Sustainable leadership styles adopted by small businesses in the UAE during and post COVID-19

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Abstract

COVID-19 emerged in late 2019 as a global crisis which led to major government restrictions on global populations. This had a detrimental impact on the survival and growth of smaller businesses. The resilience of smaller to medium enterprises (SMEs) was crucial to global economies as SMEs represent over 90% of businesses worldwide. However, due to the recent conclusion of COVID-19, there appears to be limited/no studies investigating the change in strategies adopted by businesses during the pandemic. The United Arab Emirates (UAE) established itself as the hub of business activity between Western and Eastern countries, however, this was halted by COVID-19. This study aimed to address this gap by examining the leadership philosophies adopted by SMEs in the UAE during the pandemic. Using a qualitative approach, semi-structured interviews were conducted with 70 SMEs between September and December 2023, and the data were analysed through thematic analysis. Out of the 70 interviewed SMEs, 42 SMEs changed their leadership style during the pandemic whereas 28 SMEs did not change their style. Sustainable leadership style was the most adopted style by SMEs in the UAE during the pandemic followed by transactional. After the pandemic era, the sustainable style was adopted by 46 SMEs, the transactional style is adopted by 24 SMEs and the transformational style is adopted by 10 SMEs. The findings suggested that most SMEs embraced sustainable leadership styles, characterized by agile decision-making, long-term resilience, and adaptive strategies shaped by pandemic-induced challenges. The findings contribute to the existing literature by providing insights into how small businesses in the UAE adapted their leadership approaches to maintain resilience and ensure business continuity during crises. Moreover, the study highlights the relevance of sustainable leadership in enhancing organizational adaptability and long-term survival in challenging environments, offering practical implications for business leaders and policymakers in developing crisis-resilient leadership frameworks.

Keywords Leadership framework, Sustainable leadership, Small to medium enterprises (SMEs), United Arab Emirates (UAE)

1 Introduction

An ability demonstrated by an individual to lead other individuals is widely accepted as leadership [1, 2]. Leadership styles adopted in businesses may vary based on the business' size and sector [3, 4]. Several authors have shown a connection between leadership styles and business growth or survival. They also note that this relationship is particularly relevant for small and medium-sized enterprises (SMEs) trying to survive and expand [2, 5].

Currently, there are over half a million businesses in the UAE, and it is projected that there to be over a million businesses by 2030. In terms of employee numbers, enterprises with 1–249 employees are classified as SMEs in the UAE [6]. The growth of smaller businesses in the UAE was adversely impacted by the restrictions imposed by the government as a solution to the COVID-19 threat [7].

The highlighted importance of SMEs to job creation and the national economy in the UAE justifies the need to explore leadership styles that may best ensure the survival and growth of smaller businesses during an era like COVID-19. There have been studies that have explored appropriate leadership styles during the pandemic [4, 8], however, there is no existing research that investigates appropriate leadership styles for the survival of SMEs in the UAE during COVID-19. Gilani et al. [4] have promoted further research in the area in terms of business sector and geography as they believe that there may be a variation in results based on business sector and geography.

Sustainable leadership has garnered substantial attention in recent years, particularly in the context of SMEs that form the backbone of many economies, including the UAE. Leadership practices that prioritize not only business success but also the well-being of employees, society, and the environment are critical to long-term organizational sustainability [9]. In the wake of the COVID-19 pandemic, leadership approaches underwent significant transformations globally, and SMEs in the UAE were no exception. These businesses, which represent over 95% of total companies in the UAE and contribute more than 40% to their gross domestic product (GDP), found themselves at the crossroads of survival and adaptation during the pandemic [10].

While much literature exists on the role of sustainable leadership in large corporations [11], fewer studies have explored the distinct challenges and responses of SMEs, particularly in developing economies like the UAE, which were heavily impacted by the pandemic [6]. The COVID-19 crisis introduced unprecedented challenges, including supply chain disruptions, financial constraints, workforce reductions, and the need for rapid digital transformation [4]. For SMEs in the UAE, which often operate with limited resources and managerial capacity, these challenges were even more pronounced. SMEs in the UAE make up over 95% of all businesses. Over 40% of employment in the UAE is attributed to SMEs. Additionally, SMEs were reported in 2022 to contribute to 40% of GDP, demonstrating a substantial contribution by SMEs towards the economic growth of the UAE [10]. As this paper focuses on the UAE, the UAE definition of SMEs will be incorporated in this study to inform the inclusion of SMEs.

Leadership styles during the pandemic played a pivotal role in shaping how SMEs directed these turbulent times. Business leaders had to swiftly adapt to ensure continuity while balancing the well-being of employees and other stakeholders, a key tenet of sustainable leadership [11]. The question of whether these leaders adopted more adaptive, inclusive, or transformational styles remains underexplored in the context of UAE SMEs,

making it an important area of study. Additionally, understanding how leadership practices evolved post-pandemics is crucial for future preparedness and resilience.

1.1 Importance of leadership

The role of leadership in SMEs in the UAE has become increasingly critical in the post-pandemic era. SMEs are a fundamental part of the UAE's economy, and the COVID-19 pandemic exposed the vulnerabilities of SMEs, particularly their limited resources, lack of formalized structures, and high susceptibility to external shocks [12].

While large corporations may have sufficient resources for weather crises, SMEs often rely heavily on leadership agility, strategic decision-making, and resilience to ensure survival and growth [13]. Leadership within SMEs plays a pivotal role in not only crisis management but also in fostering innovation, adaptability, and sustainable practices that are essential for thriving in a competitive and uncertain environment [14].

In the current post-pandemic context, SME leaders are expected to direct economic recovery, digital transformation, and sustainability challenges. Effective leadership in SMEs must integrate ethical decision-making, stakeholder engagement, and strategic foresight to maintain resilience and promote long-term growth [15]. Moreover, the UAE government's Vision 2030 emphasizes economic diversification, sustainability, and innovation, making it imperative for SMEs to adopt sustainable leadership practices that align with national development goals [16].

The exploration of leadership styles in the post-pandemic era is crucial for understanding how SMEs in the UAE can enhance their organizational performance, resilience, and sustainability. While the COVID-19 pandemic has subsided, its aftermath continues to influence how businesses operate and compete in a rapidly evolving market environment. SMEs, which form a significant portion of the UAE's economic fabric, must adapt their leadership strategies to align with new challenges and opportunities, including digital transformation, economic diversification, and global sustainability standards [12]. Research indicates that effective leadership practices can significantly improve employee engagement, innovation, operational efficiency, and stakeholder satisfaction [15]. By identifying the most suitable leadership styles, SME leaders can enhance their organizational performance and readiness for future crises. Additionally, understanding leadership styles that contribute most effectively to these outcomes can guide policymakers and leadership development programs in the UAE towards fostering resilient and sustainable business models that contribute positively to the nation's economic growth and Vision 2030 goals.

This study makes several significant contributions to the literature and practice of leadership in SMEs. It advances the understanding of Sustainable Leadership Theory, Crisis Leadership Theory, Transformational Leadership Theory, and Situational Leadership Theory by demonstrating how these frameworks are applied by SMEs in the UAE to direct crises and ensure long-term resilience and growth. Additionally, the study proposes a comprehensive framework linking sustainable leadership practices with organizational resilience and continuity, offering a theoretical foundation for developing leadership models tailored to SMEs. The findings provide valuable insights for SME leaders, policymakers, and leadership development programs by highlighting the most effective leadership styles for enhancing resilience and business continuity in the post-pandemic era. Practical recommendations for adopting sustainable leadership

principles, including ethical decision-making, stakeholder engagement, strategic crisis management, and technological adaptation, are also provided. Moreover, the study suggests frameworks and guidelines that policymakers can implement to support SMEs in building leadership capacity, resilience, and sustainability. By focusing on the UAE's SME sector, the study addresses a geographical and organizational context that has been largely underexplored in leadership literature, providing empirical evidence of how cultural, economic, and regulatory factors influence leadership practices within the region.

Thus, this study investigated the leadership styles adopted by UAE SMEs during the COVID-19 pandemic and whether these styles have changed in the post-pandemic era. The research explored how the unique context of the UAE, characterized by its dynamic business environment and strong governmental support for SMEs, influenced these leadership transformations.

Thus, this paper's goal was to investigate the leadership philosophies used by SMEs in the UAE throughout the epidemic. The following were the main research questions addressed in the paper:

1. Did the SMEs change their leadership styles during the pandemic?
2. What was the most dominant leadership style adopted by UAE SMEs during the pandemic?
3. Has there been a change in leadership styles adopted by SMEs after the pandemic era?
4. What is the most dominant leadership style adopted by UAE SMEs after the pandemic?

The rest of this paper is organised as follows: An introduction to COVID-19 is given in the second section. The impact of SMEs in the UAE is covered in the third part. The research on the impact of leadership styles on corporate productivity is reviewed in the fourth section. The research methodology used in this study is described in the fifth part. The empirical findings are reported, analysed, and discussed in the sixth part. An overview of the research's main conclusions, constraints, ramifications, and suggestions is provided at the end of the publication.

