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The Impact of Continuous Training on Employee Quality Service Delivery: A Field Study in Public Hospitals in Zawia, Libya

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Abstract

This study aimed to identify the impact of continuous training dimensions on employee quality service delivery in the public hospitals, Zawia, Libya. To achieve the study objectives, the descriptive analytical method was followed. A questionnaire was used to collect data. The questionnaires were distributed to 180 employees, including medical doctors, nurses, clinical officers, health attendants, laboratory technicians, pharmacists, and administrative staff. The number of questionnaires returned was (150) questionnaires, representing a response rate of 83.3%. Data analysis was performed using SPSS (V.25), employing percentages, arithmetic means, standard deviations, linear regression analysis, and other statistical methods. The results showed that the level of continuous training dimensions namely training content, training methods, evaluation mechanisms, and training sustainability at the public hospitals in Zawia was high (Mean=3.71). Whereas, the level of employee quality service delivery in the public hospitals in Zawia was moderate (Mean=3.38). The results also showed that there was a statistically significant effect at ($\alpha \leq 0.05$) for all continuous training dimensions (training content, training methods, evaluation mechanisms, and training sustainability) on employee quality service delivery. In light of these results, the study presented a number of recommendations.

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Keywords: Continuous Training, Employee Quality Service Delivery, Public Hospitals.

تأثير التدريب المستمر على جودة تقديم الخدمة من قبل الموظفين: دراسة ميدانية في المستشفيات العامة بمدينة الزاوية – ليبيا

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ملخص

هدفت هذه الدراسة إلى تحديد تأثير أبعاد التدريب المستمر على جودة تقديم الخدمة من قبل الموظفين في المستشفيات العامة بمدينة الزاوية، ليبيا. ولتحقيق أهداف الدراسة، تم اتباع المنهج الوصفي التحليلي. استُخدمت استبانة لجمع البيانات، وُزعت على 180 موظفًا، من بينهم أطباء وممرضون ومساعدون سريريون ومساعدو رعاية صحية وفنيو مختبرات وصيادلة وموظفون إداريون. وبلغت الاستبيانات المستردة (150) استمارة، بنسبة استجابة قدرها (83.3%). أُجري تحليل البيانات باستخدام برنامج SPSS (الإصدار 25)، باستخدام النسب المئوية والمتوسطات الحسابية والانحرافات المعيارية وتحليل الانحدار الخطي، بالإضافة إلى أساليب إحصائية أخرى. أظهرت النتائج أن مستوى أبعاد التدريب المستمر، وتحديدًا محتوى التدريب وأساليبه وآليات تقييمه واستدامته، كان مرتفعًا في المستشفيات العامة بالزاوية (المتوسط = 3.71). في حين كان مستوى جودة تقديم الخدمة من قبل الموظفين في المستشفيات العامة بالزاوية متوسطًا (المتوسط = 3.38). أظهرت النتائج أيضًا وجود تأثير ذي دلالة إحصائية ($\alpha \leq 0.05$) لجميع أبعاد التدريب المستمر (محتوى التدريب، وأساليب التدريب، وآليات التقييم، واستدامة التدريب) على جودة تقديم الخدمة من قبل الموظفين. وفي ضوء هذه النتائج، قدمت الدراسة عددًا من التوصيات.

الكلمات المفتاحية: التدريب المستمر، جودة تقديم الخدمة من قبل الموظفين، المستشفيات العامة.

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Introduction

Developing countries face significant economic and social disparities, exacerbated by the persistent shortage of qualified medical personnel (WHO, 2021). High-quality healthcare services are essential for achieving equitable health outcomes, particularly in developing nations where access to trained healthcare providers is limited (WHO, 2022). Training is critically important for equipping healthcare workers with the necessary competencies to improve service delivery in resource-constrained settings (Bhakuni & Saxena, 2023). Well-trained healthcare workers tend to demonstrate higher levels of work commitment, dedication, and patient-centered care, which ultimately enhances service quality (Al Badi et al., 2023; Zhang et al., 2021). However, in public hospitals, insufficient training opportunities continue to pose a significant barrier to achieving high-quality healthcare (Mwansisya et al., 2022).

Despite the recognized value of continuous training, its implementation in public health facilities is often inconsistent due to limited resources and a lack of strategic planning (Singh et al., 2023). Effective training programs not only enhance knowledge, skills, and abilities but also foster work engagement characterized by vigor, dedication, and absorption (Demerouti & Bakker, 2023; Wei et al., 2023). Engaged employees are more likely to demonstrate commitment, innovation, and discretionary effort in service delivery (Bakker & Albrecht, 2018; Kwon & Kim, 2020; Sendawula et al., 2018). Nevertheless, some researchers argue that the impact of training remains limited without addressing broader systemic issues such as staffing, supervision, and career advancement (Bibi, 2019; Makki et al., 2022; Pomaranik & Alessandri, 2023). In the Libyan context, healthcare workers in public hospitals face challenges including high patient volumes, limited supervisory support, and scarce access to continuous learning platforms (Elemam et al., 2024). Allen et al. (2024) further confirmed that insufficient training opportunities in Libya continue to constitute a significant obstacle to achieving high-quality healthcare.

Numerous studies from developed and middle-income countries, including the United Kingdom, the United Arab Emirates, Poland, Spain, India, and Malaysia, have consistently demonstrated that structured training programs improve job performance, engagement, and service delivery quality (Al Badi et al., 2023; Bailey et al., 2021;

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De Simone et al., 2022; Osei-Kusi et al., 2023; Shaheen & Farooqi, 2021). Similarly, research in Sub-Saharan Africa such as South Africa, Uganda, Nigeria, and Kenya indicates that continuous training enhances healthcare worker outcomes, including service quality (Oludeyi et al., 2021; Sendawula et al., 2018). In Libya, studies have shown that training can help address workforce shortages and improve patient care (Kisumbe & Mashala, 2020; Mwansisya et al., 2022). However, these studies have primarily focused on private health facilities, and none have examined the relationship between training and employee quality service delivery in public health facilities. Despite national and global recognition of continuous training as a catalyst for improving healthcare service delivery, there remains a limited understanding of how these initiatives influence service quality within the public hospital context.

Furthermore, the impact of continuous training and development dimensions on service quality remains insufficiently explored. This gap is particularly concerning in the Libyan context, which faces operational pressures such as those in the city of Zawia, where resource-constrained administrative systems, staff overburdened by daily pressures, and limited professional development opportunities pose significant challenges to the effectiveness of training interventions. A clearer understanding of these relationships is essential for developing sustainable policy solutions to improve service quality within the public hospital healthcare system in Zawia. While previous studies affirm the positive effects of continuous training on healthcare outcomes, empirical evidence from the local context (Zawia city) remains limited, particularly regarding how training and development influence the employee quality service delivery provided to citizens. Moreover, current studies often overlook how different dimensions of continuous training individually and collectively affect the employee quality service delivered to citizens in healthcare settings. Accordingly, this study aims to address these gaps by examining the impact of continuous training in improving employee quality service delivery in public hospitals in Zawia city.

The Study Problem

The continuous improvement of healthcare system quality has become a priority in health policy (Cunningham, et al. 2016; García-Pérez & Gil-Lacruz, 2018). Its implementation requires organizational knowledge and the engagement of various stakeholders. The new

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definition of clinical governance aims to ensure high-quality patient care based on best practices, transparency, continuous interprofessional education, and commitment to professional accountability (Gordon & Campbell, 2013; Kasvosve et al., 2014; Reeves, 2009; Ruiz, 2004). However, recent studies have revealed a significant quality gap between patient expectations and the actual reality of services provided, particularly concerning the dimensions of "reliability" and "responsiveness" (Isevier & Deger, 2024). In the Libyan context, the healthcare sector faces severe structural challenges resulting from declining public expenditure and deteriorating infrastructure (Allen et al., 2024). The World Health Organization has reported that over a decade of civil conflict has led to the near-complete collapse of vital infrastructure in Libya, with estimates indicating that 37% of health facilities had been fully or partially damaged by 2021, and up to 90% of primary healthcare centers had been closed in some areas (WHO, 2023; WHO, 2025). These challenges are compounded by a severe shortage of qualified personnel. The decline in quality is largely attributed to deficiencies in continuous training and professional development programs (Anbari et al., 2010). The World Health Organization has emphasized that lifelong learning and competency-based education are essential to enable healthcare workers to adapt to evolving healthcare practices.

Numerous studies indicate that effective training improves employee performance and elevates service delivery standards (Nor, 2023; Sabekti & Setiawan, 2023; Hassan, 2020). Nevertheless, empirical studies specifically addressing the role of training in the effectiveness of public service delivery in public sector institutions remain insufficient, indicating a research gap that warrants further investigation.

Despite the broad theoretical consensus that continuous training programs enhance healthcare service quality, empirical evidence from the context of fragile states and overburdened health systems such as Libya in general and Zawia city in particular remains limited and conflicting. Public hospitals in Zawia face chronic structural and operational challenges, manifested in severe staffing shortages, poor working conditions, job burnout, and limited professional development opportunities. These factors render the effectiveness of traditional training questionable, as the impact of any training program often dissipates rapidly due to weak follow-up mechanisms and the absence of sustainability plans. Given the pursuit of public hospitals in Zawia

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city to improve their service quality, it became important to examine the dimensions of continuous training namely training content, training methods, evaluation mechanisms, and training sustainability in order to elevate the level of employee quality service delivery. Hence, the research problem that prompted the researcher to conduct this study emerged, as it seeks to shed light on the impact of continuous training on employee quality service delivery in public hospitals in Zawia city. Based on the foregoing, the research problem is summarized in an attempt to answer the following main question: What is the impact of the dimensions of continuous training (training content, training methods, evaluation mechanisms, training sustainability) on employee quality service delivery in the public hospitals under study in Zawia city? The following sub-questions are derived from the main research question:

1.What is the level of the dimensions of continuous training (training content, training methods, evaluation mechanisms, training sustainability) from the perspective of employees in the public hospitals under study in Zawia city?

2.What is the level of employee quality service delivery in the public hospitals under study in Zawia city?

3. Is there a statistically significant impact of the dimensions of continuous training (training content, training methods, evaluation mechanisms, and training sustainability) on employee quality service delivery in the public hospitals under study in Zawia city?

Significance of the Study

The significance of this study is manifested in multiple aspects, both at the theoretical and applied levels, as outlined below:

1.This study provides empirical evidence from the Libyan environment, where studies linking the dimensions of continuous training to employee quality service delivery are scarce, thereby contributing to testing the generalizability of Western management theories to unstable Arab contexts.

2.The significance of this study is not limited to measuring the direct impact of continuous training on employee quality service delivery, it also seeks to understand the explanatory mechanisms that translate training into tangible service improvement, thereby enriching the theoretical debate on building learning health systems in resource-limited settings.

3. Developing a theoretical and analytical framework and enriching the scientific literature through the systematic linkage between the

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dimensions of continuous training (training content, training methods, evaluation mechanisms, training sustainability) and employee quality service delivery. This study offers a theoretically grounded framework amenable to empirical testing and future scholarly building, thereby filling a clear research gap in both Arab and international literature that has rarely addressed this specific context.

