Research Paper

Comparative Study of Neuroleadership and Managerial Demographics in Makati City Bank: Insights for Leadership Development

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Abstract

This study investigates how managerial employees' demographic profiles influence neuroleadership competencies in a Makati City bank. Neuroleadership encompasses four domains—decision-making & problem-solving, emotional regulation, collaboration & influencing others, and facilitating change —each critical in high-stakes financial environments. Using a quantitative, cross-sectional survey design, data were collected from 100 supervisors and managers aged 20 to 59 years. Non-parametric tests (Kruskal–Wallis and chi-square) were applied to assess differences and associations across demographic groups, including age, gender, length of service, industry experience, and leadership training. Results revealed consistently competent to high proficiency across all domains, suggesting strong cognitive and interpersonal leadership capabilities among respondents. Most demographic variables did not significantly affect neuroleadership outcomes, suggesting that competencies may develop uniformly across employees and are shaped more by organizational culture and standardized training than by demographic characteristics. Notable differences emerged only in tenure and leadership training, with longer service and recent training associated with stronger skills in facilitating change and influencing others. The study contributes empirical evidence from the underexplored Philippine banking sector and highlights practical implications for leadership development. Recommendations include scenario-based decision-making exercises, implementation-focused problem-solving workshops, and neuroscience-informed programs tailored for early-tenure employees.

Keywords: *Neuroleadership, Decision-Making and Problem-Solving, Emotional Regulation, Collaboration and Influencing Others, Facilitating Change*

INTRODUCTION

Leadership involves a combination of mindsets and behaviors that unify individuals toward a common direction, facilitate teamwork to achieve shared objectives, and support adaptation in dynamic environments (Smet et al., 2021). Thus, several studies have provided evidence that leadership development positively impacts organizations (Burke & Day, 1986, as cited in Woods et al., 2024; Collins & Holton, 2004, as cited in Woods et al., 2024). Leadership development is also described as a journey of personal growth and improvement that enables individuals to challenge their existing psychological and emotional conditioning (Maor et al., 2024).

Recent advancements in neuroscience have deepened our understanding of leadership development, highlighting how cognition and behavior shape effective leadership (Zwaan et al., 2019). As organizations increasingly emphasize cognitive and emotional intelligence, neuroleadership has emerged as a key framework that integrates neuroscience insights into leadership practices. This approach enhances decision-making, problem-solving, emotional regulation, collaboration, influence, and change facilitation. While extensive research has been conducted in countries like Greece, Spain, South Africa, Canada, and the U.S. (Gkintoni et al., 2023; Ruiz-Rodriguez et al., 2023; Akşahin et al., 2023; Pittman, 2019), few empirical studies examine how demographic and experiential factors influence neuroleadership competencies within the Philippine banking sector.

This gap is critical because banks operate in high-stakes, cognitively demanding

environments where decision-making, emotional regulation, collaboration, and change facilitation directly affect organizational performance. However, little is known about how supervisors and managers in Philippine banks develop and apply neuroleadership skills, or how these competencies vary across demographic profiles such as age, gender, tenure, and training. Addressing this gap provides both theoretical insights into neuroleadership in emerging markets and practical guidance for leadership development in the financial industry. The research examines key neuroleadership domains—decision-making and problem-solving, emotional regulation, collaboration and influencing others, and facilitating change among managerial employees of a selected bank in Makati City, providing insights into how these competencies develop across different career stages.

To address the identified gap, this study is guided by the following research objectives: (1) to assess the level of neuroleadership proficiency across its four domains among managerial employees of a selected bank in Makati City; (2) to determine whether neuroleadership competencies differ significantly across demographic profiles such as age, gender, length of service, industry experience, and leadership training; and (3) to identify which demographic factors are most strongly associated with variations in neuroleadership proficiency.

Theoretically, this study contributes to the growing body of neuroleadership literature by examining how demographic and experiential factors shape cognitive and emotional leadership competencies within an emerging-market context. By examining supervisors and managers of a selected bank in Makati City, the research clarifies how these competencies vary across age, gender, tenure, industry experience, and leadership training. In doing so, it not only contributes to the theoretical understanding of neuroleadership in an emerging-market context but also provides practical insights for leadership development and talent management strategies tailored to the Philippine financial industry.

LITERATURE REVIEW
Defining Neuroleadership

Neuroleadership, grounded in neuroscience, focuses on how leaders regulate emotions and manage organizational change (Zwaan et al., 2019). It has gained attention in management and education (Gocen, 2020), with research highlighting its role in change leadership and change management. The shift from traditional management to neuromanagement underscores neuroleadership's growing influence (Parincu et al., 2020). Leaders utilizing neuroleadership strategies can better navigate challenges in human services organizations (Pittman, 2019). The field emerged to enhance leadership effectiveness by understanding brain function (Gkintoni et al., 2023).

While these studies collectively emphasize the value of neuroleadership, literature tends to examine each domain independently rather than integrating findings across contexts. Synthesizing these perspectives suggests that neuroleadership operates as an interconnected system of cognitive and emotional competencies shaped by both individual and organizational factors.

Neuroleadership Domains

Neuroleadership consists of four key domains: decision-making and problem-solving, which involves selecting the best option using analytical, creative, and critical thinking (Taherdoost & Mandanchian, 2023; Verissimo et al., 2024; Gocen, A., 2021); emotional regulation, which refers to managing emotions effectively (Li et al., 2024); collaboration and influence, which emphasize teamwork, direction, and clear communication (Bedwell et al., 2012; Corporaal et al., 2015, as cited in Scott & Manning, 2024; Khan et al., 2020); and change facilitation, which prepares leaders through training, feedback, and communication to navigate organizational transitions (Errida &

Lotfi, 2021).

These domains are presented as paired clusters because they reflect complementary cognitive and social processes. This framework was formalized by Rock and Ringleb (2013) in the *Handbook of NeuroLeadership* and is widely used by the NeuroLeadership Institute as a guiding instrument for leadership development.

Although neuroleadership is commonly conceptualized as an integrated framework of four interconnected domains, this study analyzed each domain independently to highlight domain-specific patterns and differences across demographic groups. This approach provides more granular insights while remaining consistent with the theoretical foundations of neuroleadership. Across these domains, scholars consistently highlight the role of experience, cognitive maturity, and emotional intelligence in shaping leadership behavior. However, few studies examine how demographic variables interact with these domains simultaneously, indicating a gap that this study addresses.

The Advantage of Applying Neuroleadership in the Organization

Leadership is a crucial aspect of management (Lussier & Achua, 2016, as cited by Samoka et al., 2023). However, critics argue that recent graduates often lack essential leadership skills, highlighting the need for targeted development programs. Karagianni et al. (2023) emphasize that experiential learning is the most effective way to develop leadership qualities. By integrating neuroleadership, organizations can enhance leaders' ability to regulate emotions, make informed decisions, improve collaboration, and navigate change effectively.

