

The Efficacy of Independent Restaurant Owners in Navigating Food Safety Challenges During the COVID-19 Pandemic: A Qualitative Pilot Study

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ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic inflicted deep wounds on the foodservice industry. Independent restaurants, like many counterparts within the larger foodservice industry, were not spared numerous unprecedented challenges, especially with limitations on dine-in services. Hence, this pilot study aims to explore the experiences of an independent restaurant owner in navigating food safety challenges during the COVID-19 pandemic in Malaysia. The study examines the strategies employed to overcome these challenges, focusing on assessing the efficacy of the approaches adopted in maintaining food safety. This pilot study employed a retrospective qualitative case study approach. Purposive sampling was used to select a single independent restaurant owner in Bandar Segamat, Johor, Malaysia. Data were collected through an in-depth, semi-structured interview utilising open-ended questions to explore the independent restaurant owner's experiences. Thematic analysis was used to identify recurring themes within the interview data. Correspondingly, the thematic analysis revealed four key themes, namely the challenges of compliance with evolving regulations, the impact of financial constraints on food safety practices, the adaptive capacity for strategy implementation, and the role of transformative learning in overcoming the impact of the pandemic. These findings suggest the need for coordinated efforts between the government, industry leaders, and education institutions so that the food industry in Malaysia can maintain its competitiveness, particularly post-pandemic. Hence, integrating digital tools, strategic agility, and continuous learning can position the Malaysian food industry as a resilient and forward-thinking sector capable of overcoming future uncertainties.

Keywords: Challenges, COVID-19, Efficacy, Food safety, Independent restaurant

INTRODUCTION

Meanwhile, the foodservice industry plays a crucial role in meeting diverse dining preferences, and it faces significant challenges such as shifting consumer preferences, fierce competition, operational efficiency, workforce management, new technologies, rising costs, and strict food safety standards (Singh et al., 2024; Zanetta et al., 2024; Moreno-Gené et al., 2023; Messabia et al., 2022; Kaskela et al., 2021). A segment that has not been explored within the foodservice industry is independent restaurants. This sector was particularly hit hard during the COVID-19 pandemic.

The COVID-19 pandemic severely impacted the restaurant industry, with a 0.06% decline in daily demand for every 1% increase in new cases (Yang et al., 2020). The industry's susceptibility to infection and cross-contamination was inadvertently due to the high physical presence of customers (Donthu & Gustafsson, 2020). Despite overcoming past crises, the pandemic jeopardised the future of all restaurant types, heavily affecting the

global economy, particularly in tourist destinations, and the livelihoods of thousands of employees (Madeira et al., 2020). Moreover, lockdown restrictions significantly contributed to this impact.

Independent restaurant owners are more vulnerable to failures in their initial years due to limited experience, inadequate funding, and lack of formal standards of operations (Ghani et al., 2022). This vulnerability was further magnified with the imposition of movement restrictions during the COVID-19 pandemic, resulting in significantly reduced dining-in customers (Charlebois & Music, 2021). Moreover, restaurant owners needed to consider factors such as the nature of their business, premises layout, communication methods, and staff training (Kaushal & Srivastava, 2021) to minimise disease transmission.

Studies have reviewed the effectiveness of physical distancing measures in restaurants (Khoa et al., 2021; Gursoy & Chi, 2020). Previous researchers have found a positive association between spatial distance and safety (Maderthaner et al., 1978). Employees faced difficulty practising social distancing as close interactions during service delivery were unavoidable (Avdiu & Nayyar, 2020). Online Food Delivery (OFD) services saw higher customer concerns for hygiene and safety. Complaints about food and packaging quality, hygiene, safety measures, and delivery delays increased by 100% from 2019 to 2020 (Soni, 2020). For instance, inadequate packing quality often leads to food mix-ups during delivery. Consumers' expectations of high service quality also led to additional provider costs (Singh et al., 2024). Restaurants had to reorganise activities to prioritise health and safety, such as by adjusting operating hours and reducing seating capacities (Mongey et al., 2021). However, some food companies considered maintaining physical distance less significant (Esposito et al., 2021).

Technological advancements during the pandemic saw restaurants using robotics and AI (Zeng et al., 2020). Social media became crucial for promotions, with restaurants partnering with online service providers to support operations (Sardar et al., 2022). Small-sized, privately owned restaurants often operate on tight budgets, particularly benefiting from these strategies (Najib et al., 2020). The use of facemasks facilitated successful service interactions during the crisis (Kong et al., 2021). However, some restaurants struggled with shortages of essential supplies like gloves and sanitisers (Prasetya et al., 2021). Additionally, routine temperature checks were not always effective in detecting COVID-19 despite being considered a key measure to reduce contagion (Stave et al., 2021).

During the COVID-19 pandemic, preventing virus transmission among food handlers was a major global concern. Foodservice operators had to ensure safe food preparation, clean kitchens, and employees equipped with Personal Protective Equipment (PPE) (Cable et al., 2021). Although COVID-19 is not classified as a foodborne pathogen, there are concerns about its survival on raw animal products (Pressman et al., 2020). The debate continues due to inconsistent evidence linking food and packaging to COVID-19 transmission (Han et al., 2021). Food safety risks arise at every operational step, from order taking to delivery. If food handlers fail to follow proper measures like hand hygiene and social distancing, they could spread the virus (Shahbaz et al., 2020).

Preventing virus transmission is challenging due to typical working conditions and hygiene standards in the foodservice sector (Shahbaz et al., 2020). Reducing employee numbers, organising spaces for one-way traffic, and introducing physical barriers are problematic (Trmčić et al., 2021). Other than that, issues like unreliable equipment further complicate cleaning and maintenance (Trmčić et al., 2021). Managing foodservice risk involves complex processes that cannot always meet customer expectations (Charlebois & Music, 2021).

Sanitisation and disinfection are critical for direct food contact surfaces, non-food contact surfaces, cutting surfaces, utensils, and small wares (Shahbaz et al., 2020). Handling cash, debit, or credit cards also poses transmission risks. Managers and cashiers inevitably come into contact with shared items, increasing transmission risk. