

Evaluation of Spatial Layout and User's Satisfaction with Facilities in Selected FRSC Headquarters in South-Western Nigeria

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Abstract

A well-designed public service facility is fundamental to improving institutional efficiency, enhancing user satisfaction, and generating broader socioeconomic impact, especially for the Federal Road Safety Corps (FRSC). The spatial organisation of such facilities has far-reaching implications for sustainable infrastructure development. This study evaluates the spatial layout and user's satisfaction with facilities in selected FRSC headquarters in South-Western Nigeria with a view to develop a design guideline. Data were collected through structured questionnaires, case studies, and direct field observations. The study adopted a multi-stage sampling technique. This method combines both purposive and random sampling. Out of 338 personnel, 188 personnel were sampled, representing 55.6%. This comprised 33 FRSC personnel and 155 other users. Descriptive statistical tools such as frequencies, percentages, means, and graphical illustrations were used for analysis. The results show that the purpose of visitation to FRSC office complexes comprised: driver's licence, processing vehicle registration, road safety information, complaint submission, and official visit, having 32 (20.6%), 25 (16.1%), 18 (11.6%), 16 (10.3%), and 13 (8.4%), respectively. The results show that the access modes to the complex include: private vehicle, commercial transport, motorcycles, and walking with 55 (35.5%), 65 (41.9%), 22 (14.2%), and 13 (8.4%), respectively. Results show that the overall average means score of 3.89 MWV indicates that users generally agreed that the spatial layouts of the selected FRSC state head offices are functionally organised and capable of supporting administrative activities. The results show that users were generally satisfied with the available facilities, as reflected by the overall average mean score of 3.82 MWV. The study concludes that although functional zoning exists within the facilities, there are still opportunities to improve the positioning of support spaces, separation of incompatible activities, and enhance the efficiency of spatial allocation.

Keywords: Spatial Layout, User's Satisfaction, Facilities, FRSC Headquarters, Nigeria

Introduction

The physical environment of an organisation is a critical determinant of its operational efficiency, service delivery, and user satisfaction. In public institutions, where service delivery is directly tied to societal welfare, the design and functionality of physical facilities play a central role in shaping outcomes (Makinde, (2020); Adedokun *et al.*, 2022). Scholars have consistently shown that spatial organisation, circulation flow, and ergonomic considerations affect employee productivity, interdepartmental coordination, and overall organisational performance (Appel-Meulenbroek *et al.*, 2018). Poorly designed workspaces often result in congestion, inefficiencies, and stress, while functional layouts with clear zoning and workflow optimisation enhance collaboration, reduce delays, and improve service quality (Hassanain, 2010; Sander *et al.*, 2019). These principles are particularly relevant to public safety agencies, where organisational effectiveness directly influences human lives. Road safety is one of the most pressing public health and development challenges globally. The World Health Organisation (2026) reports that road traffic injuries are the eighth leading cause of death worldwide, with low- and middle-income countries disproportionately affected. Nigeria, in particular, ranks among the countries with the highest road traffic fatality rates in Africa, with an estimated 21.4 deaths per 100,000 population annually (World Health Organization, 2026). National statistics reveal that over 13,000 road crashes were recorded in Nigeria in 2020, resulting in more than 6,000 deaths (National Bureau of Statistics, 2021). These alarming figures underscore the importance

of strong institutional capacity, including functional physical infrastructure, to effectively manage road traffic systems and reduce preventable deaths. The Federal Road Safety Corps (FRSC), established in 1988, is Nigeria's lead agency responsible for road safety management. Its statutory functions include traffic regulation, accident response, driver licencing, vehicle inspection, and public education (FRSC, Annual Report, 2024). While the Corps has achieved notable progress in enforcement and awareness campaigns, its operational efficiency is often undermined by inadequate physical infrastructure (Uhegbu, 2021). Many FRSC offices across Nigeria occupy retrofitted residential buildings or outdated government structures that were not designed for road safety administration (Afolayan *et al.*, 2019). Such facilities typically lack appropriate spatial zoning, efficient circulation systems, ergonomic provisions, and functional layouts to support interrelated tasks such as licencing, inspection, and emergency response (Alonge *et al.*, 2023). This situation not only constrains workflow but also reduces service delivery efficiency, leading to delays and frustration for both staff and the public (Baba *et al.*, 2021).

Effective spatial layout is particularly crucial for FRSC operations because of the interdependence of its departmental activities. Driver testing, vehicle inspection, accident response, and public sensitisation require seamless workflow coordination. Poor circulation patterns, congestion in waiting areas, and lack of dedicated operational spaces disrupt service processes, diminish staff performance, and negatively affect user experiences (Hassanain, 2010). Conversely, purpose-built facilities that integrate functional zoning, ergonomic design, and workflow optimisation enhance efficiency, improve staff morale, and strengthen public trust in government services (Olusola, 2020). Despite global evidence on the benefits of functional workspace design, studies in Nigeria suggest that many public service buildings continue to suffer from design inadequacies. Research shows that the poorly planned government facilities lead to workflow inefficiencies, overcrowding, and reduced organisational credibility (Appel-Meulenbroek *et al.*, 2018). In road safety institutions, this translates into delays in service delivery, reduced responsiveness to emergencies, and negative public perception (Lie, 2022). The situation is particularly pronounced in Osun State, where FRSC offices in towns such as Osogbo, Ile-Ife, Ilesa, and Ede are typically housed in facilities that were never intended for road safety administration (Oluwalogbon, 2023). These offices often lack purpose-built spaces for driver testing, vehicle inspection, secure data management, and public engagement, thereby undermining workflow effectiveness (Alonge *et al.*, 2023). As the state capital and administrative hub, Osogbo is a focal point of vehicular activity and urban expansion, experiencing increasing traffic density and mounting safety challenges.

Studies in architecture and facility management demonstrate that efficient spatial layouts and supportive work environments enhance staff productivity, operational performance, and user experience (Afolayan *et al.*, 2019; Alonge *et al.*, 2023). However, many FRSC offices across Nigeria still operate from converted residential buildings or rented premises, which lack the spatial logic, ergonomic design, and circulation systems needed for institutional workflows. Research on public service buildings in Nigeria further reveals that poor spatial zoning, inadequate circulation, and functional ambiguity often lead to workflow disruptions and user dissatisfaction (Alonge *et al.*, 2023). Despite these findings, there is still limited empirical evaluation of FRSC Headquarters, particularly within South-Western Nigeria, where operational demands are high and urban pressures are increasing. Though sustainable building studies in Nigeria have gained momentum (Olaniyi, 2017), much of the focus remains on environmental performance rather than functional efficiency and workflow logic. Similarly, planning frameworks such as GIS and participatory design have improved spatial data management (Makinde *et al.*, 2024), yet these are rarely applied to the architectural planning of enforcement and safety institutions. Addressing this gap is essential for developing public infrastructure that supports both service delivery and human performance.

By evaluating the spatial layout, workflow effectiveness, and operational challenges of FRSC Headquarters across the South-West, this study aims to generate insights that inform architectural practice, institutional planning, and infrastructure policy. The findings will contribute to both academic knowledge and practical

design approaches by integrating spatial efficiency, workflow analysis, and user experience into facility planning. Ultimately, the study will provide a framework for the design of a functional, context-responsive FRSC facility in Osogbo, serving as a model for improved public service infrastructure in Nigeria. Hence, the study answers the following research questions: What are the socioeconomic characteristics of users in selected FRSC Headquarters across South-Western Nigeria? How are the spatial layouts and workflow patterns organised within the selected FRSC Headquarters in the study area? To what extent are users satisfied with the facilities provided in FRSC Headquarters across South-Western Nigeria? How does spatial organisation influence workflow effectiveness and staff performance in FRSC facilities?

Literature Review

The effectiveness of any institutional facility is strongly influenced by the socioeconomic characteristics, staff roles, and workflow patterns that shape its daily operations. In public organisations where multiple functions must be coordinated, such as administration, enforcement, and public education, the physical environment plays a central role in enabling or constraining how work is performed (Haynes *et al.*, 2017). Studies on workplace design emphasise that well-defined workflows enhance productivity, reduce delays, and promote user satisfaction (Hassanain, 2010, Afolayan, *et al.*, 2019, Quagrainie *et al.*, 2023). Conversely, disjointed workflows resulting from poor spatial organisation increase stress, reduce efficiency, and create user dissatisfaction (Sander *et al.*, 2019). Although research in Nigeria has examined socio-economic influences on public facility use, few studies have explored how user characteristics and workflow patterns interact with the spatial configuration of FRSC offices. The absence of such evidence across the South-West region limits understanding of how staff functions and user demographics affect space utilisation and operational performance.

