Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 2

ISSN: 1540-3270

The Research Supervisors Contribution in Doctoral Studies at Government versus Private Universities of Delhi/NCR

[1]Dr. Sangeeta, [2]Dr. Azad Singh, [3]Dr. Ashish Gupta, [4]Dr. Varinderjeet Singh, [5]Dr. Sahab Singh

[1]Assistant Professor at Management Education and Research Institute, New Delhi- India

[2]Associate Professor at Maharishi School of Business Management, Maharishi University of Information Technology, Noida-India

[3]Assistant Professor at Maharishi School of Business Management, Maharishi University of Information Technology, Noida- India

[4]Assistant Professor, Department of Management (UICM), Sant Baba Bhag Singh University, Khiala, Jalandhar, Punjab- India

[5]Prof. at Dept. of Management Studies; Dronacharya Group of Institutions, Greater Noida-India

Abstract

The Doctoral education represents the highest level of academic excellence with the motive of fostering autonomous researchers who can produce original contributions to their fields. Ph.D. programs are pillars of new knowledge production, new discoveries, advancing science, and helping future academics grow professionally. The quality of supervision is at the heart of this process and the function goes beyond only academic assistance to include intellectual mentorship, emotional support, and a long-lasting trust between the supervisor and the researcher. International studies have consistently shown that unclear expectations, ineffective communication, limited mentoring and misaligned objectives between supervisors and doctoral candidates are significant factors leading to delayed thesis submissions and elevated attrition rates. In India, these challenges are made worse by excessive workloads for supervisors, inefficient administration and lack of clear institutional accountability frameworks. This means that a scholar's progress is mostly based on the ability of their supervisor rather than any consistent institutional standard. The Delhi NCR area is a great place and particularly instructive setting for this inquiry because it has both well-known public universities like the University of Delhi, Jawaharlal Nehru University, Jamia Millia Islamia, and Guru Gobind Singh Indraprastha University and also known private universities like Ashoka University, Amity University, Sharda University, and O.P. Jindal Global University. While both sectors contribute meaningfully to doctoral education and their supervisory approaches, resource environments, and institutional priorities vary in ways that remain insufficiently explored in Indian academic literature. The present study addresses this gap through a systematic comparative examination of supervisory practices across both institutional types. A quantitative research design integrating descriptive and comparative frameworks was utilized.A structured questionnaire was used to gather data from 208 doctoral scholars through purposive sampling. After checking for completeness and consistency, 199 responses were kept for final analysis. Statistical analysis was done with SPSS which included descriptive statistics, Independent Samples t-tests, One-Way ANOVA, Pearson Correlation, Multiple Linear Regression, and MANOVA. SPSS has made it laid back to compare some groups and get a better idea of how all the supervisors works together. The finding of this study give doctoral students, their supervisors, institutional administrators, and regulatory bodies like the UGC evidence-based ideas. The study improves doctoral guidelines, encourages the development of strong supervisory frameworks, and sets consistent standards for mentorship by identifying both strengths and weaknesses in supervisory practices in different institutional settings. This strengthens India's commitment to building a fair and competitive national research ecosystem.

Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 2

ISSN: 1540-3270

Keywords: Doctoral Education, Research Supervision, Government Universities, Private Universities, Delhi NCR, Quantitative Research, Higher Education, India

Introduction

The Doctoral education line signifies the zenith of academic exercise, intended to develop sovereign researchers accomplished of creating novel offerings to their castigations. Internationally, the Ph.D. platforms are prove to be fundamental to the expansion of information, the elevation of invention, and the grounding of forthcoming researchers, specialists & academicians (Lee, 2008). The distinct from the undergraduate and different domains in master's educations, those uses to stereotypically structure around established syllabuses, the doctoral education highlights individuality, perilous analysis, and continued commitment with exploration.

The Murphy, Bain, & Conrad, in 2007 investigated the scholar's journey and defined as this journey totally depend over the supervisory association, which ominously stimuli the candidate's growth. The supervisor not merely offers scholarly direction; but then again also offers emotive support, simplifies entrance into academic networks, and guides' candidates as they traverse the difficulties of research life. The supervisory relationship in Ph.D. programs evolves with the passages of time, takes different shapes as per individual expectations, personality traits, and shared obligations (between the supervisor and doctoral candidate). Various studies proposed that practical supervision is directly linked with the timely accomplishment of various degrees, especially in the field of higher education which devoted to the society in terms of quality research consequences, and countless satisfaction with academic professions (McAlpine & Norton, 2006; Pyhalto, Stubb, & Lonka, 2012).

In conversely, the poor supervision can effect in awards delay, hindrance, and in certain cases, driver attrition. Thus, fundamentals such as balanced authority, trust clearly defined potentials, and meaningful communication are indispensable for efficacious doctoral training (Ives & Rowley, 2005). In India, as higher education industry expanding and prospects for research quality increasing, universities (across both private and public domains) are working to boost the doctoral expedition. However, disparities in governance replicas, institutional cultures and funding systems have led to varied supervisory methods (Choudaha & Kaur, 2017).