4.The study findings serve as a diagnostic tool for decision-makers in Zawia's hospitals, assisting them in transitioning from traditional practices to evidence-based practices by identifying genuine weaknesses in the training system (such as weak evaluation mechanisms, inappropriate content, or the absence of sustainability plans), thereby enabling more efficient reallocation of limited resources.

5.Improving institutional performance and enhancing the quality of services provided by linking the study's outcomes to human resource policies. Management can thereby enhance employee efficiency and performance, which positively reflects on employee quality service delivery, patient satisfaction, and the hospital's image in the community.

The Study Aim and Objectives

This study aims to identify the impact of continuous training dimensions on employee quality service delivery in public hospitals in Zawia city. To achieve the study's aim, the following objectives will be addressed:

1.To identify the level of continuous training dimensions (training content, training methods, evaluation mechanisms, and training sustainability) from the perspective of employees in public hospitals in Zawia city.

2.To identify the level of employee quality service delivery in public hospitals in Zawia city.

3.To examine the impact of continuous training dimensions (training content, training methods, evaluation mechanisms, and training sustainability) on employee quality service delivery in public hospitals in Zawia city.

4.To formulate some proposals and recommendations that may contribute to enhancing continuous training among employees in public hospitals and improving the level of employee quality service delivery.

Conceptual Framework of the Study

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The conceptual framework of this study illustrates in Figure (1), which comprises independent variables (dimensions of continuous training) and a dependent variable (employee quality service delivery). This framework posits that the dimensions of continuous training lead to improvements in employee quality service delivery. This model aligns with the study's objectives and theoretical foundations, thereby ensuring its clarity and ease of understanding.

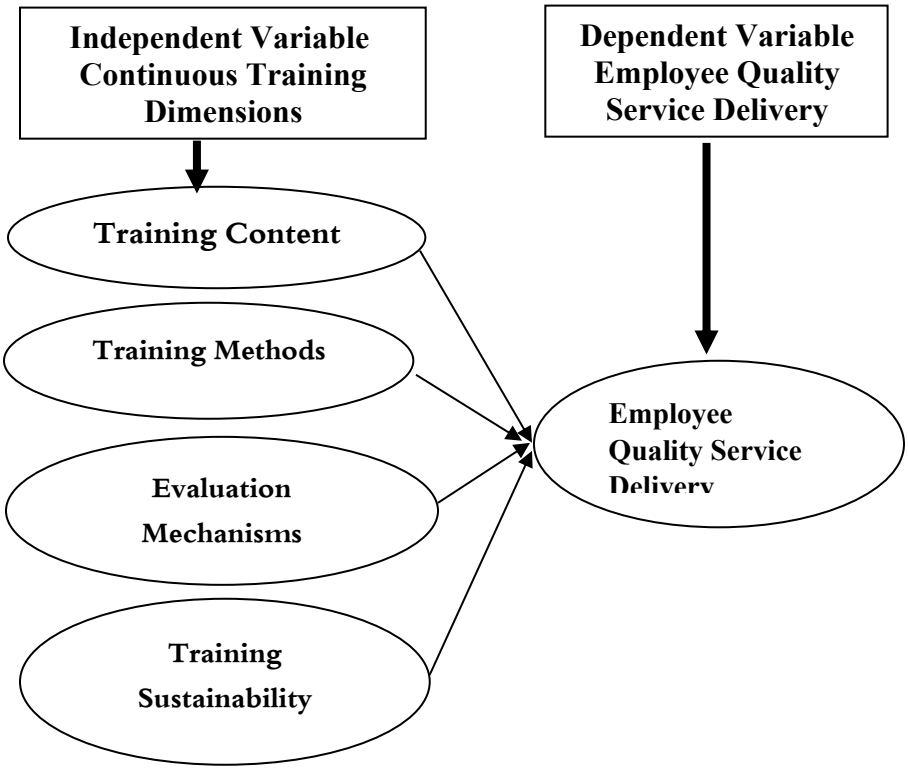

Figure (1) Conceptual Framework of the Study
Source. Adapted from the literature review (2025).

Study Hypotheses

To answer the research questions, the following hypotheses were formulated:

H_0: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of the dimensions of continuous training on employee quality service delivery in the public hospitals. The following sub-hypotheses are derived from the main hypothesis:

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$H_{0\cdot1}$: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of training content on employee quality service delivery in the public hospitals in Zawia city.
$H_{0\cdot2}$: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of training methods on employee quality service delivery in the public hospitals in Zawia city.
$H_{0\cdot3}$: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of evaluation mechanisms on employee quality service delivery in the public hospitals in Zawia city.
$H_{0\cdot4}$: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of training sustainability on employee quality service delivery in the public hospitals in Zawia city.

Theoretical Review and Conceptual Background

This review comprehensively examines the research on how This review comprehensively examines the research on how continuous training initiatives influence employee quality service delivery in public health facilities. The review begins with theories and then discusses research that tests these ideas.

Human Capital Theory

This study is grounded in Human Capital Theory (HCT), which links investment in employee training to the returns generated from such investment. Consequently, the theory is appropriate for connecting employee training to the quality of service delivery (Nor, 2025). Human Capital Theory was first introduced by Gary S. Becker in 1962 and later developed by Sherwin Rosen in 1976. The theory posits that employees are the sole owners of their human capital, which can be enhanced through education and training (Ross et al., 2023). Human capital is assumed to have a direct impact on productivity. In this context, productivity can only be increased either by enabling existing employees to acquire additional competencies and skills, or by hiring new employees with higher levels of skills and competence (Ross et al., 2023).

In the context of this study, Human Capital Theory emphasizes that employee training is the key to increasing employee productivity in terms of improving healthcare service delivery. This is also viewed as a pathway to improvement that enables employees to deliver effective services (Nchuchuwe & Etim, 2020). Therefore, if no noticeable improvement in healthcare service delivery is observed, any investment in employee training is considered futile.

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However, Human Capital Theory does not account for the relative increase in costs associated with human capital as employees' knowledge and skills grow not only in terms of increased salaries and benefits, but also in terms of their enhanced competitiveness in the labor market due to their freedom of mobility (Lwilla & Nyello, 2023). Regardless of this criticism, Human Capital Theory remains relevant because the provision of public health services involves positive externalities that business-oriented organizations cannot consider. Hence, it is essential to endorse Human Capital Theory in the context of healthcare service delivery. More importantly, proponents of the theory argue that the effect of employee training on productivity, as assumed by Human Capital Theory, can be explained through the improvement of service quality, which serves as a mediating variable (Rew et al., 2018; Rust & Huang, 2012). Studies indicate that employee training in the service sector affects service quality, which in turn explains productivity (Tanui & Kwasira, 2019). Thus, this theory is relevant as it highlights the foundational basis for hypothesizing the impact of the independent variables on the dependent variable in this study.

SERVQUAL Model

The SERVQUAL model, developed by Parasuraman et al., (1988), provides a comprehensive framework for evaluating service quality across five dimensions: reliability, responsiveness, empathy, assurance, and tangibles. It posits that employee competence and motivation, both of which are influenced by continuous training as, is critical for delivering high-quality services (Alharbi and Aloyuni, 2023; Wangechi et al., 2020). In this study, service quality is operationalized as the extent to which healthcare employees meet the expectations of these five dimensions in their service delivery. The impact of continuous training in enhancing employee competence and motivation underscores the importance of work engagement as a driver of service excellence in healthcare settings.

Definition of Continuous Training

Training is considered a fundamental human resource management activity in any organization. It can be defined as the process through which employees' behaviors, knowledge, and motivation are changed to improve the alignment between employee characteristics and capabilities and job requirements (Diab & Ajlouni, 2015; Dora & Sabag, 2008). Training also referred to bridging the gap between current performance and desired performance (Garavan, 1997). Mograbi (2008) defined training as the activity of implementing and

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designing experimental programs aimed at developing individual and collective performance and raising the level of organizational performance efficiency. This indicates how employees enhance their knowledge, skills, and abilities. Training is the process through which employees acquire knowledge and skills for specific purposes (Ameen & Baharom, 2019). Nor (2018) found that training is a method through which individuals acquire the competencies necessary to perform their jobs, emphasizing that training equips employees with specific skills suited to their current roles. Similarly, Wayne et al. (2016) described training as activities aimed at providing employees with the knowledge and skills required for their current jobs, while development focuses on long-term learning that extends beyond immediate job requirements. Effective training and development are essential components of ongoing efforts to enhance employee competencies and organizational performance. Byars and Rue (2017) described training as a learning method that involves acquiring the knowledge, skills, and abilities necessary for successful job performance (Nor, 2018). Sija (2024) noted that training refers to the process of teaching employees the skills, knowledge, and competencies required to perform specific tasks or functions effectively within the organization. This study aligns with the definition provided by Al-Dwaik and Ahmed (2019), who define it as the activities and programs designed to continuously develop the knowledge, skills, and competencies of employees in public hospitals, thereby enhancing their performance and enabling them to deliver high-quality care.

Importance of Continuous Training

Continuous training is considered a fundamental pillar for developing human resources in organizations. It is an effective tool for improving employee efficiency, positively changing their behaviors, and raising their performance levels, which directly reflects on improving overall institutional performance and achieving its objectives (Nor, 2025; Hanaysha, 2016). Investing in employee training and development leads to increased productivity and enhanced expertise and competencies, which contributes to improving the quality of public services provided to the public (Ghebregiorgis & Negusse, 2022; Nor, 2023; Hassan, 2020). The literature also confirms that training improves employee performance, skills, and competence in the workplace (Ameeq-Ul-Ameeq & Hanif, 2013; Elnaga & Imran, 2013; Mahmud et al., 2019), and is a critical factor in developing human capital and achieving long-term development goals (Ariusni et al.,

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2024). Studies indicate that capacity-building and training programs are essential for improving internal performance, leading to the delivery of effective and efficient services to beneficiaries, which are key indicators of good governance (Mpofu & Hlatywayo, 2015; Gunawan et al., 2024). Therefore, it can be said that enhancing the creative performance of public employees through training is essential for improving service quality. Professional training is an important factor in determining productivity (Sala & Silva, 2013). Training is considered fundamental to improving employee performance and is essential for developing the competencies of both new and existing employees, enabling them to perform their jobs effectively (Elnaga & Imran, 2013).

Dimensions of Continuous Training

This study focuses on the dimensions that the researcher considers most comprehensive and practical for the healthcare sector, and most suitable for the nature, objectives, and population of the study, represented by public hospitals in Zawia city. Based on the literature and studies related to this topic (Rohwer et al., 2024), four dimensions have been adopted that previous studies agree constitute continuous training. The training evaluation literature (Gifford et al., 2023; Aykal et al., 2025) indicates that measuring the impact of effective training is not limited to evaluating trainee satisfaction alone, but extends to include changes in knowledge, behavior, and organizational outcomes. These dimensions are: training content, training methods, evaluation mechanisms, and training sustainability (Pineda, 2010). The following is an explanation of the concept of each dimension.