1.2 Theoretical framework

The COVID-19 pandemic posed unprecedented challenges for businesses globally, disrupting traditional operations and compelling organizations to adapt rapidly [17, 18]. Small and Medium Enterprises (SMEs), often characterized by limited resources and agility, had to cope with these disruptions with innovative and resilient leadership approaches [19]. This study explores the sustainable leadership styles adopted by small businesses in the UAE during the COVID-19 crisis using a qualitative approach through semi-structured interviews.

The theoretical framework for this study draws from sustainable leadership, crisis leadership, transformational leadership, and situational leadership theories to provide a comprehensive understanding of the leadership approaches adopted by SMEs in the UAE during the COVID-19 pandemic.

This framework will guide the exploration of how these leadership styles facilitated resilience, innovation, and sustainability in a challenging and rapidly changing environment.

Sustainable Leadership Theory emphasizes long-term leadership practices that are not only economically viable but also socially responsible and environmentally friendly [20].

It focuses on the ability of leaders to balance short-term crisis responses with long-term sustainability goals. For SMEs in the UAE, which are integral to the country's economic and social fabric, sustainable leadership would manifest through maintaining business continuity while also addressing employee well-being and community engagement during and after the pandemic [21]. This study investigates how UAE SME leaders incorporated sustainable practices while directing the disruptions caused by COVID-19.

Crisis Leadership Theory addresses the unique leadership demands that arise during emergencies. It highlights the need for quick decision-making, adaptability, and clear communication in times of uncertainty [22]. COVID-19 created unprecedented challenges for SMEs, making it necessary for leaders to demonstrate agility, mitigate risks, and ensure the organization's survival. Crisis leadership frameworks argue that leaders must possess not only the strategic acumen to manage immediate threats but also the ability to inspire and mobilize employees in uncertain times [23]. This study explores how SME leaders in the UAE utilized crisis leadership principles to mitigate the impacts of the pandemic.

Transformational Leadership Theory focuses on how leaders inspire, motivate, and foster innovation within their teams, particularly during times of change. Transformational leaders encourage their followers to exceed expectations by creating a shared vision, fostering a sense of purpose, and driving organizational transformation [24]. For UAE SMEs, the pandemic offered an opportunity for transformational leadership, as leaders needed to inspire innovation in business models and operations to survive the crisis. This theory will help explain how leadership styles during COVID-19 promoted innovation and resilience in SMEs.

Situational Leadership Theory suggests that effective leadership is contingent on the context in which it is applied. Leaders must adjust their style depending on the specific challenges or opportunities they face [25]. In the context of the pandemic, situational leadership was vital as leaders needed to shift from a focus on growth to survival, from employee management to employee care, and from profit to sustainability. The situational leadership framework allows for an exploration of how leaders in UAE SMEs adapted their leadership styles according to the evolving circumstances during and after the pandemic.

Together, these theories form the foundation for this study's exploration of leadership practices in UAE SMEs during the COVID-19 crisis. They provide a lens through which the resilience, innovation, and sustainability of these businesses can be examined.

2 Literature review

2.1 Sustainable development and leadership in business contexts

Whether it is philosophical thinking—"harmonious coexistence between man and nature"—or environmental conservation in the industrial age, the concept of sustainable development has always played an important role in directing global actions [26]. In particular, the 2015 launch of "Transforming our World: 2030 Agenda for Sustainable Development" marked the beginning of a new era of global sustainable development. Meanwhile, 17 Sustainable Development Goals (SDGs) were approved by 193 ONU member nations in 2015 to increase human responsibility for sustainable development. These objectives necessitate action by countries, organizations, and individuals to promote sustainable development [27]. The process of sustainable development is a broad

and dynamic system [28], aimed not only at addressing climate change and environmental degradation, such as air, water, and soil pollution, overfishing, and species extinction, but also at promoting health, well-being, and eliminating inequality and poverty. Because of the close relationship between organizations and the sustainable development of the social economy, some scholars believe that this goal can be met when businesses fully accept the challenge of sustainable development, see it as an opportunity for business development, and change their business models [29]. At the same time, experts from several disciplines believe that, while businesses are a major source of these issues, they also play a significant part in their resolution [26]. There is no doubt that businesses have become the primary unit for ensuring the implementation of sustainable development. However, for a long time, enterprises have struggled to integrate the concept of sustainable development present into their own business operations, instead performing their social responsibilities through charitable donations or public welfare activities, reducing the concept of sustainable development to a mere form of social responsibility. However, it should be noted that putting these sustainable development actions into action is fraught with uncertainties. Based on this, sustainable leadership, which encourages businesses to move toward sustainable development, has gained popularity [26, 30].

Sustainable leadership is an outcome of combining sustainable development with leadership, characterized by a type of leadership and management behaviour that seeks to address the demands of stakeholders while also developing the enterprise's core business to provide long-term value for all stakeholders. It extends beyond green transformational leadership and responsible leadership to stress the balanced growth of the economy, society, and environment. At the same time, it is beneficial to assisting businesses in achieving profitable growth and sustainability, and it has emerged as a hotspot in current leadership research [11].

The literature on sustainable leadership has made progress, and some scholars have found that sustainable leadership positively impacts employees' organizational commitment, job satisfaction, and trust [30], organizational sustainable performance [31, 32], organizational financial performance [33]. However, research on sustainable leadership is still in its early stages, and there is a dearth of systematic reviews in this sector, which contrasts sharply with requests for sustainable leadership. To more effectively enhance theoretical research and management practice in sustainable leadership, we searched relevant literature in databases like as Web of Science, EBSCO, and CNKI. We also sort through the existing literature on sustainable leadership, methodically reviewing, combing, and commenting on its origin, connotation, analytical perspective, antecedents, and outcomes, as well as developing an integrated research framework for sustainable leadership and future research prospects.

2.2 The concept of sustainable leadership

The Brundtland Committee brought the notion of sustainable development to the field of organizational management. They stated that sustainable development is a method of growth that serves present demands without jeopardizing future generations' requirements. Later, this hypothesis sparked heated debate in academic circles, and it is currently being researched extensively. For example, Pearce and Turner [34] proposed the circular economy model, which emphasizes the connection of the economy and the environment.

Though, with the increasing social and environmental challenges caused by economic development, there is a major imbalance between economic gains, social responsibility, and environmental protection in the firm operation process. How to overcome this imbalance and achieve the aims of improving performance, resilience, and sustainability has been a popular topic of discussion in both practical and theoretical settings. To better consider a broader range of stakeholders, leaders must define the concept of sustainable development, integrate it into the company, and practice sustainable leadership behaviour, as the leader is the key to organizational transformation. Hargreaves and Fink [21] and Avery [35] integrated the concepts of sustainable development with leadership, introducing the notion of sustainable leadership. Since then, many researchers have investigated its implications in diverse contexts.

Obiwuru [36] identified that the transformational style aligned better to ensure improved performance in a business where characteristics like charisma, intellectual stimulation, extra effort, and satisfaction were highlighted as possible influential factors. While agreeing on the point of charisma as a possible leadership factor ensuring improved performance, Wong and Giessner [37] identify that a Laissez-faire style can be effective in ensuring improved business performance over the short term. To overcome this limitation of short-term impact, Wong and Giessner [37] propose the adoption of a hybrid style to ensure improved business performance. Ovadje and Aryee [38] highlighted the transformational style as one of the more appropriate styles to improve a business' performance/growth as it may inspire employees to work harder and longer. A supportive behavior-based style may improve the probability of more ethical practices being adopted by employees while working in their roles [39, 40].

Girling [41] explains that a leadership style is not simply based on the personality of a leader, leadership practice can be crafted and developed in such a way that a leader can adapt and vary their style based on a situation. Like Wong and Giessner [37], Girling [36] promoted the adoption of a hybrid style to ensure optimal business performance. Salamzadeh et al. [42] identify findings that align with Girling [41] by highlighting the role of innovative behaviors in leadership which are based on dynamic capabilities, and organizational effectiveness. The findings from Gilani et al. [4] and Kesidou [43] highlight a Situational leadership style as the most appropriate style for adoption in scenarios involving sudden upheaval and crisis such as the COVID-19 era. However, findings from Gilani et al. [4] identified the effectiveness of the sustainable style during the pandemic as it was a crisis period which demanded time-sensitive decisions to be made which encouraged the adoption of a leadership style which was based on a shorter chain of command.

2.3 Research gap

Despite the growing literature on leadership styles and their effectiveness during the COVID-19 pandemic, significant gaps remain in understanding what leadership practices specifically contributed to the resilience and survival of SMEs during and after the pandemic. Previous studies have primarily focused on transformational, transactional, and adaptive leadership styles, particularly in educational, medical settings, and large organizations [14, 15]. Research has also highlighted how policymakers aimed at building sustainable systems post-pandemic, emphasizing the need for collaboration across various sectors [44].