1.2 Doctoral Studies and Higher Education in India

In the recent few decades, higher education system in India has grown with an astonishing rate, positioning it among the largest in the world. As per the All-India Survey over Higher Education (AISHE, 2022), more than 1000 universities and nearly 40000 colleges, hosting by India; collectively benefiting more than 40 million students. Within this extensive system, doctoral education inhabits an essential role, contributing together to the expansion of the academic personnel and to the country's whole research output. The University Grants Commission (UGC), as the principal regulatory body, has recurrently highlighted the reputation of high-quality research, universal competitiveness, and institutional accountability-placing doctoral training at the vanguard of these urgencies (UGC, 2018).

Traditionally, the doctoral education in India has been focussed inside public organizations, particularly central and state universities like as, Jawaharlal Nehru University (JNU), the University of Delhi and the Indian Institutes of Technology (IITs). These universities have recognized themselves as foremost centres of research, maintained by veteran faculty, government funding, and vigorous infrastructure (Altbach, 2015). In dissimilarity, the previous epoch has seen the mounting perceptibility of private universities- mainly in metropolitan districts like Delhi NCR-which nowadays offer Ph.D. programs notable by bendable partnerships, structures with industry and contemporary funds intended to attract interested scholars (Choudaha & Kaur, 2017).

Though doctoral & research education is expanding significantly in India, maintaining its value continuously is a serious concerns which is rising day by day. Few majors issues like as poor-quality publications, inadequate supervision and plagiarism's instances have been continually highlighted by respective accredited bodies (the National Assessment and Accreditation Council (NAAC) and the UGC). In retort, the UGC has realized several improvements, comprising compulsory coursework on research methodology, publication requirements before Ph.D. thesis submission, and the use of plagiarism-detection software (UGC

Regulations, 2018). These ingenuities underline the supervisor's crucial role, who usually must help doctoral candidates navigate the challenges posed by these evolving standards. However, governance structures, funding configurations, and institutional cultures variations between public and private universities expressively effect supervisory exercises. By investigating these dynamic forces in Delhi NCR, there is an vital needs to understand both the challenges and opportunities which are shaping India's budding doctoral education scenery.

1.3 The Research Supervisor and Research Scholar Relationship

The Supervision in doctoral education goes far-off beyond proposing academic regulation; it is an all-inclusive process that builds trust over intellectual support, personal inspiration, and professional mentorship. The outlines five key magnitudes that stimulus this process: the practical role providing academic path and monitoring evolvement, familiarizing scholars to academic standards and practices, serious intelligent (encouraging novelty and self-governing thought), liberation (encouraging scholarly independence), and association building (nurturing trust, open communication and respect). Collectively, these proportions shape the total quality of the doctoral experience and depth (Lee (2008).

In the Indian context, the difficulties are often intensified by cultural and institutional factors. The research candidate may vacillate to critique or question their supervisors just because of traditional deference to authority, though supervisors themselves are repeatedly loaded with extensive administrative and teaching duties, restraining the time accessible for meaningful collaboration with their scholars (Kamler & Thomson, 2014).

The scholar- supervisor connection plays a conclusive role in determining key phases of the doctoral expedition, from the very beginning from identifying research topic and scheming the study to gathering data and writing and generalisation of thesis. A well-structured and supportive connection often allows scholars to engage in conferences, publish in reputable journals and build strong academic networks. In dissimilarity, feeble or conflict-ridden supervision might lead to compromised research quality, delays or even withdrawal from the research program (Mc Alpine & Norton, 2006).

1.4 Recent Trends in Government vs. Private Universities in Delhi/NCR

The Indian higher education system is categorized by the existence of both types of universities like publicly funded universities and privately run institutions. Each one is shaped by divergent ascendency models, speculative priorities, and institutional cultures. This twofold edifice is particularly noticeable in the region of Delhi/NCR, where traditional state and central universities-like Jawaharlal Nehru University, University of Delhi, Jamia Millia Islamia, and Guru Gobind Singh Indraprastha University-operate together with foremost private universities, including Amity Universit, Ashoka University, O.P. Jindal Global University and Sharda University. Though both sectors meaningfully contribute to the development of doctoral edification, their tactics related to research supervision frequently differ in notable ways.

The Government universities of Delhi NCR are extensively regarded institutions as highly research-oriented, buttressed by long traditional academic brilliance, strong public funding, with strong scholarly credentials faculty. Supervisors in these settings often maintain substantial publication portfolios and participate actively in research projects funded at state or national levels. Nonetheless, these universities frequently face criticism for bureaucratic delays, large student–faculty ratios, and heavy administrative workloads, all of which can reduce the level of personalized guidance available to doctoral scholars (Altbach, 2015).

By contrast, private universities in Delhi NCR have gained prominence over the past two decades through the adoption of flexible, student-centered approaches. These institutions often prioritize innovation in doctoral program structures, foster interdisciplinary research centers, and build strong collaborations with industry. Supervisory practices in private universities typically feature smaller research cohorts, closer faculty–student interaction, and an emphasis on timely completion of these along with international visibility. The comparatively lighter administrative responsibilities of faculty in these settings generally enable supervisors to dedicate more time to mentoring. However, debates persist regarding the consistency of research quality and the overall rigor of academic standards in private institutions (Choudaha & Kaur, 2017).

