

Midocean University

Faculty of Management

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**The Impact of Operational Audit Practices on Quality
Standards
Compliance in Multi-Brand Restaurant Chains in Saudi
Arabia**

تأثير ممارسات التدقيق التشغيلي على الامتثال لمعايير الجودة
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Chapter 1: Introduction

الفصل الأول: الإطار العام للدراسة

1.1 Research Background / المقدمة

The restaurant industry is one of the fastest-growing sectors in the world, and Saudi Arabia is no exception. The country's food service market was valued at USD 27.8 billion in 2023 and is expected to grow at a rate of 11.57% annually through to 2029 (Abdou, Hassan, & Salem, 2023). This growth is connected to a number of factors — a young population, changing eating habits, and strong government investment in the hospitality and entertainment sector as part of Vision 2030. As more restaurant chains expand across the Kingdom, the question of how to maintain consistent quality across many branches becomes increasingly important for operators and managers.

Maintaining quality in a restaurant chain is not simply about serving good food. It involves managing a wide range of operational areas — from kitchen cleanliness and food storage to pest control and staff hygiene. The Saudi Food and Drug Authority (SFDA) sets clear requirements for all food businesses operating in the Kingdom, including the implementation of HACCP-based food safety systems, proper equipment maintenance, and regular pest management (Saudi Food and Drug Authority, n.d.). In the academic literature, Juran and Godfrey (1999) describe quality control as a three-step process: measuring actual performance, comparing it to a standard, and taking action when there is a gap. This is essentially what an operational audit does. Daft and Benson (2016) take a similar view from a management perspective, arguing that control systems need to be built into day-to-day operations — not just applied when something goes wrong. More specifically

in food service settings, Presti et al. (2023) found that using a structured audit checklist across different areas of a catering operation is an effective way to identify problems, apply corrective action, and improve compliance over time. Lee et al. (2021) also showed that poor implementation of food safety management systems has direct consequences for public health, reinforcing how critical it is to have a reliable monitoring tool in place.

Despite this, there is surprisingly little research on how operational audit systems work in practice within multi-brand restaurant chains in Saudi Arabia. Most existing studies either focus on a single type of establishment or look at food safety in isolation. None of them address the situation common in the Saudi restaurant sector, where one company manages several different brands under one operations team — each branch needing to be audited regularly across multiple quality dimensions at the same time. As Juran and Godfrey (1999) point out, you cannot manage what you cannot measure consistently, and this is precisely the challenge that motivates the current study.

This study investigates the impact of operational audit practices on quality standards compliance in a multi-brand restaurant chain operating in Saudi Arabia. The audit system studied covers eight operational dimensions and uses a structured digital checklist to generate measurable scores across branches. The aim is to understand how this kind of systematic audit tool contributes to quality outcomes, and what lessons can be drawn for restaurant operators and operations managers in the region.

This project is organized into five chapters. Chapter One presents the general framework of the study. Chapter Two reviews the existing literature on the key variables. Chapter Three describes the research methodology in detail. Chapter Four presents the statistical analysis and findings. Chapter Five discusses the results and provides conclusions and recommendations.

1.2 Research Problem / مشكلة الدراسة

Running quality checks across dozens of restaurant branches is genuinely difficult. Each branch operates under slightly different conditions — different staff, different customer volumes, different physical layouts — and yet all of them are expected to meet the same standards. Without a structured audit system, it is very hard to know which branches are consistently compliant and which ones need attention. Even where regulatory requirements exist — such as those set by the SFDA (Saudi Food and Drug Authority, n.d.) — compliance is not automatic. It requires regular monitoring, clear scoring, and follow-up action.

The core question this study is trying to answer is whether a structured, multi-dimensional operational audit system can actually make a measurable difference to quality compliance levels across the branches of a multi-brand restaurant chain in Saudi Arabia.