While research acknowledges the importance of leadership competencies and crisis management in various domains [45, 46], limited studies address the unique leadership challenges faced by SMEs, which often operate with fewer resources and greater vulnerability to external shocks. Additionally, studies focusing on leadership during crises have predominantly been conducted in educational, healthcare, and public sector contexts rather than private SMEs [15, 47].

More importantly, the role of sustainable leadership in balancing immediate crisis response with long-term resilience and organizational growth remains underexplored. Most existing literature overlooks how SMEs adopt and integrate sustainable leadership approaches to ensure resilience during prolonged disruptions like the COVID-19 pandemic. Additionally, SMEs in the UAE make up over 95% of all businesses [10], it is important to know how the businesses survived during these crises. This study aims to address this gap by investigating the leadership styles adopted by SMEs in the UAE during and after the COVID-19 crisis, with a particular emphasis on the effectiveness of sustainable leadership in enhancing resilience and business continuity.

The findings from the reviewed studies inform an understanding towards the appropriateness of leadership styles based on different factors and scenarios within a business, however, outside of Gilani et al. [4] there appears to be no research comparing the leadership styles adopted before, during and after the COVID-19 pandemic era. Additionally, there appear to be no studies investigating leadership styles adopted in SMEs in the UAE during the pandemic. Therefore, there is scope for further research investigating leadership styles in SMEs within the UAE during the pandemic based on the business sector. Salamzadeh et al. [42] promoted the importance and mandatory nature related to ensuring a theoretical contribution from a research study, which in the case of the study conducted by Gilani et al. [4] was the COVID-19 Leadership Framework (CLF) (Fig. 1). It should be noted that 'L' in Fig. 1 represents the term 'Lockdown'.

The CLF has been selected for inclusion in this research as it is based on the Leadership Interactional Framework (LIF) (Fig. 2) that involves the interaction between leaders, followers, and the situation within businesses [48].

Like this study, Gilani et al. [4] investigated leadership styles adopted to ensure business performance during the pandemic where the sector of the businesses was also considered. However, contextual differences between the studies informed changes in the CLF (CLF version 2 in Fig. 3) to align with the focus of this research.

The novelty of this study lies in its effort to establish a comprehensive framework linking sustainable leadership practices with organizational resilience in the SME context. This research will contribute valuable insights for business leaders and policymakers aiming to develop crisis-resilient leadership models that can better withstand future disruptions.

3 Material and method

3.1 Data collection

The sample of the study consisted of SMEs operating in the UAE. Details of over 557,000 SMEs were reported to be in operation in the UAE at the end of 2022 [41]. Convenience stores, hair salons, restaurants, mobile shops, and pharmacies were identified as the most common types of businesses. To ensure a representative sample, a stratified random sampling approach was employed. This method was considered most suitable
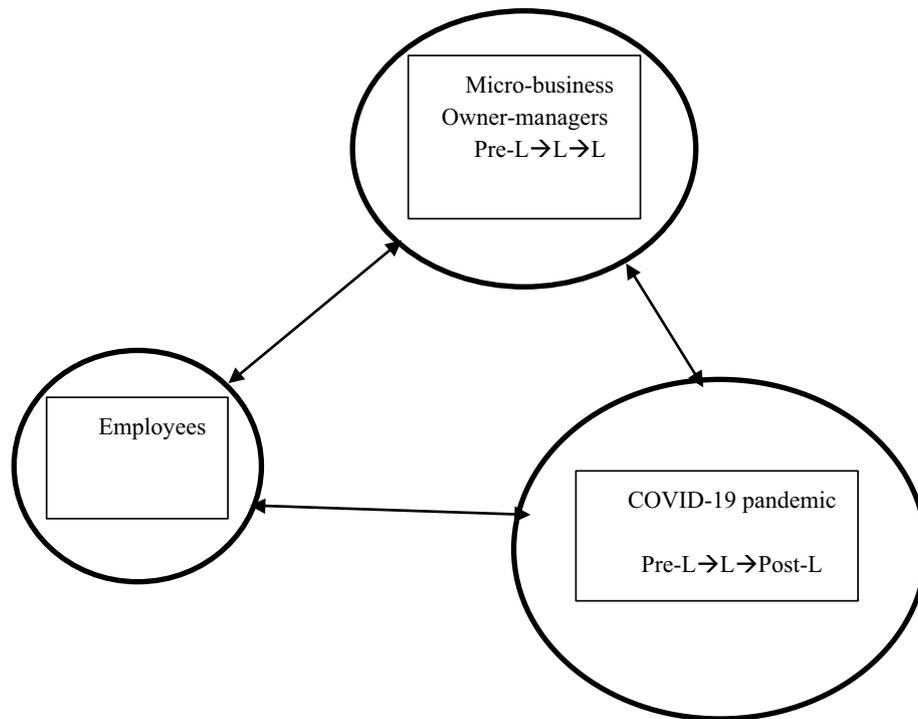
Fig. 1 Covid-19 leadership framework (CLF). *Source*: Gilani et al. [4]
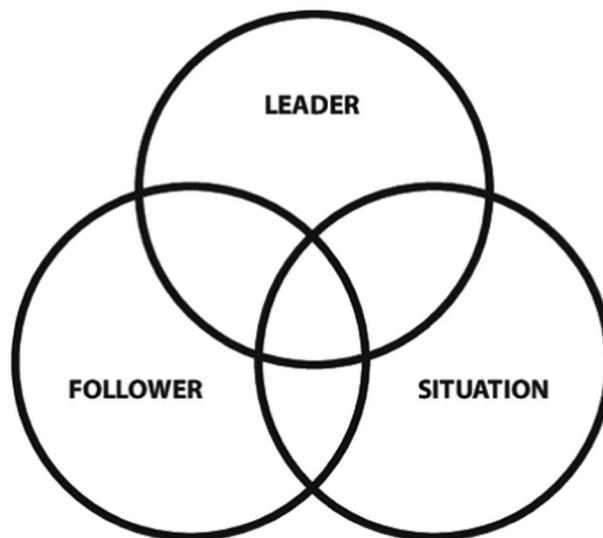


Fig. 2 Leadership interaction framework/interactional framework. *Source*: Lindsay and Woycheshin [48]

because it allows for the division of the SME population into distinct strata based on the geographical location and business type, ensuring representation across different emirates and industries. The UAE is made up of seven emirates, each with its own unique business ecosystem. To capture the diversity of leadership styles across these regions, the first level of stratification was by emirate (Ajman, Sharjah, Dubai, Abu Dhabi, Fujairah, Ras Al Khaimah, and Umm Al Quwain). The second level of stratification was by business type. Based on industry reports [42], five types of businesses were identified as the most prevalent among SMEs in the UAE: convenience stores (CS), hair salons
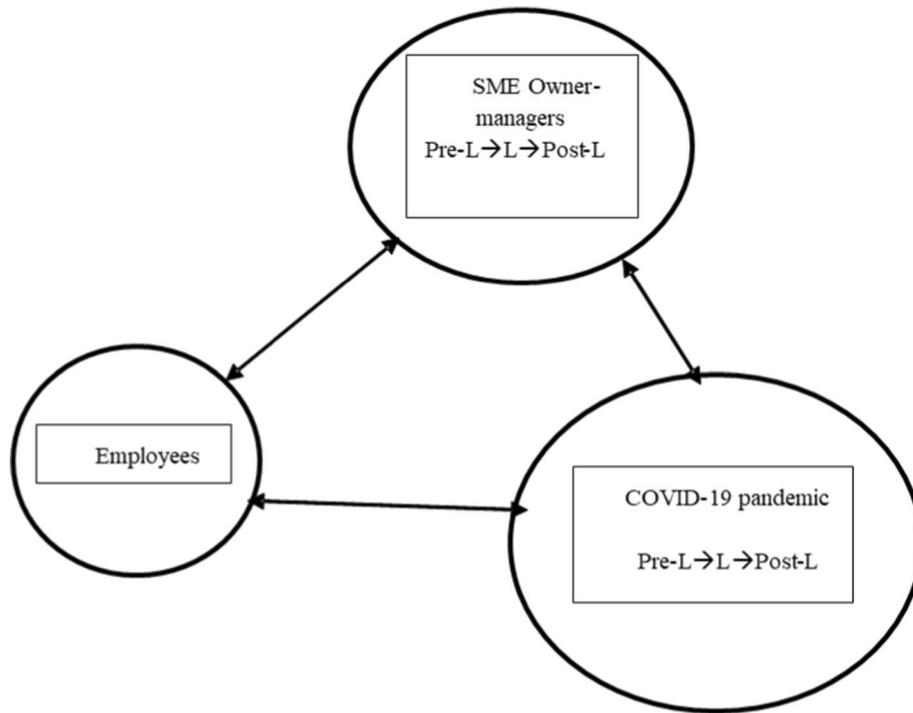
Fig. 3 Covid-19 leadership framework 2 (CLF 2). *Source*: Authors

Table 1 Questions answered and target responses during telephone communication

Questions	Target responses
Question 1: Does the business employ less than 250 people?	Yes
Question 2: What does the business sell?	Convenience stores, hair salons, restaurants, mobile shops, or pharmacies
Question 3: Was the business established before 2020?	Yes
Question 4: Would you be interested in participating in a follow-up interview?	Yes

(HS), restaurants (R), mobile shops (MS), and pharmacies (P). By applying two levels of stratification (region and business type), the sampling process ensured that the diversity of businesses and geographical coverage of the UAE were adequately represented. Ten SMEs were selected per emirate, resulting in a total of 70 SMEs. Each emirate contributed two SMEs from each of the five business types. This approach provides a balanced view of leadership practices across different industries and regions, mitigating the risk of over-representing any one emirate or industry. For the outbound calls, the business contact details were retrieved from the Yellow Pages UAE [42] database. To identify a target and representative sample, the businesses contacted were asked the following questions in Table 1.