The Variances in source allocation and research provision additional differentiate government and private universities. The Public organizations typically helped, including state funding, established infrastructure extensive libraries and well-equipped laboratories, whereas private universities usually compensate by investing

in modern amenities, endorsing international partnerships, and proposing incentives for research publications/conference participation & publication. These differences unavoidably disturb supervisory practices, determining the limitations & opportunities experienced by both supervisors and doctoral candidates.

1.5 Rationale of the Study

As India seeks to boost research output and strengthen its global academic standing, ensuring the quality of doctoral education has become a national priority, While factors such as infrastructure, funding, and regulatory policies are important, it is the academic and interpersonal connection between supervisors and doctoral candidates that most directly shapes the doctoral experience. The justification of study lies in the noticeable differences in supervisory practices transversely private and government institutions. The Government universities, with their deep-rooted academic traditions and scholarly culture, often provide substantial intellectual grounding. In dissimilarity with the government, the private universities-many of which are relatively new-have embraced flexible structures, innovative mentoring models, and closer faculty-student interactions. Discovering these conflicting approaches is vital for considerate how supervisory circumstances shape doctoral scholars' satisfaction, academic development and career pathways. The study addresses a noticeable gap in Indian higher education research. Furthermore the research seeks to generate insights that can inform policy makers, higher education administrators, and supervisors. The study findings may contribute to strengthening supervisory practices, improving scholar well-being, and aligning doctoral training with the goals of the *National Education Policy (NEP, 2020)*, which emphasizes inclusivity, excellence, and global engagement in research.

1.6 The Problem Statement:

The present study involve various national and international contexts shown that poor communication indistinct expectations, and mismatched goals between doctoral candidates and supervisors found as key contributors which delayed in thesis submission and also leads to high attrition rates in research and doctoral programs. In India, such challenges are intensified by general issues like substantial administrative constraints, supervisory workloads, and unreliable levels of institutional support. The issue becomes particularly significant when equating supervisory practices in private and government universities and the core problem lies in the lack of a inclusive understanding of in what way supervisory relationships vary between and private government universities in Delhi NCR and how these changes effect the academic experiences of doctoral scholars.

1.7 Objectives of the Study

The present study is to compare and examine the academic relationship between supervisors and doctoral scholars in private and govt. universities of Delhi NCR. To fulfill this overarching goal, the research is guided by the following specific objectives:

1. To examine the academic and interpersonal aspects of the supervisor–scholar relationship in doctoral programs between government and private universities in Delhi NCR
2. To compare supervisory practices between government and private universities in Delhi NCR
3. To evaluate how supervisory relationships affect research quality and doctoral outcomes.

2. Research Methodology

2.1 Research Design: The present study follows a quantitative approach, combining descriptive and comparative design. The analysis draws on primary data gathered through a structured questionnaire administered via purposive sampling technique, 208 doctoral scholars included scholars currently enrolled in both types of universities, ensuring a balanced perspective. After carefully reviewing the data for completeness and consistency, 199 responses were considered suitable for final analysis.

2.2 Data Analysis Techniques: The collected data were analysed using SPSS, the normality of the data was assessed using skewness, kurtosis, and graphical techniques. A range of statistical tools included descriptive statistics to summarise the dataset, Independent Sample t-tests and One-Way ANOVA for group comparisons, Pearson Correlation to examine relationships between variables, and Multiple Linear Regression to identify predictive factors. In addition, MANOVA was used to analyse multiple dependent variables simultaneously, offering a broader analytical perspective.

3.1 Data Analysis and Interpretation: The analysis begins with a detailed descriptive profile of the respondents and the key study variables. This step helps in establishing a foundational understanding of the sample characteristics and provides context for the more complex statistical interpretations that follow.

Table No: 1 Comprehensive Descriptive Overview of Demographic Characteristics and Supervisory Constructs (N = 199)

Variable	Category / Dimension	Frequency	%	Mean	SD
Gender	Male	63	31.7	1.68	0.46
	Female	136	68.3		
Age Group	22–29	78	39.2	3.11	1.57
	30–39	73	36.7		
	40–50	40	20.1		
	51+	8	4.0		
Scholar Category	JRF	49	24.6	1.75	0.43
	Non-JRF	150	75.4		
University Nature	Private	103	51.8	1.48	0.50
	Government	96	48.2		
Doctoral Stage	Coursework Completed	68	34.2	1.89	0.86
	Data Collection	40	20.1		
	Thesis Writing	36	18.1		
	Thesis Submitted	12	6.0		
	Thesis Awarded	43	21.6		
Supervisory Constructs	Academic Guidance (AG)	–	–	3.48	1.08
	Administrative Support (AS)	–	–	3.43	1.18
	Research Skills (RS)	–	–	3.31	1.30
	Emotional Support (ES)	–	–	3.23	1.06
	Comparative Perceptions (CP)	–	–	3.53	1.01
Overall Supervisory Contribution	Composite Score	–	–	3.40	1.03

Source Primary data.

Interpretation: Table 1 a closer look at the sample shows that female scholars form a larger proportion (68.3%) compared to male scholars (31.7%). In terms of age, most respondents fall within the 22–39 year bracket (75.9%), which typically represents early to mid-stage doctoral researchers. Interestingly, a substantial majority-about 75.4%-are non-JRF scholars, signifying that many respondents are either self-funded or not supported through formal fellowship schemes.

