of a (weighted) average effect size, of the dispersion of effect sizes, of the homogeneity (or heterogeneity) of the overall set of observed effect sizes and of subgroups.

Since relevant heterogeneity is frequently seen in the social sciences, the primary finding of the majority of meta-analyses is an understanding of the dispersion of real effects. In those situations, meta-analysis can be used to generate theories about "moderators" of the effect.

LIMITATION & FURTHER RESEARCH

Limitation

The individual talents of the researcher are a major determinant of the research's quality, and the researcher's biases and quirks can have a greater impact. Rigor is more challenging to uphold, gauge, and prove. Poorly done qualitative research may produce false conclusions. Summaries at the population level are frequently impossible to produce using only qualitative research. Since the goal of the research is not to produce summaries that can be applied to a larger population, it is not intended for this use.

Future Research Recommendations

In order to set the way for future qualitative research, contributors to the qualitative interview analysis provide a brief analysis of 8–9 human resource management qualitative studies. Each in-depth qualitative study on human resource management techniques identifies the research's advantages and disadvantages, draws out the main intellectual boundaries of the subject, and outlines the present and future research objectives and how they will be approached. For new researchers, the current study offers a clear and comprehensive evaluation of qualitative HRM

investigations. A qualitative analysis of the HRM studies also reveals gaps in the knowledge of the study implications for practises in human resource management.

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