Existing literature also suggests that neuroleadership contributes to organizational adaptability, employee engagement, and decision quality, yet empirical studies in Southeast Asian contexts remain limited. This underscores the importance of examining neuroleadership within Philippine organizations, where cultural norms and hierarchical structures may influence leadership behavior differently.

Theoretical Benchmark

This study is anchored on four complementary theories that together explain how neuroleadership proficiency develops across demographic groups. Trait Leadership Theory conceptualizes neuroleadership domains such as decision-making and problem-solving, emotional regulation, collaboration and influencing others, and facilitating change as enduring traits that can be strengthened through training and experience (Stogdill, 1948). Building on this, Emotional Intelligence Theory emphasizes the socio-emotional dimension of leadership, showing how leaders regulate their own emotions and empathize with others to foster collaboration and influence (Goleman, 1995). Motivation and confidence are addressed by Self-Determination Theory, which highlights the role of intrinsic motivation and autonomy in sustaining leadership behaviors (Ryan & Deci, 2022), and Self-Efficacy Theory, which explains how perceived competence and confidence determine whether individuals effectively enact neuroleadership skills (Bandura, 1977). These two perspectives are distinct but complementary: self-determination clarifies why leaders act, while self-efficacy clarifies how strongly they believe they can act. Finally, Kolb's Experiential Learning Theory situates leadership development within workplace contexts, explaining how repeated cycles of experience, reflection, conceptualization, and experimentation refine neuroleadership competencies over time (Kolb, 1984). While generational differences may be inferred, Kolb's framework is most appropriately applied to tenure and industry experience rather than age cohorts per se.

Taken together, these theories form a coherent framework: Trait Leadership Theory provides the foundation by framing neuroleadership domains as traits; Emotional Intelligence

Theory deepens the socio-emotional dimension; Self-Determination and Self-Efficacy Theories explain motivational and cognitive mechanisms; and Kolb's Experiential Learning Theory situates these processes within workplace learning cycles. This integrated model clarifies how demographic and experiential factors — age, gender, tenure, industry experience, and leadership training shape neuroleadership proficiency in the banking sector, offering both theoretical depth and practical relevance.

Hypothesis

The hypothesis of the study seeks to explain the difference between its variables, subject to verification, whereas:

Null Hypothesis

- H01 (Age): There is no significant difference in neuroleadership domain scores among respondents grouped by age, and no significant association between age group and categorized neuroleadership proficiency.
- H02 (Gender): There is no significant difference in neuroleadership domain scores among respondents grouped by gender, and no significant association between gender and categorized neuroleadership proficiency.
- H03 (Length of service): There is no significant difference in neuroleadership domain scores among respondents grouped by length of service, and no significant association between tenure group and categorized neuroleadership proficiency.
- H04 (Industry experience): There is no significant difference in neuroleadership domain scores among respondents grouped by industry experience, and no significant association between industry experience group and categorized neuroleadership proficiency.
- H05 (Leadership training): There is no significant difference in neuroleadership domain scores among respondents grouped by leadership training status, and no significant association between leadership training status and categorized neuroleadership proficiency.

RESEARCH METHOD

Research Design

This study employs a quantitative, cross-sectional survey design to measure neuroleadership proficiency among managerial employees of a selected bank in Makati City. Descriptive statistics were used to summarize patterns across demographic groups, while comparative analyses were conducted to determine whether neuroleadership competencies differ significantly across demographic profiles. For inferential analysis, each of the four neuroleadership domains was examined separately rather than as a combined score, ensuring that domain-specific differences across demographic groups could be detected.

Normality tests (Kolmogorov–Smirnov and Shapiro–Wilk) indicated that the data did not meet the assumption of normal distribution ($p < 0.05$). Consequently, non-parametric tests were applied for inferential analysis. The Kruskal–Wallis test was used to compare neuroleadership domain scores across demographic groups with three or more categories (e.g., age, length of service, industry experience, gender, leadership training). In addition, the Chi-square test of independence was employed to examine associations between categorical demographic variables and categorized levels of neuroleadership proficiency.

This design is appropriate because it enables objective measurement of neuroleadership competencies, supports hypothesis testing, and allows for meaningful statistical comparisons across demographic variables. As a non-experimental, cross-sectional approach, it does not establish causal relationships but instead identifies group differences and associations relevant to leadership development in the banking sector.

Sampling Technique

The study initially intended to use simple random sampling to ensure an unbiased representation of employees from the target population of 762. Using the Raosoft calculator, a recommended sample size of 256 was determined. However, due to organizational privacy restrictions and voluntary participation, only 100 respondents ultimately completed the survey.

Because the final respondents were those who consented and were permitted by the company to participate, the realized sample is best described as restricted-access convenience sampling rather than pure random sampling. While this limits generalizability, a sample size of 100 remains acceptable for nonparametric tests such as the Kruskal–Wallis and Chi-square tests, which do not require large sample sizes or normally distributed data.

Participants of the Study

The study focused on managerial employees (supervisors and managers) at a selected bank in Makati City, as these roles are directly responsible for decision-making and problem-solving, emotional regulation, collaboration and influence, and facilitating change—the four domains of neuroleadership. Non-managerial staff were excluded to ensure that the analysis reflects leadership-related responsibilities rather than general employee behavior.

Respondents were aged 20 to 59 years, capturing early-career supervisors through mid-career and senior managers. This age boundary was set to reflect the active managerial workforce in the banking sector, while avoiding extremes (below 20, where leadership roles are rare, and above 59, where retirement norms apply). Although the study does not isolate generational cohorts (e.g., Gen Z vs. Millennials vs. Gen X), the age range provides a practical frame for analyzing experience-based differences such as tenure and industry exposure, which are directly aligned with the study's hypotheses.

Data Gathering Method

The researchers administered a pilot survey to 30 respondents to assess the questionnaire's reliability. Subsequently, the survey was distributed to 100 respondents aged 20 to 59 who are currently managerial employees at the selected bank in Makati City. The pilot testing process ensured item clarity and allowed the researchers to refine the instrument before full deployment. Feedback from pilot respondents was used to adjust wording, improve item flow, and ensure that the neuroleadership constructs were accurately captured.

Table 1. Tests of Normality for Neuroleadership Variables

TESTS OF NORMALITY	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*df*	*Sig.*	*Statistic*	*df*	*Sig.*
Decision-Making Mean	.115	100	.002	.895	100	.000
Problem Solving Mean	.133	100	.000	.901	100	.000
Emotional Regulation Mean	.106	100	.008	.957	100	.002
Collaboration Mean	.138	100	.000	.908	100	.000
Influencing Others Means	.121	100	.001	.934	100	.000
Facilitating Change Mean	.126	100	.000	.884	100	.000

Normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) indicate that none of the neuroleadership variables are normally distributed (p < 0.05 for all tests). As a result, non-parametric tests, including the Kruskal-Wallis test, were used for further analysis.