The organisation of spatial layout and zoning patterns determines how effectively public service facilities function. Studies on Nigerian government buildings show that inefficient zoning, poorly defined circulation routes, and inadequate space allocation often result in congestion and poor service outcomes (Ogunnaike *et al.* 2020, Makinde *et al.* 2024). Alonge *et al.* (2023) assessed public buildings and found that poor spatial management reduced staff efficiency and workflow coordination. Similarly, Makinde *et al.* (2024), in a study of the Kwara State Secretariat, reported that fragmented zoning systems contributed to operational delays. Ogunnaike *et al.* (2020) further demonstrated how circulation logic in commercial malls influenced user navigation and satisfaction in Lagos. While these studies provide useful insights into spatial organisation, none specifically address FRSC facilities, whose operation driver testing, vehicle inspection, and accident response require seamless spatial integration. The lack of spatial audits and mapping of FRSC Sector Headquarters in South-Western Nigeria leaves a significant gap in understanding how physical layouts influence service efficiency and organisational performance. In addition, user satisfaction with public service facilities is a critical indicator of functional design and service quality. Previous studies link satisfaction levels to comfort, accessibility, and aesthetic quality (Agyekum *et al.*, 2020; Oluwunmi and Olayanju, 2021), yet there is scarce evidence on how FRSC staff and service users perceive their work and service environments. Many of the Corps' Sector Headquarters still operate from retrofitted or rented structures with poor lighting, ventilation, and circulation, conditions that may negatively impact morale and service delivery. Despite this, systematic assessments of user satisfaction with FRSC facilities remain largely unexplored, leaving a gap in understanding how spatial and environmental factors influence perceptions of workplace quality and service efficiency.

The influence of spatial organisation on workflow and staff performance has been widely recognised in office design literature (Afolayan *et al.*, 2019). Inefficient layouts can increase staff travel distances, reduce interdepartmental communication, and disrupt operational flow. Lisowska, (2024) identified workflow inefficiencies in public offices but did not extend these findings to enforcement agencies like the FRSC. Similarly, Hassanain (2010) and Olaniyi (2017) highlighted persistent functional deficiencies in public

buildings, including overcrowded workspaces and poorly defined service zones that compromise institutional effectiveness. However, there remains little empirical evidence linking FRSC facility layouts to workflow efficiency, staff coordination, and service outcomes, especially in the context of South-Western Nigeria. Although interest in sustainable and green building design has increased in Nigeria (Mohammed and Abbakyari, 2016), such frameworks often prioritise energy efficiency and environmental performance over operational functionality and workflow logic. Similarly, planning tools such as GIS and participatory frameworks have been introduced to enhance urban governance and spatial management (Chen, et al, 2012; Chen and Fu 2023), yet these instruments remain policy-focused rather than architectural. At the international level, UN-Habitat (2020) emphasises context-responsive and user-centred facility design as key to institutional efficiency and public trust. However, Nigeria still lacks an integrated architectural framework that combines socio-economic profiling, spatial planning, workflow analysis, and functional design principles tailored to road safety operations. This absence of a holistic framework has left FRSC offices dependent on ad-hoc, retrofitted structures rather than purpose-built facilities designed to support their specialised operations. The development of such a framework, anchored on empirical findings from South-Western Nigeria, is essential to guide the design of a functional model FRSC facility in Osogbo and to serve as a benchmark for road safety infrastructure nationwide.

Study Area

The study is situated within the South-West geopolitical zone of Nigeria, one of the six major regions that make up the country's administrative and socio-economic structure. The South-West comprises six states: Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti, covering a combined land area of approximately 79,000 square kilometres. According to the National Bureau of Statistics (NBS, 2022), the zone has an estimated population exceeding 40 million people, making it one of the most densely populated and economically active regions in Nigeria. Geographically, the South-West shares boundaries with the Kwara and Kogi States to the north, Edo and Delta States to the east, and the Atlantic Ocean to the south. The region's physical landscape is characterised by a mixture of lowland tropical forests and undulating terrain, with several major urban centres such as Lagos, Ibadan, Akure, Abeokuta, Ado-Ekiti, and Osogbo. These cities serve as significant administrative, commercial, and educational hubs, generating substantial vehicular traffic and complex transport networks.

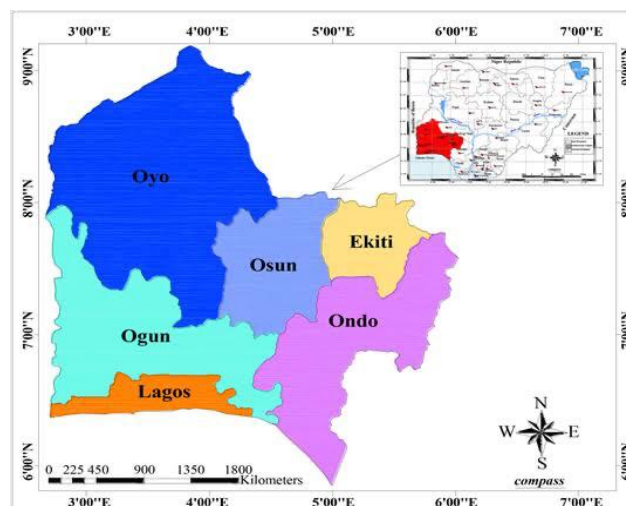


Figure 1: Map of South West, Nigeria

Source: United Nations cartographic section (2022)

Methodology

The study adopts a multi-stage sampling technique to ensure a balanced and representative selection of data sources across the six states of South-Western Nigeria. This method combines both purposive and random sampling, allowing for the inclusion of diverse Federal Road Safety Corps (FRSC) Headquarters that

accurately reflect the operational realities and spatial characteristics of the region. The multi-stage process is structured into three distinct phases as follows: At the first stage, the South-West geopolitical zone of Nigeria was purposively selected as the study region. The presence of major FRSC Sector Headquarters in each of the six states, Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti, provides a framework for the comparative evaluation of spatial layouts and workflow efficiency across different contexts. In the second stage, one FRSC Sector Headquarters is purposively selected from each of the six South-Western states. The purposive approach at this stage ensures that the study focuses on the most operationally significant offices that directly influence state-level road safety administration. At the final stage, FRSC personnel are randomly selected from various departments within each Sector Headquarters, such as operations, driver licencing, vehicle inspection, administration, and public education. This random selection helps reduce selection bias while ensuring that participants represent various staff roles and workflow experiences. The inclusion of officers at different levels provides a comprehensive understanding of how spatial layout affects workflow, communication, and operational effectiveness across departments.

The sample frame for this study comprises all Federal Road Safety Corps (FRSC) personnel operating within the state headquarters, which includes the six states in south-western Nigeria, namely, Ondo, Lagos, Oyo, Osun, Ekiti, and Ogun. 55.6% of the total personnel, which is the sample frame, were selected across all the six states to form the sample size. That is, all FRSC personnel across the six states were surveyed. The total inclusion approach ensures comprehensive representation of perspectives within the study area and enhances the reliability of the data collected. Table 1 shows the sampling frame and sample size of the study areas. Out of 338 personnel, 188 personnel were sampled representing 55.6%, which comprised: 33 FRSC Personnel and 155 other users.

Table 1: Sampling Frame and Sample Size

S/N	State Office	Head	Personnel (Sampling Frame)	FRSC Sample Size	Personnel	FRSC Sample Size	Users	Total	Sample Size
1	Osogbo		51	5		25		30	
2	Akure		54	7		26		33	
3	Abeokuta		53	7		26		33	
4	Ado-Ekiti		49	5		24		29	
5	Lagos		71	6		25		31	
6	Ibadan		60	3		29		32	
Total			338	33		155		188	

To analyse the data collected for this study, a combination of descriptive and qualitative analytical methods was employed. Descriptive statistical tools, such as frequencies, percentages, means, and graphical illustrations (bar charts, pie charts, and tables), were used to interpret responses from structured questionnaires. These techniques help in identifying trends, patterns, and variations in the socioeconomic characteristics of FRSC personnel, spatial layout perceptions, and workflow efficiency. Qualitative data obtained through case studies and field observations were subjected to thematic content analysis.

Results and Discussion

Socio-Economic Characteristics of Respondents

A total of 168 questionnaires were distributed; however, only 155 questionnaires were retrieved, indicating a high retrieval rate of 92.26%. The socioeconomic variables examined included gender, age, marital status, educational qualification, occupation, place of residence, purpose of visit, frequency of visit, access mode, duration of stay within the facility, previous visitation experience, and comparison of the selected facilities with other FRSC offices previously visited. The findings are presented in Table 2.