3.2 Semi-structured interview process and development of questions based on the CLF 2 framework

A semi-structured interview process was designed to explore the evolution of leadership styles among SMEs in the UAE during and after the COVID-19 pandemic. The CLF 2 framework was used as a foundation to develop the interview questions. This framework

provided a structured approach to assess leadership competencies across various contexts, making it a suitable basis for exploring how SME leaders adapted their leadership styles in response to a prolonged crisis. However, given the unique cultural and economic context of the UAE and the specific focus on SMEs, the CLF 2 framework was adapted to align with the study's objectives.

Gilani et al. [4] previously used the CLF 2 framework to investigate leadership styles for ensuring business performance during the pandemic, with sectoral considerations. In this study, the CLF 2 framework was adapted to emphasize competencies particularly relevant to the UAE SME context, including crisis adaptability, resilience-building, and sustainable business practices. These modifications reflect the need for UAE SMEs to balance immediate crisis responses with long-term sustainability, as they direct both operational and cultural challenges during and after the pandemic.

Each question in the semi-structured interview aligned with the adapted CLF 2 framework components, focusing on understanding changes in leadership style and their impact on business resilience and adaptability. Q1 and Q6 explored the leadership style before and during the COVID-19 lockdown, capturing baseline and crisis responses. This aligned with the leadership identity dimension of CLF 2, which examined how leaders perceive and define their own leadership style. By asking whether leaders have changed their style in the past and the impact on productivity, Q2 and Q3 addressed adaptability and flexibility, key competencies in the CLF 2 framework, particularly in the context of crisis adaptability. Q4 and Q5 specifically focused on whether the COVID-19 lockdown prompted a change in leadership style, directly addressing the crisis management component of the framework. The responses helped to show the leader's ability to adapt to unprecedented disruptions and aligned with the framework's emphasis on responsive and flexible leadership during crises. Additionally, Q7 and Q8 inquired about the leader's intentions regarding maintaining or changing their leadership style post-lockdown. This aligned with the sustainability and long-term adaptability aspects of the adapted CLF 2 framework, focusing on how leaders plan for sustained business practices and the continuity of their leadership approach after the crisis. Therefore, these questions, developed with guidance from the CLF 2 framework, provided a structured yet flexible approach for exploring the adaptation of leadership styles among UAE SME leaders. They allowed for a comprehensive analysis of how leaders responded to the crisis, managed resilience, and planned for sustainable practices in the long term.

Semi-structured interviews were used in the study, while CLF 2 supplied the theoretical foundation. The CLF 2 informed the development of the questions for this research which clarified leadership style(s) adopted by owner-managers *(1) before the pandemic era* and *(2) during the pandemic* where a question looking to clarify whether the SME owner-manager may alter their leadership style *(3) after the pandemic* was also created.

The semi-structured interview method was adopted in follow-up interviews with the 70 SMEs from the UAE. The codes for the SMEs are provided in Table 2.

The study ensured data saturation using semi-structured interviews conducted with 70 SMEs across various industries and emirates within the UAE. Saturation was achieved when additional interviews produced no new themes or insights, indicating redundancy in the data. An iterative process of data collection and analysis was employed, allowing us to compare new information with previously collected data continuously. Thematic analysis confirmed that after approximately 60 interviews, no new significant themes

Table 2 Codes for the businesses participating in semi-structured interviews

Ajman (A)	Dubai (D)	Abu Dhabi (AD)	Ras Al Khaimah (RAK)	Fujairah (F)	Umm Al Quwain (UAQ)	Sharjah (S)
Business code						
A-CS (Convenience store) 1	D-CS1	AD-CS1	RAK-CS1	F-CS1	UAQ-CS1	S-CS1
A-CS2	D-CS2	AD-CS2	RAK-CS2	F-CS2	UAQ-CS2	S-CS2
A-HS (Hair salon) 1	D-HS1	AD-HS1	RAK-HS1	F-HS1	UAQ-HS1	S-HS1
A-HS2	D-HS2	AD-HS2	RAK-HS2	F-HS2	UAQ-HS2	S-HS2
A-R (Restaurant) 1	D-R1	AD-R1	RAK-R1	F-R1	UAQ-R1	S-R1
A-R2	D-R2	AD-R2	RAK-R2	F-R2	UAQ-R2	S-R2
A-P (Pharmacy) 1	D-P1	AD-P1	RAK-P1	F-P1	UAQ-P1	S-P1
A-P2	D-P2	AD-P2	RAK-P2	F-P2	UAQ-P2	S-P2
A-MS (Mobile shop) 1	D-MS1	AD-MS1	RAK-MS1	F-MS1	UAQ-MS1	S-MS1
A-MS2	D-MS2	AD-MS2	RAK-MS2	F-MS2	UAQ-MS2	S-MS2

emerged, and the final 10 interviews validated that saturation had been reached. The diversity of participants from different sectors and regions further ensured comprehensive coverage of the phenomenon under study.

3.3 Research design

3.3.1 Qualitative research design

This cross-sectional study employed a qualitative research approach to identify sustainable leadership practices where the key role of leaders was to balance the goals of the economy, society, and environment. Semi-structured interviews conducted on 70 SMEs operating in the UAE were analysed using thematic analysis, employing interpretivism research philosophy and constructivist research paradigm.

3.3.2 Data analysis methods used

The theme analysis approach was employed to analyse the interview data. It was chosen for this study due to its ease of use and alignment with the Pragmatic philosophy, which endorses exploratory research [49]. Thematic analysis is a widely used method for analysing qualitative data, particularly interview transcripts [50].

The empirical study was conducted throughout September and December of 2023. Themes were identified, analysed, and discussed in context of the research questions. The process of thematic analysis involved three major steps such as: (a) Transcription: The step involved transcribing the interview recordings precisely. This involved converting the spoken words into written text, capturing all verbal tones, pauses, and non-verbal cues where possible. (b) Generating Codes: Initial codes were generated by systematically going through the entire data set using NVivo software. (c) Developing Themes: The initial codes are grouped into potential themes, capturing something significant about the data related to the research question. Patterns were identified among the codes and combined them into main themes. Patterns identified among the codes were combined into main themes. This involved examining how different codes combine to form a coherent story about the data. Themes were clearly defined, writing a detailed analysis for each theme, identifying the essence of what each theme represents and how it relates to the overall research question. After naming the themes, a final analysis report was reported, telling a coherent and compelling story about the data. The findings were situated within the existing literature, discussing how the identified themes

contributed to the broader understanding of the research. Table 3 contains the follow-up interview questions based on CLF 2 and Gilani et al. [4].

3.3.3 The ethical considerations

The study was conducted according to ethical guidelines provided by the APA Ethics Code (American Psychological Association, 2017). Though primarily used in psychology, this framework applies to organizational behavior, human resource management (HRM), and workplace studies, covering research integrity, participant protection, and confidentiality.

4 Data analysis

The findings from the 70 semi-structured interviews provide valuable insights into the leadership styles adopted by SMEs in the UAE during and after the COVID-19 pandemic.

Quotes from respondents:

1. Did the SMEs change their leadership styles during the pandemic?

Out of the 70 SMEs interviewed, 42 reported changing their leadership styles to adapt to the pandemic's challenges, while 28 retained their existing styles. Many respondents highlighted the necessity for adaptability. For example, a restaurant owner in Dubai stated, *"We had to become more flexible and focus on sustainable practices to keep the business afloat. It was about survival."* Another respondent from a pharmacy in Abu Dhabi emphasized, *"We shifted towards a more results-driven approach with clear directives, to ensure immediate outcomes and keep our operations running."*

"We implemented strict guidelines and clear instructions to ensure everyone stayed on track and met their targets during the crisis." — (Pharmacy respondent, Abu Dhabi).