1.2.1 Theoretical Gaps / الفجوات على المستوى النظري

On the theoretical side, the quality management literature provides solid foundations — Juran and Godfrey's (1999) quality control process and Daft and Benson's (2016) framework for organizational control are both directly relevant here. However, these frameworks have rarely been applied specifically to multi-brand restaurant chains where a single audit system must cover several distinct brands operating under one management structure. Lee et al. (2021) identified that food safety management systems do not always perform as expected across different organizational contexts, which suggests that generic frameworks may not be enough. There is a need for a model that treats multi-dimensional operational auditing as a single, unified construct studied in relation to quality compliance outcomes.

1.2.2 Practical Gaps / الفجوات على المستوى التطبيقي

On the practical side, many restaurant businesses in Saudi Arabia still rely on informal or irregular inspection routines that do not produce consistent, comparable data across locations. Abdou et al. (2023) noted that the Saudi food service sector includes a broad range of business types with varying levels of operational discipline. Presti et al. (2023) found a similar issue in institutional catering — no standard framework exists for regular mandatory inspections. Without a tool that scores each branch consistently and tracks changes over time, managers are essentially making quality decisions without reliable data. This study directly addresses that problem by examining a real operational audit system already in use across a Saudi restaurant chain.

All of this points to one central research question: To what extent do operational audit practices impact quality standards compliance in multi-brand restaurant chains in Saudi Arabia?

1.3 Research Significance / أهمية الدراسة

1.3.1 At the Theoretical Level / على المستوى النظري

From a theoretical standpoint, this study fills a gap in the existing literature by applying established quality control and organizational management frameworks to a context that has received very little academic attention — multi-brand restaurant chains in Saudi Arabia. It builds on the work of Juran and Godfrey (1999) and Daft and Benson (2016) by testing their ideas in a real operational environment, and adds to the Saudi-specific food service research of Abdou et al. (2023) by introducing an operational audit dimension that previous studies have not examined. It also responds to the concerns raised by Lee et al. (2021) about the uneven performance of food safety management systems by proposing and testing a context-appropriate audit model.

1.3.2 *At the Practical Level / على المستوى التطبيقي*

In practice, the findings of this study should be useful to anyone responsible for managing quality across multiple restaurant locations. By showing which audit dimensions have the most impact on overall compliance, the study can help operations teams prioritize their efforts and use their time more efficiently. It also makes a case for the value of digital, standardized audit tools as everyday management instruments — not just inspection checklists that get filed and forgotten. Given that the Saudi food service sector is set to keep growing (Abdou et al., 2023) and that SFDA regulations require all food businesses to maintain high hygiene and safety standards (Saudi Food and Drug Authority, n.d.), there is a real and practical need for this kind of evidence-based operational guidance.

1.4 Research Questions / أسئلة الدراسة

The study is guided by one main research question and three sub-questions:

Main Question: To what extent do operational audit practices impact quality standards compliance in multi-brand restaurant chains in Saudi Arabia?

- RQ1: What is the current level of quality standards compliance across the eight operational audit dimensions in the studied restaurant chain?
- RQ2: To what extent does each audit dimension contribute individually to overall quality compliance scores across branches?
- RQ3: Is there a relationship between the frequency of audit visits and the level of quality standards compliance across branches?
-

1.5 Research Objectives / أهداف الدراسة

The study aims to achieve the following:

1. To examine the overall impact of structured operational audit practices on quality standards compliance in a multi-brand restaurant chain in Saudi Arabia.
2. To measure current compliance levels across eight audit dimensions — entrance standards, dining area cleanliness, kitchen cleanliness, equipment condition, food safety, storage, pest control, and operations/SOP compliance.
3. To identify which audit dimensions have the strongest individual effect on overall quality compliance scores.
4. To explore the relationship between audit visit frequency and branch compliance levels.
5. To provide practical recommendations for improving operational audit frameworks in multi-brand restaurant chains in the Kingdom.

1.6 Research Hypotheses / فرضيات الدراسة

Based on the research questions, objectives, and theoretical framework, the following hypotheses are tested in this study:

- H1: Operational audit practices have a statistically significant positive impact on quality standards compliance in multi-brand restaurant chains in Saudi Arabia.
- H2: The food safety and pest control audit dimensions have a stronger positive impact on overall quality compliance than other audit dimensions.