Validation of Instrument

The survey instrument was adapted from previously validated neuroleadership measures to ensure both theoretical alignment and contextual relevance to the Philippine banking sector. Items were drawn from established studies covering the four domains of neuroleadership: decision-making and problem-solving (Taherdoost & Mandanchian, 2023; Verissimo et al., 2024; Gocen, A., 2021), emotional regulation (Li et al., 2024; Goleman, 1995), collaboration and influencing others (Bedwell et al., 2012; Corporaal et al., 2015, as cited in Scott & Manning, 2024; Khan et al., 2020), and facilitating change (Errida & Lotfi, 2021; Pittman, 2019).

The adaptation process involved selecting core items from these sources, modifying wording to reflect organizational language used in Philippine banks, and contextualizing examples to financial services settings so that respondents could relate to the scenarios. Because the items were drawn from published, peer-reviewed sources, no proprietary scales requiring licensing were used. To establish content validity, the instrument was reviewed by a statistician, an industry practitioner, and a human resource manager, who confirmed alignment with theoretical definitions of the neuroleadership domains. Construct validity was supported by grounding the items in internationally recognized frameworks, including the *Handbook of NeuroLeadership* (Rock & Ringleb, 2013) and the NeuroLeadership Institute model. Reliability testing using Cronbach's alpha demonstrated strong internal consistency across all domains, with coefficients ranging from acceptable to excellent (α = .797–.920), confirming that the instrument reliably measures neuroleadership competencies across different respondent groups.

Table 2. Interpretation Guide

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 3. Test of Reliability Using Cronbach's Alpha

Variable	Number Of Items	Cronbach's Alpha Value	Interpretation
Decision Making	21	.920	Excellent
Problem Solving	8	.898	Good
Emotional Regulation	12	.899	Good
Collaboration	8	.896	Good
Influencing Others	9	.797	Acceptable
Facilitating Change	10	.886	Good
Overall	**68**	**.944**	**Excellent**

Statistical Treatment of Data and Analysis

The survey instrument, adapted from existing studies, includes demographic questions to capture variation among respondents. It was validated by an academic statistician, an industry practitioner, and a human resource manager. Reliability will be measured using *Cronbach's alpha* to ensure internal consistency.

Since normality tests indicated that all neuroleadership variables violated the assumption of

normality (p < .05), nonparametric tests were used. The Kruskal-Wallis test was selected to compare neuroleadership scores across demographic groups because it is appropriate for ordinal data and non-normal distributions. The Chi-Square test was used to examine associations between categorical demographic variables and neuroleadership classifications. These tests align with the study's hypotheses and ensure methodological rigor.

Table 4. Verbal Interpretation of the Questionnaire

Weight	Mean Range	Descriptive Equivalent	Verbal Interpretation
1	1.00-1.80	Strongly Disagree (SD)	Significant Development
2	1.81-2.60	Disagree (D)	Room for Improvement
3	2.61-3.40	Somewhat Agree (SWA)	Satisfactory needs further assessment
4	3.41-4.20	Agree (A)	Competent
5	4.21-5.00	Strongly Agree (SA)	Highly Proficient

Conceptual Framework
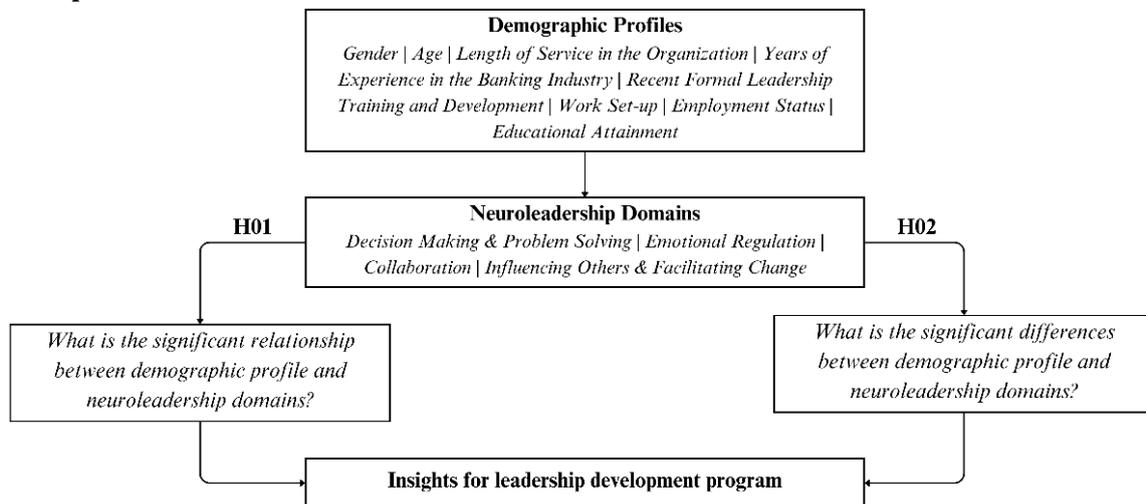
Figure 1. The Conceptual Framework

Ethical Considerations

The study adheres to ethical guidelines, the Data Privacy Act of 2012 (RA 10173), and copyright laws. It ensures respondent confidentiality and anonymity, with voluntary participation and the option to withdraw. Secondary data sources are properly cited, and an NDA was signed with the selected bank in Makati City to protect managerial employee data and restrict external use.

FINDINGS AND DISCUSSION

The study found competent neuroleadership proficiency across all domains, but many differences across demographic groups were not statistically significant. This suggests that certain competencies may develop uniformly among managerial employees, likely associated with organizational culture and standardized training rather than age, gender, or tenure. Expected trends, such as older managerial employees exhibiting stronger emotional regulation and influence, did not consistently emerge, contrary to earlier studies that link experience to interpersonal leadership skills. This may reflect the structured, compliance-driven nature of Philippine banking, which tends to standardize leadership behaviors.

The results align with prior research showing strong decision-making and collaboration

across industries, though lower scores in rapid decision-making and implementation-focused problem-solving contrast with Western findings, where leaders often act more quickly. Cultural tendencies toward careful deliberation may explain this difference. High collaboration and influence scores also align with the literature on collectivist cultures, where teamwork and relational leadership are emphasized.

Overall, the findings indicate that neuroleadership competencies are shaped by both individual traits and organizational norms. Strong collaboration and influence reflect the relational demands of frontline banking roles, while weaker implementation-focused problem-solving highlights opportunities for targeted training in operational decision-making and process execution.