2. What was the most dominant leadership style adopted by UAE SMEs during the pandemic?

The analysis revealed that Sustainable Leadership and Transactional Leadership were the most adopted styles during the pandemic. As one convenience store owner in Ajman noted, *"Sustainable leadership helped us build trust with our employees and customers. It's about taking care of everyone's well-being."* "Our focus was not just on making profits during the crisis but ensuring the survival of our business through ethical practices and long-term resilience." — (Restaurant Owner, Dubai). In contrast, a mobile shop owner from Ras Al Khaimah explained, *"We had to adopt a transactional approach to enforce discipline and meet short-term targets."*

Table 3 Questions that were answered in the follow-up interviews

Items	Content
Q1	What leadership style matched your leadership style before the lockdown?
Q2	Have you ever had to change your leadership style in the past?
Q3	If yes/no to Q2, then how did this impact the productivity of your business? If not, then why have you never changed your leadership style?
Q4	Have you changed your leadership style after the start of the COVID-19 lockdown?
Q5	If yes/no to Q4, then why you did/did not change your leadership style?
Q6	What was your leadership style during the COVID-19 lockdown?
Q7	Will you keep the same leadership style after the COVID-19 lockdown?
Q8	What style are you going to change to after the lockdown? /Why are you not going to change your leadership style after the lockdown?

3. Has there been a change in leadership styles adopted by SMEs after the pandemic era?

Findings indicate that 24 SMEs changed their leadership styles after the pandemic, while 46 SMEs retained their pandemic-era styles. A pharmacy owner from Fujairah mentioned, *"We realized that sustainable leadership is more effective in the long run, so we continued with the same approach even after the pandemic."* This sentiment was echoed by a restaurant manager in Sharjah, who stated, *"We shifted from transactional to transformational leadership to encourage innovation and creativity among our employees."*

4. What is the most dominant leadership style adopted by UAE SMEs after the pandemic?

The post-pandemic analysis shows that Sustainable Leadership emerged as the most prevalent style, with many businesses focusing on long-term resilience, ethical practices, and social responsibility. A restaurant owner in Abu Dhabi commented, *"The pandemic taught us the importance of sustainability. Now, our approach is focused on ethical practices and continuous improvement."*

4.1 Qualitative data analysis

Table 4 summarises the findings from the 70 interviews, with the letter "Q" standing for question.

As shown in Table 4 before the pandemic era, 37 of the SMEs adopted a sustainable leadership style where 7 were hair salons, 9 were mobile shops, 5 were pharmacies, 7 were convenience stores and 9 were restaurants. Transactional leadership was highlighted to be adopted by 17 SMEs where 5 were hair salons, 3 were mobile shops, 4 were pharmacies and 5 were restaurants. Transformational leadership was highlighted to be adopted by 16 SMEs where 2 were mobile shops, 5 were pharmacies, 4 were hair salons and 5 were restaurants.

In Table 4, 35 SMEs confirmed that they never changed their leadership style before the pandemic era whereas 35 SMEs highlighted, they did change their leadership style. Eight mobile shops, 4 pharmacies, 6 restaurants, 7 convenience stores and 10 hair salons confirmed that they never changed their leadership style before the pandemic. The rationale given by these SMEs for not changing their style was that they believed that it was not needed. However, 10 pharmacies, 8 restaurants, 4 hair salons, 7 convenience stores and 6 mobile shops highlighted they did change their leadership style before the pandemic. Most of the SMEs that changed their style confirmed that either they did it to improve business growth, or they did not see any improvement from the changes.

After the start of the pandemic, 42 SMEs changed their leadership style whereas 28 SMEs did not change. Of the SMEs that did change their leadership style, 7 were mobile shops; 11 were pharmacies; 7 were restaurants; 9 were hair salons; 8 were convenience stores. The main rationale given by SMEs for changing their leadership style after the emergence of the pandemic was to ensure business growth and survival. Of the SMEs that did not change their leadership style, 7 were mobile shops; 3 were pharmacies; 7 were restaurants; 5 were hair salons; 6 were convenience stores. The main rationale for no change in style after the start of the pandemic given by the SMEs was, they did not believe it was needed. During the pandemic, 32 SMEs adopted the sustainable style, 28 adopted the transactional style and 10 adopted the transformational style. The adoption

Table 4 Summary of interview findings

Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
A (Ajman)-CS (Convenience store) 1	Sustainable	No	Not needed	Yes	Improve growth	Sustainable	No	Sustainable
A-CS2	Transactional	Yes	Improved growth	No	Not needed	Transactional	No	Sustainable
A-HS (Hair salon) 1	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
A-HS2	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
A-R (Restaurant) 1	Transformational	No	Not needed	Yes	Improve growth	Sustainable	No	Sustainable
A-R2	Transactional	Yes	Improved growth	No	Not needed	Transactional	Yes	Transformational
A-P (Pharmacy) 1	Transactional	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
A-P2	Transformational	Yes	Improved growth	Yes	Survival	Sustainable	No	Sustainable
A-MS (Mobile shop) 1	Transactional	No	Not needed	No	Not needed	Transactional	Yes	Transformational
A-MS2	Sustainable	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
D (Dubai)-CS1	Transformational	Yes	Improved growth	Yes	Improve growth	Sustainable	No	Sustainable
D-CS2	Transactional	Yes	Improved growth	No	Not needed	Transactional	No	Transactional
D-HS1	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
D-HS2	Sustainable	No	Not needed	Yes	Survival	Sustainable	Yes	Transactional
D-R1	Sustainable	No	Not needed	Yes	Improve growth	Sustainable	No	Sustainable
D-R2	Sustainable	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
D-P1	Transformational	Yes	Improved growth	No	Not needed	Transformational	No	Transactional
D-P2	Transactional	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
D-MS1	Sustainable	Yes	Improved growth	No	Not needed	Transactional	Yes	Sustainable
D-MS2	Transactional	No	Not needed	Yes	Improve growth and Survival	Sustainable	No	Sustainable
AD (Abu Dhabi)-CS1	Transactional	Yes	Improved growth	Yes	Improve growth	Sustainable	Yes	Transactional
AD-CS2	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
AD-HS1	Transformational	No	Not needed	No	Not needed	Transformational	No	Transformational

Table 4 (continued)

Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
AD-HS2	Transactional	Yes	No change	Yes	Improve growth	Sustainable	Yes	Transactional
AD-R1	Sustainable	Yes	Improved growth	Yes	Improve growth	Sustainable	No	Sustainable
AD-R2	Sustainable	Yes	No change	Yes	Improve growth and Survival	Transactional	No	Transactional
AD-P1	Transactional	Yes	No change	No	Not needed	Transactional	No	Transactional
AD-P2	Sustainable	Yes	Improved growth	Yes	Improve growth	Transactional	Yes	Sustainable
AD-MS1	Sustainable	No	Not needed	Yes	Improve growth and Survival	Transactional	No	Transactional
AD-MS2	Sustainable	Yes	Improved growth	No	Not needed	Sustainable	No	Sustainable
RAK (Ras Al Khaimah)-CS1	Transactional	No	Not needed	Yes	Improve growth	Sustainable	Yes	Sustainable
RAK-CS2	Sustainable	No	Not needed	Yes	Improve growth and Survival	Transactional	Yes	Sustainable
RAK-HS1	Transactional	Yes	Improved growth	Yes	Improve growth	Sustainable	No	Sustainable
RAK-HS2	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
RAK-R1	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
RAK-R2	Sustainable	Yes	No change	Yes	Improve growth	Transactional	No	Sustainable
RAK-P1	Transactional	Yes	Improved growth	Yes	Improve growth and Survival	Sustainable	No	Sustainable
RAK-P2	Sustainable	No	Not needed	Yes	Improve growth	Transactional	No	Transactional
RAK-MS1	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
RAK-MS2	Transactional	Yes	Improved growth	Yes	Improve growth	Sustainable	No	Sustainable
F (Fujairah)-CS1	Sustainable	No	Not needed	No	Not needed	Sustainable	No	Sustainable
F-CS2	Sustainable	Yes	No change	No	Not needed	Sustainable	No	Sustainable
F-HS1	Transactional	No	Not needed	Yes	Improve growth	Sustainable	No	Sustainable
F-HS2	Sustainable	No	Not needed	Yes	Improve growth and Survival	Transactional	No	Transactional

Table 4 (continued)

Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
F-R1	Transformational	Yes	Improved growth	No	Not needed	Transformational	No	Transformational
F-R2	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
F-P1	Transformational	No	Not needed	No	Not needed	Transformational	No	Transformational
F-P2	Sustainable	Yes	No change	Yes	Survival	Transactional	Yes	Sustainable
F-MS1	Sustainable	Yes	Improved growth	No	Not needed	Sustainable	No	Sustainable
F-MS2	Transformational	No	Not needed	No	Not needed	Transformational	Yes	Sustainable
UAQ (Umm Al Quwain)-CS1	Sustainable	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
UAQ-CS2	Transformational	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
UAQ-HS1	Transactional	No	Not needed	No	Not needed	Transactional	Yes	Sustainable
UAQ-HS2	Sustainable	Yes	No change	Yes	Survival	Transactional	No	Transactional
UAQ-R1	Sustainable	Yes	Improved growth	No	Not needed	Sustainable	No	Sustainable
UAQ-R2	Transformational	No	Not needed	No	Not needed	Transformational	Yes	Sustainable
UAQ-P1	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Transformational
UAQ-P2	Transformational	Yes	No change	Yes	Improve growth	Transactional	Yes	Sustainable
UAQ-MS1	Sustainable	Yes	Improved growth	Yes	Improve growth	Transactional	No	Transactional
UAQ-MS2	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
S (Sharjah)-CS1	Transformational	No	Not needed	No	Not needed	Transformational	No	Transformational
S-CS2	Sustainable	Yes	Improved growth	Yes	Improve growth	Transactional	No	Transactional
S-HS1	Transformational	No	Not needed	No	Not needed	Transformational	Yes	Sustainable
S-HS2	Transactional	Yes	No change	Yes	Improve growth	Sustainable	No	Sustainable
S-R1	Sustainable	Yes	Improved growth	No	Not needed	Transactional	No	Transactional
S-R2	Transformational	No	Not needed	No	Not needed	Transformational	No	Transformational
S-P1	Transformational	No	Not needed	Yes	Improve growth	Sustainable	Yes	Transactional
S-P2	Sustainable	Yes	No change	Yes	Improve growth	Transactional	Yes	Sustainable
S-MS1	Sustainable	No	Not needed	Yes	Improve growth	Transactional	Yes	Sustainable
S-MS2	Transformational	No	Not needed	No	Not needed	Transformational	No	Transformational

of the sustainable style was evenly distributed amongst SMEs from all sectors, pharmacies were the highest adopters of the transactional style, and the adoption of the transformational style was evenly adopted by SMEs from all included sectors.

After the end of the pandemic, 47 SMEs did not change their leadership style whereas 23 did change. Out of the SMEs that did not change their style; 9 are mobile shops, 8 are pharmacies, 10 are restaurants, 10 are hair salons and 10 are convenience stores. Out of the SMEs that did change their leadership style after the pandemic; 3 are mobile shops, 7 are pharmacies, 6 are restaurants, 2 are hair salons and 5 are convenience stores. After the pandemic era, the sustainable style was adopted by 46 SMEs, the transactional style is adopted by 24 SMEs and the transformational style is adopted by 10 SMEs. The adoption of the sustainable, transactional, and transformational styles after the end of the pandemic era is evenly distributed amongst all the included businesses in terms of sector.

The finding of the sustainable style being selected by most of the UAE SMEs after the pandemic era aligns with the findings from Tantry and Singh [5] in their study. However, unlike this study, the hybrid leadership style was identified as a selected style after the pandemic era by businesses in the study conducted by Gilani et al. [4].

According to a consensus among authors, firms can achieve optimal productivity with transactional, transformational, and hybrid approaches [40, 51–53]. However, the businesses in this study identified sustainable, transactional, and transformational styles as the most appropriate to ensure growth and survival after the pandemic era.

Despite Kesidou's [43] findings on the benefits related to the versatility and flexibility of the Situational leadership style for businesses in uncertain periods, in this study, there appears to be no adoption highlighted of the situational leadership style adopted by UAE SMEs before, during and after the pandemic era.

As identified in the review of studies in Sect. 2, there was a paucity of literature investigating leadership styles adopted by SMEs in the UAE during the pandemic era. There is limited to no consideration given to the sector and size of businesses included in previous COVID-19 related studies in the context of the UAE. Therefore, the findings from this research have contributed to knowledge by addressing a paucity of literature.

It was noted during the research that the questions in the interviews with the 70 SMEs could have explored the relation of adopted leadership styles to areas like culture, gender, and innovation which have already been explored by Palalic et al. [54] (gender), Pringgabayu et al. [55] (culture) and Salamzadeh et al. [42] (innovation). Therefore, based on these unexplored areas, there may be opportunities for further research. The frequency of the leadership styles adopted during and after COVID-19 are presented in Fig. 4.

Thematic maps were developed to represent the three dominant leadership styles identified from the interviews: Transformational leadership, transactional leadership, and sustainable leadership. As illustrated in the thematic map (Fig. 5), the size of each node indicates the frequency of occurrence.

Sustainable Leadership (largest node) was the most prominent theme adopted by SMEs during and after the pandemic. Transactional leadership (medium node): The second most common theme, often associated with short-term goals and structured approaches. And, transformational leadership (smallest node) was the least frequent theme; however, it was significant for its role in inspiring change and innovation.
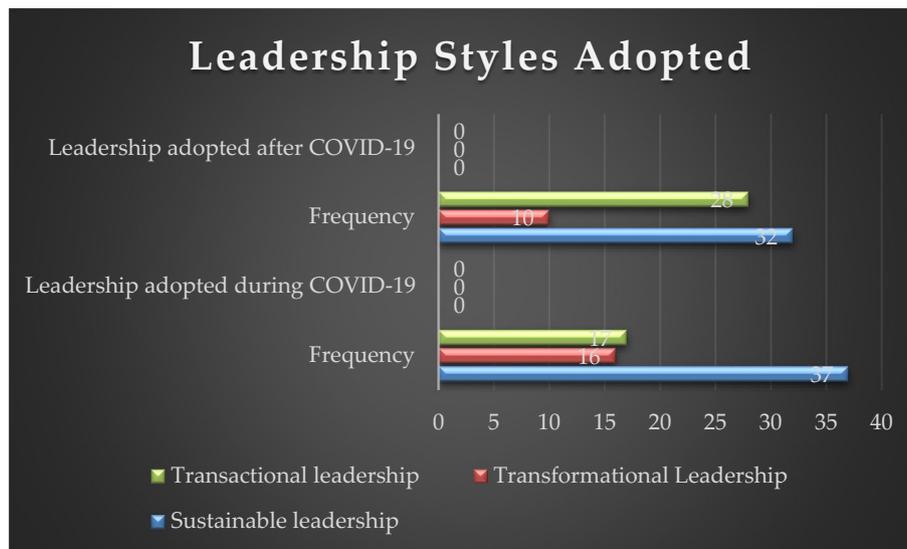
Fig. 4 Frequency of the leadership styles adopted during and after COVID-19 by SMEs in UAE

To further enhance the findings, sentiment analysis was conducted to identify the emotional tone of the responses. The analysis categorized responses into Positive, Negative, and Neutral sentiments. The results categorized responses based on their polarity scores, which range from – 1 (negative) to + 1 (positive) (Table 5).

The sentiment analysis indicates that Sustainable Leadership received the highest overall positive perception (average polarity: 0.55), supported by strong sentiments across its sub-themes. Nodes such as *Ethical Decision-Making* (0.70), *Resilience Building* (0.65), and *Employee Well-being* (0.65) reflect highly favorable views of this leadership style, especially for navigating crises and ensuring long-term business resilience.

Transactional Leadership showed a moderately positive perception (average polarity: 0.40). While themes like *Task-Oriented Management* (0.69) and *Structured Processes* (0.62) were positively viewed for maintaining performance and order during disruption, nodes such as *Clear but Strict Directions* (– 0.05) and *Rewards and Penalties* (– 0.02) showed neutral to slightly negative sentiment, suggesting a perception of rigidity or lack of adaptability in some cases.

Transformational Leadership reflected an overall neutral to slightly positive perception (average polarity: 0.03). While nodes such as *Employee Empowerment* (0.20) and *Inspirational Motivation* (0.03) indicated mild positivity, the node *Burnout from High Expectations* (– 0.11) introduced a weak negative sentiment, highlighting the strain caused by continuous high demands.

Therefore, Sustainable Leadership emerged as the most favorably perceived style among SME leaders in the UAE, followed by Transactional Leadership, while Transformational Leadership, though recognized for its motivational aspects, showed limited effectiveness and concerns related to employee fatigue.