H3: Higher frequency of operational audit visits is positively associated with higher quality standards compliance across restaurant branches.

1.7 Research Model / نموذج الدراسة

The research model proposes a direct relationship between two main variables. The independent variable is Operational Audit Practices, measured across eight dimensions derived from the structured audit checklist. The dependent variable is Quality Standards Compliance, measured as the aggregate audit score per branch per visit on a 1–5 scale. Each of the eight dimensions feeds into the compliance outcome, and the model tests both combined and individual dimension effects.

This model is grounded in Juran and Godfrey's (1999) quality control process — measurement, comparison, and corrective action — and in Daft and Benson's (2016) organizational control framework. The SFDA Food Hygiene Requirements (Saudi Food and Drug Authority, n.d.) serve as the external regulatory benchmark against which compliance is assessed.

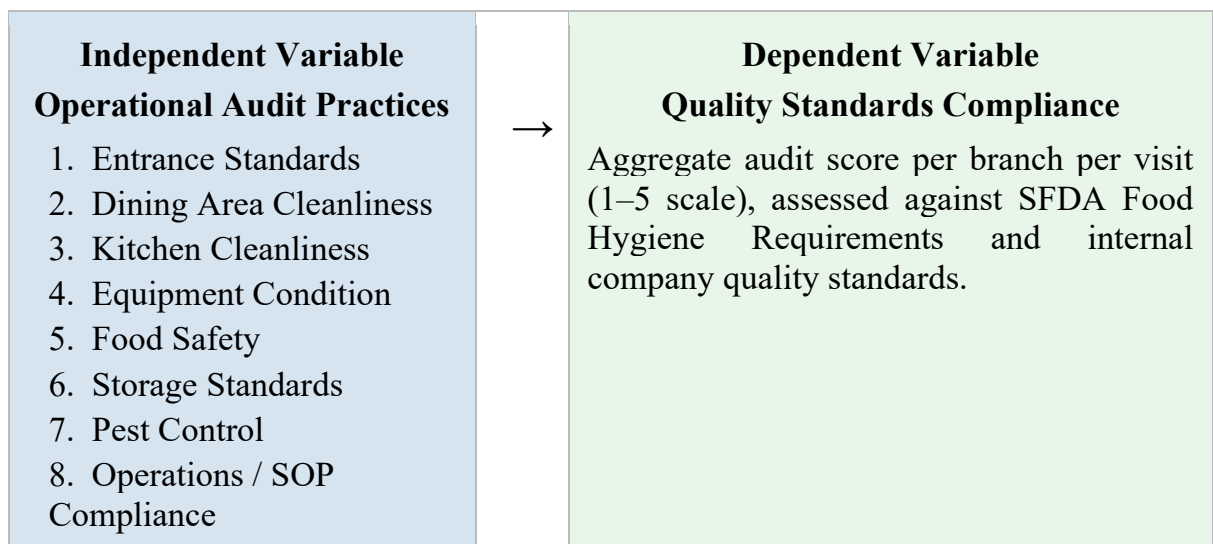


Figure 1: Proposed Research Model

1.8 Research Methodology / منهجية الدراسة

This study uses a quantitative, descriptive-analytical approach. According to Sekaran (n.d.), quantitative research is appropriate when the goal is to measure relationships between variables using numerical data, and when the researcher wants findings that can be compared and generalized. That fits well with what this study is trying to do — compare audit scores across branches, identify patterns, and draw conclusions about what drives compliance.

The primary data comes from the operational audit checklist deployed across the restaurant chain's branches. The checklist is completed digitally via Google Forms after each branch visit, recording scores on a 1–5 scale across eight operational areas. Each submission also captures the branch name, city, date, inspector name, and type of visit. Before and after photos are recorded for each area, providing visual confirmation of scores.

The study population is all restaurant branches of the chain operating in Saudi Arabia. The sample consists of 20 audit responses collected across 19 branches during May 2026, spanning cities including Jeddah, Makkah, Taif, and surrounding areas. Descriptive statistics are used to summarize compliance levels per dimension and per branch. Correlation and regression analysis are applied to test the three hypotheses. Results are interpreted against the SFDA regulatory framework (Saudi Food and Drug Authority, n.d.) and the quality control standards described by Juran and Godfrey (1999).

