African Journal of Social and Behavioural Sciences (AJSBS)
Volume 16, Number 5 (2026) ISSN: 2141-209X

EFFECT OF TOTAL QUALITY MANAGEMENT ON THE PERFORMANCE OF FEDERAL ROAD SAFETY CORPS, ABUJA

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ABSTRACT: The ever-improving global competition and increasing requests for more qualified products by customers have caused organisations to understand that the only way to survive in the market is to deliver better quality products to meet customers' needs. Therefore, the study examined the effect of total quality management on the performance of the Federal Road Safety Corps, Abuja. The study adopted a descriptive research design, using survey method. The entire population of 594 officers and men of the Abuja Federal Road Safety Corps were used for the study. The data was collected using a questionnaire and was analysed using correlation and regression techniques. The results of the analysis revealed that TQM has a significant and positive effect on the performance of FRSC, Abuja. Specifically, TQM components such as top management commitment and employee involvement showed a significant positive effect on performance. The study therefore recommended that the FRSC should channel more effort toward getting top management to be committed to quality and also involve men and officers in the quality process.

Keywords: Total Quality Management, Top Management Commitment, Employee Involvement, Performance and Effectiveness

INTRODUCTION

Organisations all over the world have been trying to cope with a rapidly changing business environment in which management has to be more astute in finding ways to sustain or gain a competitive advantage. The ever-increasing global competition and increasing requests for more qualified products and services by customers have caused organisations to understand that the only way of survival in the market is to deliver better quality products to meet customers' needs. As a result, these companies are ready to make drastic changes according to the demands of the market in order to be ahead of their competitors (Sauer & Seuring, 2017). Many organisations, therefore, spend considerable amounts of their funds in activities related to improving products and services. As such, most manufacturing businesses have adopted new philosophies such as Concurrent Engineering, Lean Production, Just-In-Time (JIT) strategies, Total Quality Management (TQM), Business Process Re-engineering (BPR), amongst others, to become more effective in the way they conduct business. The main driver behind these philosophies is the optimisation of the organisation's performance both internally and externally within its respective market targets.

In today's competitive environment, where customers are more conscious about product quality and service, the importance and adoption of quality improvement initiatives are increasing day by day. A broad list of such initiatives has been found in literature, including Advanced Manufacturing

Technology (ATM), Total Quality Management (TQM), and Total Preventive Management (TPM), Just in Time (JIT), Six-Sigma and Lean Manufacturing (Nelson, 2017). Selecting from among these emerging concepts, the focus of the current study is on TQM implementation and further investigation of its effects on organisational performance. The concept of TQM flourished after the advent of the quality movement led by Americans, such as Deming, Juran and Feigenbaum in the 1950s. Deming taught statistical methods, and Juran taught quality management techniques to the Japanese (Nelson, 2017).

Implementing TQM is a major organisational change that requires a transformation in the organisation's culture, processes, strategic priorities, and beliefs, among others, in order to realise performance in terms of efficiency and effectiveness in an organisation. Increasing demand by customers for better quality of product in the marketplace has encouraged many companies to provide quality products and services in order to compete in the marketplace successfully. To meet the challenge of this global competition, many businesses have invested substantial resources in adapting and implementing Total Quality Management (TQM) practices in their operations (Lagrosen, 2002). It involves the proper coordination of work processes, which allows for continuous improvement in all business units with the aim of meeting or surpassing customers' expectations.

Performance is the process of ensuring that firms' resources are properly used in pursuit of their goals (George, 2017). According to Walker (2012), performance is to achieve a convincing, flawless task or objective. Moreover, Walker looked at performance as a connection of shared 'effort and abilities. Performance is defined as how an enterprise is doing in terms of an increase in profit, market share, product quality, and expansion over other enterprises in the same industry (Akyuz & Opusunju, 2019). Performance is measured using diverse parameters by different organisations; some firms measure it through expansion, survival, number of employees, and capital employed (Akyuz & Opusunju, 2020). The indicators of performance are revenue, effectiveness, efficiency, growth, return on investment, profitability and market share. Hence, whenever the key performance indicators are in favourable states, it indicates efficiency (Lyndon & Timi, 2019). This study views performance as the ability of an organisation to effectively achieve its stated goals. For the FRSC, these goals include ensuring that there are fewer accidents on the road and that road users are effectively trained and monitored to ensure compliance. Understanding and implementing TQM in the organisation can bring about the attainment of these goals.