Table 2: Socio-Economic Characteristics of Respondents across Selected FRSC Headquarters in South-Western Nigeria (n = 155)

Variables	Categories	Osogbo No. (%)	Lagos No. (%)	Abeokuta No. (%)	Ibadan No. (%)	Akure No. (%)	Ado- Ekiti No. (%)	Total No. (%)
Gender	Male	13 (64.0)	17 (60.6)	11 (58.3)	12 (62.5)	13 (61.5)	12 (56.5)	78 (60.6)
	Female	6 (36.0)	10 (39.4)	7 (41.7)	6 (37.5)	7 (38.5)	8 (43.5)	44 (39.4)
	Total	19 (100.0)	27 (100.0)	19 (100.0)	18 (100.0)	20 (100.0)	20 (100.0)	122(100.0)
Age	18–25 years	5 (20.0)	6 (18.2)	4 (16.7)	4 (16.7)	5 (19.2)	4 (17.4)	28 (18.1)
	26–35 years	9 (36.0)	12 (36.4)	8 (33.3)	9 (37.5)	10 (38.5)	8 (34.8)	56 (36.1)
	36–45 years	6 (24.0)	8 (24.2)	7 (29.2)	6 (25.0)	6 (23.1)	6 (26.1)	39 (25.2)
	46–55 years	3 (12.0)	5 (15.2)	3 (12.5)	3 (12.5)	3 (11.5)	3 (13.0)	20 (12.9)
	Above 55 years	2 (8.0)	2 (6.0)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	12 (7.7)
	Total	25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Marital Status	Single	11 (44.0)	13 (39.4)	10 (41.7)	9 (37.5)	11 (42.3)	10 (43.5)	64 (41.3)
	Married	11 (44.0)	15 (45.5)	11 (45.8)	12 (50.0)	12 (46.2)	10 (43.5)	71 (45.8)
	Divorced	2 (8.0)	3 (9.1)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	13 (8.4)
	Widowed	1 (4.0)	2 (6.0)	1 (4.2)	1 (4.2)	1 (3.8)	1 (4.3)	7 (4.5)
	Total	25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Educational Qualification	Primary School	1 (4.0)	1 (3.0)	1 (4.2)	1 (4.2)	1 (3.8)	1 (4.3)	6 (3.9)
	Secondary School	5 (20.0)	6 (18.2)	5 (20.8)	5 (20.8)	5 (19.2)	4 (17.4)	30 (19.4)
	OND/NCE	6 (24.0)	8 (24.2)	6 (25.0)	6 (25.0)	7 (26.9)	6 (26.1)	39 (25.2)
	HND/BSc	9 (36.0)	12	8 (33.3)	8 (33.3)	9 (34.6)	8 (34.8)	54 (34.8)

		(36.4)						
Occupation	Postgraduate	4 (16.0)	6 (18.2)	4 (16.7)	4 (16.7)	4 (15.4)	4 (17.4)	26 (16.8)
	Total	25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
	Civil Servant	9 (36.0)	11 (33.3)	8 (33.3)	8 (33.3)	9 (34.6)	8 (34.8)	53 (34.2)
	Private Sector Employees	4 (16.0)	6 (18.2)	4 (16.7)	4 (16.7)	5 (19.2)	4 (17.4)	27 (17.4)
	Self-Employed	5 (20.0)	7 (21.2)	5 (20.8)	5 (20.8)	5 (19.2)	5 (21.7)	32 (20.6)
	Student	5 (20.0)	6 (18.2)	5 (20.8)	5 (20.8)	5 (19.2)	4 (17.4)	30 (19.4)
	Unemployed	2 (8.0)	3 (9.1)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	13 (8.4)
	Total	25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Place of Residence	Osogbo	16 (64.0)	-	-	-	-	-	16 (10.3)
	Other towns within the state	7 (28.0)	10 (30.3)	8 (33.3)	7 (29.2)	8 (30.8)	7 (30.4)	47 (30.3)
	Outside state	2 (8.0)	23 (69.7)	16 (66.7)	17 (70.8)	18 (69.2)	16 (69.6)	92 (59.4)
	Total	25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Purpose of Visit	Driver's licence Processing	8 (32.0)	10 (30.3)	8 (33.3)	8 (33.3)	9 (34.6)	8 (34.8)	51 (32.9)
	Vehicle Registration	5 (20.0)	7 (21.2)	5 (20.8)	5 (20.8)	5 (19.2)	5 (21.7)	32 (20.6)
	Road Safety Information	4 (16.0)	5 (15.2)	4 (16.7)	4 (16.7)	4 (15.4)	4 (17.4)	25 (16.1)
	Complaint Submission	3 (12.0)	4 (12.1)	3 (12.5)	3 (12.5)	3 (11.5)	2 (8.7)	18 (11.6)
	Official Visit	3 (12.0)	4 (12.1)	2 (8.3)	2 (8.3)	3 (11.5)	2 (8.7)	16 (10.3)
	Others	2 (8.0)	3 (9.1)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	13 (8.4)
	Total	25	33	24 (100.0)	24	26	23	122 (100.0)

			(100.0)	(100.0)		(100.0)	(100.0)	(100.0)	
Frequency of Visit	First Time		8 (32.0)	9 (27.3)	7 (29.2)	7 (29.2)	8 (30.8)	7 (30.4)	46 (29.7)
	Occasionally		10 (40.0)	14 (42.4)	10 (41.7)	10 (41.7)	11 (42.3)	10 (43.5)	65 (41.9)
	Several Times a Year		5 (20.0)	7 (21.2)	5 (20.8)	5 (20.8)	5 (19.2)	4 (17.4)	31 (20.0)
	Frequently		2 (8.0)	3 (9.1)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	13 (8.4)
	Total		25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Access Mode	Private Vehicle		9 (36.0)	12 (36.4)	9 (37.5)	8 (33.3)	9 (34.6)	8 (34.8)	55 (35.5)
	Commercial Transport		10 (40.0)	13 (39.4)	10 (41.7)	11 (45.8)	11 (42.3)	10 (43.5)	65 (41.9)
	Motorcycle		4 (16.0)	5 (15.2)	3 (12.5)	3 (12.5)	4 (15.4)	3 (13.0)	22 (14.2)
	Walking		2 (8.0)	3 (9.1)	2 (8.3)	2 (8.3)	2 (7.7)	2 (8.7)	13 (8.4)
	Total		25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Time Spent in Facility	Less than 30 mins		5 (20.0)	6 (18.2)	5 (20.8)	5 (20.8)	5 (19.2)	4 (17.4)	30 (19.4)
	30 min–1 hour		9 (36.0)	12 (36.4)	8 (33.3)	9 (37.5)	10 (38.5)	9 (39.1)	57 (36.8)
	1–2 hours		8 (32.0)	11 (33.3)	8 (33.3)	7 (29.2)	8 (30.8)	7 (30.4)	49 (31.6)
	More than 2 hours		3 (12.0)	4 (12.1)	3 (12.5)	3 (12.5)	3 (11.5)	3 (13.0)	19 (12.2)
	Total		25 (100.0)	33 (100.0)	24 (100.0)	24 (100.0)	26 (100.0)	23 (100.0)	122 (100.0)
Visited Other FRSC Offices	Yes		17 (68.0)	23 (69.7)	16 (66.7)	17 (70.8)	18 (69.2)	16 (69.6)	107 (69.0)
	No		8 (32.0)	10 (30.3)	8 (33.3)	7 (29.2)	8 (30.8)	7 (30.4)	48 (31.0)
	Total		25	33	24 (100.0)	24	26	23	122 (100.0)

		(100.0)	(100.0)		(100.0)	(100.0)	(100.0)	
Comparison	Better	11 (44.0)	14	10 (41.7)	10 (41.7)	11	10 (43.5)	66 (42.6)
With	Other		(42.4)			(42.3)		
Offices								
	Same	9 (36.0)	12	9 (37.5)	9 (37.5)	9 (34.6)	8 (34.8)	56 (36.1)
			(36.4)					
	Worse	5 (20.0)	7 (21.2)	5 (20.8)	5 (20.8)	6 (23.1)	5 (21.7)	33 (21.3)
	Total	25	33	24 (100.0)	24	26	23	122 (100.0)
		(100.0)	(100.0)		(100.0)	(100.0)	(100.0)	

The gender distribution of respondents across the selected FRSC Headquarters in South-Western Nigeria revealed that male respondents constituted most users within the selected facilities. The findings presented in Figure 2 indicate that out of the total 155 respondents sampled, 78 respondents representing 60.6% were male, while 44 respondents representing 39.4% were female. A closer examination of the distribution across the selected FRSC Headquarters shows that the Lagos Headquarters recorded the highest number of respondents with 33 participants, out of which 60.6% were male and 39.4% were female. Similarly, the Osogbo Headquarters recorded 64.0% male respondents and 36.0% female respondents. In Abeokuta, male respondents accounted for 58.3%, while female respondents accounted for 41.7%. The Ibadan Headquarters recorded 62.5% male respondents and 37.5% female respondents. Likewise, Akure recorded 61.5% male respondents and 38.5% female respondents, while Ado-Ekiti recorded 56.5% male respondents and 43.5% female respondents.