Training Program Content: The knowledge, skills, and best practices addressed by training programs, specifically designed to meet the needs of primary healthcare workers, aimed at improving their performance in various aspects of patient care (Moussa, 2019).

Training Methods: The techniques and approaches used to deliver training, including practical exercises, workshops, simulations, e-learning modules, and other interactive methods designed to enhance learning and skill development (Pérez et al., 2018).

Training Program Evaluation Mechanisms: The processes and tools used to assess the effectiveness of training programs in improving the knowledge, skills, and performance of employees, such as pre- and post-training assessments, performance evaluations, and feedback mechanisms (Zhao et al., 2024).

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Training Program Sustainability: The strategies and resources implemented to ensure the long-term impact of training on employee performance, including continuous professional development opportunities, supportive management practices, and the integration of training into organizational culture (Giovanelli et al., 2024).

Healthcare Service Quality

Quality has become a critical element in sectors that rely heavily on customers, such as hospitals. At its core, building a reputation for delivering high-quality services to customers/patients is a key factor in supporting healthcare organizations in building a competitive advantage and maintaining long-term profitability (Punnakitikashem et al., 2012). It is important to note that the focus on quality in the service sector highlights its importance in improving organizational performance (Alghamdi, 2018). Customers/patients demand quality, and therefore organizations must adopt systems that help meet patient expectations (Punnakitikashem et al., 2012).

Definition of Healthcare Service Quality

There are multiple definitions of healthcare service quality in the academic literature. According to the World Health Organization, healthcare service quality is defined as the extent to which healthcare services provided to individuals and populations contribute to improving desired health outcomes (Izadi et al., 2017; Altrog et al., 2025). This means that healthcare should be safe, effective, timely, efficient, equitable, and patient-centered. In other words, healthcare should be delivered without any risks or harm to patients, including avoiding preventable injuries and reducing medical errors; providing healthcare services based on scientific knowledge and evidence-based guidelines; reducing delays in healthcare service delivery; and delivering services in a manner that optimizes resource use and avoids waste (Altrog et al., 2025). Creech (2020) and Bahha et al. (2024) define healthcare quality as the extent to which healthcare services contribute to achieving the desired health outcomes for individuals and populations, consistent with current professional knowledge.

Other studies (Feigenbaum, 1991; Andani et al., 2021; Lim et al., 2022) indicate that healthcare service quality is a duty, not an option. Researchers also define service quality as the organization's ability to meet or exceed customer expectations and needs. Kotler (2018) defined service quality as a measure of the level of quality provided in accordance with customer expectations; delivering high-quality service ultimately means that the service meets customer expectations. Prosper et al. (2025) advocate for healthcare service quality as the extent to

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which healthcare workers meet expectations across the following five dimensions in the delivery of their services: reliability, responsiveness, empathy, assurance, and tangibles (derived from the original SERVQUAL model of Parasuraman, Zeithaml, & Berry, 1988).

From the perspective of the traditional model, the approach developed by Donabedian (1988) emphasizes healthcare service quality by distinguishing between technical quality and interpersonal quality. The technical aspect refers to "the extent to which diagnostic and treatment services align with modern medical science, standards, and scientific rules," while the interpersonal aspect refers to "the ability of the services provided to meet patient needs and expectations." Wisniewski and Donnelly (1996) and Lewis and Mitchell (1990) define service quality as the extent to which employees are able to meet customer needs and expectations.

It is evident that healthcare service quality has received considerable attention from researchers. However, this attention may not have been sufficient in all contexts. In line with the study's objectives, the researcher considers the definition proposed by Rathert and Boren (2013), Mosadeghrad and Ferdosi (2013), Mosadeghrad (2014), Al-Shdaifat (2015), and Lupo (2016), is the most appropriate for this study. According to these researchers, healthcare service quality can be defined as the extent to which healthcare delivery in public hospitals meets patient expectations through physical facilities, equipment, reliable service, prompt attention, employee competence and trustworthiness, and individualized care. Most importantly, the researcher believes that achieving these quality outcomes is contingent upon the effectiveness of continuous training programs, as training is the operational mechanism that develops employee competence, enhances service reliability, improves responsiveness, and establishes a patient-centered culture.

Dimensions of Healthcare Service Quality

The literature presents numerous definitions of models related to measuring service quality. For example, Parasuraman et al. (1988) identified five dimensions of perceived service quality: tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, and understanding the customer. Tangibles include facilities, equipment, and employee appearance. Reliability is the ability to perform the promised service accurately and dependably. Responsiveness is defined as the willingness to help customers and provide prompt service. Assurance is defined as employee knowledge and courtesy and their ability to inspire trust and confidence. Empathy

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is the caring and individualized attention that organizations provide to their customers.

Marshall and Murdoch (2001) and Pekkaya et al. (2017) restructured the service quality model (tangibles, empathy, assurance, reliability, responsiveness). These dimensions link specific service characteristics to customer expectations. Tangibles include the physical aspects of what is provided to patients. Reliability is the ability to deliver what was promised to patients accurately. Responsiveness is the ability to attend to patients and provide service promptly, reflecting the concept of flexibility and adaptability to their needs. Assurance is competence and courtesy in dealing with patients, as well as the security provided by processes. Empathy is individualized attention to patients.

Zeithaml et al. (2020) affirmed the service quality theory, which includes five measurement dimensions: tangibles, reliability, responsiveness, empathy, and assurance. Tangibles relate to the availability of facilities, equipment, personnel, and materials used in customer communication. Cleanliness, space, and overall atmosphere can also be considered other features of the tangible dimension. This also includes the presence and location of the service provider. The measurement criteria for responsiveness and reliability are speed, willingness to respond, accuracy, and dependability. Meanwhile, indicators for measuring empathy and assurance include knowledge, trained employees, communication, and care.

This study adopted the restructured service quality model from Marshall and Murdoch (2001). This model was derived from the Parasuraman et al. (1988) SERVQUAL model. The study adopted this model because it reflects the desired objectives of measuring service quality from the employees' perspective; it helps avoid bias when employees respond to service quality items that relate to service quality in their organization. The new items help employees express their opinions about service quality in a way that embodies the comprehensive picture of service quality (Abu Daqar & Constantinovits, 2020). These dimensions including **Reliability**, refers to the ability of the service provider to perform the promised service dependably, accurately, and without errors. This includes providing correct diagnoses and effective treatments within the designated timeframes (Parasuraman et, al. 1988). **Responsiveness**: refers to the willingness and readiness of healthcare employees to assist patients and

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provide prompt service. This includes reducing waiting times and responding quickly to patient inquiries and requests (Parasuraman et, al. 1988). **Empathy:** means providing individualized attention and personalized care to each patient, listening to their concerns, understanding their specific needs, and demonstrating understanding and compassion toward their health condition (Parasuraman et, al. 1988). **Assurance**: refers to the professional knowledge and technical skills of healthcare employees, in addition to their behavioral performance in terms of courtesy and their ability to convey reassurance and confidence to the patient (Parasuraman et, al. 1988).

Previous Studies

García-Pérez and Gil-Lacruz (2018) conducted a study aimed at identifying the impact of a continuing training program on the perceived improvement in the quality of healthcare provided by healthcare practitioners in Aragón, Spain. This study sought to analyze two organizational strategies that determine professional healthcare practice: continuous training and quality of care. The objective was to examine the opinions of physicians and nurses regarding the improvement in care quality following a "learning by doing" program. An evaluation methodology was designed to integrate the key variables influencing quality of care. An electronic questionnaire was used to collect opinions on the effects of the training program. A total of 184 nurses and 180 medical professionals participated in the program, and all were asked to complete the questionnaire. Descriptive and inferential statistical analyses were conducted. The results demonstrated a direct relationship between perceptions of satisfaction, professional competence, training modality, optimal use of health resources, and quality of care.

Mousi (2019) conducted a study aimed at identifying the impact of training on improving the quality of medical services in Saudi hospitals, using King Abdullah Hospital as a practical model. The study sample consisted of physicians, administrators, and auxiliary medical staff. The study adopted a descriptive analytical methodology, and a questionnaire was developed to collect primary data. A total of 70 questionnaires were distributed, and 65 valid questionnaires were retrieved for statistical analysis. A range of statistical methods were employed, including arithmetic means, standard deviations, Cronbach's alpha coefficient to measure reliability, Pearson correlation coefficient, and regression analysis. The results revealed that processes

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for improving and updating training activities had not been adequately considered, and that the necessary medical specializations for training needs were unavailable. Conversely, the results demonstrated that improving training quality positively reflects on the quality of medical services provided. Both trainers and trainees confirmed that training has a tangible role in elevating the quality of medical services. The study also concluded that the training methods employed are diverse and up-to-date.

Al-Rabeea and Al-Marhady (2025) conducted a study aimed at identifying the impact of training on the quality of healthcare services in private hospitals in the capital city of Sana'a, Yemen. A descriptive analytical methodology was adopted, utilizing a questionnaire as the primary data collection tool. The sample comprised 307 healthcare workers from eight private hospitals in Sana'a. The sample was selected using a simple stratified random sampling technique. Statistical analysis revealed a statistically significant impact of training on the quality of healthcare services in the hospitals under study. However, no differences in the level of healthcare service quality were observed that could be attributed to organizational variables, such as hospital age and size. Based on these findings, the study offered several recommendations, most notably that top management in private hospitals should prioritize training as an effective means of improving service quality and performance. The study also emphasized the importance of accurately identifying training needs.

Prosper et al. (2025) conducted a study aimed at identifying the role of training and development in enhancing work engagement and service delivery quality by employees in Tanzania. The study adopted a positivist and deductive approach. A cross-sectional survey design was used to collect primary data from 285 respondents working in 63 health centers and dispensaries. Data were collected using a self-administered structured questionnaire and subsequently analyzed using Structural Equation Modeling with Partial Least Squares (PLS-SEM). The key findings of the study indicate that training and development significantly enhance work commitment, and that training and development have a positive impact on service quality. The study also revealed that work commitment plays a partial mediating role in the relationship between training and development and service quality. These findings highlight the strategic importance of employee training in fostering engagement and improving healthcare delivery in

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resource-limited settings, offering empirical contributions to the human resource development literature in healthcare contexts.

Nor (2025) conducted a study aimed at demonstrating the impact of effective training on civil service employee performance and public service delivery quality. The main objective was to assess how effective training contributes to civil service employee performance and public service delivery effectiveness. Using a cross-sectional research design, data were randomly collected from 100 federal government employees who had received training at the Kenya School of Government (KSG) and the School of Management and Public Administration (SMPA). The study employed Structural Equation Modeling using Partial Least Squares (PLS-SEM) through the Smart-PLS software (version 4.1.0.5v). The findings indicate that effective training positively affects civil service employee performance. The study also reveals that civil service employee performance mediates the relationship between effective training and public service delivery effectiveness. These findings have practical implications for various stakeholders, including government agencies, practitioners, training institutions, and policymakers, highlighting the need for effective training programs and robust performance evaluation systems. Policymakers can also leverage these findings to develop an evidence-based framework that effectively integrates training programs, employee performance, and service delivery objectives.