In recent years, the Federal Road Safety Corps (FRSC) has faced numerous challenges in fulfilling its mandate to ensure road safety, reduce road traffic accidents, and advise the federal government on road safety matters. Despite various strategies and interventions aimed at improving road safety, the persistently high rates of road traffic accidents, fatalities, and injuries indicate that the existing measures may not be fully effective or optimally implemented. This situation necessitates a critical examination of the FRSC's internal management practices and operational frameworks, particularly through the lens of Total Quality Management (TQM).

Total Quality Management, a comprehensive and structured approach to organisational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback, has been widely adopted in various sectors with significant success. TQM

focuses on customer satisfaction, process standardisation, continuous improvement, and the involvement of all employees, from top management to frontline workers, in quality enhancement initiatives (Omogbiya & Addah, 2016). However, the application and impact of TQM principles in the context of government agencies, especially those involved in road safety, have received limited attention in academic and practical discourse.

The problem of the study, therefore, radiates along the increasing rate of road accidents despite several efforts being made, for which the role of TQM will be examined.

Furthermore, identifying the barriers to the effective implementation of TQM in the FRSC, including organisational culture, resistance to change, lack of training, and insufficient leadership commitment, is crucial for developing targeted interventions. The research problem extends to examining the relationship between TQM practices and key performance indicators (KPIs) in the FRSC, such as accident response times, public satisfaction ratings, reductions in road traffic violations, and overall improvements in road safety records.

Addressing this research problem will not only contribute to the body of knowledge on the application of TQM in public sector organisations but also offer practical insights and recommendations for policy-makers, managers, and practitioners within the FRSC and similar agencies worldwide, aiming at enhancing their operational effectiveness and service quality through the principles of Total Quality Management.

The main objective of the study is to assess the effect of total quality management on the performance of the Federal Road Safety Corps, Abuja. More specifically, the following objectives will be diligently pursued:

i. investigate the effect of top management commitment on the performance of the Federal Road Safety Corps, Abuja.
ii. examine the effect of employee involvement on the performance of the Federal Road Safety Corps, Abuja.

The hypotheses of the study are:

H_{O1}: Top Management Commitment has no significant effect on the performance of Federal Road Safety Corps, Abuja.

H_{O2}: Employee Involvement has no Significant effect on the performance of Federal Road Safety Corps, Abuja.

This study examined the impact of Total Quality Management practice on performance, with a specific reference to the Federal Road Safety Corps, Abuja, during the period covering 2024. The study covered top management commitment and employees' involvement, as proxies for (TQM), while performance is measured by the effectiveness of the organisation.

LITERATURE REVIEW

Total Quality Management

Total Quality Management (TQM) has evolved from a quality control technique into a comprehensive management philosophy aimed at achieving continuous improvement, customer satisfaction, operational excellence, and enhanced organisational performance. Bellis-Jones and Hand (2019) argue that TQM provides organisations with a sustainable competitive advantage by integrating quality planning, statistical control, and management processes into a unified framework. Similarly, Kumar (2019) conceptualises TQM as an organisation-wide system designed to satisfy customer requirements while reducing operational costs and improving workplace conditions. These perspectives converge on the notion that quality should not be viewed as the responsibility of a single department but rather as a strategic concern embedded in every organisational process. However, while proponents of TQM emphasize its universal applicability, critics contend that the success of TQM is contingent upon organisational culture, leadership commitment, and employee acceptance, suggesting that the effectiveness of TQM may vary across sectors and institutional contexts.