1.9 Scope of The Study / الدراسة الميدانية

The study is conducted within a leading multi-brand restaurant chain operating across Saudi Arabia. The company manages more than 40 branches spread

across several restaurant brands, with the majority located in Jeddah and additional branches in Makkah, Taif, and other cities. The operations team conducts 2–3 branch visits per day, meaning each branch typically receives at least two audit visits per month under normal conditions. Where a branch has a significant compliance issue — such as pest activity or a kitchen needing deep cleaning — additional visits are arranged outside of the regular schedule.

The dataset used in this study comprises 20 audit responses from 19 branches collected during May 2026, the first month of the audit system's deployment. Audit visits were conducted by two inspectors and classified as follow-up visits. The dataset covers 37 scored checklist items across 8 operational dimensions, with scores ranging from 1 (Poor) to 5 (Excellent). The study is limited to this internal audit data and does not include external regulatory inspection records or customer feedback.

1.10 The Suggested Project Structure / مخطط المشروع المقترح

The project is structured as follows:

1. Cover Page
2. Table of Contents
3. List of Figures
4. List of Tables
5. Chapter 1: General Framework of the Study
6. Chapter 2: Literature Review
7. Chapter 3: Research Methodology
8. Chapter 4: Statistical Analysis and Findings
9. Chapter 5: Discussion, Conclusions, and Recommendations

10. References

11. Appendix A: Research Instrument — Operational Audit Checklist

12. Appendix B: Table of Research Instruments

Chapter 2: Literature Review

الفصل الثاني: الدراسات السابقة

2.1 Introduction / المقدمة

This chapter reviews the existing academic and regulatory literature relevant to the two main variables of this study: operational audit practices (the independent variable) and quality standards compliance (the dependent variable). The review draws on peer-reviewed journal articles, established management and quality handbooks, official regulatory documents, and industry reports. The chapter is organized into three substantive sections — the independent variable, the dependent variable, and the relationship between them — followed by a conclusion that positions the current study within the existing body of knowledge.

The sources reviewed include Abdou et al. (2023), Lee et al. (2021), Presti et al. (2023), Daft and Benson (2016), Juran and Godfrey (1999), the Saudi Food and Drug Authority (n.d.), and the National Restaurant Association (2023). Together, these provide a solid theoretical and contextual foundation for the empirical study that follows in Chapters 3 and 4.

2.2 Operational Audit Practices (Independent Variable) / المتغير المستقل

Operational auditing is the systematic process of evaluating whether an organization's activities are being carried out efficiently, effectively, and in accordance with established standards. In the quality management literature, this concept is closely connected to organizational control. Daft and Benson (2016)

describe organizational control as a process by which managers monitor ongoing activities, compare results with established targets, and make corrections where needed. They argue that this kind of control needs to be embedded into the daily rhythm of an organization — especially in multi-site operations where consistency across locations cannot be taken for granted.

Juran and Godfrey (1999) offer a more detailed framework through what they call the quality control process, which consists of three steps: evaluating actual performance, comparing it against quality goals, and acting on the difference. This framework is particularly useful for understanding operational auditing because it makes explicit the link between measurement and action — the audit is not just a data collection exercise, it is the mechanism through which deviations from standards are identified and corrected. Juran and Godfrey (1999) also stress that this process must be applied consistently across all organizational units for it to be effective; an audit that produces non-comparable data across branches cannot support meaningful quality management decisions.

In the food service context, the specific dimensions that an operational audit should cover are largely shaped by food safety and hygiene regulations. The Saudi Food and Drug Authority (n.d.) sets comprehensive requirements for all food business operators in the Kingdom. These include maintaining clean and structurally sound premises that allow for effective pest control; ensuring food is stored at proper temperatures; keeping equipment in good working order and accessible for cleaning; maintaining high standards of personal hygiene among all food-handling staff; and implementing HACCP-based systems that identify hazards, establish critical control points, and define corrective actions when limits are breached. Each of these requirements maps directly onto one or more dimensions of a structured operational audit checklist.

