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Impact of Psychological Capital on Employees Job Satisfaction: A Meta-Analysis

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Abstract

The present study has been conducted with the purpose that there exists positive relationship between psychological capital and job satisfaction amongst the employees and the same has been revalidated and reaffirmed by this study. The study does not only prove validation of relationship between the variables but also examines the strength, its magnitude and direction of relationship through comprehensive quantitative empirical data obtained from earlier studies within the time frame of 2007 to 2023. For this study, meta-analysis statistical approach has been applied to combine quantitatively the eligible results of studies. A sample of 15 studies has been considered for meta-analysis to test correlation coefficient. Random effect model has been adopted to fit the data. To get the homogeneity in data average age as moderator has been introduced. The estimate of correlation 'r' in combined effect is 0.40 at 95% of Confidence Interval verifying the fact psychological capital is positively and significantly correlated with job satisfaction. Funnel plot approach applied for assessing publication biasness suggest that there is no publication biasness in the sample. Regression analysis of moderator reveals that R² explains 5.93% of variance in the I² that is percentage of variance in the sample.

Key Words: Psychological Capital, Job Satisfaction, Meta-Analysis, Correlation, Forest Plot

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INTRODUCTION:

The Greek myth of Pygmalion is psychological phenomenon in which high expectations of human beings lead to better performance where as low expectations lead to decline in the performance. Luthans (2002) emphasized that the positive approach to organizational behavior can be attained not only through positively oriented human traits but through systems, goals, strategies and resources. Luthans et al. (2007) concludes that where critical thinking or practical prudence is not discouraged. The traditional studies about the role of attendant concepts of positive organizational behavior have further been refined by researches where confidence/self-efficacy but not overconfidence, Vancouver et al. (2002); Vancouver et al. (2001), hope which should not be untruthful, Luthans et al. (2007), optimism which should not be unrealistic, C. Peterson (2000), subjective well-being/happiness, and not off-beam emotional intelligence in today's workplace showed to enhance human performance. Effective management through positive

organizational behavior where the strongest qualities of human resources having relevance to leadership, effectiveness and employee's performance are identified and nurtured as positive psychological capital. The significance of positive emotions recognized by Seligman and other positive psychologists through the years remains the area of research at micro or individual, macro or institutional level in the organizational behavior. Over the years, organizational behavior found that constructs such as positive reinforcement and positive effect, positively oriented employee's attitudes, and even humour have significant impact on performance.

The employees embodying higher level of psychological capital like exhibiting higher hope accompanied by optimism, self-efficacy and resilience are more satisfied with their job. Investigative study done on production workers of a factory by Larson & Luthans (2006) led to hypotheses that level of psychological capital has stronger relationship with job satisfaction and organizational

commitment than individual's core trait constructs: optimism, self-efficacy, hope and resilience. The potential added value of employees' psychological capital on work attitudes has been reported to have significant impact over human and social capital as far as satisfaction and commitment attitudes are concerned, (Larson & Luthans 2006; Luthans et al. 2007; Topcu & Ocak 2012; Cetin & Basim 2011) studies have demonstrated that four psychological capital dimensions form higher order construct as predictors of job satisfaction and employee's performance. Additionally, they have also examined the unique variance contribution of psychological capital using hierarchical regression analysis to predict job satisfaction. The inferences put forth through the study provide preliminary discriminant validity support that psychological capital accounts for unique variance beyond personality traits i.e. conscientiousness, extraversion and core self-evaluations while predicting job satisfaction. Luthans et al. (2007) taking Sample 1 (Manufacturing Firm) and sample 2 (Insurance Service firm) tested hypotheses 1 that states that psychological capital is having significant positive relationship with employees' performance and job satisfaction along with hypotheses 2 which states level of psychological capital has stronger relationship with employee's performance and satisfaction than individual components.