Top Management Commitment

A critical dimension of TQM is top management commitment, which has consistently emerged as one of the most influential determinants of successful quality implementation. According to Heyns and Boikanyo (2019), management commitment is reflected in the willingness of organisational leaders to allocate resources, establish quality-oriented cultures, and actively participate in quality initiatives. Their findings suggest that organisations where senior management visibly supports quality programmes experience higher implementation success rates than organisations where management remains detached. This position aligns with Deming's (1986) assertion that quality improvement begins with leadership because management is responsible for creating systems, setting standards, and fostering continuous improvement. Nevertheless, some scholars argue that management commitment alone may not guarantee organisational success if employees are not adequately empowered or if quality initiatives are implemented as symbolic exercises rather than substantive organisational reforms. This suggests that leadership commitment should be complemented by employee participation and organisational learning to produce meaningful performance outcomes.

Employee Involvement

Employee involvement represents another critical component of TQM. Bendix (2019) and Bryson (2019) describe employee involvement as the extent to which employees participate in decision-making processes affecting their work. Employee participation may range from consultative arrangements to shared decision-making structures that grant employees greater influence over organisational activities. The literature generally supports the view that employee involvement enhances organisational effectiveness by fostering commitment, creativity, and ownership of organisational objectives. However, some studies indicate that employee participation does not automatically translate into improved performance. In organisations where participation mechanisms are poorly structured or where management fails to act upon employee suggestions,

involvement may become symbolic and yield limited organisational benefits. Consequently, the relationship between employee involvement and performance may depend on the quality of participation systems and the organisational climate within which they operate.

Performance

The concept of organisational performance itself remains a subject of scholarly debate. Clegg and Bailey (2020) note that organisational performance is multidimensional and can be assessed using financial, operational, and effectiveness indicators. Montes et al. (2020) and Chu-Hua et al. (2021) further argue that performance should not be measured solely through financial outcomes but should also consider operational efficiency, customer satisfaction, adaptability, and stakeholder value creation. Boyne (2022) expands this discussion by proposing five dimensions of public-sector performance: outputs, efficiency, effectiveness, responsiveness, and democratic outcomes. While private-sector studies frequently emphasize profitability and market share, public-sector organisations such as the Federal Road Safety Corps (FRSC) are more appropriately assessed through effectiveness measures that capture the achievement of institutional mandates and service delivery goals. This distinction is particularly important because performance indicators applicable in commercial enterprises may not adequately reflect the success of public institutions.

Effectiveness

This refers to the degree to which an organisation achieves its goals, efficiently utilises resources, and meets the expectations of its stakeholders. It is a multifaceted concept that encompasses various dimensions, including efficiency, productivity, quality, innovation, and adaptability (Stoner, 2019). The effectiveness of an organisation is often evaluated by its ability to produce desired outcomes and achieve its strategic objectives while maintaining a balance between internal processes and external demands.

One of the primary measures of organisational effectiveness is the extent to which an organsation meets its goals. This perspective, often referred to as the goal-attainment approach, suggests that effectiveness is determined by the clarity of goals and the organisation's success in achieving them (Etzioni, 2019).

Owusu-Kyei (2024) investigated the influence of total quality management strategies on the telecommunications industry’s business performance. Questionnaires were used as survey instruments to collect information on the impact of TQM methods on business performance. To assess the situation, eight hundred (800) responses were received from employees and top management of MTN Ghana Ltd. The study established that principles applied to total quality management have a significant bearing on business performance.

Anyadighibe et al. (2021) examined the effect of total quality management practices (Customer focus, top management involvement, employee participation, continuous improvement and byproducts value optimisation) on organisational performance. The questionnaire was used to obtain data from 482 respondents (lower, middle and upper level employees) of manufacturing companies in Nigeria. A cross-sectional survey research and stratified sampling technique were used for the

study, while multiple regression analysis was employed to analyse the data. It was concluded that TQM practices portray enormous potential for business re-engineering in companies. The findings showed that TQM tools assisted manufacturing companies to reduce/ eliminate waste, environmental pollution and cost from compensation, increase customer patronage and the company's success.