Demographic Characteristics of the Respondents

Table 5. Frequency & Percentage of the Demographic Profile of the Respondents

		Frequency	Percentage
1.1 Gender			
Female		44	44.0
Male		56	56.0
	Total	**100**	**100.0**
1.2 Age			
20 to 29 years old (Generation Z)		55	55.0
30 to 44 years old (Millennials)		33	33.0
45 to 59 years old (Generation X)		12	12.0
	Total	**100**	**100.0**
1.3 Length of Service in the Organization/Company			
Less than 1 year		37	37.0
1 year to 3 years		29	29.0
4 years to 8 years		20	20.0
9 years and above		14	14.0
	Total	**100**	**100.0**
1.4 Years of Experience in the Banking Industry			
Less than 1 year		34	34.0
1 year to 3 years		29	29.0
4 years to 8 years		19	19.0
9 years and above		18	18.0
	Total	**100**	**100.0**
1.5 Recent Formal Leadership Training and Development			
None		37	37.0
Within the last 3 months		25	25.0
Within the last 6 months		15	15.0
More than a year ago		23	23.0
	Total	**100**	**100.0**
1.6 Work Set-Up			
Full in-Office		94	94.0
Hybrid		6	6.0
	Total	**100**	**100.0**
1.7 Employment Status			
Regular		90	90.0

Probationary	10	10.0
Total	**100**	**100.0**
1.8 Educational Attainment		
Bachelor's Degree	86	86.0
Postgraduate	14	14.0
Total	**100**	**100.0**

The demographic profile of the 100 respondents reflects a relatively balanced gender distribution, with 56% male and 44% female, suggesting that both perspectives are adequately represented in the study. The age composition reveals a predominantly younger workforce, with Generation Z (20–29 years) making up 55%, Millennials (30–44 years) 33%, and Generation X (45–59 years) 12%. This indicates that neuroleadership competencies in the bank are largely shaped by younger professionals, which may influence how leadership practices evolve toward adaptability, collaboration, and openness to change.

Patterns in tenure and industry experience reinforce this observation. A significant proportion of respondents (37% with less than one year of service and 34% with less than one year of industry experience) are relatively new hires, while only a minority have long-term experience (14–18% with nine or more years). This suggests that the organization is in a phase of workforce renewal, with leadership development likely focused on onboarding and early-career growth rather than sustaining long-tenured leaders.

Leadership training exposure varied, with 63% reporting some form of training, though timing differed: 25% within the last three months, 15% within six months, and 23% more than a year ago. The fact that over one-third (37%) had no recent training highlights potential gaps in systematic leadership development, which may affect consistency in neuroleadership competencies across the workforce.

Work arrangements were overwhelmingly traditional, with 94% working fully in-the office. This reflects the banking sector's reliance on face-to-face operations and may shape collaboration and influencing behaviors differently than in hybrid or remote setups. Employment status was stable, with 90% holding regular positions, suggesting that most respondents have established roles and are likely to be invested in long-term organizational outcomes. Educational attainment was high, with 86% holding a bachelor's degree and 14% postgraduate qualifications, indicating a well-educated workforce that provides a strong foundation for leadership development but may also raise expectations for advanced training opportunities.

What is the level of assessment of the respondents in terms of the following neuroleadership domains?

Table 6. Summary of the Respondents Based on Their Assessment
in Terms of Decision-Making

Verbal Interpretation	**Frequency**	**Percent**
Significant Development Needed	1	1.0
Room for Improvement	0	0.0
Satisfactory	7	7.0
Competent	37	37.0
Highly Proficient	55	55.0
Total	100	100.0

The data shows that most respondents perceive themselves as Highly Proficient in decision-making, with 55% rating themselves as Highly Proficient and 37% as Competent. This indicates

strong overall decision-making capability, shaped by individual preferences and real-world contexts (Bakken & Haerem, 2020).

Table 7. Summary of the Respondents Based on Their Assessment
in Terms of Problem-Solving

Verbal Interpretation	Frequency	Percent
Significant Development Needed	1	1.0
Room for Improvement	4	4.0
Satisfactory	9	9.0
Competent	40	40.0
Highly Proficient	46	46.0
Total	100	100.0

The data reveal that 46% of respondents rated themselves as Highly Proficient in Problem Solving, while 40% identified as Competent. Although most feel confident in their abilities, a small percentage may require further development, supporting van Aken et al. (2012), who highlight problem-solving as a crucial competency refined through experience.

Table 8. Summary of the Respondents Based on Their Assessment
in Terms of Emotional Regulation

Verbal Interpretation	Frequency	Percent
Significant Development Needed	0	0.0
Room for Improvement	5	5.0
Satisfactory	12	12.0
Competent	44	44.0
Highly Proficient	39	39.0
Total	100	100.0

The data shows that most respondents feel confident in their emotional regulation, with 44% rating themselves as Competent and 39% as Highly Proficient. With no significant development needs reported, this suggests generally strong emotional regulation skills, which play a crucial role in workplace stress management and interpersonal interactions (Lawrence, 2023).

Table 9. Summary of the Respondents Based on Their Assessment
in Terms of Collaboration

Verbal Interpretation	Frequency	Percent
Significant Development Needed	0	0.0
Room for Improvement	1	1.0
Satisfactory	8	8.0
Competent	29	29.0
Highly Proficient	62	62.0
Total	100	100.0

The data indicate strong collaboration proficiency among respondents, with 62% rating themselves as Highly Proficient and 29% as Competent. With no significant development needs reported, this underscores the importance of collaboration in enhancing team performance and efficiency (Assbeihat, 2016).

Table 10. Summary of the Respondents Based on Their Assessment
in Terms of Influencing Others

Verbal Interpretation	Frequency	Percent
Significant Development Needed	3	3.0
Room for Improvement	5	5.0
Satisfactory	18	18.0
Competent	38	38.0
Highly Proficient	36	36.0
Total	100	100.0

The data indicate that 74% of respondents demonstrate strong proficiency in influencing others, with 36% rated Highly Proficient and 38% rated Competent. This reflects an overall effective capacity for influence, aligning with House (1976, as cited in Ali, 2012), who emphasizes influence as a key leadership trait in driving organizational success.

Table 11. Summary of the Respondents Based on Their Assessment
in Terms of Facilitating Change

Verbal Interpretation	Frequency	Percent
Significant Development Needed	2	2.0
Room for Improvement	0	0.0
Satisfactory	7	7.0
Competent	47	47.0
Highly Proficient	44	44.0
Total	100	100.0

The data show that most respondents demonstrate strong proficiency in facilitating change, with 44% rated Highly Proficient and 47% rated Competent. This suggests that effective leadership in facilitating change contributes to continuous improvement and innovation in organizations. This supports Hao and Yazdanifard's (2015) view that effective change-oriented leadership drives continuous improvement and innovation.