In the same study, Luthans et al. (2007) entered overall psychological capital into regression to determine increase in multiple correlation value and found that overall psychological capital across both the samples showed an increase in multiple correlation value above and beyond individual components providing support to hypotheses 2. A mixed support for the four individual psychological capital components in terms of their relationship with job satisfaction as in high tech manufacturing sample, none of individual components added to satisfaction equation and for service

sample 2 only hope could enter psychological capital as it contributed additional variance to self-rated performance composite. It provides clear evidence about positive relationship between psychological capital and job satisfaction moreover, giving marked indication about the outcome that psychological capital is better predictor and higher order factor indicated by four individual components.

Theoretical understanding of Psychological Capital

Psychological capital originally developed in an organizational context has been determined as second order construct of major four factors: Efficacy, Hope, Resilience, and Optimism abbreviated as HERO, Luthans et al. (2007). The notion of psychological capital with its four pillars has been linked both to job and life satisfaction. Whetten et al. (2009) discussed the borrowing of theoretical perspectives across vertical (Cross-Level) and horizontal (Cross- context) boundaries and makes an associated distinction between theories in organisations and theories of organizations. The conclusion is mainly drawn from psychological resource theory.

Hobfoll's (2002) psychological research has increasingly turned to an examination of the impact of people's resources on their stress resistance and well-being. The author found that psychology has progressively turned to the study of psychological resources in the examination of well-being through loss or gain of psychological energy. The variables: self-esteem, close attachments, health and inner peace have been studied and resources-oriented models based on the supposition that individuals who tend to regain or build internal resources to adapt themselves against stress tend to live in favourable way. Further, the psychological capital has been put as valuable positive psychological resource that employees strive to acquire and safeguard to utmost extent.

Theoretical foundation of Job Satisfaction

In the commencement of the 20th century there was an increasing interest regarding the relationship between employees' performance and job satisfaction. It is the most researched phenomena in human resource management and organizational behaviour. In the human resource perspective, job satisfaction is an emotional state of contentment about assigned task and responsibility leading to helpful and positive behaviour on part of employee as it and also acts as a motivational factor. It is not the sagacity of self-satisfaction, happiness or self-contentment but is linked with job stability, career growth and calm poise of work life. The term 'job satisfaction' was brought to limelight by Hoppock (1935). The author describes 'job satisfaction' as any combination of positive psychological components and efficient environmental circumstances having rewarding culture that causes a person with job satisfaction. Herzberg et.al (1959) developed dual factor theory based on motivational model, mainly related to nature of work and rewards drawn on basis of performance of that work. He founded that two factors influence job satisfaction: first, hygiene factor and second motivation factor. Hygiene factors like working conditions and salary are basic necessities which may or may not contribute to satisfaction. Rather if inadequate, it can cause dissatisfaction among employees' motivation and disinterest in work. Motivational factors such as achievement, recognition, responsibility, advancement etc. are most potent in driving job satisfaction and these intrinsic aspects have lasting effect as they have productive feelings towards the job satisfaction.

Job satisfaction means employees' emotion to the extent of like and dislike of his job. Spector (1977) and Brief (1998), state that job satisfaction is one's feelings and thoughts towards the jobs that expressed effectively or cognitively to some degree of favoured or disfavoured

experience. Thus, Job satisfaction represents emotional feeling, contemplation about work conditions supporting career development, co-workers' support, managerial support and benefits in many perspectives. Bateman & Organ (1983) state that performance does not consistently follow from satisfaction in a debt functional relationship but they are influencing each other. Izvercian et al. (2016) founded through analysis of 14 semi-structured interviews having predetermined as well as non-planned thematic framework of questions asked from the professionals of Romanian public and private sector. From the analysis authors have set a model regarding influencing variables in job satisfaction based on six main variables: perturbing factors which include motivation, social interaction, employee characteristics, organisational environment characteristics, organizational perception and disturbing factors each variable further consist of six sub-elements. Sell & Cleal (2011) have also propounded a model of job satisfaction integrating economic variables and work environment variables to explain the response of employees (i) in hazardous work environment with elevated monetary paybacks and (ii) in non-hazardous work environment but providing low monetary benefits. The study finds many aspects of employee's behaviour and performance based on different psychological and work environment variables like organizational climate, work group, flexibility and control level of organization, social support etc. have a direct and immediate impact on job satisfaction. According to the study poor and inappropriate environmental factors and non-participation in decision making lead to dissatisfaction and even increasing the rewards does not necessarily improve the level of job satisfaction among employees. One more study of, Castillo & Cano (2004) on amount of variance among the college teachers on level of job satisfaction with regard to Herzberg theory demonstrates that proper focus by administration on recognition through