Chekpech and Cheluget (2021) studied the effect of Total Quality Management practices on organisational performance in Kenya. It adopted explanatory research design. The target population comprised heads of departments and tutors in the tertiary institutions within Uasin Gishu County, whose total population was 421. The sample size of 264 respondents was drawn using stratified random sampling. Questionnaires were used to collect primary data. Statistical Package for Social Sciences (SPSS) was used to conduct data analysis using descriptive statistics such as mean and standard deviation, and inferential statistics such as correlation analysis and multiple regressions to test hypotheses. The study findings of correlation analysis showed that employee involvement and customer focus were positively and significantly affected organisational performance. The findings of the multiple regression analysis showed that the observed changes in organisational performance attributed to the elements of total quality management practice are 56.9% ($r^2 = .569$). This finding of this research supports the hypothesis that total quality management practices significantly affect organisational performance; thus, any tertiary institution managers aiming to achieve organisational performance should pay close attention to all the elements of total quality management.

Despite this broad consensus, important contradictions exist within the literature. First, most empirical studies have focused on private-sector organisations, particularly manufacturing and telecommunications firms, where performance is often measured through financial and market indicators. Consequently, the applicability of these findings to public-sector organisations remains uncertain. Second, while studies consistently identify employee involvement and management commitment as significant predictors of performance, there is limited agreement on which TQM dimensions exert the greatest influence. For instance, some studies emphasize customer focus as the strongest determinant of performance, while others identify leadership commitment or continuous improvement as more influential factors. Third, many existing studies employ cross-sectional research designs and self-reported performance measures, raising concerns about causality and respondent bias. These methodological limitations suggest the need for additional research within public-sector contexts using more robust performance indicators.

The present study contributes to the existing body of knowledge by addressing these gaps. Unlike previous studies that concentrated largely on manufacturing firms, telecommunications companies, and educational institutions, this study focuses on the Federal Road Safety Corps (FRSC), Abuja, a public-sector organisation whose mandate centres on public service delivery rather than profit generation. Furthermore, the study specifically examines the effects of top management commitment and employee involvement on organisational effectiveness, thereby extending TQM research into a context where quality management practices have received relatively limited scholarly attention. By focusing on effectiveness as a measure of performance, the study provides a more appropriate assessment of TQM outcomes within a public-sector environment and contributes to the growing literature on quality management in government institutions.

Systems Theory

Systems Theory provides a comprehensive framework for understanding how organisations function as integrated and interdependent entities. Originally developed by the biologist Ludwig von Bertalanffy, the theory posits that organisations are open systems composed of interconnected subsystems that continuously interact with one another and with the external environment. According to Systems Theory, organisational effectiveness cannot be understood by examining individual components in isolation because the performance of each component depends on its interaction with other components within the system. Consequently, organisational success emerges from the coordination, integration, and alignment of all organisational processes rather than from the effectiveness of any single unit.

Within the context of TQM, Systems Theory suggests that quality management should be viewed as an organisation-wide responsibility rather than a departmental function. Every aspect of the organisation—including leadership, employees, processes, technology, suppliers, and customers—forms part of a larger system whose elements must work together harmoniously to achieve quality objectives. This perspective aligns closely with TQM principles, which emphasize cross-functional collaboration, continuous improvement, and customer satisfaction. When one component of the organisational system fails to function effectively, the performance of the entire organisation may be negatively affected. For example, even when employees are highly committed to quality improvement, organisational performance may remain poor if management fails to provide adequate resources, training, or strategic direction.