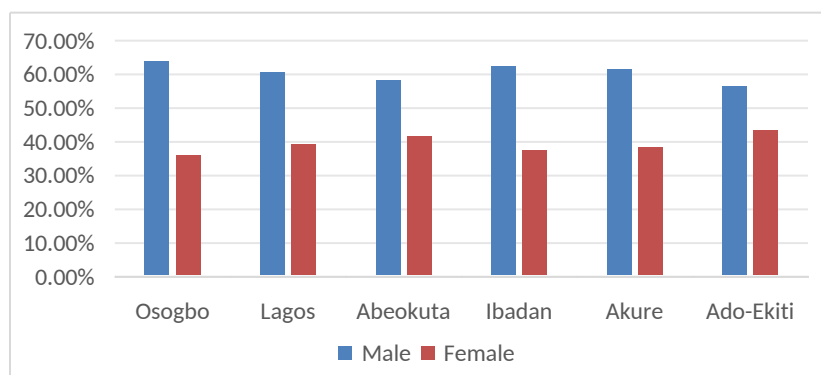


Figure 2: Distribution based on sex across the selected FRSC Headquarters

The relatively significant proportion of female respondents indicates increasing female participation in transportation activities and public institutional engagements. This suggests that the planning and design of FRSC Headquarters should adequately cater for both male and female users through inclusive spatial planning, adequate waiting areas, security considerations, and user-friendly circulation systems. The age distribution of respondents across the selected FRSC Headquarters reveals that most users fall within the economically active and mobility-intensive age categories. As indicated in Figure 3, respondents within the age bracket of 26–35 years constituted the highest proportion, with 56 respondents representing 36.1% of the total sample. This was followed by respondents within the age range of 36–45 years, who accounted for 39 respondents, representing 25.2%. Respondents within the age category of 18–25 years represented 18.1% of the total respondents, while respondents aged 46–55 years accounted for 12.9%. The least

represented category was respondents aged >55 years, who constituted 7.7% of the total sample population. Across the selected FRSC Headquarters, similar patterns were observed. In Lagos, respondents within the 26–35 years category accounted for 36.4% of users, while in Akure, the same category accounted for 38.5%. Osogbo recorded 36.0% within the same age bracket, while Ibadan recorded 37.5%. These findings indicate that young and middle-aged adults constitute the dominant users with FRSC facilities.

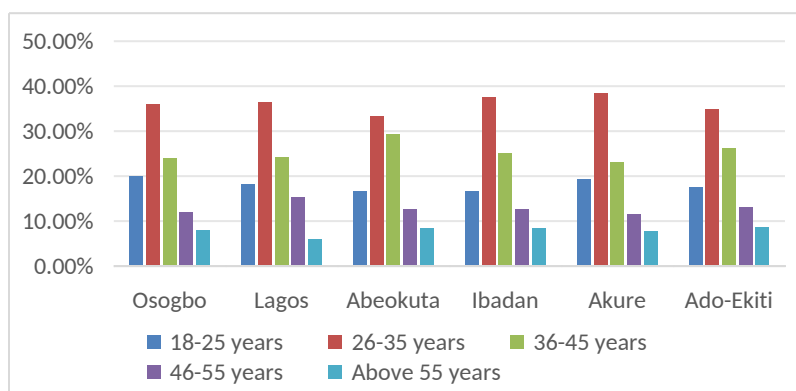


Figure 3: Distribution based on age across the selected FRSC Headquarters

The dominance of respondents within the productive age categories suggests that FRSC Headquarters are primarily utilised by active road users, vehicle owners, transport operators, and working-class individuals who frequently engage in driving, transportation, and mobility-related activities. This category of users is highly dependent on services such as licence processing, vehicle registration, and road safety documentation. The relatively low proportion of elderly respondents may imply lower mobility rates among older adults or reduced frequency of interaction with FRSC services. This finding highlights the need for FRSC facilities to maintain efficient circulation systems, functional waiting spaces, and user-friendly operational layouts capable of handling large volumes of active users within productive age groups. The marital status distribution is balanced with a slight inclination towards married respondents in most of the selected FRSC headquarters. In Lagos, Abeokuta, Ibadan, and Akure, married respondents marginally outnumber single individuals, while Osogbo and Ado-Ekiti show an almost equal distribution between both categories. Across the study area, divorced and widowed respondents constitute a small proportion of the sample, with values remaining fairly consistent across all locations. The pattern seen in Figure 4 suggests that FRSC services are primarily accessed by individuals in stable family structures, which may be linked to higher vehicle ownership responsibilities and administrative engagement associated with household mobility needs.

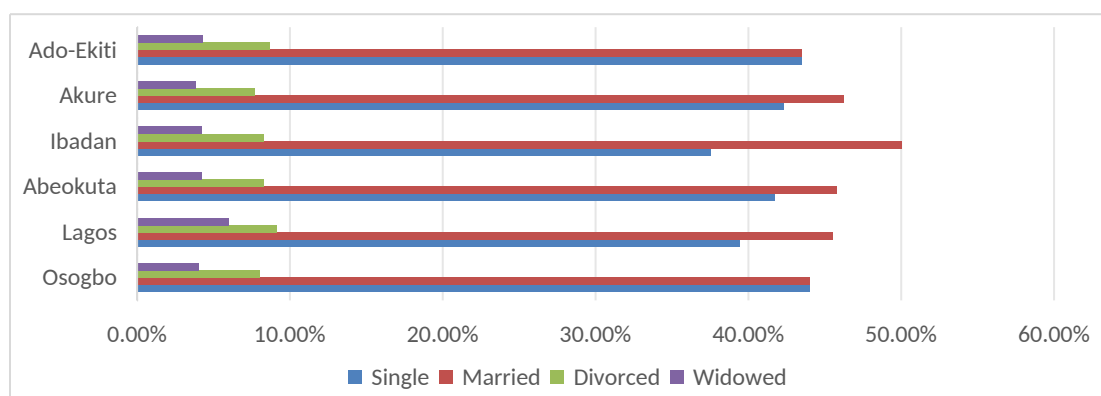


Figure 4: Distribution based on marital status across the Selected FRSC Headquarters

Figure 5 show that the educational profile of respondents across all FRSC headquarters reflects a generally well-educated user population. Holders of HND/BSc constitute the largest group in all locations, ranging

from 33.3% in Abeokuta and Ibadan to about 36.4% in Lagos. This is closely followed by respondents with OND/NCE qualifications, while secondary school leavers also form a notable proportion across the centres. Postgraduate degree holders are moderately represented, whereas respondents with only primary education remain the least in all locations. This distribution indicates that users of FRSC services are largely literate and possess at least post-secondary education, which may influence their awareness and engagement with institutional processes and procedures.

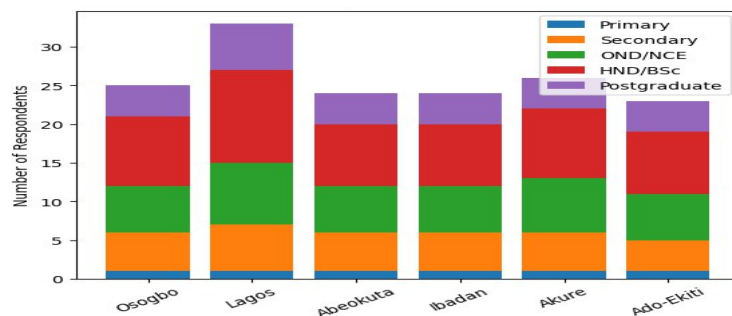


Figure 5: Educational Distribution of Respondents

The occupational structure of respondents in Figure 6 shows a diverse mix across the selected FRSC headquarters, although civil servants consistently represent the largest category in all locations. Lagos, Osogbo, Abeokuta, Ibadan, Akure, and Ado-Ekiti all reflect civil servant dominance, ranging from approximately one-third to slightly above one-third of respondents. Self-employed individuals and students also form significant proportions across the study area, indicating that FRSC services are accessed by both formal and informal sector participants. Private sector employees and unemployed respondents, however, constitute relatively smaller proportions. This distribution highlights the broad user base of FRSC services, cutting across different socio-economic groups, with a noticeable tilt towards formally employed individuals.