The representation across institutions appears reasonably balanced, with 51.8% of participants drawn from private universities and 48.2% from government institutions. This balance is useful, especially when making comparisons in later stages of analysis. Looking at doctoral progress, the sample includes scholars at different phases: around 34.2% have completed their coursework, while 21.6% have already been awarded their degree. Only a small fraction (6.0%) are at the thesis submission stage, which points to a spread of research maturity levels rather than concentration at a single stage.

When it comes to supervisory dimensions, the mean scores suggest generally positive, though not exceptionally high, perceptions across all constructs. The comparative perceptions recorded the highest mean score (M = 3.53, SD = 1.00), followed closely by Academic Guidance (M = 3.48, SD = 1.08) and Administrative Support (M = 3.43, SD = 1.18). On the other hand, Research Skills (M = 3.31, SD = 1.30) and Emotional Support (M = 3.23, SD = 1.06) received comparatively lower ratings. This difference, although not drastic, may indicate areas where supervisory practices could be strengthened-particularly in fostering research capabilities and offering emotional reassurance during the doctoral journey. The overall supervisory contribution score (M = 3.40, SD = 1.03) reflects a moderately positive assessment of supervision among doctoral scholars. At the same time, the standard deviation values across different constructs point to a fair

degree of variability, implying that supervisory experiences are not uniform and may differ depending on institutional context or stage of research. Taken together, these descriptive findings highlight a sample that is both diverse and fairly balanced. While the overall perception of supervisory support leans positive, there remains noticeable room for improvement, especially in areas related to emotional support and the development of research-oriented skills.

3.2 Assessment of Normality: The assessment was carried out using 199 valid responses. Evaluating normality at helps avoid potential distortions in analyses while applying parametric methods that are sensitive to deviations from normal distribution.

Table No: 2 Descriptive Statistics and Distribution Shape (N = 199)

Variable	Mean	SD	Skewness	Kurtosis
AG	3.48	1.08	-0.48	-0.42
AS	3.43	1.18	-0.99	-0.41
RS	3.31	1.30	-0.79	-0.48
ES	3.23	1.06	-0.42	-0.48
CP	3.53	1.00	-0.56	-0.14

Source: Primary data

The skewness values lie between −0.993 and −0.422, which points to a moderate level of negative skewness in the data. In other words, the distribution is slightly tilted, though not to an extreme extent. At the same time, the kurtosis values remain within the ±1 range, indicating that the overall shape of the distribution is fairly acceptable. This suggests that, the data does not significantly depart from normality and can be considered suitable for further analysis.

Table No. 3 Tests of Normality

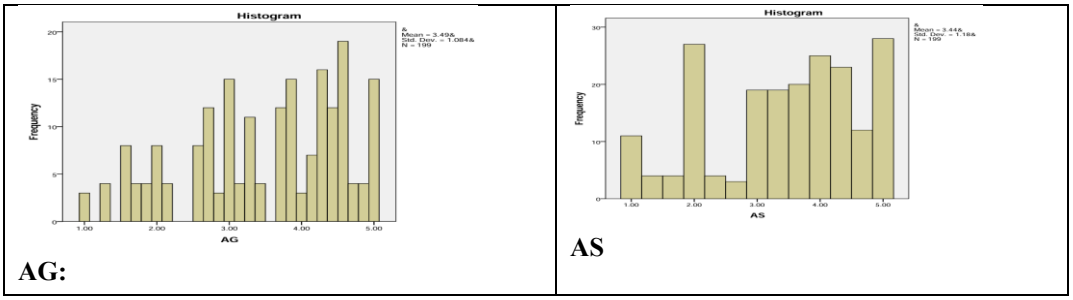
Variable	Kolmogorov–Smirnov (Sig.)	Shapiro–Wilk (Sig.)
AG	.014	.000
AS	.000	.000
RS	.000	.000
ES	.000	.000
CP	.000	.000

Source: Primary data

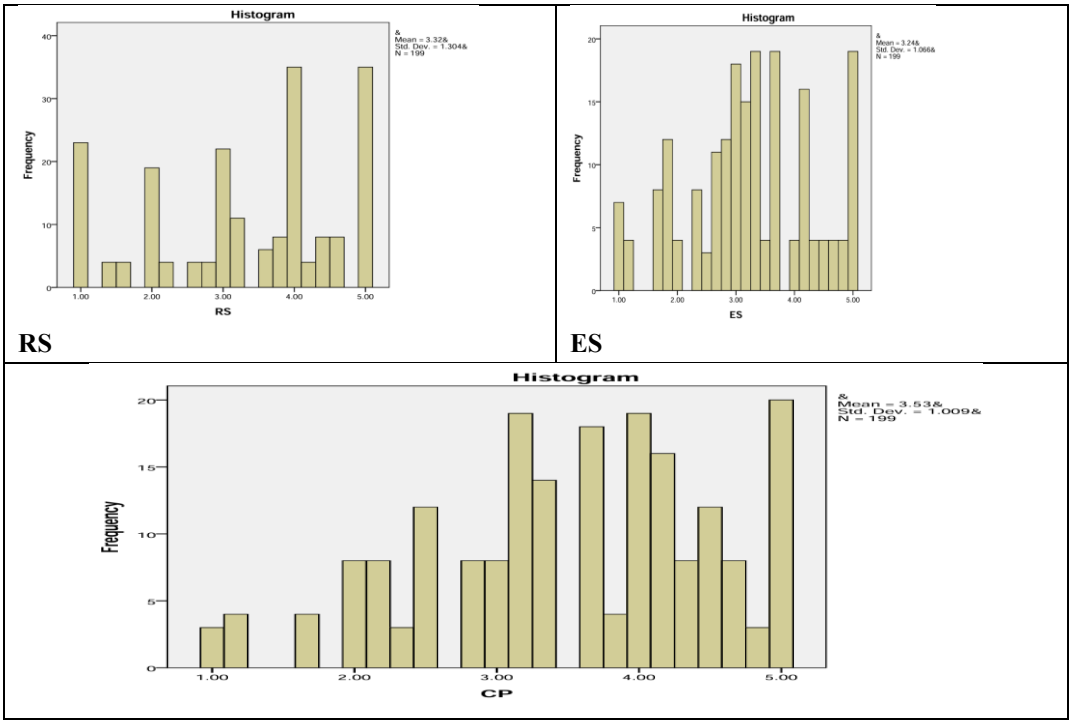
The Kolmogorov–Smirnov and Shapiro–Wilk tests were statistically significant ($p < .05$), indicating deviation from strict normality.