Table 12. Neuroleadership Proficiency of The Respondents
in Terms of Decision-Making

Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1. I always make decisions logically and systematically in the organization.	4.29	0.74	Highly Proficient
2. I consider multiple perspectives when making decisions.	4.34	0.76	Highly Proficient
3. When making a decision, I thoroughly explore various options in terms of a specified goal.	4.36	0.73	Highly Proficient
4. I always double-check my information sources to be sure I have the right facts before making decisions.	4.31	0.77	Highly Proficient
5. When making decisions, I mostly rely on both my analysis and external validation	4.33	0.73	Highly Proficient

to ensure accuracy.			
6. I ensure my decisions are based on reliable information and experts' insights.	4.31	0.79	Highly Proficient
7. I establish a clear criteria before I make a decision.	4.26	0.75	Highly Proficient
8. I prefer to make important decisions after carefully considering all factors, even under pressure.	4.28	0.74	Highly Proficient
9. I never postpone decision-making whenever possible.	4.13	0.98	Competent
10. I always make important decisions promptly or with little to no delay as long as it will yield positive results.	4.16	0.83	Competent
11. I'm confident in making quick choices, fully aware of the possible results.	4.14	0.86	Competent
12. I adapt my decision-making approach to match the urgency and complexity of each situation.	4.27	0.80	Highly Proficient
13. I generally make important decisions in a timely manner when necessary.	4.31	0.76	Highly Proficient
14. I often collaborate with others when making important decisions.	4.32	0.79	Highly Proficient
15. If I have the support of others, it is even more effective for me to make important decisions.	4.27	0.84	Highly Proficient
16. I like to get feedback when I am faced with important decisions.	4.31	0.88	Highly Proficient
17. I make sure my decisions are future-focused and aim for long-term success	4.26	0.89	Highly Proficient
18. I adapt my decision-making process based on the situation's urgency.	4.22	0.85	Highly Proficient
19. I often collaborate with colleagues to ensure my decisions benefit from diverse viewpoints.	4.17	1.02	Competent
20. I integrate feedback from others into my decision-making process when available.	4.16	0.95	Competent
21. I ensure my decisions align with the organizational mission and vision values.	4.30	0.92	Highly Proficient
Decision Making	**4.26**	**0.61**	**Highly Proficient**

The study found respondents to be Highly Proficient in decision-making (mean: 4.26), excelling in structured, evidence-based choices. They scored highest in exploring options (4.36), considering perspectives (4.34), and validating information (4.31). While they demonstrated strong adaptability (4.27) and collaboration (4.32), slightly lower ratings in timely (4.13) and quick

decision-making (4.14) suggest a preference for deliberation over speed. This highlights strong analytical skills but indicates a need for greater efficiency under time constraints. Aligns with findings by Zhou et al. (2024), who note that time pressure reduces cognitive efficiency and slows decision performance.

Table 13. The Neuroleadership Proficiency of the Respondents
in Terms of Problem-Solving

Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1. I identify what information is needed to solve a problem.	4.19	0.84	Competent
2. I clarify the problem that needs to be solved.	4.19	0.84	Competent
3. I revise the problem-solving process by sustaining the strength and re-plan the process to improve weaknesses.	4.07	0.93	Competent
4. I choose the appropriate approach and technique to solve a problem.	4.15	0.94	Competent
5. I evaluate the implemented process in solving a problem.	4.17	0.97	Competent
6. I plan strategically to solve a problem that is feasible and acceptable to those who are involved in the process.	4.11	0.91	Competent
7. I implement an effective and efficient process to solve a problem.	3.92	0.98	Competent
8. I develop an effective process to solve a problem.	3.92	0.97	Competent
Problem Solving	**4.09**	**0.78**	**Competent**

The study found that respondents rated themselves as Competent in problem-solving (weighted mean: 4.09), excelling in identifying relevant information (4.19), clarifying issues (4.19), and selecting techniques (4.15). However, they need improvement in execution, particularly in implementation (3.92) and developing effective processes (3.92). While strong analytical and planning skills support adaptability and teamwork (Schwencke, 2024), obstacles like assumptions and fixed thinking can hinder efficiency (Cherry, 2023). These findings suggest that enhancing execution strategies would further strengthen respondents' problem-solving abilities.

Table 14. The Neuroleadership Proficiency of the Respondents
in Terms of Emotional Regulation

Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1. When I want to feel more positive emotion (such as joy or amusement), I actively change what I'm thinking about.	3.83	1.09	Competent
2. I effectively manage my emotions during work hours.	3.91	0.90	Competent
3. When I want to feel less negative emotion (such as sadness or anger), I intentionally	3.90	1.00	Competent

	Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
	change what I'm thinking about.			
4.	When I am feeling positive emotions, I express them appropriately.	4.01	0.96	Competent
5.	When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	3.93	0.90	Competent
6.	I regulate my emotions effectively to maintain control.	3.99	0.87	Competent
7.	When I want to feel more positive emotions, I change the way I'm thinking about the situation.	4.00	0.93	Competent
8.	I control my emotions by positively reframing the way I think about the situation I'm in.	3.97	0.82	Competent
9.	When I want to feel positive emotions, I increase their expression appropriately.	3.99	1.03	Competent
10.	When I am feeling negative emotions, I make sure to manage them effectively.	4.05	0.86	Competent
11.	When I want to feel less negative emotion, I change the way I'm thinking about the situation.	4.02	0.92	Competent
12.	In certain situations, I appropriately express what I am feeling (be it positive or negative).	4.07	0.91	Competent
Emotional Regulation		**3.97**	**0.70**	**Competent**

The study found that respondents rated themselves as Competent in Emotional Regulation, with a weighted mean of 3.97. They excel in handling negative emotions (4.05) and expressing feelings appropriately (4.07), but could improve by maintaining a positive mindset. Emotional control enhances leadership effectiveness by fostering likability, ethical conduct, and goal alignment (Torrencen & Connelly, 2019), whereas poor regulation can lead to negativity and mood swings (Veazey, 2022). Since Emotional Regulation relies on Emotional Intelligence, developing EI can help leaders adapt behaviors for organizational success.

Table 15. The Neuroleadership Proficiency of The Respondents
in Terms of Collaboration

	Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1.	I listen to ideas of others with an open mind before making a decision.	4.30	0.69	Highly Proficient
2.	I treat group members with respect.	4.27	0.74	Highly Proficient
3.	I tell other group members when you think they are doing a good job (praise peers).	4.36	0.69	Highly Proficient
4.	I focus on problem solving rather than who is to be blamed.	4.29	0.73	Highly Proficient
5.	I work on collaborative projects as a team member.	4.34	0.74	Highly Proficient
6.	I get straight to the point in the discussion	4.39	0.69	Highly Proficient

	Weighted Mean	Standard Deviation	Qualitative Interpretation
group.			
7. I am aware of the feelings of other members of a group.	4.25	0.81	Highly Proficient
8. I develop ways to resolve conflict and reach agreement in a group.	4.26	0.76	Highly Proficient
Collaboration	**4.31**	**0.58**	**Highly Proficient**

Respondents are Competent in Problem Solving (4.09), excelling in information identification, issue clarification, and technique selection. However, they need improvement in execution, particularly in implementation and process development (3.92). Strong analytical and planning skills support adaptability, but assumptions and fixed thinking may hinder efficiency. Enhancing execution strategies could further strengthen their problem-solving abilities (Landrum, 2025).