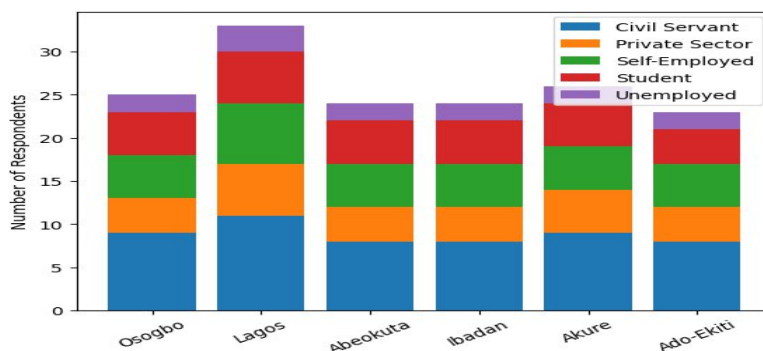


Figure 6 Occupational Distributions of Respondents

The residential pattern of respondents shown in Table 2 reveals a strong inter-regional usage of FRSC headquarters. While Osogbo records most users residing within the city (64.0%), the situation differs significantly in other locations. In Lagos, Abeokuta, Ibadan, Akure, and Ado-Ekiti, a substantial proportion of respondents reside outside the state, ranging between 66.7% and 70.8%. This indicates that FRSC headquarters serve not only local populations but also attract users from neighbouring towns and states. The pattern reflects the centralised nature of FRSC services, where individuals often travel across administrative boundaries to access specific services such as licencing and vehicle documentation. The analysis of respondents' purpose of visit across the selected FRSC headquarters in Table 2 shows a clear dominance of driver's licence processing as the primary reason for patronage. This service consistently records the highest proportion across all locations, followed by vehicle registration. Other reasons, such as road safety information, complaint submission, official visits, and miscellaneous services, account for

smaller but still notable proportions of respondents. The consistency of this pattern across Osogbo, Lagos, Abeokuta, Ibadan, Akure, and Ado-Ekiti suggests that licencing and vehicle documentation remain the core functional services driving public interaction with FRSC offices.

The frequency of visits to the selected FRSC headquarters indicates that most respondents interact with the facilities on an occasional basis rather than as frequent users. Across all locations, the "Occasionally" category consistently records the highest proportion of respondents. In Osogbo, 40.0% of respondents indicated that they visit occasionally, while Lagos recorded 42.4%. Similar patterns were observed in Abeokuta and Ibadan, where occasional visitors accounted for 41.7% and 41.7%, respectively. Akure and Ado-Ekiti also followed the same trend with 42.3% and 43.5%, respectively. First-time visitors also constitute a considerable proportion across the six centres, ranging from 27.3% in Lagos to about 32.0% in Osogbo. Respondents who visit several times a year form a moderate proportion across all locations, while frequent users represent the least category in each centre. The consistency of this pattern in Table 2 suggests that most FRSC services are periodic in nature and are usually accessed only when administrative needs arise, such as licence renewal, vehicle registration, or official documentation.

Socio-Economic Characteristics of FRSC Personnel

Table 3 presents the socioeconomic characteristics of the 33 FRSC personnel who participated in the study across the selected headquarters in South-Western Nigeria. The findings reveal that male personnel constituted most respondents (75.8%), while female personnel accounted for 24.2%, reflecting the traditionally male-dominated workforce within the Corps. The age distribution indicates that most personnel (39.4%) were between 36 and 45 years, followed by those aged 46–55 years (27.3%). This suggests that most respondents were experienced officers who had spent considerable time working within FRSC facilities and were therefore well positioned to evaluate the accessibility and functionality of the office environment. Regarding marital status, 63.6% of respondents were married, while 27.3% were single. Educational attainment showed that over half of the respondents (51.5%) possessed HND/BSc qualifications, whereas 30.3% had postgraduate degrees. This indicates a relatively educated workforce capable of providing informed opinions on workplace accessibility and facility management. The analysis of professional rank revealed a good representation of officers across different cadres, while the distribution of years of service showed that many respondents had worked with the Corps for more than five years. This level of professional experience enhances the reliability of their assessment of accessibility challenges and compliance within FRSC office facilities. Finally, personnel were drawn from various operational departments, including Administration, Operations, Driver's Licence, Vehicle Inspection, and Road Safety Education, ensuring that the responses reflected the perspectives of officers performing diverse functional responsibilities within the selected headquarters.

The analysis of time spent within the FRSC facilities reveals that a substantial proportion of respondents spend between 30 minutes and 1 hour during their visits. In Osogbo, 36.0% of respondents spent between 30 minutes and 1 hour, while Lagos recorded 36.4% within the same category. Ibadan and Akure recorded slightly higher proportions of 37.5% and 38.5%, respectively, whereas Ado-Ekiti recorded the highest at 39.1%. Table 3 also reveals that respondents who spent between 1 and 2 hours also constitute a notable proportion across all centres, particularly in Lagos, where 33.3% reported spending within this duration. In contrast, those who spent less than 30 minutes and more than 2 hours accounted for smaller proportions across the study area. The findings suggest that although service delivery within the selected FRSC headquarters may be relatively moderate in efficiency, waiting time and processing duration still remain important operational considerations affecting user experience.

The distribution of respondents based on whether they had previously visited other FRSC offices indicates that a majority possess prior experience with FRSC facilities outside the selected study locations. In Osogbo, 68.0% of respondents indicated that they had visited other FRSC offices, while Lagos recorded

69.7%. Similar trends were observed in Abeokuta (66.7%), Ibadan (70.8%), Akure (69.2%), and Ado-Ekiti (69.6%). Conversely, respondents who had not visited other FRSC offices constituted smaller proportions across all centres, ranging between 29.2% and 33.3%. The pattern shown in Table 3 shows that many users have a comparative understanding of service conditions and operational environments across different FRSC facilities. Such prior exposure is significant because it enables respondents to make more informed assessments regarding the adequacy, efficiency, and quality of facilities within the selected headquarters.

Table 3: Socio-Economic Characteristics of FRSC Personnel across Selected FRSC Headquarters in South-Western Nigeria (n = 33)

S/N	Variables	Categories	Osogbo No. (%)	Lagos No. (%)	Abeokuta No. (%)	Ibadan No. (%)	Akure No. (%)	Ado- Ekiti No. (%)	Total No. (%)
1	Gender								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Gender	Male	4 (80.0)	5 (83.3)	5 (71.4)	2 (66.7)	5 (71.4)	4 (80.0)	25 (75.8)
		Female	1 (20.0)	1 (16.7)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	8 (24.2)
		Total	5 (100.0)	6 (100.0)	7 (100.0)	3 (100.0)	7 (100.0)	5 (100.0)	33 (100.0)
2	Age								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Age	26–35 years	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
		36–45 years	2 (40.0)	2 (33.3)	3 (42.8)	1 (33.3)	3 (42.8)	2 (40.0)	13 (39.4)
		46–55 years	1 (20.0)	1 (16.7)	1 (14.3)	1 (33.3)	1 (14.3)	1 (20.0)	6 (18.2)
		Above 55 years	1 (20.0)	1 (16.7)	1 (14.3)	0 (0.0)	1 (14.3)	1 (20.0)	5 (15.1)
		Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)
3	Marital Status								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Marital Status	Single	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
		Married	4 (80.0)	4 (66.7)	5 (71.4)	2 (66.7)	5 (71.4)	4 (80.0)	24

(72.7)

Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)
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4 Educational Qualification

Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado-Ekiti	Total
Educational Qualification	ND/NCE	1 (20.0)	1 (16.7)	1 (14.3)	1 (33.3)	1 (14.3)	1 (20.0)	6 (18.2)
	HND/B.Sc.	3 (60.0)	3 (50.0)	4 (57.1)	1 (33.3)	4 (57.1)	3 (60.0)	18 (54.5)
	Postgraduate	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
	Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)

5 Professional Rank

Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado-Ekiti	Total
Professional Rank	ARC	2 (40.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	2 (40.0)	11 (33.3)
	RC	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
	DRC	1 (20.0)	1 (16.7)	2 (28.6)	0 (0.0)	2 (28.6)	1 (20.0)	7 (21.2)
	CRC & Others	1 (20.0)	1 (16.7)	1 (14.3)	1 (33.3)	1 (14.3)	1 (20.0)	6 (18.2)
	Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)

6 Years of Service

Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado-Ekiti	Total
Years of Service	Below 5 years	1 (20.0)	1 (16.7)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	8 (24.2)
	5–10 years	2 (40.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	2 (40.0)	11 (33.3)
	11–15 years	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
	>15 years	1 (20.0)	1 (16.7)	1 (14.3)	0 (0.0)	1 (14.3)	1 (20.0)	5 (15.2)

		Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)
7	Department/Unit								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Department	Administration	1 (20.0)	1 (16.7)	1 (14.3)	1 (33.3)	1 (14.3)	1 (20.0)	6 (18.2)
		Operations	2 (40.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	2 (40.0)	11 (33.3)
		Driver's Licence	1 (20.0)	1 (16.7)	2 (28.6)	0 (0.0)	2 (28.6)	1 (20.0)	7 (21.2)
		Vehicle Inspection	1 (20.0)	1 (16.7)	1 (14.3)	1 (33.3)	1 (14.3)	1 (20.0)	6 (18.2)
		Road Safety Education	0 (0.0)	1 (16.7)	1 (14.3)	0 (0.0)	1 (14.3)	0 (0.0)	3 (9.1)
		Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)
8	Employment Status								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Employment Status	Permanent	5 (100.0)	6 (100.0)	7 (100.0)	3 (100.0)	7 (100.0)	5 (100.0)	33 (100.0)
9	Disability Awareness Training								
	Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado- Ekiti	Total
	Training	Yes	4 (80.0)	5 (83.3)	5 (71.4)	2 (66.7)	5 (71.4)	4 (80.0)	25 (75.8)
		No	1 (20.0)	1 (16.7)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	8 (24.2)
		Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)
10	Frequency of Assistance for Persons with								