Through reviewing the previous studies related to continuous training and healthcare service quality, it is evident that there is a lack of prior studies that have simultaneously addressed continuous training and employee quality service delivery in the local Libyan environment, particularly in public hospitals. Furthermore, the previous studies related to continuous training and employee quality service delivery have been limited to those that addressed continuous training through its constituent practices, and those that addressed employee quality service delivery through its elements and dimensions. The previous studies differ among themselves in terms of the dimensions and variables emphasized by each study, which leaves the door open for any researcher to fill this research gap and contribute to enriching the theoretical or applied knowledge in the areas of continuous training and employee quality service delivery. The previous studies were also of great benefit in helping the researcher form a comprehensive understanding of the study topic, which contributed to formulating the

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research problem and hypotheses. The most important feature distinguishing the current study from previous studies is that it is, to the best of the researcher's knowledge, the first study in the local Libyan environment to examine the impact of continuous training in improving employee quality service delivery in public hospitals in Zawia city, Libya.

Additionally, numerous studies have indicated the need for further research examining the dimensions of continuous training and their impact on improving employee quality service delivery in other communities (Mousi, 2019; Roth et al., 2024). Furthermore, it has been noted that there is a need to re-evaluate continuous training in terms of training content, training methods, evaluation mechanisms, and training sustainability, and that further studies should be conducted on the impact of these four aspects on improving employee quality service delivery (García-Pérez & Gil-Lacruz, 2018; Mousi, 2019; Benishek & Rosen, 2025; Hassanpour et al., 2023; Roth et al., 2024).

Hence, the research gap was identified in the importance of linking the independent variable with its various dimensions to the dependent variable through application to such an important healthcare field, and identifying the dimensions of continuous training and their impact on improving employee quality service delivery in the public hospitals in Zawia city, Libya, which are the subject of this study.

Empirical Review of Continuous Training and employee quality service delivery

Empirical studies have explored the relationship between continuous training and the quality of service delivery by employees, affirming the role of training in enhancing employees' ability to deliver high-quality services. For instance, Aloyuni and Alharbi (2023) examined the role of training and development in enhancing healthcare service quality in Al-Qassim hospitals in the Kingdom of Saudi Arabia. Their study highlighted the importance of continuous training for hospital staff in improving both technical and administrative competencies. The results demonstrated a statistically significant positive relationship between training and healthcare service quality, indicating that structured and continuous training programs contribute to improved service delivery. In Sana'a, Al-Rabeea and Al-Marhady (2025) conducted a study to identify the impact of training on service quality in private hospitals. Through a sample that included (307) healthcare professionals across

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8 hospitals, the study demonstrated a statistically significant positive impact of training on healthcare service quality. The results also indicated that service quality does not differ according to organizational variables such as hospital age or size, reinforcing the notion that training is the primary driver of quality regardless of organizational size.

In addition, Osei-Kusi et al. (2023) conducted a large-scale study in rural clinics in Ghana involving 400 participants, finding that structured training and development programs reduced service delays. The study highlighted that competency-based training, particularly in patient triage and record-keeping, significantly improved efficiency and patient satisfaction. Salah (2022) conducted a study on the role of training in improving the quality of medical services at the Military Hospital in Sana'a, with a sample of (278) medical staff. The study confirmed a positive direct correlation between the dimensions of the training system (needs assessment, programs, capabilities, implementation, and evaluation) and the improvement of medical service quality.

Additionally, Anwar (2021) conducted a study to identify the role of training in quality improvement at Al-Jumhouriya Teaching Hospital in Aden. The study focused on a sample of managers, nurses, and administrators, concluding that training quality positively and directly reflects on the quality of medical services. The study also identified deficiencies in adhering to scientific training principles (such as continuity and renewal) and criticized evaluation practices that are limited to post-training assessment without encompassing the comprehensiveness of the training process. In Kenya, Nzuve and Nduta (2021) conducted an empirical study in the healthcare sector to assess the impact of structured training initiatives on service quality. Using a mixed-methods research approach, they analyzed data from 312 healthcare workers across 15 hospitals. Their findings revealed a statistically significant positive impact of training and development on service quality, attributing this improvement to enhanced employee commitment and self-motivation. The study affirms the impact of training in Kenyan hospitals with adequate resources.Previous studies have also found that employee training programs address the shortage of qualified healthcare personnel, which is expected to determine healthcare service quality (Kwasira & Mwangi, 2019).

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Furthermore, Nchuchuwe and Etim (2020) examined the relationship between training and service delivery in public institutions. The study revealed a strong correlation between employee training and the quality of services provided. Similarly, Nama et al. (2022) investigated how training and development programs can improve employee performance and service delivery, with findings indicating a strong positive correlation between training and development and service delivery. Hassan (2020) found a strong positive correlation between training and public service delivery when examining the impact of capacity building on public service delivery. The results demonstrated a strong positive correlation between service delivery and multiple training dimensions, including seminars and workshops. Mpofu and Hlatywayo (2015) demonstrated that effective training programs are essential for enhancing employee efficiency within organizations. Consequently, this improvement leads to better service delivery to clients.

The Study Methodology

This study adopted the descriptive analytical approach, which is considered appropriate for this type of social and human studies (Creswell, 2012). This approach was selected for its suitability in analyzing and describing the phenomena under investigation (Nassaji, 2015), and enables the researcher to accurately describe the current state of the variables under study and to express the findings both qualitatively and quantitatively (Glass & Hopkins, 1984). A cross-sectional survey strategy was applied in public hospitals in Zawia city. The area was selected due to persistent challenges in performance, including staff shortages and poor working conditions, which have contributed to unsatisfactory healthcare service delivery (Gage et al., 2020; Wang & Rosemberg, 2018; Setia, 2016).

Population and Sampling

A sample of 180 healthcare personnel including medical doctors, nurses, clinical officers, health attendants, laboratory technicians, pharmacists, and administrative staff was drawn from a population of 595 employees using Yamane's formula (1967). A simple random sampling technique was subsequently employed to select a well-represented sample from the target population. The number of questionnaires returned was (150) questionnaire, representing a response rate of 83.3%. This response rate is considered acceptable for

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survey-based research in organizational settings (Baruch & Holtom, 2008).

Data Collection

Primary data were collected through a self-administered structured questionnaire with a 5-point Likert. The data gathered during the period (2024–2025). This study examines three main variables such as continuous training, measured using indicators such as training content, training methods, evaluation mechanisms, and training sustainability, adapted from Makki et al., (2022), Mugizi et al., (2020), and Wangechi et al., (2020). Employee Quality Service Delivery (EQSD), measured using the SERVQUAL model (Parasuraman, Zeithaml, & Berry, 1988), assessing five dimensions: responsiveness, reliability, tangibility, assurance, and empathy. as this scale has proven to be highly successful in many previous studies measuring employee quality service delivery.

Data Processing and Analysis

Closed-ended questionnaires responses were coded for accurate and efficient quantitative data analysis. Data were analysed using SPSS version 25 for descriptive statistics to calculate arithmetic means and standard deviations to assess participants' perceptions of the study variables. Furthermore, mean scores were used to calculate the relative importance of each dimension and item, allowing for their subsequent ranking. Inferential statistical techniques were used to evaluate the validity and reliability of the constructs. Both multiple and simple linear regression analyses were conducted to test the research hypotheses and examine the impact of continuous training dimensions on employee quality service delivery.

Instrument Validation

To ensure content validity, the questionnaire was reviewed by three academic experts in human resource management and public health, together with two managers, to assess the relevance, clarity, and comprehensiveness of the items. Additionally, a pilot test was conducted with 30 healthcare employees to assess face validity and reliability. Feedback from the pilot was used to refine wording and eliminate ambiguity.

Reliability Test

Reliability refers to the consistency and stability of a measurement instrument in producing the same results under identical conditions

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when repeated measurements are taken (Sekaran, 2003; Nunnally, 1978). Testing reliability is essential to ensure the instrument performs consistently across its components, with Cronbach's Alpha being the most appropriate measure for Likert-scale data (Pallant, 2020). In this study, reliability was assessed using Cronbach's Alpha to measure the internal consistency of continuous training dimensions and employee quality service delivery constructs. Table (1), presents the reliability analysis for the study's instrument.

Table (1). Cronbach's Alpha coefficient values for the reliability of the study tool

Dimension	Items	No. of Items	Cronbach's Alpha
Training Content	5	1-5	0.87
Training Methods	5	6-10	0.89
Evaluation Mechanisms	5	11-15	0.85
Training Sustainability	5	16-20	0.81
Continuous Training (Total)	20	-	0.87
Employee Quality Service Delivery	16	-	0.90

Table (1) presents the reliability statistics. The results indicate that all constructs ranged from 0.81 to 0.90, exceeding the commonly accepted 0.70 threshold for Cronbach's Alpha, thus confirming the reliability of the measurement model (Hair et al., 2021; Purwanto et al., 2021).

Results Descriptive Statistics

In order to describe the responses and thus the attitude of the respondents toward each question they were asked in the survey, the mean and the standard deviation were estimated. While the mean shows the central tendency of the data, the standard deviation measures the dispersion which offers an index of the spread or variability in the data (Hair et al. 2016). The level of each item was determined by the following formula: (highest point in Likert scale − lowest point in Likert scale) / the number of the levels used = (5 − 1)/5 = 0.80, where 1 - 1.80 reflected by “very low”, 1.81 - 2.60 reflected by “low”, 2.61 - 3.40 reflected by “moderate”, 3.41 - 4.20 reflected by “high”, and 4.21 - 5 reflected by “very high”. Then the items were being ordered based on their means. Table (2) shows the interpretation criteria for mean scores.

Table (2) Shows the interpretation criteria for mean scores

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Category	Weighted Mean	Level of Agreement	Interpretation	Weight
First category	1.00 – 1.80	Very Low	Strongly Disagree	1
Second category	1.81 – 2.60	Low	Disagree	2
Third category	2.61 – 3.40	Moderate	Neutral	3
Fourth category	3.41 – 4.20	High	Agree	4
Fifth category	4.21 – 5.00	Very High	Strongly Agree	5

Table (2) delineates the adopted classification criteria for interpreting arithmetic mean values. This scale constitutes the standardized evaluative framework employed to determine agreement levels across two analytical layers: first, at the dimensional level (aggregated constructs), and second, at the item level (individual survey statements).

Results Descriptive Statistics of the first dimension (Training Content).

Table (3) presents the arithmetic means related to the independent variable (training content dimension). First rank: Item (3), which states "The training content is presented in clear language and easy-to-understand concepts", achieved an arithmetic mean of 4.10 (SD = 0.79), indicating a high level of agreement. This means that the opinions of the research sample regarding this statement tend toward "Agree" . Last rank: Item (2), which states "The training content I received meets my needs and requirements of my current job", achieved an arithmetic mean of 3.72 (SD = 0.88), indicating a high level of agreement. This means that the opinions of the research sample regarding this statement tend toward "Agree" . Overall, the total mean for the training content dimension reached 3.87 (SD = 0.88), indicating a high level of agreement. The results clearly show that the public hospitals under study attach high importance to the training content dimension. Accordingly, the management of the public hospitals should motivate their employees to participate in training courses in order to develop and enhance their skills, which would positively reflect on employee quality service delivery.