Presti et al. (2023) provide one of the most directly relevant examples in the literature of what a structured audit looks like in practice. In their study of collective catering operations within the Italian National Police, they developed a 20-section audit checklist covering the entire food production line — from incoming goods and

storage through preparation, distribution, and waste disposal. The checklist was designed to verify food safety regulations, assess the overall effectiveness of the control system, and support the implementation of corrective measures when non-conformities were found. Presti et al. (2023) categorized findings into three levels — minor, major, and critical — each triggering a different corrective action protocol and timeframe. Their study also highlighted that no standardized guidelines currently exist for mandatory periodic inspections of collective catering operations, underscoring the value of developing context-specific audit tools.

Lee et al. (2021) approach the same subject from a food safety management system perspective. They argue that the foundation of any effective food safety system is the Prerequisite Programs (PRPs) — the basic hygiene conditions and operational practices that must be in place before HACCP can function properly. These include Good Hygiene Practices, Sanitation Standard Operating Procedures, personal hygiene protocols, and pest control measures. Lee et al. (2021) note that the most common cause of food safety failures is not a breakdown at HACCP critical control points but rather the failure of prerequisite programs — particularly poor personal hygiene and inadequate sanitation. This finding has direct implications for operational auditing: it suggests that routine audit checks on hygiene, cleanliness, and SOP compliance are core drivers of food safety outcomes, not peripheral concerns.

Taken together, the literature presents operational auditing as a multi-dimensional, structured, and recurring management activity spanning physical cleanliness, food safety, equipment maintenance, pest prevention, storage conditions, and procedural compliance. When implemented consistently and scored transparently, such a system functions as both a diagnostic tool and a corrective action mechanism — exactly as described in Juran and Godfrey's (1999) quality control process.

2.3 Quality Standards Compliance (Dependent Variable) / المتغير التابع

Quality standards compliance in a restaurant context refers to the degree to which a branch consistently meets the operational, hygiene, food safety, and service standards expected of it. These standards come from two sources: external regulatory requirements imposed by bodies like the SFDA, and internal standards set by the organization. In practice, compliance is a continuum, and the role of an audit system is to measure where on that continuum a given branch sits.

The Saudi food service industry is one of the most dynamic and rapidly growing in the world, with a market size of USD 27.8 billion in 2023 and projected annual growth of 11.57% through to 2029 (Abdou et al., 2023). Abdou et al. (2023) found that Saudi restaurants operate across a wide range of formats and business models, with varying levels of operational discipline and quality orientation. While their study focused primarily on sustainable food practices rather than compliance specifically, it documented the operational pressures and management challenges that Saudi restaurant operators face — particularly around maintaining consistent standards across multiple locations in a fast-moving market.

From a regulatory standpoint, the Saudi Food and Drug Authority (n.d.) sets out a detailed framework that all food businesses in the Kingdom must comply with. This covers the physical condition of food premises — requiring adequate ventilation, drainage, lighting, and structural integrity to prevent contamination and enable effective cleaning and pest control. Equipment requirements specify that all food-contact surfaces must be smooth, washable, and easy to clean and disinfect. On personal hygiene, every person working in a food-handling area must maintain a high degree of personal cleanliness and wear suitable protective clothing. The SFDA also requires food operators to implement HACCP-based standards, maintain documentation, and provide evidence of compliance to the competent authority on request (Saudi Food and Drug Authority, n.d.).

In the academic literature, the consequences of failing to meet food safety and quality standards are well documented. Lee et al. (2021) use a detailed case

study of a multi-state listeriosis outbreak in the United States to illustrate how the failure of basic prerequisite programs — including inadequate sanitation, poor personal hygiene, and ineffective pest prevention — can lead to serious public health consequences. They note that the breakdown typically occurs not at the level of HACCP critical control points but in the everyday hygiene and cleaning routines that an operational audit would normally catch. This reinforces the idea that quality standards compliance is not just a regulatory obligation — it is a health and safety matter with direct consequences for consumers.