5 Discussion

The study aimed to explore the leadership styles adopted by SMEs in the UAE during and after the COVID-19 pandemic. The research questions focused on whether SMEs changed their leadership styles during the pandemic, identifying the dominant
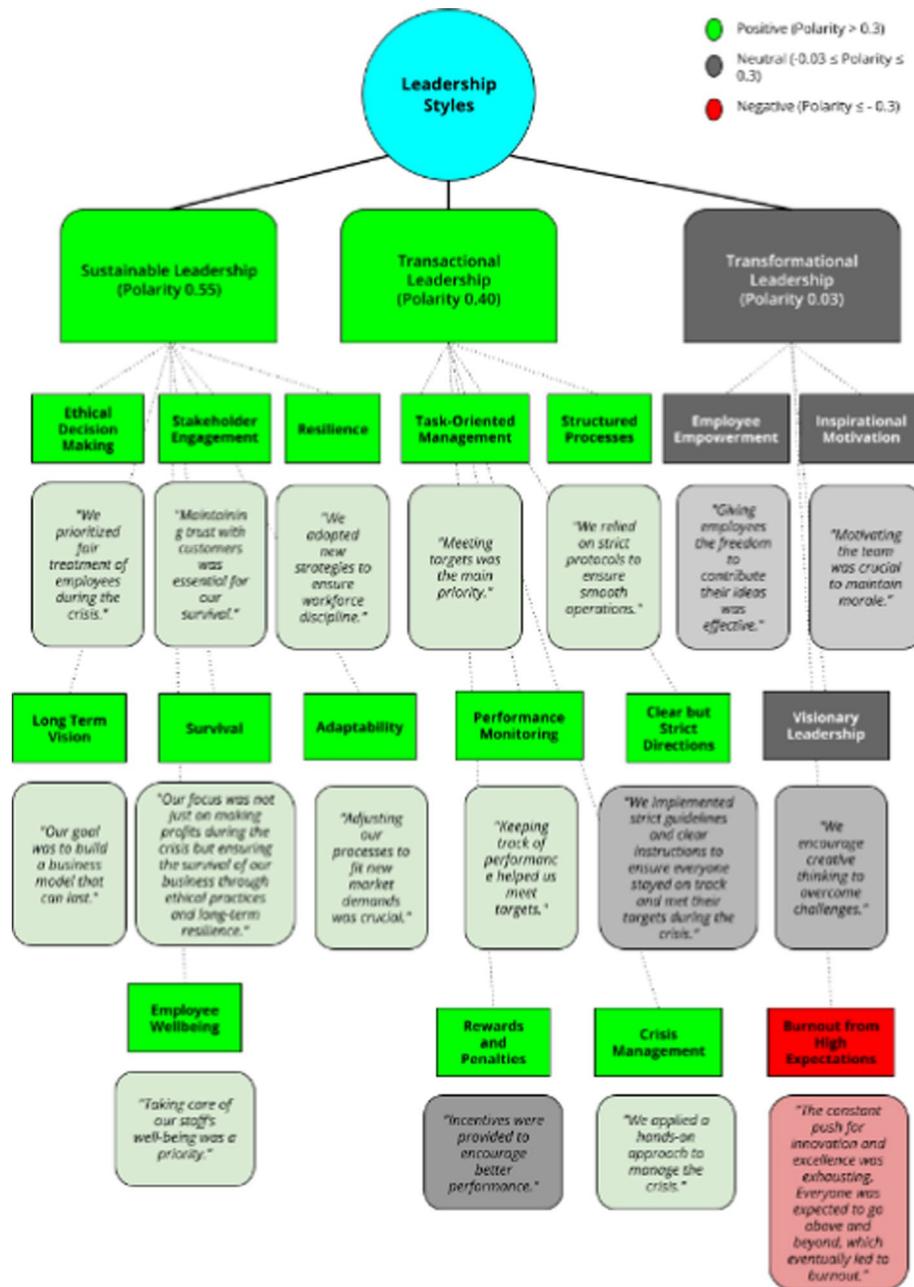
Fig. 5 Thematic maps of dominant leadership styles

leadership style during and after the pandemic, and examining any changes in leadership approaches in the post-pandemic era. Specifically, it sought to understand the predominant leadership styles prior to the pandemic, whether and why SME leaders changed their leadership approaches, how those changes impacted business productivity, the styles adopted during the lockdown, and the leadership strategies planned for the post-lockdown period.

Research Question 1: The findings indicated a shift in leadership styles during the pandemic, with sustainable leadership emerging as the most prevalent approach, followed by transformational and transactional leadership. The emphasis on sustainable leadership aligned with the necessity to balance immediate crisis responses with long-term

Table 5 Sentiment analysis

Themes	Nodes	Quotes	Polarity	Interpretation
Sustainable leadership			**0.55**	Positive perception
	Ethical Decision-Making	"We prioritized fair treatment of employees during the crisis."	0.70	Strong positive perception
	Stakeholder Engagement	"Maintaining trust with customers was essential for our survival."	0.40	Moderately positive perception
	Resilience Building	"We adopted practices that ensure we can handle future disruptions."	0.65	Positive perception
	Long-Term Vision	"Our goal was to build a business model that can last."	0.45	Moderately positive perception
	Survival	"Our focus was not just on making profits during the crisis but ensuring the survival of our business through ethical practices and long-term resilience."	0.53	Positive perception
	Adaptability	"Adjusting our processes to fit new market demands was crucial."	0.47	Moderately positive perception
	Employee Well-being	"Taking care of our staff's well-being was a priority."	0.65	Positive perception
Transactional leadership			**0.40**	Moderately positive perception
	Task-Oriented Management	"Meeting targets was the main priority."	0.69	Positive perception
	Structured Processes	"We relied on strict protocols to ensure smooth operations."	0.62	Positive perception
	Performance Monitoring	"Keeping track of performance helped us meet targets."	0.57	Positive perception
	Clear but strict Directions	"We implemented strict guidelines and clear instructions to ensure everyone stayed on track and met their targets during the crisis."	− 0.05	Neutral to slightly negative perception
	Rewards and Penalties	"Incentives were provided to encourage better performance."	− 0.02	Neutral to slightly negative perception
	Crisis Management	"We applied a hands-on approach to manage the crisis."	0.59	Positive perception
Transformational leadership			**0.03**	Neutral to slightly positive
	Employee Empowerment	Giving employees the freedom to contribute their ideas was effective."	0.2	Neutral to slightly positive perception
	Inspirational Motivation	"Motivating the team was crucial to maintain morale."	0.03	Neutral to slightly positive perception
	Visionary Leadership	"We encouraged creative thinking to overcome challenges."	0.01	Neutral to slightly positive perception
	Burnout from High Expectations	"The constant push for innovation and excellence was exhausting. Everyone was expected to go above and beyond, which eventually led to burnout."	− 0.11	Very weak negative perception

stability, as highlighted in crisis management literature [56, 57]. During the pandemic, many SMEs in the UAE faced significant operational disruptions, which necessitated adaptive strategies that prioritized resilience, employee well-being, and continuity [58]. The adoption of sustainable leadership reflects these priorities, suggesting that SME leaders prioritized practices that fostered organizational resilience.

Research Question 2: As shown in the results graph, sustainable leadership was the dominant style adopted by UAE SMEs during the pandemic, with a frequency of 37,

indicating that leaders focused on ensuring continuity and sustainability amid crises [56]. Transactional leadership was the second most common, with a frequency of 17, reflecting the emphasis on traditional performance-driven approaches during the crisis. This aligned with transactional leadership theory, which emphasized performance management, accountability, and operational efficiency [59]. The relatively lower adoption of transformational leadership (frequency of 16) suggests that SME leaders placed less emphasis on inspiring teams to innovate, likely due to the extraordinary circumstances that required a more flexible and supportive style.

Research Question 3: The results suggested a notable shift in post-pandemic leadership styles, with transactional leadership increasing significantly to a frequency of 28. This shift suggested that, after the pandemic, leaders began to reemphasize performance management, accountability, and operational efficiency, hallmarks of transactional leadership [59]. Sustainable leadership, however, remained prevalent, indicating a lasting influence of the pandemic on leadership practices, as SME leaders continue to value resilience and sustainability [50]. The decrease in transformational leadership post-pandemic suggested that innovation and adaptability were less emphasized as businesses returned to more stable operations.

Research Question 4: After the pandemic, sustainable leadership (frequency of 32) remained the most dominant style, followed by transactional leadership. This continued emphasis on sustainable practices highlighted the importance SME leaders place on long-term organizational stability and the well-being of employees and stakeholders [56]. The reduced focus on transformational leadership could indicate that leaders now view the post-pandemic era as a time to consolidate gains and reinforce stability rather than drive further transformational change.

5.1 Practical implications

The findings of this study have several practical implications for SME leadership practices in the UAE and beyond. The continued prominence of sustainable leadership highlighted the importance of adopting a balanced approach that addresses both immediate business goals and long-term resilience. As SMEs move beyond the pandemic, maintaining sustainable practices, such as employee support and community engagement, can strengthen their resilience to future disruptions. Additionally, the increased focus on transactional leadership post-pandemic suggested that performance and accountability have regained importance as businesses stabilize. However, leaders should be cautious not to shift entirely away from transformational and adaptive approaches, as these styles are essential for innovation and flexibility in a rapidly changing business environment [60].

It is essential for business leaders to undergo continuous training focused on sustainable leadership competencies. This includes enhancing their adaptability, ethical decision-making, emotional intelligence, and stakeholder engagement. Leadership development programs should incorporate crisis management modules emphasizing sustainability to prepare leaders for future disruptions.

SMEs are encouraged to integrate sustainable leadership principles that balance short-term crisis response with long-term strategic planning. Leaders should adopt practices that promote organizational resilience, ethical responsibility, and social sustainability.

This involves actively considering the well-being of stakeholders, fostering innovation, and enhancing organizational agility.

Policymakers should develop frameworks that support SMEs in adopting sustainable leadership practices. This includes providing financial incentives, technical assistance, and resources to help businesses build resilience against potential future crises. Furthermore, creating networks and platforms for knowledge exchange among SMEs can promote collaborative learning and shared best practices.

The development of a strategic crisis management framework tailored to SMEs is recommended. Such a framework should outline proactive measures, adaptability strategies, and monitoring mechanisms that ensure businesses remain resilient and sustainable even in unpredictable environments. Sustainable leadership involves engaging with stakeholders beyond organizational boundaries. Collaborating with communities, suppliers, customers, and policymakers can enhance resilience by building networks of mutual support and shared goals.