reward system, interpersonal relationship aspects, attention to words and supervision of faculty will definitely elevate the level of job satisfaction.

Many heuristic models which include external and internal factor associated with higher job satisfaction like better individual and organizational performance, commitment, increased productivity and less absenteeism etc. explain differences in the job satisfaction. Maidani (1991) has done comparative study amongst 486 employees of private and public sector to evaluate job satisfaction and has revalidated the Herzberg's study outcomes. Their study concluded that both the types of employees valued intrinsic factors of motivation for job satisfaction, but the public sector employees valued extrinsic hygiene factors more than the intrinsic factors. Totawar & Nambudiri (2014) reported that there is mediating as well as intervening role of psychological capital confirming the positive influence of organizational justice on job satisfaction. Han (2022) in his study explored that for improvement of psychological capital and professional identity of teachers, schools adopt more effective school management strategies to build a positive school atmosphere where solving practical problems augmented job satisfaction among both primary and secondary school teachers. According to Kappagoda (2017), concept of psychological capital can be used as intrinsic factor in banking sector as its impact on job satisfaction for employees below managerial post is positively and significantly associated with their job satisfaction. Shankar & Kumari (2022) concluded in their study that there exists a significant relationship between job satisfaction and psychological capital using Pearson correlation and multiple regression analysis.

Therefore, on the basis of above discussions it can be concluded that positive psychological behaviour goes beyond social and human capital and its constituent components. The following

hypothesis is thus revalidated and reaffirmed.

H: There exist positive relationship between Psychological Capital and Job Satisfaction.

The present study has been conducted with hypothesis testing and also seeks to investigate the relationship between variables.

Methodology

The aim of the undertaken study is to inspect the strength of relationship between psychological capital and job satisfaction, through comprehensive learning from available and relevant research papers of 2007 to 2023. In the present study, Meta-essentials correlation data 1.5 has been used for analysis developed by Erasmus Research Institute of Management (ERIM). In order to be incorporated in this meta-analysis, the identified studies need to meet some rules and standards and four criteria have been designated for the rationale study. The first criterion for the study to be incorporated in this analysis is that it should have been published between the years 2007 to 2023. The second criterion is that it should be a quantitative empirical study providing at least correlation coefficient in its variables. The third criterion is that English should be the language of the research study. The fourth criterion is related to sample for study, only those studies that used unique samples have been included. After screening the identified research studies by using inclusion criteria, a sample of 15 studies have been taken up for meta-analysis.

RESULTS AND DISCUSSION:

In the present study, two variables have been incorporated for analysis i.e. job satisfaction and psychological capital. A random-effects model was adopted to fit the data. To get the homogeneity in the data a Moderator i.e. average age of respondents has been used.

The main outcome of the Meta-Analysis is the forest plot in the form of a graphical display as shown in Figure-1. In

Meta-Essentials the meta-analytic result consists of two intervals, both are around the same bullet. These bullets represent the weighted average effect, which refers “combined effect size”. The smaller black interval is confidence interval and the larger green interval is prediction interval. In the present study x-axis forms the effect size scale, plotted on the top of the plot. Each row, except the bottom one, represents a study’s effect size estimate in

the form of a point for (95%) confidence interval. The 16th row (i.e. bottom row) of the graph indicates confidence interval and prediction interval. The confidence interval quantifies the accuracy of the mean, in 95% of cases the mean effect size falls in between the horizontal black lines and the prediction interval addresses the actual dispersion of effect sizes, in 95% of cases the true effect in a new study will falls in between the horizontal green lines.