Disabilities

Variables	Categories	Osogbo	Lagos	Abeokuta	Ibadan	Akure	Ado-Ekiti	Total
Frequency	Daily	2 (40.0)	2 (33.3)	3 (42.8)	1 (33.3)	3 (42.8)	2 (40.0)	13 (39.4)
	Weekly	2 (40.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	2 (40.0)	11 (33.3)
	Occasionally	1 (20.0)	2 (33.3)	2 (28.6)	1 (33.3)	2 (28.6)	1 (20.0)	9 (27.3)
	Total	5 (100)	6 (100)	7 (100)	3 (100)	7 (100)	5 (100)	33 (100)

Analysis of Spatial Layout and Workflow Patterns within Selected FRSC Headquarters

This section examines how spatial organisation, circulation systems, zoning arrangements, and departmental relationships influence workflow efficiency and service delivery within facilities. The physical arrangement of spaces within public institutions plays a critical role in determining operational efficiency, ease of movement, staff productivity, and user satisfaction. In FRSC facilities, effective spatial planning is particularly important because of the wide range of administrative and operational activities carried out daily, including licencing services, vehicle documentation, enforcement coordination, public engagement, and administrative support functions. To assess respondents perception of spatial performance, data were collected from (n) of 155 respondents, representing approximately 92.5% response rate from the 168 questionnaires distributed.

Response Rate Formula:

$$\begin{aligned} \text{Response Rate (\%)} &= \frac{\text{Number of Distributed Questionnaires}}{\text{Number of Returned Questionnaires}} \times 100 \\ &= \frac{168}{155} \times 100 = 92.3\% \approx 92.5\% \end{aligned}$$

The weighted mean value (MWV) for each variable was computed using:

$$MWV = \frac{\sum (f \times w)}{n}$$

f = frequency of responses

w = Likert scale weight (1 – 5)

n = total valid respondents (155)

TMV = Total Mean Value (sum of weighted scores)

The overall average mean was calculated as follows:

$$\text{Overall Average Mean} = \frac{\sum MWV \text{ of all variables}}{\text{Number of variables}}$$

Responses were measured using a five – point Likert scale as follows:

SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree

SD = Strongly disagree

Results of Users' Assessment of Spatial Layout Characteristics in Each Selected FRSC in All State Headquarters

The assessment of users' perception of the spatial layout characteristics of selected FRSC State Head Offices based on 155 valid responses. The analysis was conducted using a five-point Likert scale, where a mean value closer to 5 indicates a higher level of agreement that the spatial feature supports efficient office

operations. The overall average means score of 3.89 indicates that respondents generally agreed that the spatial layouts of the selected FRSC State Head Offices are functionally organised and capable of supporting administrative activities. The assessment of spatial layout characteristics at Osogbo FRSC State Headquarters, as shown in Table 4, recorded an overall mean value of 3.87, indicating that users generally perceive the spatial organisation of the facility as good and supportive of operational activities. The highest-rated characteristic was the office layout reflecting departmental functions (MWV = 4.07), followed closely by the adequacy of circulation spaces (MWV = 4.03). This suggests that departmental arrangement and movement patterns within the facility contribute positively to user experience and workflow. However, waiting area positioning recorded the lowest mean (MWV = 3.63), indicating that improvements may be required in organising visitor waiting spaces to reduce interference with staff activities. According to Table 4, Akure FRSC Headquarters achieved an overall mean value of 3.74, showing a positive perception of spatial layout characteristics among users. Although the score is slightly lower than other facilities, it still indicates that respondents consider the layout reasonably functional. The highest-rated feature was the adequacy of circulation spaces (MWV = 4.05), suggesting that internal movement is relatively effective. Conversely, waiting area positioning (MWV = 3.45) and signage effectiveness (MWV = 3.55) received lower ratings, indicating areas requiring improvement for better user navigation and public interaction.

Table 4 indicates that Abeokuta FRSC Headquarters recorded an overall mean score of 3.84, indicating that respondents generally rated the spatial layout characteristics positively. The facility demonstrates good performance in office organisation, circulation, and departmental relationships. The highest-rated factor was office layout reflecting departmental functions (MWV = 4.00), while waiting area arrangement (MWV = 3.64) and security checkpoint positioning (MWV = 3.67) recorded relatively lower values. The assessment of spatial layout characteristics at the Ado-Ekiti FRSC State Headquarters produced, according to Table 4, an overall mean score of 3.86, indicating that users perceive the facility's spatial organisation as good and functional. The result suggests that the arrangement of spaces generally supports administrative activities, movement efficiency, and interaction among departments. The highest-rated characteristic was the adequacy of circulation spaces (MWV = 4.07), indicating that internal movement routes are considered satisfactory by users. Other highly rated aspects include the reflection of departmental functions in office layout and the separation of public and staff areas (MWV = 3.93). However, waiting area positioning (MWV = 3.59) recorded the lowest rating, suggesting that improvements are required in organising visitor waiting zones to prevent interference with staff operations. Similarly, congestion management and security checkpoint positioning require further consideration to improve overall functionality.

According to Table 4, Lagos FRSC State Headquarters recorded the highest overall mean value among the selected facilities, with an MWV of 3.95, indicating a good spatial layout performance. The findings suggest that users perceive the facility as effectively organised in terms of departmental arrangement, circulation, and operational relationships. The highest-rated spatial characteristic was the adequacy of circulation spaces (MWV = 4.10), demonstrating that movement within the facility is considered efficient. Office layout reflecting departmental functions and office arrangement supporting communication among staff also achieved high ratings (MWV = 4.03). The lowest-rated characteristics were waiting area positioning (MWV = 3.65) and security checkpoint positioning (MWV = 3.77), suggesting areas where improvements can enhance visitor management, security operations, and overall user experience. The Ibadan FRSC State Headquarters recorded an overall mean value of 3.89, indicating that users perceive the spatial layout characteristics as good and supportive of facility operations. The results in Table 4 demonstrate that the spatial arrangement positively contributes to movement efficiency, departmental interaction, and workflow organisation. The highest-rated factor was circulation space adequacy (MWV = 4.10), followed by office layout reflecting departmental functions (MWV = 4.07). These findings suggest that spatial organisation within the facility allows users to move effectively and understand departmental relationships. The lowest-

rated variables were waiting area positioning (MWV = 3.63) and signage effectiveness (MWV = 3.70), indicating possible improvements in visitor orientation, navigation, and public service areas.

Table 4: Users' Assessment of Spatial Layout Characteristics of FRSC in each State Headquarters

S/ N	Variables	Osogbo FRSC		Akure FRSC		Ibadan FRSC		Lagos FRSC		Abeokuta FRSC		A d o - E k i t i FRSC	
		TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V
I	Office layout reflects departmental functions	122	4.07	78	3.90	122	4.07	125	4.03	132	4.00	114	3.93
Ii	Movement between departments is efficient	116	3.87	75	3.75	116	3.87	122	3.94	130	3.94	112	3.86
Iii	Public and staff areas are clearly separated.	119	3.97	76	3.80	119	3.97	123	3.97	128	3.88	114	3.93
Iv	Circulation spaces are adequate	121	4.03	81	4.05	123	4.10	127	4.10	131	3.97	118	4.07
V	Workflow processes follow a logical spatial sequence	117	3.90	78	3.90	117	3.90	123	3.97	130	3.94	112	3.86
Vi	Office zoning reduces unnecessary movement	114	3.80	74	3.70	114	3.80	118	3.81	126	3.82	110	3.79
Vii	Signage supports easy navigation	111	3.70	71	3.55	111	3.70	118	3.81	122	3.70	110	3.79

Vii i	Location of service areas supports efficient task performance	116	3.87	75	3.75	116	3.87	122	3.94	127	3.85	113	3.90
Ix	Workspaces are located close to frequently interacting departments.	118	3.93	78	3.90	118	3.93	122	3.94	130	3.94	114	3.93
X	Layout minimises congestion in work areas	114	3.80	74	3.70	114	3.80	118	3.81	127	3.85	109	3.76
Xi	Arrangement of offices supports communication among staff	117	3.90	77	3.85	117	3.90	125	4.03	129	3.91	113	3.90
Xii	Waiting areas are properly positioned to avoid disruption to workflow.	109	3.63	69	3.45	109	3.63	113	3.65	120	3.64	104	3.59
Xii i	Security checkpoints are strategically positioned within the facility.	113	3.77	72	3.60	113	3.77	117	3.77	121	3.67	108	3.72
Average Mean			3.87		3.84		3.89		3.95		3.84		3.86

Evaluation of Users' Satisfaction with Facilities

This section presents the assessment of users' satisfaction with facilities available in the selected FRSC State Head Offices across the study locations. Respondents evaluated various facility components based on their level of satisfaction using a five-point Likert scale ranging from strongly dissatisfied (1) to strongly satisfied (5). The analysis was conducted using the Total Mean Value (TMV) and Mean Weighted Value (MWV) to determine the performance level of each facility component and compare satisfaction levels among the selected headquarters.