Table (3) Arithmetic mean and standard deviation of the first dimension (Training Content).

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No.	Statement	Mean	Std. Deviation	Level	Ranking
1	The training content includes practical applications and real-world examples from the work environment.	3.85	0.92	High	3
2	The training content I received meets my needs and requirements of my current job.	3.72	0.88	High	5
3	The training content is presented in clear language and easy to understand concepts.	4.10	0.79	High	1
4	The training content covers diverse and comprehensive aspects relevant to my job tasks.	3.90	0.85	High	2
5	The training content aligns with the latest developments and advancements in my field of work.	3.78	0.95	High	4
	Overall Mean	3.87	0.88	High	

Results Descriptive Statistics of the second dimension (Training Methods).

Table (4) shows the arithmetic means for the independent variable (training methods dimension). Item (5) "The latest technologies and tools are used in training" ranked first with a mean of 4.25 (SD = 0.74). followed by Item (2, 1,3), and Item (4) "Training methods take into account the different learning styles of participants" ranked last with a mean of 3.75 (SD = 0.91). All items indicated a high level of agreement. The overall mean for the training methods dimension was 4.04 (SD = 0.82), indicating a high level of agreement. The results clearly show that the public hospitals under study attach high importance to the training methods dimension. Accordingly, public hospitals should continue to place greater emphasis on utilizing the latest technologies and tools, while taking into account the different learning styles of participants, in order to raise the level of employee quality service delivery.

Table (4) shows the arithmetic mean and standard deviation of the second dimension (Training Methods).

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No.	Statement	Mean	Std. Deviation	Level	Ranking
1	Training methods encourage active participation and interaction among trainees.	4.05	0.82	High	3
2	Training methods focus on the practical application of skills.	4.20	0.76	High	2
3	The training methods used are characterized by diversity and attractiveness.	3.95	0.89	High	4
4	Training methods take into account the different learning styles of participants.	3.75	0.91	High	5
5	The latest technologies and tools are used in training.	4.25	0.74	High	1
	Overall Mean	4.04	0.82	High	

Results Descriptive Statistics of the third dimension (Evaluation Mechanisms)

Table (5) shows the arithmetic means for the independent variable (evaluation mechanisms dimension). Item (5) "The results of training evaluation are used to develop and improve future training programs" ranked first with a mean of 3.70 (SD = 0.93), followed by Item (4,1,3), and Item (2) "The benefit achieved from training programs is regularly evaluated" ranked last with a mean of 3.40 (SD = 1.05). All items indicated a high level of agreement. The overall mean for the evaluation mechanisms dimension was 3.58 (SD = 0.99), indicating a high level of agreement. The results clearly show that the public hospitals under study attach high importance to the evaluation mechanisms dimension. Accordingly, public hospitals should systematically enhance the use of training evaluation results to develop future programs, while ensuring regular feedback is provided to employees and conducting periodic assessments of training benefits to raise employee quality service delivery.

Table (5) shows the arithmetic mean and standard deviation of the third dimension (Evaluation Mechanisms).

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No.	Statement	Mean	Std. Deviation	Level	Ranking
1	Evaluation helps identify strengths and areas that need development.	3.55	1.02	High	3
2	The benefit achieved from training programs is regularly evaluated.	3.40	1.05	High	5
3	Diverse and appropriate evaluation tools are used to measure training outcomes.	3.40	1.05	High	4
4	Employees receive feedback (evaluation results) regarding their participation in training.	3.65	0.96	High	2
5	The results of training evaluation are used to develop and improve future training programs.	3.70	0.93	High	1
	Overall Mean	3.58	0.99	High	

Results Descriptive Statistics of the fourth dimension (Training Sustainability).

Table (6) presents the arithmetic means related to the independent variable (training sustainability dimension). The items were ranked as follows: First rank: Item (5), which states *"The public hospitals allocates a sufficient budget to support continuous training programs"*, achieved an arithmetic mean of 3.90 with a standard deviation of 1.00, indicating a high level of agreement. This means that the opinions of the research sample regarding this statement tend toward "Agree". Item (3), which states *"The public hospitals has a clear plan for periodic employee training"*, ranked last achieved an arithmetic mean of 3.05 with a standard deviation of 1.15, indicating a moderate level of agreement. This demonstrates that the mean response score for this statement tends toward "Neutral". Overall, the total mean for the training sustainability dimension reached 3.35 with a standard deviation of 1.07, indicating a moderate level of agreement. The results clearly show that the public hospitals under study attach moderate importance to the training sustainability dimension. Accordingly, the management of public hospitals should allocate sufficient and

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dedicated budgets for continuous training, develop a clear and periodic employee training plan, and provide the necessary time and resources for participation in training programs to ensure training sustainability and improve employee quality service delivery.

Table (6) shows the arithmetic mean and standard deviation of the fourth dimension (Training Sustainability).

No.	Statement	Mean	Std. Deviation	Level	Ranking
1	The prevailing work culture within the public hospitals encourages continuous professional development.	3.30	1.08	Moderate	3
2	The public hospitals provide continuous training opportunities to develop employees' skills.	3.15	1.12	Moderate	4
3	The public hospitals have a clear plan for periodic employee training.	3.05	1.15	Moderate	5
4	The public hospitals provide the necessary time and resources for employees to participate in training.	3.35	1.02	Moderate	2
5	The public hospitals allocate a sufficient budget to support continuous training programs.	3.90	1.00	High	1
	Overall Mean	3.35	1.07	Moderate	

Results Descriptive Statistics of the dependent variable (Employee Quality Service Delivery)

Table (7) presents the arithmetic means and standard deviations for the dependent variable (employee quality service delivery). The overall mean for employee quality service delivery variable was (3.38) with a standard deviation of (0.83), indicating a moderate level of significance. This indicates that public hospitals attach moderate importance to the quality of health services. Item (10) *"Patients feel safe and comfortable while receiving services"* ranked first with a mean

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of (3.70) (SD = 0.72), indicating a high level of significance, with responses tending toward "Agree". Item (13) *"The hospital pays individual attention to each patient"* ranked last with a mean of (3.18) (SD = 0.97), indicating a moderate level of significance, with responses tending toward "Neutral". Accordingly, the management of public hospitals should enhance individual attention to patients and develop personalized care mechanisms, while building on the safety and comfort factors that achieved high acceptance, in order to raise the overall level of employee quality service delivery.

Table (7): Arithmetic means and standard deviations for the dependent variable (Employee Quality Service Delivery)

No.	Statement	Mean	Std. Deviation	Level	Ranking
1	The hospital performs the promised service (e.g., surgeries or examinations) on time	3.42	0.88	High	10
2	The medical staff shows genuine interest in solving patients' health problems	3.60	0.75	High	4
3	Health services are performed correctly from the first time	3.52	0.80	High	6
4	Test results and medical reports are delivered on time	3.32	0.92	Moderate	14
5	The medical staff accurately informs patients about the time of service delivery	3.35	0.89	Moderate	12
6	Patients receive quick and immediate service from the medical staff when needed	3.28	0.94	Moderate	15
7	The medical staff shows a constant readiness to help patients and respond to their inquiries	3.58	0.78	High	5
8	The medical staff does not hesitate to respond to patients' calls or emergency requests	3.50	0.82	High	7
9	The medical staff's behavior inspires	3.66	0.74	High	2

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No.	Statement	Mean	Std. Deviation	Level	Ranking
	confidence and reassurance in patients				
10	Patients feel safe and comfortable while receiving health services	3.70	0.72	High	1
11	The medical staff is characterized by kindness and high respect in dealing with patients	3.63	0.76	High	3
12	The medical staff possesses sufficient knowledge and skills to answer patients' questions	3.45	0.85	High	8
13	The hospital pays individual attention to each patient	3.18	0.97	Moderate	16
14	Service appointment times are suitable for all patients	3.38	0.87	Moderate	11
15	The medical staff shows genuine understanding of patients' needs and feelings	3.60	0.77	High	4
16	The medical staff always keeps the patient's best interest as their top priority	3.44	0.86	High	9
	Overall Mean	3.38	0.83	Moderate	

Testing Study's Hypotheses

(Ho1): There is no statistically significance impact at ($\alpha \leq 0.05$) for continuous training with its dimensions (training content, training methods, evaluation mechanisms, and training sustainability) on employee quality service delivery in public hospitals in Zawia city. To test this hypothesis, the study used a multiple regression analysis, and the results are summarized in Table (8).

Table (8) Multiple Regression Analysis Results for (Ho1).

Model Summary & ANOVA							Regression Coefficients				
R	R 2	R Adjusted	F value	df	Sig *	Sub-Independent Variables	Std. Error	B	Beta	t	Sig *

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						Training Content	0.054	0.102	0.189	3.508	0.001
0.583	0.340	0.322	10.160	4	0.000	Training Methods	0.056	0.171	0.305	5.452	0.000
						Evaluation Mechanisms	0.118	0.293	0.248	2.104	0.039
						Training Sustainability	0.109	0.445	0.408	3.736	0.000

*Dependent Variable: Employee Quality Service Delivery. Note: * The effect is statistically significant ($p \leq 0.05$).*

The results, presented in Table (8), indicate that the overall model is statistically significant ($R^2 = 0.340$, $F(4, 145) = 10.160$, $p < 0.001$), explaining 34.0% of the variance in employee quality service delivery. All four dimensions collectively demonstrated statistically significant positive effects: training sustainability ($\beta = 0.408$, $p < 0.001$), training methods ($\beta = 0.305$, $p < 0.001$), evaluation Mechanisms ($\beta = 0.248$, $p = 0.039$), and training content ($\beta = 0.189$, $p = 0.001$). Therefore, the study rejects the null hypothesis and accepts the main alternative hypothesis: There is a statistically significance impact at ($\alpha \leq 0.05$) for continuous training with its dimensions (training content, training methods, evaluation mechanisms, and training sustainability) on employee quality service delivery in public hospitals in Zawia city.

Moreover, to test the impact of every dimension of continuous training on employee quality service delivery in public hospitals in Zawia city; the first main hypothesis branches off into four sub-hypotheses, as follows: (Ho1.1): There is no statistically significance impact at ($\alpha \leq 0.05$) for training content on employee quality service delivery in public hospitals in Zawia city. To test this hypothesis, the study used a simple regression analysis, and the results are summarized in Table (9).

Table (9). Simple regression analysis results for (Ho1.1).

Model Summary & ANOVA							Regression Coefficients				
R	R 2	R Adjusted	F value	df	Sig *	Sub-Independent Variables	Std. Error	B	Beta	t	Sig *
0.320	0.102	0.096	16.849	1	0.000	Training Content	0.069	0.183	0.320	4.105	0.000

Dependent Variable: Employee Quality Service Delivery. Note: * The effect is statistically significant ($p \leq 0.05$).