Figure-1 Forest Plot

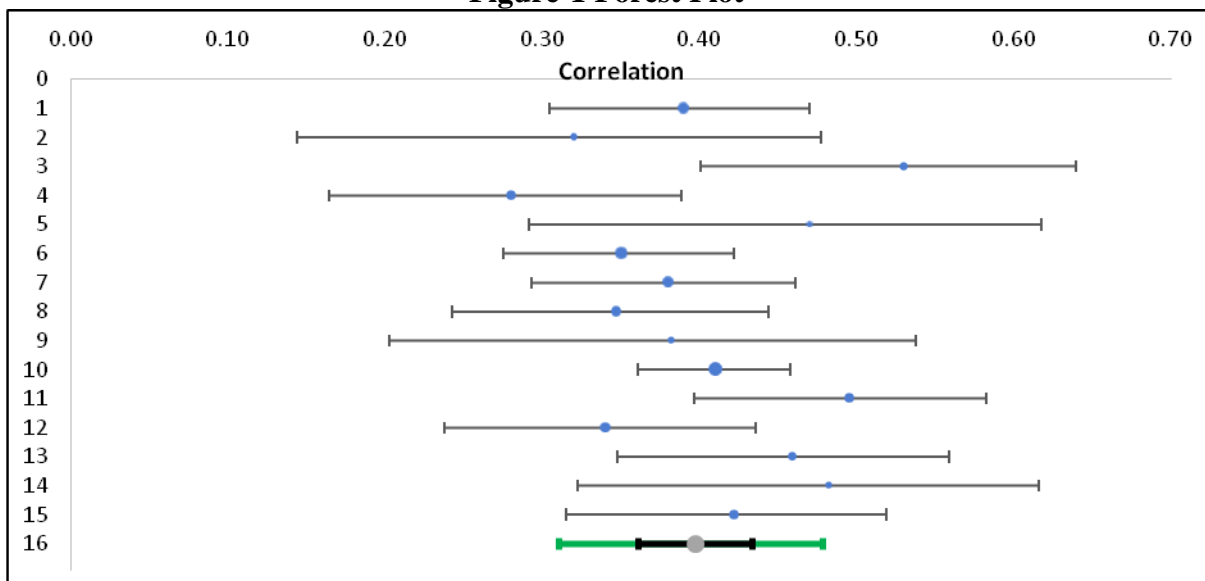


Table-1 Heterogeneity in Sample

Q-Test	21.18
P _Q	0.097
I ²	33.89%
τ ²	0.00
τ	0.04

Confidence Level →95%

Q-Test → Q-statistics (Cochrane’s). Measure of variation around the average.

P_Q→ P-value

I²→Statistic describes the percentage of variation across studies, that is due to heterogeneity rather than chance.

τ² (Tau²)→ Estimate of the variance of true effect size- used to assign weights to the studies assuming random effect.

τ (Tau)→ Estimate of the standard deviation of distribution of true effect size-used for computing the prediction interval.

Table-2 Combined Effect Size

r	CI LL	CI UL	PI LL	PI UL
0.40	0.36	0.43	0.31	0.48

r → Correlation

CI LL → Confidence Interval Lower Limit

CI UL → Confidence Interval Upper Limit

PI LL → Prediction Interval Lower Limit

PI UL → Prediction Interval Upper Limit

Table-1 provides the numerical information about the degree of heterogeneity for the forest plot of *Meta-Essentials*. A careful perusal of table *Navninderjit Singh & Dr. Rajeev Kansal*