The calculations were checked using the weighted mean formula:

$$MWV = \frac{(1 \times f1) + (2 \times f2) + (3 \times f3) + (4 \times f4) + (5 \times f5)}{n}$$

Where:

f1= frequency of very dissatisfied responses

f2= frequency of dissatisfied responses

f3= frequency of neutral responses

f4f = frequency of satisfied responses

f5f = frequency of very satisfied responses

n=155

Users of the selected FRSC State Head Offices were generally satisfied with the available facilities, as reflected by the overall average mean score of 3.82. This suggests that most facilities provided within the offices meet users' operational expectations, although some areas require improvement.

Results of Users' Satisfaction with Facilities in each Selected FRSC Headquarters in the States

The assessment of users' satisfaction with facilities at Osogbo FRSC State Headquarters recorded an overall mean score of 3.80, indicating that users were generally satisfied with the available facilities. The highest satisfaction levels were recorded for lighting quality, ventilation, security provisions, and cleanliness (MWV = 3.93), suggesting that environmental comfort and facility management contribute positively to user experience. However, public waiting areas recorded the lowest satisfaction score (MWV = 3.57), followed by archive storage and sanitary facilities (MWV = 3.63), indicating areas requiring improvement to enhance user convenience.

Table 5 shows that Akure FRSC Headquarters recorded an overall satisfaction mean of 3.65, showing that users were moderately satisfied with the available facilities. Lighting quality, accessibility, and security provisions achieved the highest ratings (MWV = 3.85), suggesting that users consider these facilities adequate. Conversely, public waiting areas (MWV = 3.30) and sanitary facilities (MWV = 3.35) received lower ratings, indicating shortcomings in user-support spaces. Abeokuta FRSC Headquarters recorded an overall mean score of 3.81, indicating that users were generally satisfied with facility conditions. The highest-rated facilities were lighting and security provisions (MWV = 3.97), followed by ventilation and maintenance (MWV = 3.94). These results show positive perceptions regarding environmental quality and facility management. Lower satisfaction levels were recorded for waiting areas (MWV = 3.58) and archive storage facilities (MWV = 3.61), suggesting the need for improvement in support spaces.

The assessment of users' satisfaction with facilities at Ado-Ekiti FRSC State Headquarters produced, as shown in Table 5, an overall mean value of 3.79, indicating that respondents were generally satisfied with the available facilities. The findings suggest that the facility provides a reasonably supportive environment for administrative activities and user interaction. The highest satisfaction ratings were recorded for lighting quality and security provisions (MWV = 4.00), indicating that users perceive the facility to have adequate illumination and acceptable safety measures. Accessibility to offices and cleanliness of the facility also received favourable ratings (MWV = 3.90). However, public waiting areas, record/archive storage facilities, and sanitary facilities (MWV = 3.59) recorded the lowest satisfaction levels. This suggests the need for

improved visitor waiting provisions, better storage solutions, and upgraded sanitary facilities to enhance the overall user experience.

According to Table 5, Lagos FRSC State Headquarters recorded the highest overall users' satisfaction score among the selected facilities, with an MWV of 3.92, indicating that respondents were highly satisfied with the available facilities. The highest-rated facilities were lighting quality and security provisions (MWV = 4.10), followed by accessibility and cleanliness (MWV = 4.03). This demonstrates that users perceive the facility as performing effectively in terms of environmental comfort, safety, and ease of movement. The relatively lower satisfaction scores were recorded for public waiting areas and archive storage facilities (MWV = 3.65), indicating that improvements in visitor management spaces and record storage provisions would further enhance facility performance. The Ibadan FRSC State Headquarters recorded an overall mean score of **3.84**, indicating that users were generally satisfied with the condition and availability of facilities. The result suggests that the facility provides adequate support for staff activities and public services. The highest-rated facilities were lighting quality, ventilation, security provisions, and cleanliness (MWV = 3.93), indicating positive perceptions regarding environmental comfort and facility management. Conversely, public waiting areas (MWV = 3.57) recorded the lowest satisfaction level, followed by archive storage and sanitary facilities (MWV = 3.63). This indicates the need for improvement in visitor support spaces, storage capacity, and hygiene facilities.

Table 5: Results of Users' Satisfaction with Facilities in each Selected FRSC Headquarters in the Study Areas

S/ N	Variables	Areas											
		Osogbo FRSC		Akure FRSC		Abeokuta FRSC		A d o - E k i t i FRSC		Lagos FRSC		Ibadan FRSC	
		TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V	TM V	MW V
I	Office workspace size	116	3.87	73	3.65	125	3.79	112	3.86	121	3.90	116	3.87
Ii	Lighting quality	118	3.93	77	3.85	131	3.97	116	4.00	127	4.10	118	3.93
Iii	Ventilation and air circulation	118	3.93	75	3.75	130	3.94	114	3.93	123	3.97	118	3.93
Iv	Public waiting areas	107	3.57	66	3.30	118	3.58	104	3.59	113	3.65	107	3.57
V	Meeting/briefing rooms	113	3.77	74	3.70	122	3.70	109	3.76	118	3.81	113	3.77
Vi	Record/archive storage facilities	109	3.63	71	3.55	119	3.61	104	3.59	113	3.65	109	3.63
Vii	Parking and vehicular yard	114	3.80	73	3.65	127	3.85	112	3.86	121	3.90	114	3.80
Vii	Sanitary facilities (toilets)	109	3.63	67	3.35	119	3.61	104	3.59	114	3.68	109	3.63

i	and washrooms)												
Ix	Accessibility to different offices within the facility	116	3.87	77	3.85	128	3.88	113	3.90	125	4.03	116	3.87
X	Signage and wayfinding within the facility	110	3.67	70	3.50	122	3.70	105	3.62	118	3.81	110	3.67
Xi	Security and safety provisions within the premises	118	3.93	77	3.85	131	3.97	116	4.00	127	4.10	118	3.93
Xii	Cleanliness and maintenance of the facility	118	3.93	75	3.75	130	3.94	113	3.90	125	4.03	118	3.93
	Average Mean		3.48		3.65		3.81		3.79		3.92		3.84

Case Study

Case Study One

Name: Federal Road Safety Corps Headquarters, Osogbo

Description: The Federal Road Safety Corps (FRSC) Headquarters in Osogbo is located within the administrative axis of Osun State, positioned in a moderately urbanised environment characterised by government institutions, commercial developments, and residential areas. The facility is strategically sited with access to major road networks, allowing for effective coordination of road safety operations across the state. The headquarters is accessible via primary and secondary roads, ensuring ease of movement for staff, officials, and operational vehicles. The entrance to the facility is clearly defined and positioned along a major access route, supporting both administrative and emergency response functions.

General Information: The FRSC Headquarters in Osogbo serves as the central command and administrative unit for road safety operations within Osun State. The facility accommodates various departments responsible for traffic management, enforcement, public education, administration, and emergency response coordination. The building supports both office-based activities and field operations, resulting in a dynamic workflow that involves frequent movement of personnel, visitors, and operational vehicles.

General Layout: The layout of the FRSC headquarters consists of a combination of administrative office spaces and operational support areas organised within a defined site. The main entrance leads into a reception area, which serves as the first point of contact for visitors. Spaces are arranged along corridor systems, with offices distributed across different sections of the building. Operational units are positioned within proximity to administrative areas; however, the zoning between public, staff, and operational spaces is not always clearly defined.

Circulation within the facility is primarily horizontal, with movement occurring between offices, service areas, and external operational zones such as parking and dispatch areas. While the layout supports basic functionality, it does not fully optimise workflow efficiency, particularly in relation to the interaction between administrative and operational units.

Spaces Provided: The facility comprises a main entrance/reception, central operations/control room, traffic monitoring units, administrative offices, meeting and briefing rooms, emergency coordination units, data and server rooms, staff workstations, breakout and lounge areas, circulation spaces, toilets and service areas, and parking with service access zones. It also incorporates specialised technical spaces for data processing, communication systems, and real-time traffic monitoring, ensuring efficient and coordinated operations.

Merits:

The location of the headquarters provides good connectivity to major road networks, enhancing operational efficiency.