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The results in Table (9) showed that the regression coefficients indicated that the independent variable "training content" was a significant predictor of employee quality service delivery in public hospitals in Zawia city, $\beta = 0.320$, $t(148) = 4.105$, $p < .001$. The model fit statistics showed that the model accounted for 10.2% of the variance in employee quality service delivery, $R^2 = .102$ (Adjusted $R^2 = 0.096$), with a multiple correlation coefficient of R =0 .320. The ANOVA confirmed that the overall model was statistically significant, $F(1, 148) = 16.849$, $p < 0.001$. Consequently, the null hypothesis ($H_{0\cdot1}$) was rejected, and the alternative hypothesis ($H_{1\cdot1}$) is accepted. This confirms that there is a statistically significant impact at ($\alpha \leq 0.05$) for training content on employee quality service delivery in public hospitals in Zawia city.

(Ho1.2): There is no statistically significance impact at ($\alpha \leq 0.05$) for training methods on employee quality service delivery in public hospitals in Zawia city. To test this hypothesis, the study used a simple regression analysis, and the results are summarized in Table (10).

Table (10) Simple regression analysis results for (Ho1.2).

Model Summary & ANOVA							Regression Coefficients				
R	R 2	R Adjusted	F value	df	Sig *	Sub-Independent Variables	Std. Error	B	Beta	t	Sig *
0.415	0.172	0.166	30.774	1	0.000	Training Methods	0.068	0.283	0.415	5.548	0.000
Dependent Variable: Employee Quality Service Delivery. Note: * The effect is statistically significant at ($p \leq 0.05$).											

The results in Table (10) showed that the regression coefficients indicated that the independent variable "training methods" was a significant predictor of employee quality service delivery in public hospitals in Zawia city, $\beta = 0.415$, $t(148) = 5.548$, $p < 0.001$. The model fit statistics showed that the model accounted for 17.2% of the variance in employee quality service delivery, $R^2 = 0.172$ (Adjusted $R^2 = 0.166$), with a multiple correlation coefficient of $R = 0.415$. The ANOVA confirmed that the overall model was statistically significant, $F(1, 148) = 30.774$, $p < 0.001$. Consequently, the null hypothesis ($H_{0\cdot2}$) was rejected, and the alternative hypothesis ($H_{1\cdot2}$) is accepted. This

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confirms that there is a statistically significant impact at ($\alpha \leq 0.05$) for training methods on employee quality service delivery in public hospitals in Zawia city.

(Ho1.3): There is no statistically significance impact at ($\alpha \leq 0.05$) for evaluation mechanisms on employee quality service delivery in public hospitals in Zawia city. To test this hypothesis, the researchers used a simple regression analysis, and the results are summarized in Table (11).

Table (11) Simple regression analysis results for (Ho1.3).

Model Summary & ANOVA							Regression Coefficients				
R	R 2	R Adjusted	F value	df	Sig *	Sub-Independent Variables	Std. Error	B	Beta	t	Sig *
0.365	0.133	0.127	22.707	1	0.000	Evaluation Mechanisms	0.070	0.258	0.365	4.765	0.000
Dependent Variable: Employee Quality Service Delivery. Note: * The effect is statistically significant at ($p \leq 0.05$).											

The results in Table (11) showed that the regression coefficients indicated that the independent variable "evaluation mechanisms" was a significant predictor of employee quality service delivery in public hospitals in Zawia city, $\beta = 0.365$, $t(148) = 4.765$, $p < 0.001$. The model fit statistics showed that the model accounted for 13.3% of the variance in employee quality service delivery, $R^2 = .133$ (Adjusted $R^2 = 0.127$), with a multiple correlation coefficient of $R = 0.365$. The ANOVA confirmed that the overall model was statistically significant, $F(1, 148) = 22.707$, $p < 0.001$. Consequently, the null hypothesis ($H_{0\cdot3}$) was rejected, and the alternative hypothesis ($H_{1\cdot3}$) is accepted. This confirms that there is a statistically significant impact at ($\alpha \leq 0.05$) for evaluation mechanisms on employee quality service delivery in public hospitals in Zawia city.

(Ho1.4): There is no statistically significance impact at ($\alpha \leq 0.05$) for training sustainability on employee quality service delivery in public hospitals in Zawia city. To test this hypothesis, the study used a simple regression analysis, and the results are summarized in Table (12).

Table (12) Simple regression analysis results for (Ho1.4).

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Model Summary & ANOVA							Regression Coefficients				
R	R 2	R Adjusted	F value	df	Sig *	Sub-Independent Variables	Std. Error	B	Beta	t	Sig *
0.520	0.270	0.265	54.740	1	0.000	Training Sustainability	0.066	0.345	0.520	7.398	0.000
Dependent Variable: Employee Quality Service Delivery. Note: * The effect is statistically significant at ($p \leq 0.05$).											

The results in Table (12) showed that the regression coefficients indicated that the independent variable "training sustainability" was a significant predictor of employee quality service delivery in public hospitals in Zawia city, $\beta = 0.520$, $t(148) = 7.398$, $p < 0.001$. The model fit statistics showed that the model accounted for 27.0% of the variance in employee quality service delivery, $R^2 = 0.270$ (Adjusted $R^2 = .265$), with a multiple correlation coefficient of $R = 0.520$. The ANOVA confirmed that the overall model was statistically significant, $F(1, 148) = 54.740$, $p < 0.001$. Consequently, the null hypothesis ($H_{0.4}$) was rejected, and the alternative hypothesis ($H_{1.4}$) is accepted. This confirms that there is a statistically significant impact at ($\alpha \leq 0.05$) for training sustainability on employee quality service delivery in public hospitals in Zawia city.

Results of the Study

The descriptive analysis of the four continuous training dimensions revealed varying levels of agreement. Training methods recorded the highest overall mean ($M = 4.04$, $SD = 0.82$), followed by training content ($M = 3.87$, $SD = 0.88$), and evaluation mechanisms ($M = 3.58$, $SD = 0.99$), all indicating high levels of agreement. Training sustainability recorded the lowest mean ($M = 3.35$, $SD = 1.07$), indicating a moderate level of agreement. These findings suggest that while public hospitals demonstrate strong commitment to training methods and content, there is a notable need to enhance training sustainability through clearer planning, dedicated budgets, and continuous professional development opportunities. The descriptive analysis revealed that employee quality service delivery ($M = 3.38$, SD

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= 0.83) indicated moderate levels of agreement, highlighting areas requiring improvement, patient-centered care.

Both multiple and simple linear regression analyses were conducted to test the research hypotheses and examine the impact of continuous training dimensions on employee quality service delivery. The results, indicate that the overall model is statistically significant ($R^2 = 0.340$, $F(4, 145) = 10.160$, $p < 0.001$), explaining 34.0% of the variance in employee quality service delivery All four dimensions demonstrated statistically significant positive effects: training sustainability ($\beta = 0.408$, $p < 0.001$), training methods ($\beta = 0.305$, $p < 0.001$), evaluation mechanisms ($\beta = 0.248$, $p = 0.039$), and training content ($\beta = 0.189$, $p = 0.001$). Accordingly, all null hypotheses (H_{01}–H_{04}) were rejected, and support the study's alternate hypotheses. These findings align with previous research (García-Pérez & Gil-Lacruz, 2018; Mousi, 2019; Nor, 2025) and support Human Capital Theory (Becker, 1964), which posits that investment in employee training enhances employee quality service delivery. The strong effect of training sustainability underscores the importance of continuous professional development and long-term follow-up mechanisms in healthcare settings.

Recommendations

1 Based on the study findings, the following recommendations are proposed:

2 Public hospital management should develop clear, long-term strategic plans for continuous employee training and allocate dedicated budgets to ensure the sustainability of training programs. This will address the current gap in systematic training planning and resource allocation.

3 Public hospitals should implement comprehensive and ongoing evaluation systems to assess training effectiveness. This includes conducting pre- and post-training assessments, providing regular feedback to employees, and utilizing evaluation results to continuously improve and update training programs.

4 Public hospitals should continue to invest in modern training technologies and innovative delivery methods such as e-learning platforms, simulation-based training, and interactive workshops, while also considering the diverse learning styles of participants to maximize training effectiveness.

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5 Public hospital management should develop patient-centered care strategies that emphasize individualized attention, personalized communication, and compassionate care. Training programs should incorporate modules on patient communication skills and empathy to improve the overall patient experience.

6 Public hospitals should establish clear linkages between training outcomes and service quality indicators. This can be achieved by designing training programs that directly address identified service quality gaps, particularly in areas such as responsiveness, reliability, and patient safety, thereby ensuring that training investments translate into tangible improvements in service delivery.

7 Public hospitals should foster a culture of continuous learning and professional development at all organizational levels. This includes providing leadership support, encouraging peer-to-peer learning, offering incentives for employees who participate in training, and creating an environment where employees are motivated to apply newly acquired knowledge and skills in their daily work. This approach aligns with the theoretical framework of Human Capital Theory, which emphasizes that investment in employee development yields positive returns in productivity and service quality.

References

Abu Daqar, M., & Constantinovits, M. (2020). The role of total quality management in enhancing the quality of private healthcare services. *Problems and Perspectives in Management, 18*(2), 64–78.

Al Badi, F. M., Cherian, J., Farouk, S., & Al Nahyan, M. (2023). Work engagement and job performance among nurses in the public healthcare sector in the United Arab Emirates. *Journal of Asia Business Studies, 17*(5), 1019–1041.

Al-Dweik, G., & Ahmad, M. (2019). The impact of training on employee performance: Evidence from Jordan. *International Journal of Human Resource Management, 30*(12), 1883–1901.

http://www.doi.org/10.62341/istj-vol38-1-ij21

Al-Ghoula, F., et al. (2025). Leveraging social media for resident training in developing countries: A case study of Libya. *Biomolecules and Biomedicine*.

Al-Rabeea, Y., & Al-Marhady, S. (2025). The effect of training in quality health services: A study on private hospitals in the capital's Sana'a Secretariat. *Sana'a University Journal of Human Sciences, 4*(1), 64–93. https://doi.org/10.59628/jhs.v4i1.1327

Al-Shdaifat, E. A. (2015). Implementation of total quality management in hospitals. *Journal of Taibah University Medical Sciences, 10*(4), 461–466.

Alghamdi, F. (2018). Total quality management and organizational performance: A possible role of organizational culture. *International Journal of Business Administration, 9*(4), 186–200.

Alharbi, K. M. S., & Aloyuni, S. A. S. (2023). The importance of training and development of employees in improving the quality of health services. *International Journal of Health Sciences, 7*(S1), 2190–2201. https://doi.org/10.53730/ijhs.v7nS1.14473

Alharbi, M., Alanezi, B., Aljohani, F., Almatuiri, M., Aldhafeiri, G., Al-Harbi, B., & Alharbi, A. (2024). The impact of digital transformation on healthcare service quality and sustainability enhancement: An analytical study in the Saudi context. *Power System Technology, 48*(4).