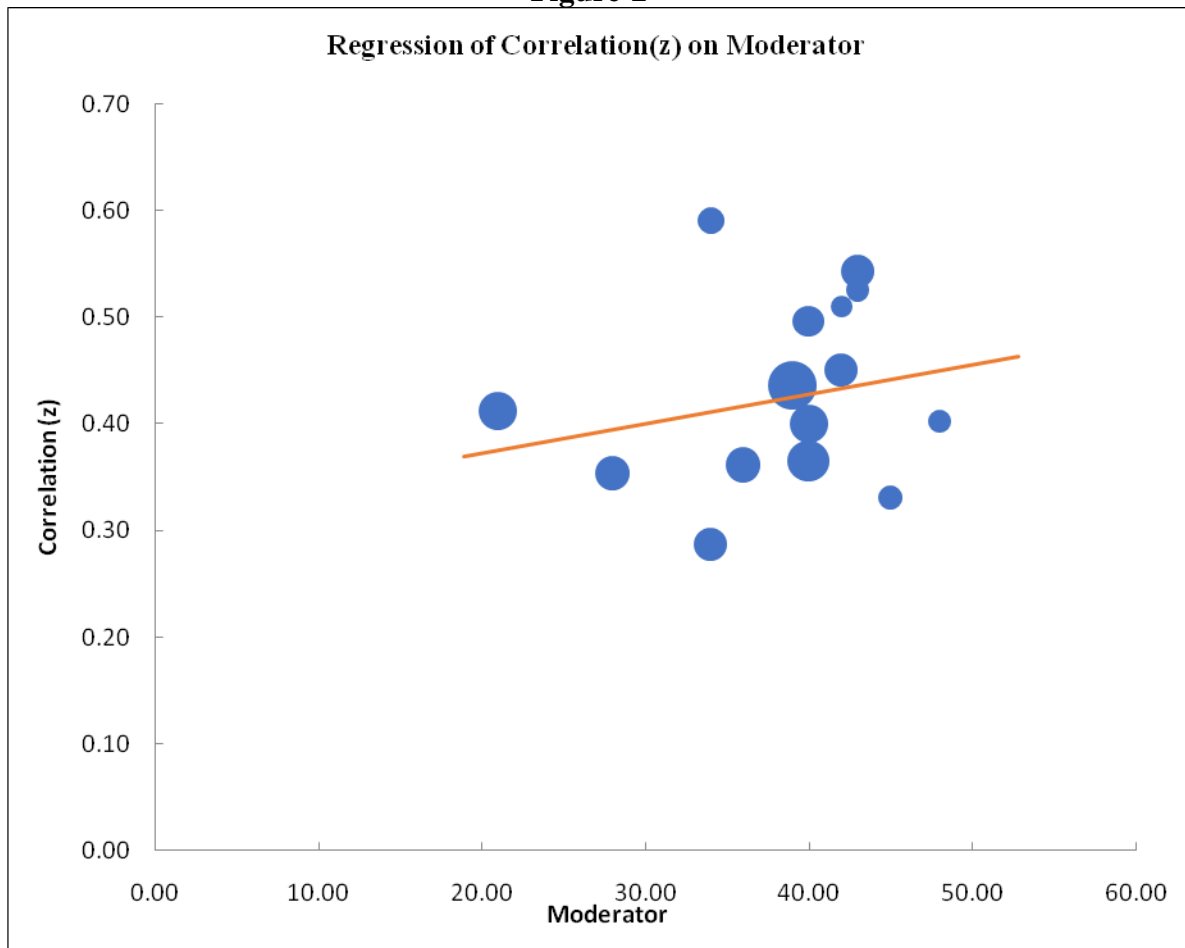
reveals that it includes four types of information about heterogeneity i.e. Q-statistics with a p-value, I², Tau² and Tau. The Q statistics is the weighted sum of

squared differences between the observed effects and the average effect. It is the measure of variation around the average and is not yet a measure of heterogeneity, p-value is not an effect size and hence not a measure of the extent of heterogeneity. The low p-value indicates that there is probability of some (undetermined) degree of heterogeneity. In the above table, the p-value is .097 which can be considered as high. I^2 is a measure of the proportion of observed variance that reflects real difference in the effect size. It is the most important source of information and a relative measure about the extent of heterogeneity. As shown in table-1, the I^2

is 33.89%, indicating that all the studies have produced estimates of the same ‘true’ effect size and low heterogeneity. To convert this low heterogeneity into homogeneity, a moderator i.e. average age of respondents has been introduced in the data which was extracted from all the studies.