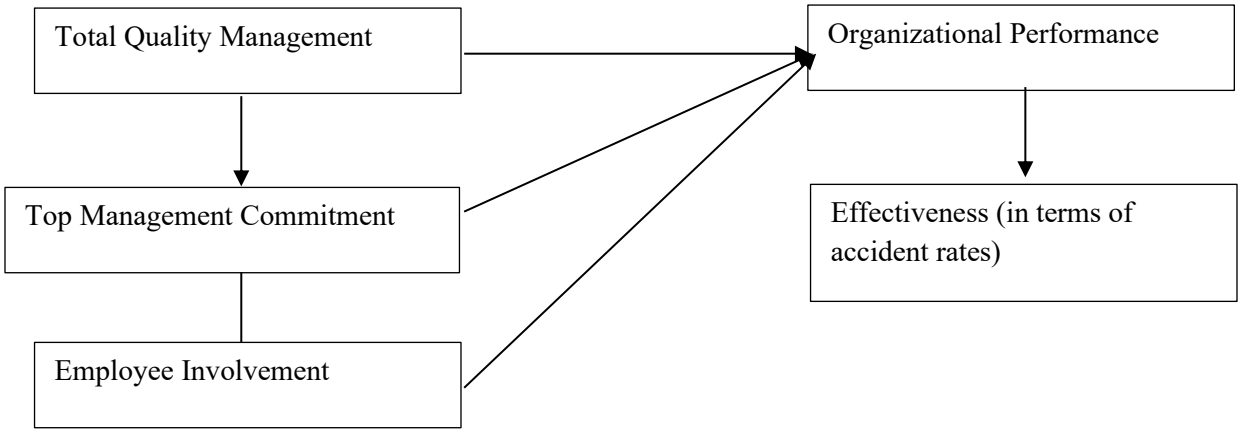
Systems Theory is particularly relevant to the variables of top management commitment and employee involvement. Top management serves as the coordinating subsystem responsible for setting goals, allocating resources, and ensuring alignment among organisational units. Employee involvement, on the other hand, represents the operational subsystem through which organisational objectives are translated into actions. Systems Theory argues that optimal organisational performance can only be achieved when these subsystems interact effectively. Thus, management commitment and employee involvement should not be viewed as independent variables but as interconnected elements of a broader organisational system whose combined effectiveness influences organisational outcomes.

The theory also highlights the importance of feedback mechanisms, which constitute a central principle of both Systems Theory and TQM. Feedback enables organisations to monitor performance, identify deviations from expected standards, and implement corrective actions. Through continuous feedback and learning, organisations adapt to environmental changes and improve their processes over time. This notion closely mirrors Deming's philosophy of continuous improvement, which advocates ongoing assessment and refinement of organisational practices. In the FRSC context, feedback obtained from employees, road users, operational reports, and performance evaluations can help management identify weaknesses and implement quality improvement initiatives that enhance organisational effectiveness.

A major strength of Systems Theory is its holistic approach to organisational analysis. Unlike theories that focus exclusively on leadership, employee behaviour, or organisational structure,

Systems Theory recognizes the interdependence of all organisational components and provides a comprehensive explanation of how quality management practices influence performance. However, critics argue that the theory is often too broad and abstract, making it difficult to identify the specific mechanisms through which organisational outcomes are achieved. Despite this limitation, Systems Theory remains highly relevant to the present study because it provides a strong conceptual foundation for understanding how top management commitment and employee involvement interact within the broader organisational system to influence the effectiveness of the Federal Road Safety Corps, Abuja. Therefore, the theory offers a valuable lens through which the relationship between TQM practices and organisational performance can be examined and explained.

Figure 1: Conceptual Model



Source: Researcher's conceptualization (2026)

METHODOLOGY

The study adopted a quantitative research design using a survey method. This allowed the study to use parametric statistical tools for data analysis. The survey method also allowed the research to gather and analyse a large amount of data, obtained primarily.

The population of the study consisted of all men and officers of the Federal Road Safety Corps (FRSC), Abuja, Nigeria. This sums to a total of 594 officers and staff who cut across 20 commands in Abuja. Given the population's usable size, the study adopted the census technique. This enabled the researcher to reach all the respondents and not reduce the population into a sample size. A self-administered questionnaire was used to gather the data.

The respondents were given assurance that their responses are strictly for research purposes and will be kept confidential. Therefore, no name or rank number was enquired in order to avoid bias and ensure confidentiality of responses.

Reliability Test

Reliability was used to test the extent of the accuracy of the questions in the instrument. The most convenient method for testing for the internal consistency is Cronbach's Alpha, which was computed with the following model:

$$\alpha = \frac{Nr}{1+r(N-1)}$$

Where:

α= Cronbach Alpha

N= the number of items in the scale

r= the mean inter-item correlation

A minimum Cronbach's Alpha value of 0.7 will be stated as reliable (Ritter, 2010)

Table 3. 1: Cronbach Analysis

SN	Variables	No of Items	Cronbach's Alpha
1	Top Management Commitment	4	.86
2	Employee Involvement	4	.83
5	Effectiveness	4	.74

Source: *SPSS v 26*

Table 3.1 indicated the reliability values of the questions asked in the research instruments. All Cronbach's Alpha values are above 70%, which means that they are all reliable (Ritter, 2010).