Table 16. The Neuroleadership Proficiency of The Respondents in Terms of Influencing Others

Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1. I try to persuade others by using reason, logic, and facts.	4.07	0.79	Competent
2. I try to build enthusiasm for my ideas and suggestions by appealing to others' emotions, ideals, or values.	4.17	0.79	Competent
3. I try to gain support for my ideas and suggestions by involving others in planning, making decisions, and implementing changes.	4.07	0.84	Competent
4. I like to compliment people or use flattery or humor before making a request.	4.03	1.00	Competent
5. I ask people to go along with me based on friendship and loyalty.	3.82	1.10	Competent
6. I attempt to persuade others either by telling or suggesting I'll do something for them in return.	3.77	1.25	Competent
7. I try to get multiple people to support my ideas and ask them to convince others.	3.82	1.16	Competent
8. I confront people and demand they comply with my preferred course of action.	3.74	1.25	Competent
9. I use my position (e.g., as a manager or supervisor), policy, and/or the support from other senior members to persuade others to follow my wishes.	3.51	1.40	Competent
Influencing Others	**3.89**	**0.87**	**Competent**

The data show that respondents perceive themselves as competent in influencing others (mean = 3.89). They favor logical persuasion (4.07) and emotional appeal (4.17) over coercion. This finding aligns with research showing that both cognitive and affective appeals are central to

effective persuasion across contexts ([Ng et al., 2025](); [UNC Kenan-Flagler Business School, 2023]()), while flattery (4.03) and leveraging relationships (3.82) scored slightly lower. The lowest ratings were for direct confrontation (3.74) and hierarchical authority (3.51), reflecting reluctance to use power-based influence ([Feser, 2016]()). While respondents effectively use logic and emotion, their lower assertiveness suggests a need to develop stronger dominance and leadership techniques to enhance their overall influence.

Table 17. The Neuroleadership Proficiency of Respondents
in Terms of Facilitating Change

Statement	Weighted Mean	Standard Deviation	Qualitative Interpretation
1. I remain composed and confident when handling change.	4.19	0.72	Competent
2. I am able to stay calm and relaxed, even when change is happening.	4.15	0.81	Competent
3. I feel energized and ready to cope with everyday life.	4.07	0.87	Competent
4. I am hopeful and actively working towards adapting to my environment.	4.21	0.73	Highly Proficient
5. I'm calm and adaptable, even though I don't always know what is going to happen.	4.16	0.83	Competent
6. I can act in any situation, even when I don't have all the information.	4.03	0.90	Competent
7. I consider myself ready. I am aware of what is happening around me.	4.09	0.85	Competent
8. When I have a problem, I proactively make an effort to solve it.	4.24	0.81	Highly Proficient
9. I recognize my emotions, those of others, and adapt accordingly.	4.25	0.81	Highly Proficient
10. I control my emotions when I think they could make things worse for me.	4.20	0.82	Highly Proficient
Facilitating Change	**4.16**	**0.65**	**Competent**

The data shows that respondents are Competent in Facilitating Change (mean: 4.16). They excel in emotional awareness (4.25) and proactive problem-solving (4.24), while maintaining composure during change (4.15) and acting without full information (4.03) scored slightly lower. These findings highlight their adaptability and resilience in handling uncertainty. Given that organizational change can create stress ([van den Heuvel et al., 2020](); [Neves & Dam, 2024]()), developing further adaptability strategies could enhance their ability to navigate workplace challenges.

Is there a significant relationship between respondents' demographic profiles and neuroleadership?

Table 18. Association between Gender and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.224	No Significant Relationship

Problem Solving	.366	No Significant Relationship
Emotional Regulation	.516	No Significant Relationship
Collaboration	.510	No Significant Relationship
Influencing Others	.168	No Significant Relationship
Facilitating Change	.361	No Significant Relationship
Neuroleadership Overall	**.442**	**No Significant Relationship**

The analysis indicates no significant association between gender and neuroleadership domains, with all p-values exceeding the significance threshold. Decision Making (.224), Problem Solving (.366), Emotional Regulation (.516), Collaboration (.510), Influencing Others (.168), and Facilitating Change (.361) show no notable differences based on gender. Additionally, the overall neuroleadership score (p = .442) confirms that gender does not influence neuroleadership competencies.

Table 19. Association between Age and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.078	No Significant Relationship
Problem Solving	.253	No Significant Relationship
Emotional Regulation	.239	No Significant Relationship
Collaboration	.306	No Significant Relationship
Influencing Others	.044	Significant Relationship
Facilitating Change	.038	Significant Relationship
Neuroleadership Overall	**.040**	**Significant Relationship**

The study found a significant association between age and certain neuroleadership domains. Influencing Others (p = .044) and Facilitating Change (p = .038) were notably associated with age, as was the overall neuroleadership score (p = .040). However, no significant relationship was found for Decision Making (p = .078), Problem Solving (p = .253), Emotional Regulation (p = .239), and Collaboration (p = .306). These results suggest that age influences adaptability and influence-related leadership skills, while other competencies may be shaped by different factors.

Table 20. Association between Length of Service
in the Organization and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.016	Significant Relationship
Problem Solving	.433	No Significant Relationship
Emotional Regulation	.659	No Significant Relationship
Collaboration	.425	No Significant Relationship
Influencing Others	.015	Significant Relationship
Facilitating Change	.107	No Significant Relationship
Neuroleadership Overall	**.022**	**Significant Relationship**

The analysis indicates that length of service is significantly associated with Decision Making (p = .016) and Influencing Others (p = .015), suggesting that tenure enhances these competencies. Additionally, overall neuroleadership scores are related to tenure (p = .022). However, Problem Solving, Emotional Regulation, Collaboration, and Facilitating Change show no significant relationships, implying that these skills may develop independently of organizational experience.

These findings highlight that longer tenure primarily strengthens decision-making and influence within the organization.

Table 21. Association between Years of Experience in the Banking Industry
and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.017	Significant Relationship
Problem Solving	.570	No Significant Relationship
Emotional Regulation	.298	No Significant Relationship
Collaboration	.455	No Significant Relationship
Influencing Others	.049	Significant Relationship
Facilitating Change	.192	No Significant Relationship
Neuroleadership Overall	**.015**	**Significant Relationship**

The association analysis shows that years of banking experience significantly enhance Influencing Others (p = .049) and overall neuroleadership competencies (p = .015), suggesting that tenure strengthens leadership influence. However, no significant relationships were found for Decision Making (p = .017), Problem Solving, Emotional Regulation, Collaboration, or Facilitating Change, indicating that these skills develop independently of experience and may require personal development, training, or organizational support.

Table 22. Association between Recent Formal Leadership Training and Development
and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.033	Significant Relationship
Problem Solving	.352	No Significant Relationship
Emotional Regulation	.641	No Significant Relationship
Collaboration	.554	No Significant Relationship
Influencing Others	.410	No Significant Relationship
Facilitating Change	.218	No Significant Relationship
Neuroleadership Overall	**.079**	**No Significant Relationship**

The analysis shows that Decision Making (p = .033) is significantly related to recent formal leadership training, suggesting that training enhances decision-making skills. However, no significant relationships were found for Problem Solving, Emotional Regulation, Collaboration, Influencing Others, Facilitating Change, or overall neuroleadership scores. This indicates that while training is positively associated with decision-making, its effects on other neuroleadership domains may be limited or take longer to develop.