By implementing these practical recommendations, SMEs can strengthen their capacity to withstand future crises and contribute positively to sustainable economic growth. The insights provided by this study also serve as a foundation for developing leadership frameworks and policies aimed at promoting resilience and sustainability in the SME sector.

5.2 Theoretical implications

The findings support the Sustainable Leadership Theory by demonstrating how SMEs in the UAE adopted leadership practices that emphasize long-term viability, ethical decision-making, stakeholder engagement, and resilience. Unlike previous studies that predominantly focused on large corporations, this research highlights how resource-constrained SMEs integrated sustainable leadership principles to navigate the challenges posed by COVID-19. The study confirms that sustainable leadership is not only relevant during stability but also crucial for crisis management and future preparedness.

It bridges the gap between Sustainable Leadership and Crisis Leadership Theories by illustrating how sustainable leadership practices were integrated into crisis management strategies. Crisis Leadership Theory emphasizes rapid response, flexibility, and resilience-building, which were evident in the actions of SME leaders during the pandemic. The study demonstrates how SMEs effectively combined immediate crisis response with sustainable practices aimed at long-term continuity and growth [45].

The findings also align with the principles of Transformational Leadership Theory, which emphasizes visionary leadership, motivation, innovation, and change management. During the pandemic, many SME leaders exhibited transformational qualities by inspiring their employees, promoting creativity, and adapting organizational strategies to overcome challenges. This finding confirms that transformational leadership can be effectively integrated with sustainable leadership to enhance resilience and innovation during crises [14].

It further aligns with Situational Leadership Theory, which emphasizes the need for leaders to adapt their styles according to the situation and the maturity of their employees. During the pandemic, SME leaders demonstrated situational adaptability by modifying their leadership approaches based on the evolving challenges of the crisis. This

flexibility was crucial for maintaining employee engagement, productivity, and well-being under uncertain conditions [46].

5.3 Recommendations

The UAE SMEs should invest in leadership development programs that emphasize sustainable leadership. This would help leaders balance profit-oriented goals with practices that promote social responsibility and environmental sustainability, reinforcing resilience for future crises. Although transformational leadership has decreased post-pandemic, SMEs should continue to encourage adaptive and transformational skills in their leaders. These skills foster an innovative mindset and prepare leaders to respond effectively to future challenges, promoting a culture of continuous improvement [60, 61].

Sustainable leadership prioritizes the well-being of employees and the broader community. By maintaining a focus on these aspects, SME leaders can strengthen employee loyalty, community support, and customer trust, which are critical for long-term success [56]. The emphasis on sustainable and transactional leadership during the pandemic highlights the importance of crisis preparedness. SMEs should establish formal crisis management plans that include strategies for leadership adaptation and employee support, ensuring a structured response in future crises.

The findings of this study offer valuable insights that can help SMEs in areas dealing with a range of crises, including natural catastrophes, economic downturns, pandemics, and geopolitical conflicts. A strategic framework that may be applied to a variety of crisis situations is provided by the UAE's SMEs' adoption of sustainable leadership practices during and after the COVID-19 pandemic. The principles of sustainable leadership, such as ethical decision-making, adaptability, emotional intelligence, stakeholder engagement, and strategic crisis management, are universally relevant. SMEs operating in crisis-affected regions can benefit from integrating these principles to enhance their resilience and ensure business continuity. While this study focuses on SMEs in the UAE, the principles of sustainable leadership and strategic crisis management are broadly applicable to SMEs worldwide. The proposed framework offers a blueprint that can be adapted and applied to different regional contexts, providing practical guidance for businesses seeking to enhance resilience during crises. By demonstrating how these findings can benefit SMEs in various regions facing crises, the study contributes to a broader understanding of crisis-resilient leadership and offers practical solutions that can be adapted to diverse contexts.

6 Conclusion

The review of the literature identified a paucity of research investigating leadership styles adopted during the pandemic era by businesses in the UAE based on their size and sector. This paucity informed this research study which involved interviews (during September–December 2023) involving 70 SMEs with 10 representing each emirate and the 10 SMEs consisted of 2 from each of the sectors of hair salons, pharmacies, convenience stores, mobile shops, and restaurants.

The findings in response to the key research questions outlined in Sect. 1 are provided below.

The results showed that a significant number of SMEs in the UAE altered their leadership styles during the pandemic, with 42 SMEs adopting new approaches while 28

SMEs maintained their existing styles. The most dominant leadership styles adopted by SMEs during the pandemic were sustainable and transactional leadership, highlighting the importance of resilience and adaptability in crisis management. In the post-pandemic era, some SMEs continued to adjust their leadership styles, with 24 SMEs making changes and 46 retaining their previous approaches. Notably, sustainable leadership emerged as the most prevalent style adopted by SMEs after the pandemic, reflecting an increased emphasis on ethical practices, long-term strategic planning, and stakeholder well-being. These findings emphasize the critical role of sustainable leadership in ensuring business continuity and resilience during times of crisis.

In response to the focus of this research exploring leadership styles adopted by UAE SMEs during the pandemic era, the most common leadership style adopted by SMEs before, during and after the pandemic era has been highlighted as the sustainable style where a few businesses did change to a transactional leadership style during the pandemic era. The research highlighted that there was no common pattern or theme for adopted leadership styles amongst the SMEs based on their sector and location in terms of the emirate. Regardless of leadership style change before, during and after the pandemic era, the most common rationale given by SMEs for leadership style change was that it may improve business growth/survival and the most common rationale given by SMEs for not changing leadership style was that there was no requirement by the owner-managers as they were happy with the way the business was operating.

In terms of practical implications, the findings from this research may inform smaller businesses, especially, in the context of the Middle East regarding appropriate leadership styles that may be employed in crises like the COVID-19 era to ensure the survival and growth of smaller businesses which are crucial to job creation and the national economy of nations around the world as SMEs make up over 90% of all businesses [6].

Therefore, the findings from this research may inform UAE-based policymakers regarding developing strategies to ensure the survival and growth of SMEs which aligns with the UAE government's vision of increasing the number of entrepreneurs in the population [51].

6.1 Limitations and suggestions for future research

The development and application of the CLF 2 have led to a theoretical contribution from the findings of this research where the adaptability of the theory may vary based on geography, business size and business sector-based contexts.

The authors of this research encourage future research on the same area based in other regions investigating the link between leadership styles and areas like culture and innovative behaviours as the authors believe that the findings may vary in comparison to the findings of this paper.

Future research could expand on this study by exploring whether shifts in leadership styles differ significantly across various industries and regions within the UAE, providing deeper insights into how industry-specific factors influence leadership practices during crises. A longitudinal study would allow researchers to track changes in leadership styles over a longer period, examining whether the post-pandemic shift toward transactional leadership is sustained or if other styles become more prominent as businesses evolve. Additionally, future studies could investigate how digital advancements, accelerated by COVID-19, have influenced leadership styles and decision-making in SMEs, particularly

in sustaining innovation and adaptability. Incorporating employee perspectives would provide a more comprehensive view of how leadership styles impact engagement, productivity, and well-being, especially during crises. To enhance generalizability, cross-cultural studies could explore similar questions in other countries, offering insights into cultural factors that may influence sustainable and transformational leadership practices. Together, these areas of exploration would contribute to optimizing leadership practices in SMEs to enhance resilience and adaptability in an increasingly uncertain business environment.

Appendix

Consent to participate

To Whom It May Concern,

I, --, confirm that I have read and understood the information provided regarding the research study titled "Sustainable Leadership Styles Adopted by Small Businesses in the UAE During COVID-19". I acknowledge that my participation in this study is entirely voluntary.

I understand that:

1. My participation is confidential, and my personal information will not be disclosed.
2. I have the right to withdraw from the study at any time without facing any penalties.
3. I have had the opportunity to ask questions about the study and have received satisfactory answers.
4. I hereby give my consent for the publication of the findings derived from my participation in this research, with the assurance that my identity and personal information will remain confidential.

By signing below, I give my informed consent to participate in this research study.

Participant's Name: _____
Signature: _____
Date: _____
Researcher's Name: _____
Signature: _____

Author contributions
A.T., S.AS., and N.K. conceptualized and designed the study. A.T., C.S. and N.K. conducted the literature review and formulated the research framework. T.M. and S.A. collected and analyzed the data, while A.T. and S.G. contributed to the statistical analysis and interpretation of results. S.AS. and A.T. drafted the main manuscript text, and C.S., S.AS., T.M. provided critical revisions and editorial support. All authors reviewed and approved the final manuscript. R.M.B contributed in the revision of the manuscript addressing some of the review comments.

Availability of data and materials
The data set supporting the analysis will shared on request to corresponding author.

Declarations

Ethics approval and consent to participate
The APA ethical guidelines (APA, 2017) were followed for Human Ethics and for Consent to Participate declarations—see Appendix.

Competing interests
The authors declare no competing interests.

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