The study adopted a quantitative method of analysis, using descriptive statistics such as mean and standard deviation as well as frequencies and percentages. Also, the study used regression and correlation; the multiple regression was used to estimate the cause-and-effect relationship between the dependent and independent variables, while correlation was used to ascertain the degree or strength of a relationship between the variables with the aid of Statistical Package for Social Sciences v26 to analyse the data.

The study used TQM indicators such as Top management commitment and Employee engagement. The dependent variable, employee performance, was measured using effectiveness. Using correlation and simple regression models, the regression model is stated as:

$Y=a+bx$ - - - - - - 3.1

Where y is the dependent variable

a is constant or intercept

b is the coefficient

x is the independent variable

However, the above model is expanded to:

$Y = \alpha + \beta_1 X + \beta_2 X + \mu$ - - - - - 3.2

The formula is substituted with the variables and presented as follows;

$PF = \alpha + \beta_1 TC + \beta_2 EI + \mu$ - - - 3.3

Where:

PF = Performance

TC = Top Management Commitment

EI = Employee involvement

α =Intercept or Constant

β = Slope of the regression line with respect to the independent variables

μ = error term

Correlation Model

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$ - - - - - 3.4

r = correlation coefficient

Σ = Summation

x = dependent variable

y = independent variable

n = number of samples

DATA ANALYSIS

Table 4.1 Response Rate

Item	Number	Percentage
Questionnaire distributed	594	100
Questionnaire returned	590	99.3
Questionnaire wrongly filled	3	0.5
Questionnaire correctly filled	587	99.5

Source: research survey (2024)

The study distributed 594 questionnaires based on the population of the study. Five hundred and ninety were returned, out of which three were incorrectly filled, and the remaining five hundred and eighty-seven were used for the research.

Table 4.10 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TC	587	1.00	5.00	3.2739	1.41665
EI	587	1.00	5.00	3.1261	1.42416
EF	587	1.00	5.00	3.8526	1.32384
Valid N (listwise)	587				

Source: SPSS V 26

The table presents descriptive statistics on the effect of Total Quality Management (TQM) on the performance of the Federal Road Safety Corps (FRSC) using five variables: TC (Top Management Commitment), EI (Employee Involvement) and EF (Effectiveness).

For all the variables, the sample size is 587 respondents, which ensures the analysis is based on a robust sample. For all variables, the minimum score is 1.00, indicating that some respondents strongly disagreed with the statements corresponding to these variables. The maximum score of 5.00 across all variables suggests that some respondents strongly agreed with the statements.

The overall data suggest a moderately positive perception of TQM elements within FRSC. However, the relatively high standard deviations indicate that opinions on TQM practices vary significantly. The results show that while there are positive elements of TQM being implemented, there may be areas for improvement, especially in Employee Involvement (EI), which has relatively lower mean scores.

Table 4.11 Correlations

		TC	EI	EF
TC	Pearson Correlation	1	.971**	.936**
	Sig. (2-tailed)		.000	.000
	N	587	587	587
EI	Pearson Correlation	.971**	1	.912**
	Sig. (2-tailed)	.000		.000
	N	587	587	587
EF	Pearson Correlation	.936**	.912**	1
	Sig. (2-tailed)	.000	.000	
	N	587	587	587

***. Correlation is significant at the 0.01 level (2-tailed).*

Source: SPSS V 26

The provided table presents the Pearson correlation coefficients among various dimensions of Total Quality Management (TQM) and their impact on the performance of the Federal Road Safety Corps (FRSC).