Presti et al. (2023) offer a direct measure of what non-compliance looks like in a controlled catering environment. In their study of six canteens, they identified non-conformities including structural issues such as the absence of insect barriers, problems with documentation, and the presence of flying pests in food storage areas. Significantly, these issues were identified and resolved through the systematic use of a structured checklist — demonstrating the direct link between compliance monitoring and corrective action. Their findings also showed that some non-conformities could be resolved immediately, while others required a formal corrective action plan with defined timeframes (Presti et al., 2023).

What emerges from the literature is that quality standards compliance in food service is a multi-layered concept covering physical cleanliness, food storage and temperature control, pest prevention, equipment condition, staff hygiene, and procedural adherence. It is shaped by regulatory mandates and internal organizational standards alike, and is best measured through a structured, multi-dimensional tool that captures performance across all relevant areas simultaneously.

2.4 The Relationship Between Operational Audit Practices and Quality Standards Compliance / العلاقة بين المتغيرين

The theoretical connection between operational audit practices and quality standards compliance is straightforward: auditing is the mechanism through which compliance is monitored, and compliance is the outcome that auditing is designed to improve. This relationship is implicit in Juran and Godfrey's (1999) quality control process — without a structured evaluation of actual performance, there is no basis for comparison against standards and therefore no basis for corrective action.

Daft and Benson (2016) reinforce this from an organizational management perspective. They argue that formal control systems — of which operational audits are a clear example — are essential in multi-site organizations precisely because managers cannot be present everywhere at once. In a company with dozens of branches, each operating under different local conditions, a standardized audit tool is the only practical way to maintain an overview of quality performance across the network. Without it, branch-level deviations from standards may go undetected until they escalate into serious problems.

The evidence from Presti et al. (2023) supports this view in a food service setting. Their study showed that the introduction of a structured audit checklist in collective catering made non-conformities visible and manageable. Things that had previously gone unnoticed or unaddressed could now be categorized, reported, and followed up systematically. The checklist enabled a risk-based approach to corrective action, with different categories of non-conformity triggering different response protocols. This is precisely the kind of measurable impact on compliance that the current study examines in the context of a multi-brand restaurant chain.

Lee et al. (2021) add an important nuance to this relationship. They argue that food safety management systems are only effective when they are genuinely implemented rather than simply documented. Organizations that treat food safety auditing as a bureaucratic exercise rather than a real management tool tend to have weaker compliance outcomes. This suggests that the frequency, consistency, and seriousness with which audits are conducted matters as much as the existence of the audit tool itself — directly relevant to Hypothesis 3 of this study, which proposes

that higher audit visit frequency is positively associated with better compliance outcomes.

The Saudi Arabian restaurant industry context adds another dimension. Abdou et al. (2023) found that promoting quality-oriented practices in Saudi restaurants is significantly influenced by management commitment and organizational culture around standards. While their study focused on sustainability, their finding that management engagement is a critical driver of quality outcomes is consistent with the proposition that a structured, regularly implemented audit system — backed by genuine managerial follow-through — should produce measurable improvements in compliance. The SFDA regulatory framework (Saudi Food and Drug Authority, n.d.) further supports this: where standards are clearly defined and operators are required to demonstrate compliance, an effective internal audit system becomes an essential operational tool.

In summary, the literature consistently supports the proposition that structured operational audit practices are positively associated with quality standards compliance in food service settings. The audit provides the measurement, comparison, and corrective action loop described by Juran and Godfrey (1999); the organizational control framework described by Daft and Benson (2016) explains why this is especially important in multi-site operations; and the empirical evidence from Presti et al. (2023) and Lee et al. (2021) demonstrates both the practical value of structured checklists and the risks of inadequate implementation.

2.5 Conclusion / الخاتمة

This chapter has reviewed the key literature relevant to the two main variables of this study. On the independent variable side, the literature presents operational auditing as a structured, multi-dimensional management practice covering physical hygiene, food safety, equipment, pest control, storage, and

procedural compliance. Frameworks from Juran and Godfrey (1999) and Daft and Benson (2016) provide the theoretical grounding, while Presti et al. (2023) and the SFDA requirements (Saudi Food and Drug Authority, n.d.) offer concrete evidence of what effective auditing looks like in practice.