3.3 Graphical Assessment of Normality

Figure 1: Histograms of Supervisory Constructs (AG, AS, RS, ES, and CP) Showing Approximate Normal Distribution with Moderate Negative Skewness (N = 199)



AG: **AS**



Source: Primary data

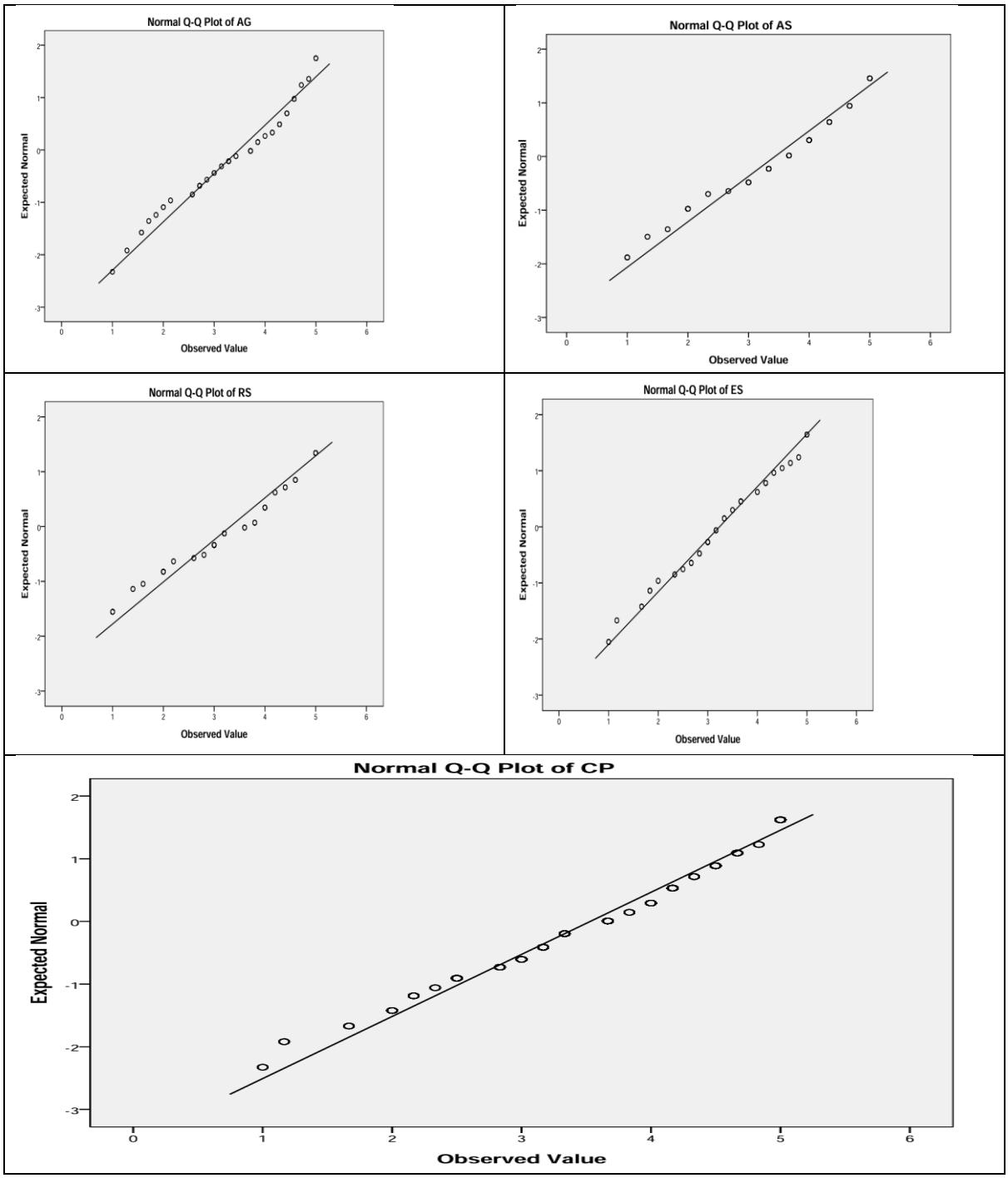
Interpretation: Based on 199 valid responses, the figure 1 illustrates the histograms for Academic Guidance (AG), Administrative Support (AS), Research Skills (RS), Emotional Support (ES), and Comparative Perceptions (CP). The mean scores fall within a relatively narrow range, from 3.23 for Emotional Support to 3.53 for Comparative Perceptions. This pattern suggests that respondents, overall, hold moderately positive views regarding different aspects of supervision, though the variation across dimensions is still worth noting.