The estimate of correlation ‘r’ in combined effect is 0.40 (table-2) at 95% of Confidence Interval with CI LL0.26 and CI UL0.64. After the introduction of moderator the next step which was done by Meta Essentials is to find regression of correlation on moderator which is depicted in figure-2 given below.

Figure-2



The result of moderator analysis, figure-2 suggests that the age has influence on the correlation. It shows that as the moderator increases, the correlation also increases. But the results may be interpreted as there is no significant relationship ($p = .348$) between age and correlation.

Table-3 Regression of Correlation(z) on Moderator

	B-Value	CI LL	CI UL	Z-value	p-value
Intercept	0.32	0.08	0.56	2.87	0.004
Moderator	0.00	0.00	0.01	0.94	0.348

Analysis of Variance	Sum of square (Q)	df	p-value	Mean Square	F-value	p-value
Model	0.88	1	0.348	0.88	0.82	0.382
Residual	13.98	13	0.375	1.08		
Total	14.86	14	0.388			

Combined Effect Size	0.42
T ² (Methods of Moments Estimation)	0.00
R ²	5.93%

CI LL → Confidence Interval Lower Limit

CI UL → Confidence Interval Upper Limit

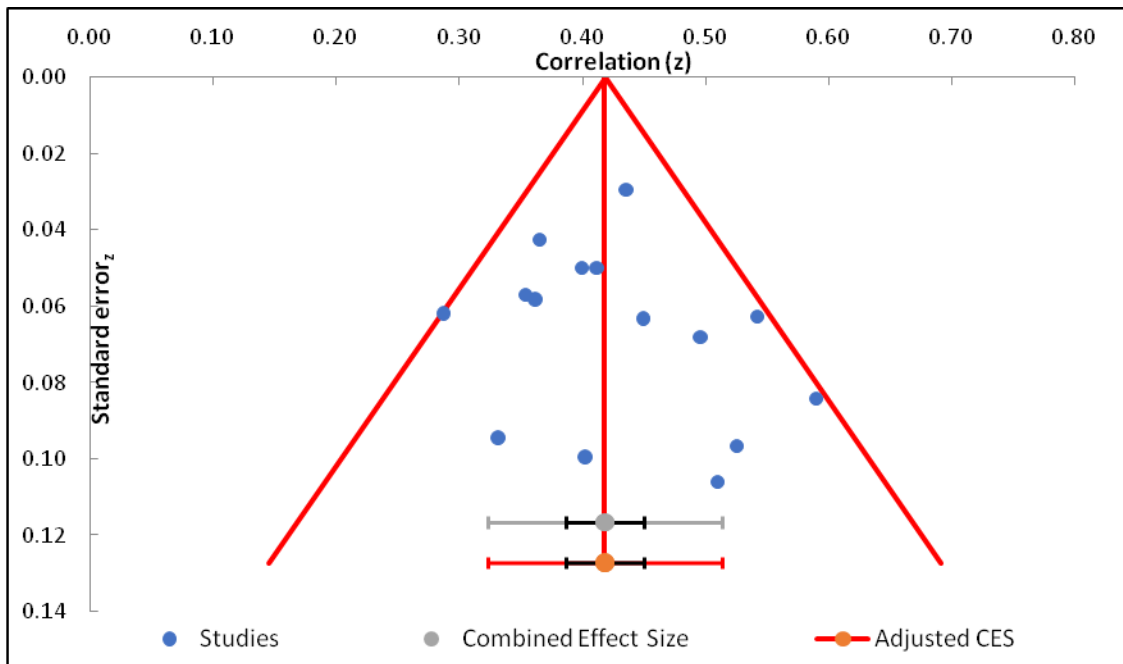
R²→ the proportional reduction in the variance component when adding the moderator(s) to the model. Similarly, the table-3 shows that intercept B-value is .32 and Z-Value is 2.87 which means this is significant at p-value .004 but moderator Z-Value is .94 which is non-significant at P-value 0.348 means insignificant.