All correlations between the variables are significant at the 0.01 level, indicating very strong positive relationships among the components of TQM and the performance measure (effectiveness, EF). For instance, the correlation between TC and EF is **0.936**, between EI and EF is **0.912**, and so on. This suggests that as TQM components (such as top management commitment and employee involvement) increase, FRSC effectiveness improves.

The correlations indicate that the implementation of TQM principles, such as top management commitment and employee involvement, is highly associated with enhanced performance (effectiveness) in FRSC. Each component of TQM not only improves effectiveness but also positively influences other TQM dimensions, suggesting that an integrated approach to quality management is critical for organisational performance.

Table 4.12 Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.745[a]	.794	.793	.43317

a. Predictors: (Constant), TC, EI,

Source: SPSS V 26

The table presents a summary of the regression model analysing the effect of Total Quality Management (TQM) on the performance of the Federal Road Safety Corps (FRSC).

The R-value is the correlation coefficient that represents the strength and direction of the relationship between the predictors (TC, EI) and FRSC performance. An R-value of .745 indicates a very strong positive relationship between TQM practices and FRSC performance. This suggests

that as the implementation of TQM practices improves, the performance of FRSC also tends to improve significantly. The R-squared value represents the proportion of variance in the dependent variable (FRSC performance) that can be explained by the independent variables (TQM practices). An R Square of .794 means that 79.4% of the variation in FRSC performance can be explained by the model, which includes TC and EI. This is a very high percentage, indicating that TQM has a substantial impact on the performance of FRSC.

The model summary suggests that the TQM practices of Top and Employee Involvement, collectively, have a strong and significant effect on the performance of FRSC. The high R and R Square values indicate that these TQM elements explain a large proportion of the variation in performance, while the low Standard Error reflects that the model's predictions are close to the actual data.

Table 4.13 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	458.899	2	229.449	1222.823	.000[b]
	Residual	109.206	584	.188		
	Total	568.105	586			

a. Dependent Variable: EF
b. Predictors: (Constant), TC, EI,
Source: SPSS V 26

The ANOVA table (Table 4.13) provides a summary of the analysis of variance for a regression model exploring the effect of Total Quality Management (TQM) on the performance of the Federal Road Safety Corps (FRSC). The significance level or p-value. A p-value of .000 indicates that the model is statistically significant, meaning there is strong evidence that the independent variables (TC, EI) collectively have a significant impact on FRSC performance.

Table 4.14 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.765	.056		13.779	.000
	TC	.189	.091	.203	2.070	.039
	EI	.304	.088	.327	3.448	.001

a. Dependent Variable: EF
Source: SPSS V 26

The table provided presents the results of a regression analysis examining the impact of Total Quality Management (TQM) on the performance of the Federal Road Safety Corps (FRSC). The

dependent variable in this analysis is EF (Effectiveness of FRSC), while the independent variables are TC and EI.

A one-unit increase in Top Management Commitment is associated with a 0.189 unit increase in EF, holding other factors constant. The positive Beta (0.203) suggests a moderate positive relationship. Since $p = 0.039$ (< 0.05), this effect is statistically significant. A one-unit increase in Employee Involvement leads to a 0.304 unit increase in EF. The Beta value of 0.327 indicates a strong positive impact. With $p = 0.001$, this relationship is highly significant.

The analysis clearly demonstrates that TQM positively influences the performance of FRSC across all examined dimensions. Prioritising employee training and involvement should be a key strategy for FRSC to maximise the benefits of TQM, followed by enhancing customer involvement and ensuring top management commitment to quality initiatives.

Test of Hypotheses

The study, therefore, tested the following hypotheses from the results of the analysis.

Hypotheses one

Based on the analysis and the results from the coefficient table, the study rejects the null hypotheses, which state that there is no significant effect of top management commitment. This is because the result showed a p-value of 0.039, which is less than 0.05.

Hypotheses two

Based on the analysis and the results from the coefficient table, the study rejects the null hypotheses, which state that there is no significant effect of employee involvement. This is because the result showed a p-value of 0.001, which is less than 0.05.