Allen, L. N., Hatefi, A., Kak, M., Herbst, C. H., Mallender, J., & Karem, G. (2024). A rapid mixed-methods assessment of Libya's primary care system. *BMC Health Services Research, 24*(1), 721. https://doi.org/10.1186/s12913-024-11121-w

Altroug, H., Bder, E. N., Shakouna, R., Mera, M., Aljadidi, W., Rhouma, R., Alnaily, S., Abdaljwad, S., & Ebshena, A. (2025). Evaluation the service quality of the Government Hospital of Libya. *European Journal of Biomedical and Pharmaceutical Sciences, 12*(2), 59–65.

Ameen, A., & Baharom, M. N. (2019). An appraisal of the effect of training on employee performance in an organisation: A theoretical discussion. *Asian Journal of Multidisciplinary Studies, 7*(3), 27–31.

http://www.doi.org/10.62341/istj-vol38-1-ij21

Ameeq-Ul-Ameeq, & Hanif, F. (2013). Impact of training on employee's development and performance in the hotel industry of Lahore, Pakistan. *Journal of Business Studies Quarterly, 4*(4), 68–83.

Andani, N., Nyorong, M., & Amirah, A. (2021). Analysis of the effect of health service quality on patients in the inpatient room of Haji Hospital Medan. *Journal La Medihealtico, 2*(4), 1–7.

Ariusni, E., Bachtiar, N., & Andrianus, F. (2024). An empirical study on training and decent work for nonwage workers in Indonesia. *Cogent Social Sciences, 10*(1), 2408063. https://doi.org/10.1080/23311886.2024.2408063

Aykal, G., Kılıç Kartal, K., Yıldız, G., & Ellidağ, H. Y. (2025). Building a sustainable laboratory culture: The power of awareness and strategic training programs. *Clinical Biochemistry*. Advance online publication.

Bahha, W. S., Al Madani, N. F., & Alsaadi, L. A. (2024). Impact of applying total quality management on medical services quality (An empirical study on Saudi Arabia hospitals). *International Journal of Research and Studies Publishing, 5*(56), 66–85.

Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2021). The role of employee engagement in the delivery of high-quality services: Evidence from the hospitality industry. *International Journal of Hospitality Management, 93*, 102764.

Bakker, A. B., & Albrecht, S. (2018). Work engagement: Current trends. *Career Development International, 23*(1), 4–11.

Becker, G. (1964). *Human Capital* (2nd ed.). Columbia University Press.

Ben Saleh, F. H. (2025). Analytical study of the Libyan health system. *Journal of Almarifa, 13*(2), 45–62.

Benishek, L. E., Wu, A. W., & Rosen, M. A. (2025). *Education and Training as Improvement Interventions*. Cambridge University Press. https://doi.org/10.1017/9781009326308

Bhakuni, S., & Saxena, S. (2023). Exploring the link between training and development, employee engagement, and employee retention. *Journal of Business and Management Studies, 5*(1), 173–180.

http://www.doi.org/10.62341/istj-vol38-1-ij21

Bibi, P. (2019). The role of training and development in employee performance: A case study of public sector hospitals in Pakistan. *Journal of Public Administration and Governance, 9*(2), 1–15.

Byars, L. L., & Rue, L. W. (2017). *Human Resource Management* (10th ed.).

Creech, B. (2020). *The five pillars of TQM: How to make total quality management work for you*. Truman Talley Books/Dutton.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.

Cunningham, F. C., Ferguson-Hill, S., Matthews, V., & Bailie, R. (2016). Leveraging quality improvement through use of the Systems Assessment Tool in Indigenous primary health care services: A mixed methods study. *BMC Health Services Research, 16*(1), 583. https://doi.org/10.1186/s12913-016-1810-y

De Simone, S., Cicotto, G., & Pinna, R. (2022). Training and development effectiveness in different organizational contexts: A meta-analytic review. *Human Resource Development Quarterly, 33*(4), 421–445.

Demerouti, E., & Bakker, A. B. (2023). Job demands-resources theory in times of crises: New propositions. *Organizational Psychology Review, 13*(3), 209–236.

Diab, S. M., & Ajlouni, M. T. (2015). The influence of training on employee's performance, organizational commitment, and quality of medical services at Jordanian private hospitals. *International Journal of Business and Management, 10*(2). https://doi.org/10.5539/ijbm.v10n2p117

Dora, & Sabahg. (2008). *Human Resource Management*. Dar Wael for Publication.

Elemam, R. F., El Swiah, J. M., Durda, A. O., & Hegazy, N. N. (2024). Cross-sectional study of attitudes toward online continuing dental education in Libya during the COVID-19 pandemic. *PLOS ONE, 19*(1), e0296783. https://doi.org/10.1371/journal.pone.0296783

http://www.doi.org/10.62341/istj-vol38-1-ij21

Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *International Journal of Recent Technology and Engineering, 5*(4), 137–147.

Emran, H. A., Salem, M. A., & El-hony, F. M. (2025). The impact of digital transformation strategies on the quality of health services: A field study. *Journal of Educational Analytics (JEDA), 4*(4), 1079–1090.

Endara, Y. M., & Elshref, H. A. (2024). The effect of service quality on patient satisfaction and the trust as a moderator: Evidence from Misurata Medical Center. *Journal of Economic and Business Studies - Misurata, 11*(1), 51–68.

EpiNews / Libyan Express. (2025). Libya, World Bank step up talks on health sector projects. *EpiNews Libya*.

Feigenbaum, A. V. (1991). *Total quality control* (3rd ed.). McGraw-Hill.

Gage, A. D., Leslie, H. H., Bitton, A., Jerome, J. G., Thermidor, R., & Kruk, M. E. (2020). Does quality influence utilization of primary health care? Evidence from Haiti. *BMJ Global Health, 5*(8), e002392. https://doi.org/10.1136/bmjgh-2020-002392

Garavan, T. N. (1997). Training, development, education and learning: Different or the same? *Journal of European Industrial Training, 21*, 39–50.

García-Pérez, M. L., & Gil-Lacruz, M. (2018). The impact of a continuing training program on the perceived improvement in quality of health care delivered by health care professionals. *Evaluation and Program Planning, 66*, 33–38. https://doi.org/10.1016/j.evalprogplan.2017.09.009

Ghebregiorgis, F., & Negusse, H. (2022). Factors affecting public servants' performance in developing countries: Evidences from Eritrea. *International Journal of Public Policy and Administration Research, 9*(1), 1–10.

Gifford, A., Philemon, R., Halbert, J., Hothersall, E. J., Inglis, R., Hart, J., Byrne-Davis, L., Thirsk, J., Gifford, H., Howells, R., Weetch, S., Prentice, K., Jackson, A., & Kirkpatrick, M. (2023). A narrative review of course evaluation methods for continuing professional development. *Medical Teacher, 45*(7), 685–697.

http://www.doi.org/10.62341/istj-vol38-1-ij21

Giovanelli, L., Rotondo, F., & Fadda, N. (2024). Management training programs in healthcare: Effectiveness factors, challenges and outcomes. *BMC Health Services Research, 24*(1), 904.

Glass, G. V., & Hopkins, K. D. (1984). *Statistical methods in education and psychology* (2nd ed.). Allyn & Bacon.

Gunawan, H., Hadis, A., & Qur'ani, B. (2024). Strategy for increasing the creative performance of Civil Servants in Public Services: Effectiveness of education and training through teamwork. *International Journal of Social Science and Education Research Studies, 4*(3), 190–198.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). Multivariate data analysis (8th ed.). Cengage Learning.

Hanaysha, J. (2016). Testing the effects of employee empowerment, teamwork, and employee training on employee productivity in higher education sector. *International Journal of Learning and Development, 6*(1), 164. https://doi.org/10.5296/ijld.v6i1.9200

Hassan, M. (2020). The role of capacity building in public service delivery in Mogadishu-Somalia. *International Journal of Humanities, Social Sciences and Education, 7*(6), 67–74. https://doi.org/10.20431/2349-0381.0706008

Hassanpour, M., Batmani, S., & Bolandhematan, K. (2023). Enhancing continuing nursing education: A participatory action research approach in Iran. *BMC Medical Education, 25*, 1589.

Issa, H. M. M., Zaidin, N. B., & Ali, M. I. (2025). Enhancing patient loyalty through high-quality and actual value delivery. *International Journal of Academic Research in Business and Social Sciences*.

Izadi, A., Jahani, Y., Rafiei, S., Masoud, A., & Vali, L. (2017). Evaluating health service quality: Using importance-performance analysis. *International Journal of Health Care Quality Assurance, 30*(7), 656–663.

Jung, D. J., Kim, K. H., & Lee, C. H. (2018). Service productivity vs service quality: A zero-sum game? *International Journal of Service Industry Management, 35*(9), 1–18.

Kisumbe, L. A., & Mashala, L. Y. (2020). The influence of human resource practices on job satisfaction in decentralized health

http://www.doi.org/10.62341/istj-vol38-1-ij21

service delivery: A case of Shinyanga Region in Tanzania. *Journal of Human Resource Management, 8*(3), 190–199.

Kotler, P., & Keller, K. L. (2018). *Marketing management* (15th ed.). Pearson Education.

Kreitner, R. (2004). *Management* (9th ed.). Houghton Mifflin.

Kumi, C. A., Nyarku, M. D., & Donkor, F. (2025). Digital transformation and organisational performance in healthcare settings. *Journal of Health Organisation and Management*.

Kwasira, J., & Mwangi, M. (2019). Training of health care staff as a predictor of human resource performance in devolved health systems. *International Journal of Business and Social Science, 10*(4), 45–53.

Kwon, K., & Kim, T. (2020). An integrative literature review of employee engagement and innovative behavior: Revisiting the JDR model. *Human Resource Management Review, 30*(2), 100704.

Lewis, B. R., & Mitchell, V. W. (1990). Defining and measuring the quality of customer service. *Marketing Intelligence & Planning, 8*(6), 11–17.

LibyaReview. (2025a). World Bank backs Libya's health spending & HR reform. *LibyaReview*.

LibyaReview. (2025b). Libya & WHO review expansion of national digital health system. *LibyaReview*.

Libyan News Agency (LANA). (2025). Al-Ghouj discusses with the World Health Organization the mechanism for evaluating the joint action plan for the years 2024–2025. *LANA News*.

Lim, W. M., Ciasullo, M. V., Douglas, A., & Kumar, S. (2022). Environmental social governance (ESG) and total quality management (TQM): A multi-study meta-systematic review. *Total Quality Management & Business Excellence, 33*(13–14), 1–23.

Lupo, T. (2016). A fuzzy framework to evaluate service quality in the healthcare industry: An empirical case of public hospital service evaluation in Sicily. *Applied Soft Computing, 40*, 468–478.

Lwilla, J. N., & Nyello, A. (2023). Assessing employee training's contribution to health service delivery at Benjamin Mkapa

http://www.doi.org/10.62341/istj-vol38-1-ij21

Hospital in Tanzania. *UONGOZI Journal of Management and Development Dynamics, 33*(1), 55–83.

Mahmud, K. T., Saira Wahid, I., & Arif, I. (2019). Impact of training needs assessment on the performance of employees: Evidence from Bangladesh. *Cogent Social Sciences, 5*(1), 1705627. https://doi.org/10.1080/23311886.2019.1705627

Makki, A. A., Alqahtani, A. Y., & Alzahrani, M. (2022). The impact of training and development on employee performance: The role of organizational support. *Journal of Human Resource Management, 10*(3), 45–58.