On the dependent variable side, quality standards compliance in food service is shaped by regulatory mandates, internal organizational standards, and everyday operational practices. Lee et al. (2021) demonstrate that failures in basic hygiene and sanitation routines are among the most common causes of food safety breakdowns. Abdou et al. (2023) provide context on the Saudi Arabian restaurant sector, highlighting both its rapid growth and the operational challenges that come with it.

The relationship between the two variables is well-supported in the literature: auditing is the mechanism through which compliance is measured and maintained, and consistent, structured implementation is associated with better compliance outcomes. The current study contributes to this body of knowledge by examining this relationship empirically in a specific context that has not been studied before — a multi-brand restaurant chain conducting regular digital audits across more than 40 branches in Saudi Arabia.

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Appendix A: Research Instrument

أداة البحث: استمارة التدقيق التشغيلي

The following operational audit checklist serves as the primary data collection instrument for this study. It was developed by the researcher based on professional experience in operational auditing within a multi-brand restaurant chain in Saudi Arabia, and is aligned with the food hygiene requirements set by the Saudi Food and Drug Authority (n.d.) and the quality control principles described by Juran and Godfrey (1999). The checklist is administered digitally via Google Forms after each branch visit. Scores are recorded on a 1–5 Likert scale (1 = Poor, 5 = Excellent) unless otherwise indicated.

Section A: Basic Information / البيانات الأساسية

No.	Field / الحقل	Response Type / نوع الإجابة
1	City / مدينة	Open text
2	Branch Name / اسم الفرع	Open text
3	Date / التاريخ	Date and time
4	Inspector / المفتش	Open text
5	Visit Type / نوع الزيارة	Select: Evaluation / Follow up / Deep Clean / Pest Control / Other

Section 1: Entrance / المدخل

No.	Checklist Item / بند التدقيق	Scale / المقياس
1	Clean entrance / المدخل نظيف	1–5 Likert
2	No bad odor / لا توجد روائح	1–5 Likert

Section 2: Dining Area / صالة الطعام

No.	Checklist Item / بند التدقيق	Scale / المقياس
3	Dining area free from food residue / الصالة خالية من بقايا الأكل	1–5 Likert
4	Tables and chairs clean / الطاولات والكراسي نظيفة	1–5 Likert
5	Floors and corners clean / الأرضيات والزوايا نظيفة	1–5 Likert
6	Waste bins clean and closed / سلات النفايات نظيفة ومغلقة	1–5 Likert
7	No visible pest activity / لا يوجد نشاط آفات	1–5 Likert

Section 3: Kitchen Cleanliness / نظافة المطبخ

No.	Checklist Item / بند التدقيق	Scale / المقياس
8	Kitchen free from food residue / المطبخ خالي من بقايا الأكل	1–5 Likert
9	No grease accumulation on surfaces / لا يوجد تراكم زيوت	1–5 Likert
10	Equipment surroundings clean (behind/under) / محيط الأجهزة نظيف	1–5 Likert
11	Floors completely dry (no moisture) / الأرضيات ناشفة تماماً	1–5 Likert
12	Walls and cladding clean / الجدران والكلادينغ نظيفة	1–5 Likert

Section 4: Equipment Condition / حالة المعدات

No.	Checklist Item / بند التدقيق	Scale / المقياس
13	Equipment functioning properly / الأجهزة تعمل بكفاءة	1–5 Likert
14	Equipment internally clean / الأجهزة نظيفة من الداخل	1–5 Likert
15	No unnecessary equipment stored / لا توجد أجهزة غير مستخدمة	1–5 Likert
16	Equipment accessible for cleaning / يمكن الوصول للأجهزة للتنظيف	1–5 Likert

Section 5: Food Safety / سلامة الغذاء

No.	Checklist Item / بند التدقيق	Scale / المقياس
17	Food stored under proper conditions / تخزين الطعام بشكل صحيح	1–5 Likert
18	No uncovered food present / لا يوجد طعام مكشوف	1–5 Likert
19	Cross contamination prevented / منع التلوث المتبادل	1–5 Likert
20	Temperature control implemented / تطبيق التحكم بالحرارة	1–5 Likert