There is a mild negative skewness which is evident across all constructs and its values range from -0.99 for Administrative Support to -0.42 for Emotional Support, indicating a slight tendency for responses to cluster toward the higher end of the scale. At the same time, kurtosis values remain within acceptable limits (-0.48 to -0.14), which implies that the distributions are neither excessively peaked nor unusually flat.

A closer, visual examination of the histograms reveals distributions that are reasonably bell-shaped, without any extreme outliers or pronounced asymmetry. Considering the skewness and kurtosis values, which fall within the commonly accepted ±1 range, the assumption of normality can be regarded as sufficiently met for practical purposes for parametric statistical techniques.

Interpretation: Figure 2 displays the Normal Q–Q plots for Academic Guidance (AG), Administrative Support (AS), Research Skills (RS), Emotional Support (ES), and Comparative Perceptions (CP), based on 199 valid observations. Across all plots, the observed data points tend to follow the diagonal reference line fairly closely, which generally indicates alignment with a normal distribution. There are, of course, slight deviations at the lower and upper ends, but these are relatively minor and do not suggest any consistent or systematic departure from linearity. Overall, the positioning of points along the reference line provides reasonable visual evidence that the data approximate normality. This interpretation becomes stronger when viewed alongside the skewness values (ranging from −0.993 to −0.422) and kurtosis values (−0.482 to −0.141), both of which fall within acceptable limits. Taken together, these indicators suggest that the assumption of normality is largely met.

Figure No.2: Normal Q–Q Plots of Supervisory Constructs (AG, AS, RS, ES, and CP) Indicating Near-Linear Alignment with the Expected Normal Distribution (N = 199)



Source: Primary data

It is worth noting that formal normality tests produced statistically significant results. However, with a sample size of 199, such outcomes are not unusual, as even small deviations can appear significant. In this context, greater emphasis was placed on skewness, kurtosis, and graphical assessment. Given that these measures fall within the commonly accepted thresholds (±1), and considering the general robustness of parametric techniques to moderate violations of normality, the assumption can be treated as sufficiently satisfied. On this basis, the use of parametric statistical methods—such as the t-test, ANOVA, MANOVA, correlation, and regression—was considered appropriate for subsequent analysis.

3.4 Hypothesis Testing

3.4.1 Overall Difference in Supervisory Contribution Between Government and Private Universities

An independent samples t-test was conducted to examine whether overall supervisory contribution differs between Government and Private Universities.

Table No. 4: Overall Supervisory Contribution by University Type

University Type	N	Mean	SD	t	df	p
Private	103	3.44	1.12	0.64	197	0.52
Government	96	3.35	0.92			

Source: Primary data

Levene's test was not significant (p = 0.06), indicating homogeneity of variance. The difference was not statistically significant (p = 0.52).

Decision (H0): Not Rejected.: There is no significant difference in overall supervisory contribution between Government and Private Universities.

3.4.2 Dimension-wise Differences Between University Types (H01–H05)

Independent samples t-tests were conducted for each supervisory dimension.

Table 5: Comparison Across Supervisory Dimensions

Dimension	Private University Mean	Govt. University Mean	t	p	Result*
Academic Guidance (AG)	3.56	3.40	1.07	0.28	NS
Administrative Support (AS)	3.43	3.43	-0.02	0.98	NS
Research Skills (RS)	3.32	3.31	0.02	0.98	NS
Emotional Support (ES)	3.28	3.18	0.67	0.50	NS
Comparative Perceptions (CP)	3.63	3.42	1.45	0.14	NS

(*NS = Not Significant) ***Source: Author's computation based on primary data (SPSS Output)***

All p-values exceed 0.05.

Decision (H01–H05): Accepted. No significant differences exist between Government and Private Universities across supervisory dimensions.

3.4.3 Gender-Based Difference in Supervisory Contribution (H06)

Table 6. Gender-Based Difference in Overall Score

Gender	N	Mean	t	df	p
Male	63	3.99	5.91	197	0.00
Female	136	3.12			

Source: Primary data

A significant difference was observed (p < .001), with male scholars reporting higher supervisory contribution.

Decision (H06): Rejected. A significant gender-based difference exists.

3.4.4 Difference Based on Fellowship Status (H07)

Table No.7 JRF vs Non-JRF Comparison

Category	N	Mean	t	df	p
JRF	49	3.30	-0.75	197	0.45
Non-JRF	150	3.43			

Source: Primary data

No statistically significant difference was found.

Decision (H07): Accepted. Supervisory contribution does not differ based on fellowship status.

3.4.5 Difference Across Stages of Doctoral Research (H08)

A One-Way ANOVA was conducted.