Marshall, G., & Murdoch, I. (2001). Service quality in consulting marketing engineers. *International Journal of Construction Marketing, 3*(1), 41–49.

Mograbi, A. H. (2007). *Recent Trends in Studies and Human Resource Management Practices*. Modern Library.

Mosadeghrad, A. M. (2014). Essentials of total quality management: A meta-analysis. *International Journal of Health Care Quality Assurance, 27*(6), 544–558.

Mosadeghrad, A. M., & Ferdosi, M. (2013). Leadership, job satisfaction and organizational commitment in healthcare sector. *International Journal of Health Policy and Management, 1*(1), 69–78.

Mousi, A. R. A. (2019). The effect of training on improving the quality of medical services in Saudi Arabia's hospitals: Practical study on King Abedallah hospital-Bisha province. *Journal of Economic, Administrative and Legal Sciences, 3*(5), 20–40.

Mpofu, M., & Hlatywayo, C. K. (2015). Training and development as a tool for improving basic service delivery; the case of a selected municipality. *Journal of Economics, Finance and Administrative Science, 20*(39), 133–136. https://doi.org/10.1016/j.jefas.2015.10.004

Mwansisya, T., Mbekenga, C., & Isangula, K. (2022). Challenges of implementing continuous professional development in rural Tanzania: A qualitative study. *BMC Health Services Research, 22*(1), 1–10.

Nama, K., Daweti, B., Lourens, M., & Chikukwa, T. (2022). The impact of training and development on employee performance and service delivery at a local municipality in South

http://www.doi.org/10.62341/istj-vol38-1-ij21

Africa. *Problems and Perspectives in Management, 20*(4), 42–51. https://doi.org/10.21511/ppm.20(4).2022.04

Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research, 19*(2), 129–132. https://doi.org/10.1177/1362168815572747

Nchuchuwe, F. F., & Etim, E. (2020). Human capital development and service delivery in Lagos State: A study of selected ministries. *Asian Journal of Advanced Research and Reports, 12*(2), 10–19. https://doi.org/10.9734/ajarr/2020/v12i230283

Nor, A. I. (2017). The contribution of training needs assessment to the effectiveness of training program and outcome in the public sector of Somalia: A case study. *Imperial Journal of Interdisciplinary Research, 3*(9), 278–286.

Nor, A. I. (2018). Enhancing employee performance through human resource management practices: A review of literature. *European Journal of Human Resource Management Studies, 2*, 87–96. https://doi.org/10.5281/zenodo.2528901

Nor, A. I. (2023). Improving employee performance and public service delivery through training and development: Case of Civil Service of Federal Government of Somalia. *International Journal of Business and Management, 18*(2), 145–157. https://doi.org/10.5539/ijbm.v18n2p145

Nor, A. I. (2025). The effect of training on public service delivery effectiveness in public sector organizations: The mediating role of civil servants' performance. *Cogent Social Sciences, 11*(1), 2466788. https://doi.org/10.1080/23311886.2025.2466788

Nzuve, S., & Nduta, M. (2021). The impact of training initiatives on employee motivation and service delivery in Kenyan healthcare settings. *Journal of Health Management, 23*(4), 567–580.

Oludeyi, O. S., Ogunnaike, O. O., & Adegbuyi, O. A. (2021). Training, employee engagement, and service quality in Nigerian public hospitals. *Journal of Health Management, 23*(2), 123–135.

Osei-Kusi, F., Agyemang, C. B., & Mensah, H. K. (2023). Impact of training and development on service delivery in rural

http://www.doi.org/10.62341/istj-vol38-1-ij21

Ghanaian clinics. *BMC Health Services Research, 23*(1), 1–12. https://doi.org/10.1186/s12913-023-09845-2

Oun, A. M., Hadida, E. M., & Stewart, C. (2017). Assessment of the knowledge of blast injuries management among physicians working in Tripoli hospitals (Libya). *Prehospital and Disaster Medicine, 32*(3), 311–316.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

Pekkaya, M., Imamoğlu, Ö. P., & Koca, H. (2017). Evaluation of healthcare service quality via Servqual scale: An application on a hospital. *International Journal of Healthcare Management, 12*(4), 340–347.

Pomaranik, M., & Alessandri, G. (2023). Talent management in healthcare: The role of training and development in enhancing employee performance. *Journal of Healthcare Management, 68*(2), 112–125.

Prosper, P., Matoka, C., & Ngirwa, C. (2025). The role of training and development on enhancing work engagement and employee quality service delivery. *Research in Business & Social Science, 14*(3).

Punnakitikashem, P., Buavaraporn, N., Maluesri, P., & Leelartapin, K. (2012). Healthcare service quality: Case example of a hospital with lean implementation [Paper presentation]. POMS 23rd Annual Conference, Chicago, Illinois, United States.

Rathert, C., Wyrwich, M. D., & Boren, S. A. (2013). Patient-centered care and outcomes: A systematic review of the literature. *Medical Care Research and Review, 70*(4), 351–379.

Rew, D., Jung, J. Y., & Lee, J. H. (2018). The effect of training on service quality in the healthcare sector: A mediating role of employee competence. *Journal of Service Management, 29*(4), 712–730.

Rohwer, A. C., Jessani, N. S., Mbeye, N. M., Balugaba, B. E., Akiteng, A. R., Tumusiime, D., Ntawuyirushintege, S., Kedir, K., Howe, R., Durao, S., Toews, I., & Burns, J. (2024). Evaluation of implementation of evidence-based public health

http://www.doi.org/10.62341/istj-vol38-1-ij21

training in sub-Saharan Africa. *Journal of Public Health in Africa, 15*(1). https://doi.org/10.4102/jphia.v15i1.576

Ross, S., Rasure, E., & Munichiello, K. (2023). What is the human capital theory and how is it used? *Investopedia*. https://www.investopedia.com/ask/answers/032715/what-human-capitaland-how-it-used.asp

Roth, M. J., Maggio, L. A., Costello, J. A., & Samuel, A. (2024). E-learning interventions for quality improvement continuing medical education—A scoping review. *Journal of Continuing Education in the Health Professions*. https://doi.org/10.1097/CEH.0000000000000589

Rust, R. T., & Huang, M. H. (2012a). Optimizing service productivity. *Journal of Marketing, 76*(2), 47–66. https://doi.org/10.1509/jm.10.0441

Rust, R. T., & Huang, M. H. (2012b). Service productivity theory. In P. F. Fader (Ed.), *Handbook of service marketing research*. Edward Elgar Publishing.

Sabekti, T. S., & Setiawan, A. I. (2023). How to improve employee performance through the role of work engagement mediation empirical studies on public sector organizations. *Asian Journal of Engineering, Social and Health, 2*(3), 205–218. https://doi.org/10.46799/ajesh.v2i3.45

Sala, H., & Silva, J. I. (2013). Labor productivity and vocational training: Evidence from Europe. *Journal of Productivity Analysis, 40*(1), 31–41. https://doi.org/10.1007/s11123-012-0304-0.

Salah Abbas Al-Azzi Hamoud. (2022). The role of training in improving the quality of medical services in the military hospital in Sana'a. Al-Razi University Journal of Administrative and Human Sciences, 3(6).

Sendawula, K., Nakyejwe Kimuli, S., Bananuka, J., Najjemba Muganga, G., & Wanasika, I. (2018). Training, employee engagement, and employee performance: Evidence from Uganda's health sector. *Cogent Business & Management, 5*(1).

Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology, 61*(3), 261–264. https://doi.org/10.4103/0019-5154.182410

http://www.doi.org/10.62341/istj-vol38-1-ij21

Shaheen, S., & Farooqi, Y. A. (2021). The impact of training & development on work engagement: A study in the banking sector. *Journal of Business and Social Review in Emerging Economies, 7*(1), 1–12.

Sija, A. (2024). Unveiling the impact of training and development employee performance. *European Journal of Human Resource Management Studies, 8*(2).

Singh, A., Khan, F. S., Akhlaq, N., & Bajpai, S. (2023). Analyzing the role of training and development in job performance of company executives in public sector undertakings in Uttar Pradesh. *Res Militaris, 13*(3), 171–184.

Tanui, A. C., & Kwasira, J. (2019). Influence of staff training on service delivery at Moi Teaching and Referral Hospital. *International Journal of Recent Research in Commerce Economics and Management, 6*(4), 1–12.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems, 28*(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003

Wang, Y., & Rosemberg, M. A. (2018). Staffing shortages and working conditions in healthcare settings: A systematic review of the literature. *Journal of Nursing Management, 26*(4), 445–456. https://doi.org/10.1111/jonm.12567

Wangechi, E. M., Koome, P., & Gesimba, P. (2020). Effect of talent management on service delivery in the hospitality industry: A critical approach to learning and development process. *International Journal of Research in Business and Social Science, 9*(5), 91–99.

Wayne, R., Mondy, D., & Martocchio, J. J. (2016). *Human Resource Management, Global Edition*. Pearson Education.

Wei, H., Horsley, L., Cao, Y., Haddad, L. M., Hall, K. C., Robinson, R., Powers, M., & Anderson, D. G. (2023). The associations among nurse work engagement, job satisfaction, quality of care, and intent to leave: A national survey in the United States. *International Journal of Nursing Sciences, 10*(4), 476–484.

Wisniewski, M., & Donnelly, M. (1996). Measuring service quality in the public sector: The potential for SERVQUAL. *Total Quality Management, 7*(4), 357–365.

http://www.doi.org/10.62341/istj-vol38-1-ij21

World Health Organization. (2021). *Global strategy on human resources for health: Workforce 2030*. Geneva: WHO.

World Health Organization. (2022). *Health workforce requirements for universal health coverage and the Sustainable Development Goals*. Geneva: WHO Press.

World Health Organization. (2023). *Outbreak and Crisis Response Appeal: Libya*. WHO Regional Office for the Eastern Mediterranean.

World Health Organization. (2024). *Libya annual report 2023*. WHO Regional Office for the Eastern Mediterranean.

World Health Organization. (2025). *Public Health Situation Analysis: Libya*. Geneva: World Health Organization.

World Health Organization Regional Office for the Eastern Mediterranean. (2025). *Monitoring Libya's health system: A comprehensive guide to national health indicators*.

Xu, X., Zhang, Y., Wang, Y., Zhao, C., Zhang, Y., & Xie, X. (2025). Impact of regional digital transformation on public health: An empirical analysis based on 31 provinces in China. *BMC Public Health, 25*, 2485.

Zeithaml, V. A., Verleye, K., Hatak, I., Koller, M., & Zauner, A. (2020). Three decades of customer value research: Paradigmatic roots and future research avenues. *Journal of Service Research, 23*(4), 409–432.

Zhang, Y., Zhang, Y., & Liu, Z. (2021). The impact of work engagement on patient safety outcomes: A meta-analysis. *Journal of Nursing Scholarship, 53*(4), 442–451.