Section 6: Storage / التخزين

No.	Checklist Item / بند التدقيق	Scale / المقياس
21	Storage organized and clean / التخزين مرتب ونظيف	1–5 Likert
22	Items stored off the floor / المواد مرفوعة عن الأرض	1–5 Likert
23	Expiry dates controlled / مراقبة تواريخ الصلاحية	1–5 Likert
24	Food properly covered / الطعام مغطى	1–5 Likert
25	Food storage hierarchy followed / التخزين الهرمي	1–5 Likert

Section 7: Pest Control / مكافحة الآفات

No.	Checklist Item / بند التدقيق	Scale / المقياس
26	No structural openings or gaps / لا توجد فتحات أو شقوق	Yes / No
27	Drains properly closed / فتحات الصرف مغلقة	1–5 Likert
28	No pest evidence present / لا يوجد دليل على الآفات	Yes / No
29	Pest control tools properly placed / أدوات مكافحة موزعة بشكل صحيح	Yes / No

Section 8: Maintenance / الصيانة

No.	Checklist Item / بند التدقيق	Scale / المقياس
30	All openings sealed properly / جميع الفتحات مغلقة	Yes / No

Section 9: Operations / التشغيل / SOP

No.	Checklist Item / بند التدقيق	Scale / المقياس
31	Closing procedure followed / إجراءات الإغلاق	Yes / No
32	Full cleaning completed / تم التنظيف الكامل	1–5 Likert
33	No food residue remaining / لا توجد بقايا أكل	1–5 Likert
34	Grease removed / إزالة الزيوت	1–5 Likert
35	Floors dry / الأرضيات ناشفة	1–5 Likert
36	Waste removed / إخراج النفايات	1–5 Likert
37	Drains closed / إغلاق فتحات الصرف	1–5 Likert

Note: Scale 1 = Poor, 2 = Below Average, 3 = Average, 4 = Good, 5 = Excellent. Yes/No items are recorded as binary responses. Photo evidence (before and after) is recorded for each section.

Appendix B: Table of Research Instruments

جدول أدوات البحث

The table below summarizes the structure of the research instrument, showing the number of items per dimension, the measurement scale used, and the theoretical or regulatory source that each dimension is grounded in.

Dimension / البُعد	No. of Items	Scale / المقياس	Source / المصدر
Entrance Standards / معايير المدخل	2	1–5 Likert	Developed by researcher
Dining Area Cleanliness / نظافة صالة الطعام	5	1–5 Likert	Developed by researcher; SFDA (n.d.)
Kitchen Cleanliness / نظافة المطبخ	5	1–5 Likert	Developed by researcher; SFDA (n.d.); Presti et al. (2023)
Equipment Condition / حالة المعدات	4	1–5 Likert	SFDA (n.d.); Developed by researcher
Food Safety / سلامة الغذاء	4	1–5 Likert	SFDA (n.d.); Lee et al. (2021); Presti et al. (2023)
Storage Standards / معايير التخزين	5	1–5 Likert	SFDA (n.d.); Presti et al. (2023)
Pest Control / مكافحة الآفات	4	Yes/No + 1–5	SFDA (n.d.); Presti et al. (2023); Lee et al. (2021)
Maintenance / الصيانة	1	Yes/No	Developed by researcher; SFDA (n.d.)

Operations / SOP / التشغيل	7	Yes/No + 1–5	Developed by researcher; Juran & Godfrey (1999)
Total / المجموع	37		

Table 1: Summary of Research Instrument Dimensions and Sources

The instrument was developed by the researcher based on direct professional experience conducting operational audits within a multi-brand restaurant chain in Saudi Arabia. The dimensions align with both the SFDA Food Hygiene Requirements (Saudi Food and Drug Authority, n.d.) and the quality control framework established by Juran and Godfrey (1999). The food safety, storage, and pest control dimensions also draw on the audit methodology described by Presti et al. (2023) and the prerequisite program framework outlined by Lee et al. (2021).