Table 23. Association between Work Set-up and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.762	No Significant Relationship
Problem Solving	.364	No Significant Relationship
Emotional Regulation	.035	Significant Relationship
Collaboration	.113	No Significant Relationship
Influencing Others	.818	No Significant Relationship
Facilitating Change	.037	Significant Relationship

Neuroleadership Overall	**.371**	**No Significant Relationship**

The analysis reveals a significant relationship between work set-up and Emotional Regulation (p = .035), suggesting that workplace environments impact employees' ability to manage emotions. However, no significant relationships were found for Decision Making, Problem Solving, Collaboration, Influencing Others, Facilitating Change, or overall neuroleadership scores. These findings indicate that while work set-up affects emotional regulation, its influence on other neuroleadership domains appears minimal.

Table 24. Association between Employment Status and
Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.532	No Significant Relationship
Problem Solving	.403	No Significant Relationship
Emotional Regulation	.913	No Significant Relationship
Collaboration	.309	No Significant Relationship
Influencing Others	.170	No Significant Relationship
Facilitating Change	.511	No Significant Relationship
Neuroleadership Overall	**.450**	**No Significant Relationship**

The analysis shows no significant association between employment status and any neuroleadership domain, including Decision Making, Problem Solving, Emotional Regulation, Collaboration, Influencing Others, and Facilitating Change. Additionally, the overall neuroleadership score is not significantly impacted. These findings suggest that neuroleadership competencies are not associated with employment status but may instead depend on factors like training, experience, or personal development.

Table 25. Association between Educational Attainment and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.179	No Significant Relationship
Problem Solving	.724	No Significant Relationship
Emotional Regulation	.650	No Significant Relationship
Collaboration	.213	No Significant Relationship
Influencing Others	.227	No Significant Relationship
Facilitating Change	.123	No Significant Relationship
Neuroleadership Overall	**.197**	**No Significant Relationship**

The analysis finds no significant association between educational attainment and any neuroleadership domain, including Decision Making, Problem Solving, Emotional Regulation, Collaboration, Influencing Others, and Facilitating Change. The overall neuroleadership score also shows no significant relationship. These results suggest that neuroleadership competencies are influenced more by experience, workplace environment, and personal development than by formal education.

Is there a significant difference between the respondents' demographic profile and neuroleadership?

Table 26. The difference between Gender and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.813	No Significant Difference
Problem Solving	.714	No Significant Difference
Emotional Regulation	.922	No Significant Difference
Collaboration	.872	No Significant Difference
Influencing Others	.197	No Significant Difference
Facilitating Change	.235	No Significant Difference
Neuroleadership Overall	**.564**	**No Significant Difference**

The analysis finds no significant differences in neuroleadership proficiency based on gender, as all p-values exceed the 0.05 threshold. This applies to Decision-Making, Problem-Solving, Emotional Regulation, Collaboration, Influencing Others, and Facilitating Change. The overall neuroleadership score also shows no gender-based disparities, suggesting that both male and female respondents demonstrate similar levels of proficiency across all domains.

Table 27. The Difference between Age and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.048	Significant Difference
Problem Solving	.108	No Significant Difference
Emotional Regulation	.731	No Significant Difference
Collaboration	.580	No Significant Difference
Influencing Others	.066	No Significant Difference
Facilitating Change	.025	Significant Difference
Neuroleadership Overall	**.034**	**Significant Difference**

The analysis reveals that age significantly relates to Decision Making (p = 0.048), Facilitating Change (p = 0.025), and overall neuroleadership proficiency (p = 0.034). However, no significant age-based differences were found for Problem Solving, Emotional Regulation, Collaboration, and Influencing Others, suggesting these domains are not associated with age.

Table 28. The Difference between the Length of Service in the Organization and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.029	Significant Difference
Problem Solving	.719	No Significant Difference
Emotional Regulation	.969	No Significant Difference
Collaboration	.669	No Significant Difference
Influencing Others	.010	Significant Difference
Facilitating Change	.007	Significant Difference
Neuroleadership Overall	**.124**	**No Significant Difference**

The analysis shows that length of service significantly associates with Decision Making (p = 0.029), Influencing Others (p = 0.010), and Facilitating Change (p = 0.007), suggesting that longer

tenure enhances proficiency in these areas. However, no significant differences were found for Problem Solving, Emotional Regulation, Collaboration, or overall neuroleadership proficiency, indicating that these skills are not strongly associated with time spent in the organization.

Table 29. The Difference between Years of Experience in the Banking Industry and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.001	Significant Difference
Problem Solving	.254	No Significant Difference
Emotional Regulation	.844	No Significant Difference
Collaboration	.437	No Significant Difference
Influencing Others	.007	Significant Difference
Facilitating Change	.012	Significant Difference
Neuroleadership Overall	**.011**	**Significant Difference**

The analysis indicates that years of experience in the banking industry significantly impact decision-making (p = 0.001), Influencing Others (p = 0.007), Facilitating Change (p = 0.012), and overall neuroleadership proficiency (p = 0.011). This suggests that greater experience in the banking sector enhances proficiency in these areas. However, no significant differences were found in Problem Solving, Emotional Regulation, or Collaboration, suggesting that these competencies may be related to other factors rather than to industry experience.

Table 30. The Difference between Recent Formal Leadership Training and Development in the Banking Industry and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.024	Significant Difference
Problem Solving	.367	No Significant Difference
Emotional Regulation	.865	No Significant Difference
Collaboration	.337	No Significant Difference
Influencing Others	.101	No Significant Difference
Facilitating Change	.152	No Significant Difference
Neuroleadership Overall	**.079**	**No Significant Difference**

The results suggest that recent formal leadership training is significantly associated with decision-making (p = 0.024), indicating that individuals who have undergone training exhibit greater proficiency in this area. However, no significant differences were found in Problem Solving, Emotional Regulation, Collaboration, Influencing Others, Facilitating Change, or overall neuroleadership proficiency, implying that leadership training may primarily enhance decision-making skills. In contrast, its effects on other neuroleadership domains are less pronounced.

Table 31. The Difference between Work Set-up in the Banking Industry and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.662	No Significant Difference
Problem Solving	.821	No Significant Difference
Emotional Regulation	.105	No Significant Difference
Collaboration	.229	No Significant Difference

Influencing Others	.625	No Significant Difference
Facilitating Change	.424	No Significant Difference
Neuroleadership Overall	**.468**	**No Significant Difference**

These suggest that work setup, whether in-office, hybrid, or remote, does not significantly impact neuroleadership proficiency across any domain. The lack of statistically significant differences implies that employees develop and apply neuroleadership skills regardless of their work environment. This may indicate that factors such as training, experience, or personal development play a more substantial role in shaping neuroleadership capabilities than work arrangements.