Table No. 8 ANOVA Results for Stages of Doctoral Research

Source	df	F	p
Between Groups	4	6.19	0.00
Within Groups	194		

Source: Primary data

A significant difference was observed ($p < .001$).

Table 9: Mean Scores by Stage

Stage	N	Mean
Thesis Writing	36	2.94
Data Collection	40	3.27
Thesis Awarded	68	3.30
Thesis Submitted	12	3.82
Coursework Completed	43	3.94

Source: Primary data

Post hoc analysis indicated significant differences between:

- Coursework Completed and Thesis Writing
- Coursework Completed and Thesis Awarded

Decision (H08): Rejected.

Supervisory contribution varies significantly across doctoral stages.

3.4.6 Correlation among Supervisory Constructs (H09)

Pearson correlation analysis revealed strong positive relationships among all supervisory dimensions.

Table No. 10 Correlation with Overall Supervisory Contribution (N = 199)

Dimension	r	p
AG	0.92	0.00
AS	0.92	0.00
RS	0.94	0.00
ES	0.87	0.00
CP	0.90	0.00

Source: Primary data

All correlations are significant at $p < .01$.

Decision (H09): Rejected. Supervisory constructs are strongly and positively interrelated.

3.4.7 Multiple Regression Analysis (H010)

Multiple regression was performed to determine predictors of overall supervisory contribution.

Table No.11 Model Summary

R	R^2	Adjusted R^2	p
1.00	1.00	1.00	0.00

Source: Primary data

Table No.12 Standardized Regression Coefficients

Predictor	Beta	p
RS	0.25	0.00
AS	0.22	0.00
AG	0.20	0.00
ES	0.20	0.00
CP	0.19	0.00
University Nature	0.00	1.00

Source: Primary data

All supervisory dimensions significantly predict overall contribution. Research Skills is the strongest predictor. University type is not significant.

Decision (H010): Rejected.

4.8 MANOVA Analysis (H011)

MANOVA was conducted to assess multivariate differences between Government and Private Universities.

Table. No. 13 Multivariate Test (Pillai's Trace)

Value	F	p
.153	5.77	0.00

Source: Primary data

A significant multivariate effect was observed.

Table No.14 Univariate Effects

Variable	F	p
AG	1.16	0.28
AS	0.00	0.98
RS	0.00	0.98
ES	0.44	0.50
CP	2.11	0.14

Source: Primary data

No individual supervisory dimension showed significant differences.

Decision (H011): Rejected at multivariate level.

4. Major Findings

a) No significant difference exists between Government and Private Universities in overall supervisory contribution ($p = 0.52$).
b) No dimension-wise differences were found across university types (AG, AS, RS, ES, CP; $p > .05$).
c) Gender shows a significant difference ($p < .001$), with male scholars reporting higher supervisory contribution.
d) Fellowship status (JRF vs Non-JRF) does not significantly affect supervisory perception ($p = 0.451$).
e) Significant variation exists across doctoral stages ($F = 6.19$, $p < .001$). Scholars in coursework stage report the highest supervisory support.
f) Strong positive correlations exist among supervisory constructs ($r = 0.87$ to 0.948).
g) Research Skills is the strongest predictor ($\beta = 0.252$) of overall supervisory contribution.
h) University type does not significantly predict supervisory contribution in regression analysis.
i) MANOVA indicates multivariate significance ($p < .001$), but univariate effects are not significant.

5. Conclusion

The findings indicate that supervisory contribution does not significantly differ between Government and Private Universities. Supervisory practices, on the whole, seem to be fairly similar across different types of institutions. In other words, whether a scholar is enrolled in a government or private university does not appear to create major structural differences in how supervision is carried out. That said, some variations do emerge when factors such as gender and stage of doctoral progress are taken into account. These differences suggest that the nature and extent of supervisory engagement may depend more on individual scholar characteristics and where they stand in their research journey, rather than the institutional setting itself.

Among the various dimensions examined, Research Skills and Professional Development stand out as the most influential contributors to overall supervisory effectiveness. This points to an interesting pattern—doctoral scholars seem to place greater value on structured academic and research-oriented guidance than on administrative assistance or even emotional support. While the latter remain important, they appear to play a relatively secondary role in shaping overall perceptions.

Taken together, the findings indicate that supervisory contribution is generally viewed in a moderately positive light. However, this positive perception is not consistent across all areas. In particular, emotional support seems to lag behind other dimensions, hinting at a possible gap that institutions and supervisors may need to address more consciously.

6. Way Forward / Recommendations

a) **Enhancing Emotional Support:** Universities may need to move beyond informal interactions and introduce more structured mentoring and counselling systems. Such initiatives could help strengthen the emotional connection between supervisors and scholars, which, at present, appears somewhat underdeveloped.

b) **Stage-Specific Supervisory Approaches:** Supervision should not follow a one-size-fits-all model. Instead, it would be more effective if supervisory practices are aligned with the scholar's stage in the doctoral journey-particularly during the thesis-writing phase, where guidance needs tend to be more intensive and focused.

c) **Gender-Sensitive Supervisory Practices:** There is a need for institutions to take a closer look at the factors driving gender-based differences in supervisory experiences. Understanding these variations could help in designing more inclusive and responsive supervisory frameworks.