DISCUSSION

The study examined the effect of total quality management on the performance of the Federal Road Safety Corps, Abuja. Based on the analysis, the following discussions were made.The finding that top management commitment has a significant effect on performance, as indicated by a p-value of 0.039 (which is less than the 0.05 threshold for significance), suggests that leadership plays a crucial role in the successful implementation of TQM initiatives within an organisation like the Federal Road Safety Corps (FRSC). This result aligns with existing research emphasising the importance of managerial dedication in driving organisational performance. Demirbag et al. (2022) found that top management commitment was a critical factor in implementing TQM practices in Turkish manufacturing organisations. Their study revealed that without strong managerial support, TQM initiatives struggled to improve operational performance. This is consistent with the finding of this study, reinforcing that leadership is vital in fostering a culture of quality improvement. Sebastianelli and Tamimi (2023) provided a contrasting perspective, noting that while top management commitment is important, it is not the sole determinant of TQM success. Their research on small

and medium-sized enterprises (SMEs) suggested that other factors, such as organisational culture and employee empowerment, also play crucial roles. In some cases, even with managerial support, TQM initiatives faltered due to resistance from employees or structural issues.

The finding that employee involvement has a significant effect on performance, supported by a p-value of 0.001 (which is less than the standard significance level of 0.05), indicates a strong relationship between employee participation and organisational performance. This suggests that when employees are actively involved in decision-making processes, feel empowered, and contribute to organisational initiatives, the overall performance improves. Employee involvement enhances commitment, motivation, and satisfaction, leading to better organisational outcomes. The p-value of 0.001 indicates that this result is statistically significant, implying a very low probability that the observed effect is due to chance. Thus, the more engaged and involved employees are, the more likely they are to contribute positively to performance outcomes. Cox et al. (2019) concluded that employee involvement in quality improvement programs significantly enhances organisational performance in sectors like healthcare and manufacturing. They argued that when employees feel ownership of their tasks, they are more likely to be proactive in problem-solving, leading to higher performance. Appelbaum et al. (2020), in their study of high-performance work systems, demonstrated that employee involvement practices, such as self-directed teams and flexible job assignments, improve productivity and organisational performance by creating an empowered workforce.

Conclusion

The study concludes that Total Quality Management (TQM) significantly influences the performance of the Federal Road Safety Corps (FRSC), Abuja, with key dimensions such as top management commitment and employee involvement contributing positively and significantly to organisational performance. These findings suggest that sustained leadership support and active employee participation are critical factors in enhancing operational efficiency, service delivery, and overall organisational effectiveness within public sector institutions. However, the study is subject to certain limitations that should be considered when interpreting the results. First, the research was confined to a single organisation, FRSC Abuja, which may limit the generalisability of the findings to other government agencies, private organisations, or geographical locations with different operational environments. Second, the study relied on self-reported data obtained from respondents, which may be affected by social desirability bias, respondent subjectivity, or inaccurate perceptions. Third, organisational performance was measured using perceptual indicators rather than objective performance metrics, which may not fully capture actual organisational outcomes. Consequently, future studies should expand the scope to include multiple organisations across different sectors and regions, employ longitudinal research designs to examine causal relationships over time, and incorporate objective performance measures alongside perceptual assessments. Further research may also investigate additional TQM dimensions and explore moderating or mediating variables that could influence the relationship between TQM practices and organisational performance

Recommendations

The study recommends the following based on the findings:

i. FRSC leadership should continuously demonstrate their commitment through active engagement with staff at all levels. This can be done by organising regular meetings where top management provides clear organisational goals, listens to employee feedback, and addresses concerns. Top management should maintain open and transparent communication channels regarding decisions that affect the organisation and its employees. Initiatives like regular updates on organisational goals, financial standing, and project progress will foster trust and accountability. To maintain high standards of top management commitment, FRSC should provide leadership development and training programs for current and emerging leaders. This can include coaching on effective leadership, team management, and performance-enhancing strategies.

ii. Implement regular forums, town hall meetings, or suggestion systems where men and officers can provide input on operational procedures, safety initiatives, and public engagement strategies. Delegate authority to regional or unit-based teams, allowing them to make decisions about daily road safety operations and team management. Empowering teams encourages accountability and improves problem-solving, which can enhance organisational performance.

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