Further R² value 5.93% suggests that it explain the approx. 6% variance of the I² value of 33.89%, (Ref. table 1) i.e. heterogeneity of the sample. This means that 5.93% of the difference in true effect size can be explained by the age. Beginning with the relationship between job satisfaction and psychological capital the outcomes are presented in table-2 and after implementation of Moderator, with these studies psychological capital is positively and significantly correlated (r=.40, ref. table 2) with job satisfaction. Therefore, the proposed hypothesis is supported.

For assessing publication bias there are two approaches i.e. selection model

and the funnel plot the selection models approach typically use the weighted distribution theory model the publication bias process (Dear & Begg 1992); (Hedges 1992). The funnel Plot usually present effect sizes plotted against their standard errors, Light & Pillemer (1984); Sterne & Egger (2001). In the present study the Egger regression test based on funnel plot approach has been used which is given by Egger et al. (1997). The Eggers test regresses the standardized effect sizes on their precisions in the absence of publication bias, the regression intercept is expected to be zero. Note that this regression is equivalent to weighted regression of the effect sizes on their standard errors. In present study the correlation has been given on x-axis and standard-error is given on the y-axis in figure-3.

Figure - 3 Funnel Plot (Publication Bias)



The careful perusal of the figure 3 shows that there is no publication bias or systematic heterogeneity in the research studies. All the studies included in the same sample are within the pyramid which reflects the homogeneous set of results hence the combined effect size is interpreted as an estimate of a true effect size in the data. The majority of studies are on the upper side in the plot. It indicates that the standard error in the sample is less means that there is no publication biasness in the sample. As the present study has no publication bias, it assumes that studies

with high precision are plotted close to the average, and studies with low precision are spread evenly on both sides of the average, creating a roughly reverse funnel-shaped distribution.

As per the Eggers regression test, findings indicate that the observed effect sizes are not unduly affected by the selective publications. The absence of publication bias enhances the reliability of the meta-analytic findings, suggesting that the synthesized evidence is reflective of a diverse range of study outcomes.

Table-4 Egger Regression Test

	Estimate	CI LL	CI UL
Intercept	0.68	-1.30	2.67
Slope	0.38	0.27	0.49
t-test	0.74		
p-value	0.47		

CI LL → Confidence Interval Lower Limit
 CI UL → Confidence Interval Upper Limit

The table-4 shows that the p-value of 0.47 is greater than the commonly used significance level of 0.05. This suggests that there is no statistically significant evidence of publication bias based on the Egger regression test. A t-test value of 0.74 is not statistically significant at the conventional significance level of 0.05. Therefore, the sample studies data is symmetrical.

Conclusion

The aim of the study was to explore the magnitude and direction of relationship between psychological capital and job satisfaction among the employees’ taking the data of earlier studies within the time frame of 2007 to 2023. From this perspective, study attempts to add an important brick on the wall of

psychological capital literature through meta-analysis test treatment. After careful examination of chosen papers for effectiveness of already approved hypotheses regarding relationship between psychological capital and job satisfaction, it has been experimentally reaffirmed that psychological capital is positively related to job satisfaction at moderate level. However, to generalize the relationship between the variables further comprehensive study is required that may include the studies from the entire working environment. Future research may aspire to combine and create the findings from existing meta-analysis on psychological capital and job satisfaction. For future studies, identification of common patterns or manageable gaps can be conducted in literature to provide more comprehensive understanding of these variables. Job satisfaction is a subjective construct which depends upon the nature of job (Job aspect) capabilities and abilities of the person (personal aspect) and the working environment (interpersonal aspect) and thus varies from person to person. Therefore, it is recommended to carry out further research in this field.

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