Table 32. The Difference between Employment Status and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.922	No Significant Difference
Problem Solving	.660	No Significant Difference
Emotional Regulation	.818	No Significant Difference
Collaboration	.714	No Significant Difference
Influencing Others	.128	No Significant Difference
Facilitating Change	.977	No Significant Difference
Neuroleadership Overall	**.498**	**No Significant Difference**

These findings suggest that employment status, whether regular or probationary, does not significantly impact neuroleadership proficiency across any domain. This implies that neuroleadership capabilities are likely shaped by other factors, such as experience, training, or individual competencies, rather than employment classification. It also indicates that both regular and probationary employees demonstrate similar levels of neuroleadership skills within the organization.

Table 33. The Difference between Educational Attainment and Neuroleadership Domains

Main Variable	p-Value	Qualitative Interpretation
Decision Making	.171	No Significant Difference
Problem Solving	.308	No Significant Difference
Emotional Regulation	.557	No Significant Difference
Collaboration	.714	No Significant Difference
Influencing Others	.164	No Significant Difference
Facilitating Change	.101	No Significant Difference
Neuroleadership Overall	**.118**	**No Significant Difference**

These findings suggest that educational attainment, whether a bachelor's degree or a postgraduate qualification, does not significantly impact neuroleadership proficiency across any domain. This implies that neuroleadership skills may be influenced more by practical experience, workplace exposure, and professional development rather than formal academic credentials. It highlights the importance of experiential learning and continuous skill enhancement in leadership effectiveness.

Table 34. Post-Hoc Results

Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Multiple Comparisons							
Post-Hoc Test of Age							
Facilitating Change Means	20 to 29 years old (Gen Z)	30 to 44 years old (Millennials)	-.14242	.13968	.596	-.4897	.2048
		45 to 59 years old (Gen X)	-.55455*	.20211	.027	-1.0570	-.0521
Post-Hoc Test of Length of Service in the Organization							
Facilitating Change Means	1 year to 3 years	Less than 1 year	-.14613	.15425	.826	-.5851	.2928
		4 years to 8 years	-.49086	.18077	.068	-1.0053	.0236
		9 years and above	-.59015*	.20240	.042	-1.1661	-.0142
Post-Hoc Test of Years of Experience in the Banking Industry							
Influencing Others Means	1 year to 3 years	Less than 1 year	-.49733	.20985	.139	-1.0945	.0998
		4 years to 8 years	-.75428*	.24503	.028	-1.4516	-.0570
		9 years and above	-.73531*	.24911	.039	-1.4442	-.0264

These findings emphasize the role of experience in developing key neuroleadership skills, particularly in Facilitating Change and Influencing Others. The higher scores of Generation X and long-tenured employees suggest that exposure to workplace transitions over time enhances adaptability. Similarly, the progression in influence with industry experience indicates that leadership capabilities are refined through practical engagement, problem-solving, and interpersonal interactions. This supports the idea that neuroleadership competencies are experience-driven rather than purely dependent on academic background or initial leadership training.

What insights can be gained from the results of the study to improve leadership development?

This study highlights the importance of experience, training, and mentorship in shaping neuroleadership competencies. While gender and education showed no significant influence, age, tenure, and industry experience played key roles in leadership effectiveness, particularly in decision-making, influencing others, and facilitating change. The findings reinforce the idea that leadership is a developed skill rather than an inherent trait, emphasizing the value of structured training programs and mentorship opportunities to cultivate strong neuroleaders. Organizations aiming to optimize leadership potential should invest in continuous learning, hands-on experience, and a culture that fosters adaptive leadership development.

CONCLUSIONS

This study evaluated neuroleadership competencies among managerial employees in a Makati-based bank and examined how these competencies vary across demographic and experiential factors. Results revealed consistently high proficiency in decision-making, collaboration, emotional regulation, and change facilitation, indicating strong cognitive and interpersonal leadership capabilities across the workforce. While the study addressed its core objectives—assessing proficiency levels, identifying demographic differences, and determining influential factors- it found that most demographic variables (gender, age, tenure, industry experience, employment status) did not significantly affect neuroleadership outcomes. The only notable variations emerged in leadership training exposure and tenure, with certain groups demonstrating stronger competencies in facilitating change and influencing others.

Theoretically, the study contributes to leadership literature by documenting the observed proficiency pattern across domains and clarifying which demographic and experiential factors showed limited versus significant associations in the Philippine banking context. This adds empirical evidence from an underexplored sector, highlighting how organizational culture and standardized training may play a stronger role in shaping neuroleadership than individual demographic differences. A tentative interpretation is that these competencies could reflect underlying traits interacting with workplace experiences; however, this explanation requires validation through future studies that incorporate trait-based measures and factor-analytic approaches to establish construct validity.

Practically, the findings support the design of targeted leadership development initiatives, especially for early-tenure employees. Recommended interventions include:

• Scenario-based decision-making training to enhance cognitive agility
• Implementation-focused problem-solving workshops to strengthen strategic execution
• Neuroscience-informed programs that build emotional regulation, collaborative influence, and change readiness

Overall, the study underscores the value of integrating neuroleadership principles into leadership development efforts, particularly in environments that demand cognitive flexibility, emotional intelligence, and strong collaborative influence. By grounding leadership training in neuroscience and contextual realities, organizations can foster more adaptive, resilient, and effective leaders.

LIMITATION & FURTHER RESEARCH

This study offers meaningful insights into neuroleadership by highlighting the cognitive and emotional processes that shape leadership behavior in the Philippine banking sector. Findings demonstrated consistently high proficiency across domains of decision-making, problem-solving, emotional regulation, collaboration, and change facilitation, underscoring strong cognitive and interpersonal leadership capabilities among employees. These results can guide future researchers examining neuroleadership across diverse industries, regions, or demographic groups, while also informing practical applications. For instance, government and organizational leaders may use neuroleadership principles to strengthen decision-making and emotional management, educators can integrate them into experiential learning activities, and banks can design development programs that leverage employee age, tenure, and experience. Approaches such as mentorship, experiential learning, and intergenerational workshops can further enhance adaptability, influence, and stress management.

Despite these contributions, several limitations must be acknowledged. The sample size of 100, while adequate for non-parametric analysis, restricts generalizability. The study's focus on a single bank in Makati City further limits its applicability to other industries or organizational

cultures. In addition, reliance on self-assessment measures may introduce bias or inaccuracies in evaluating neuroleadership proficiency.

These limitations present opportunities for future research. Expanding the sample across multiple banks or industries, employing longitudinal designs, and incorporating multi-source assessments (e.g., supervisor or peer evaluations) would strengthen the validity and reliability of findings. Future studies may also examine the effectiveness of neuroscience-based training programs, particularly those aimed at improving implementation-focused problem-solving and rapid decision-making under pressure. Such investigations would deepen understanding of how neuroleadership competencies can be cultivated and sustained across different organizational contexts.

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