d) **Focus on Research Skill Development:** Institutions should give greater emphasis to building research competencies by organizing regular workshops on research methodology, academic writing, publication processes, and research design. These efforts can significantly enhance scholars' confidence and academic output.

e) **Supervisor Development and Training:** Introducing formal training programs for supervisors could help bring consistency in mentoring quality. While many supervisors rely on experience, structured training may ensure a more standardized and effective approach to guidance.

f) **Establishing Monitoring Mechanisms:** Periodic feedback systems should be put in place to evaluate supervisory effectiveness. Regular monitoring not only ensures accountability but also provides opportunities for timely improvements.

g) **Directions for Future Research**: Future studies could benefit from adopting longitudinal research designs to capture changes over time. In addition, incorporating qualitative methods, such as in-depth interviews, may offer richer insights into the supervisory experience

7. Significance of the Study

The significance of this study lies in its attempt to contribute to the ongoing development of doctoral education in India by closely examining the relationship between research scholars and their supervisors. In this context, supervision is not just an administrative requirement-it plays a central role in shaping capable researchers and ensuring meaningful academic output. By focusing on the Delhi NCR region, where government and private universities coexist within the same academic ecosystem, the study creates a useful setting to observe how supervisory practices may differ across institutional types. The findings, highlighting both strengths and gaps in supervision, can offer practical inputs for regulatory bodies as after all, a growing concern around uneven research standards and delays in Ph.D. completion. Evidence-based insights may help in refining doctoral guidelines and introducing more consistent supervisory benchmarks across institutions.

For universities and academic administrators, the study has clear practical relevance. It not only compares supervisory approaches across government and private institutions, but also brings attention to practices that seem to work well, alongside those that may need reconsideration. These observations could inform decisions related to faculty development, mentoring structures, and even workload distribution. In a way, improving supervision is not just about individual effort-it requires institutional support and thoughtful policy design.

The Supervisors themselves may also find the study useful, as it offers a reflective lens on their roles. It highlights how different aspects of supervision-be it academic guidance, communication style, or responsiveness-can influence both the experience and outcomes of doctoral scholars. Being aware of these

dynamics might encourage supervisors to strike a better balance between maintaining academic rigor and offering necessary support, which is often easier said than done. From the perspective of doctoral scholars, the study provides a platform to articulate their experiences, expectations, and challenges. This can empower scholars to engage more actively in shaping their research journey and advocating for better supervisory practices. Overall, the study attempts to address a noticeable gap in the Indian higher education literature by systematically examining supervisory relationships across different types of universities. It contributes to the theoretical understanding of doctoral supervision; its real value perhaps lies in its practical implications. Strengthening supervision, after all, is closely tied to improving research quality, supporting scholar development, and ultimately enhancing the academic standards of the country.

References

[1] Altbach, P. G. (2015). Knowledge and education as international commodities: The collapse of the common good. *International Higher Education*, (28), 2–5. https://doi.org/10.6017/ihe.2002.28.6937

[2] All India Survey on Higher Education (AISHE). (2022). *AISHE 2020–21 report*. Ministry of Education, Government of India. https://aishe.gov.in

[3] Choudaha, R., & Kaur, S. (2017). Private higher education in India: Trends, challenges, and opportunities. *International Higher Education*, (90), 18–20. https://doi.org/10.6017/ihe.2017.90.10039

[4] Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

[5] Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

[6] Delamont, S., Atkinson, P., & Parry, O. (2004). *Supervising the doctorate: A guide to success* (2nd ed.). Open University Press.

[7] Ives, G., & Rowley, G. (2005). Supervisor selection or allocation and continuity of supervision: PhD students' progress and outcomes. *Studies in Higher Education, 30*(5), 535–555. https://doi.org/10.1080/03075070500249161

[8] Kamler, B., & Thomson, P. (2014). *Helping doctoral students write: Pedagogies for supervision* (2nd ed.). Routledge.

[9] Kumar, R. (2020). Doctoral education in India: Issues and concerns. *Journal of Higher Education Policy and Management, 42*(3), 256–271. https://doi.org/10.1080/1360080X.2019.1701855

[10] Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education, 33*(3), 267–281. https://doi.org/10.1080/03075070802049202

[11] McAlpine, L., & Norton, J. (2006). Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research & Development, 25*(1), 3–17. https://doi.org/10.1080/07294360500453012

[12] Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.

[13] Murphy, N., Bain, J. D., & Conrad, L. (2007). Orientations to research higher degree supervision. *Higher Education, 53*(2), 209–234. https://doi.org/10.1007/s10734-005-5608-9

[14] National Assessment and Accreditation Council (NAAC). (2021). *Manual for self-study report: Universities*. NAAC.

[15] Pyhältö, K., Stubb, J., & Lonka, K. (2009). Developing scholarly communities as learning environments for doctoral students. *International Journal for Academic Development, 14*(3), 221–232. https://doi.org/10.1080/13601440903106551

[16] Pyhältö, K., Vekkaila, J., & Keskinen, J. (2012). Exploring the fit between doctoral students and supervisors: Mismatches, tensions, and interactions. *International Journal of Researcher Development, 3*(2), 139–158. https://doi.org/10.1108/17597511211278677

[17] University Grants Commission (UGC). (2018). *UGC regulations on minimum standards and procedure for award of Ph.D. degree*. UGC.

[18] Yin, R. K. (2017). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.