The facility accommodates both administrative and operational functions within a single complex.

The presence of an operations/control unit supports the coordination of field activities.

Adequate external space is available for vehicle movement and operational activities.

Demerits:

The spatial layout does not clearly separate public, administrative, and operational zones, leading to overlaps and workflow inefficiencies.

Circulation within the building is not optimally organised, resulting in unnecessary movement and reduced operational efficiency.

The relationship between key functional units is not well articulated, affecting coordination and response time.

Building finishes and materials show signs of wear due to insufficient maintenance.

Environmental comfort is not adequately addressed, particularly in terms of ventilation and thermal conditions.

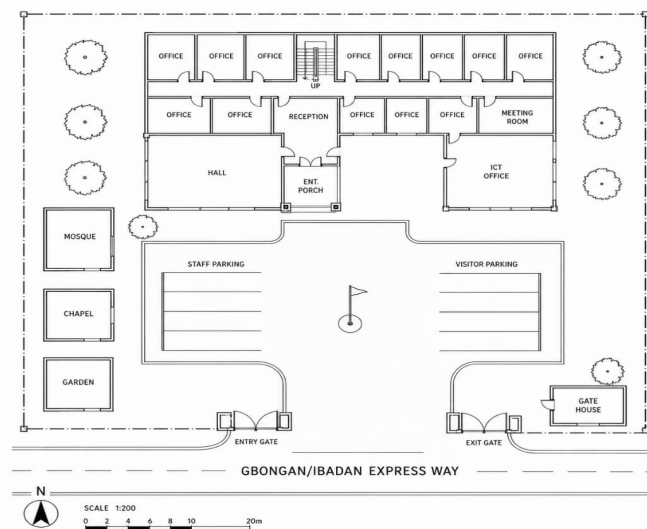


Figure 7: Approach view of the FRSC Headquarters, Osogbo



Plate 1: Approach view of the FRSC Headquarters, Osogbo



Plate 2: Side view of the FRSC Headquarters, Osogbo



Plate 3: Approach view and car park of the FRSC Headquarters, Osogbo



Plate 4: Approach view of the FRSC Headquarters, Osogbo

Case Study Two

Name: Federal Road Safety Corps Headquarters, Abeokuta

Description: The Federal Road Safety Corps (FRSC) Headquarters in Abeokuta is located within the administrative framework of Ogun State, situated in a well-developed urban environment characterised by government institutions, commercial establishments, and residential areas. The facility is strategically positioned with direct access to major road networks, enabling efficient monitoring and coordination of road safety operations within the state. The headquarters is accessible through a network of primary and secondary roads, allowing easy entry for staff, visitors, and operational vehicles. The main entrance is visibly defined and positioned to support both administrative activities and rapid deployment for field operations.

General Information: The FRSC Headquarters in Abeokuta functions as the central command and administrative hub for road safety operations in Ogun State. The facility houses multiple departments, including enforcement, public education, administration, and emergency response coordination units. The building supports a high level of activity, involving continuous interaction between administrative staff, field officers, and members of the public. This results in a dynamic workflow system that requires efficient spatial organisation to function effectively.

General Layout: The layout of the headquarters comprises a combination of administrative office blocks and operational support areas arranged within a defined site. The main entrance leads into a reception and waiting area, which serves as the interface between the public and the institution. Spaces are organised along corridor systems, with offices and units distributed across different sections of the building. There is an attempt at functional zoning, separating administrative offices from operational areas such as control units and vehicle yards; however, the separation is not always clearly defined or efficiently executed. Circulation is primarily horizontal, with movement occurring between offices, meeting rooms, and operational spaces. While the layout supports basic workflow, certain functional relationships, particularly between command units and field operations, are not optimally streamlined, leading to inefficiencies in movement and communication.

Spaces Provided: The facility comprises administrative, operational, and support spaces that promote the efficient delivery of FRSC services. These include a main entrance and reception, administrative offices, the Commanding Officer's office, an operations and control room, meeting and briefing rooms, a public service and complaint unit, a records and registry unit, staff offices, waiting areas, corridors, toilets, storage rooms, and vehicle parking. An operational yard is also provided to support vehicle inspection, dispatch, and other field activities essential to the command's operations.

Merits:

The location provides strong connectivity to major road networks, supporting efficient operational deployment.

There is a functional attempt to separate administrative and operational spaces within the layout.

The presence of a control/operation unit enhances the coordination of field activities.

External spaces adequately support vehicle movement and operational functions.

Demerits:

The spatial relationship between key departments is not optimally arranged, leading to workflow inefficiencies.

Circulation patterns are not clearly defined, resulting in unnecessary movement within the facility.

Zoning between public, administrative, and operational areas is weak, causing overlap and potential disruption of workflow.

Environmental comfort is not adequately addressed, particularly in terms of ventilation and thermal conditions.

Building finishes show signs of wear due to insufficient maintenance practices.

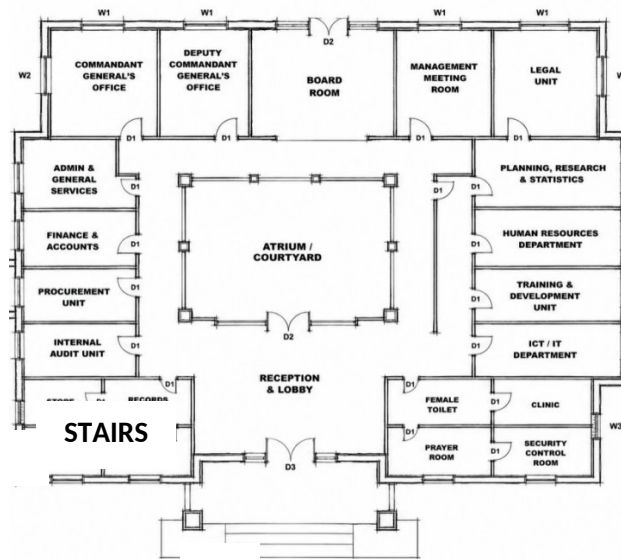


Figure 8: Floor Plan of the FRSC Headquarters, Abeokuta



Plate 5: Approach view of the FRSC Headquarters, Abeokuta



Plate 6: Approach view of the FRSC Headquarters, Abeokuta



Plate 7: Parade Ground of the FRSC Headquarters, Abeokuta



Plate 8: Front View of the FRSC Headquarters, Abeokuta



Plate 9: car park of the FRSC Headquarters, Abeokuta

Conclusion

The study also concludes that users are generally dissatisfied with the condition and performance of facilities provided within the selected FRSC Headquarters. The negative satisfaction index scores recorded across all evaluated facility variables indicate that the physical infrastructure currently available within the facilities falls below acceptable user expectations. Critical operational spaces such as waiting areas, parking facilities, record storage spaces, and signage systems were found to be particularly inadequate. Although security and safety provisions performed better than other facility components, the overall environmental quality of the facilities remains unsatisfactory. The implication is that this condition of many FRSC Headquarters does not adequately support user comfort, accessibility, operational convenience, or service efficiency. Consequently, deficiencies in environmental quality and facility management continue to affect user experience and institutional performance within the selected facilities.

Furthermore, the study concludes that spatial organisation has a direct and significant influence on workflow effectiveness and staff performance within FRSC facilities. The findings established that poor spatial arrangement contributes substantially to operational delays, inefficient workflow patterns, and reduced staff productivity. Variables relating to circulation systems, zoning arrangements, workspace relationships, and departmental proximity were identified as important determinants of operational efficiency within the facilities. Although the current spatial conditions provide moderate support for administrative activities, the findings reveal that they are insufficient for achieving optimal institutional performance. In addition, the relatively low ratings recorded for staff comfort, concentration, and workplace motivation indicate that existing FRSC facilities do not adequately address behavioural and ergonomic considerations necessary for effective workplace performance. The study therefore confirms that efficient spatial organisation is essential for improving workflow integration, staff wellbeing, service delivery speed, and institutional productivity within road safety facilities.

Finally, the study concludes that the development of a functional and context-responsive FRSC Headquarters in Osogbo requires the adoption of integrated design strategies that prioritise workflow efficiency, operational functionality, user comfort, and technological integration. The findings clearly demonstrate that respondents strongly prefer facilities characterised by functional departmental zoning, separation of public and staff areas, digitalised service systems, improved signage and wayfinding, ICT integration, wider circulation spaces, and adequate waiting and parking facilities. These preferences reflect the operational shortcomings identified within the existing FRSC Headquarters and emphasise the need for purpose-built facilities specifically designed to support the specialised functions of road safety administration. The study therefore concludes that future FRSC facilities in Nigeria should move beyond improvised and retrofitted structures towards more efficient, user-centred, and operationally responsive

architectural solutions capable of enhancing institutional effectiveness, improving public service delivery, and strengthening road safety administration in rapidly urbanising environments such as Osogbo

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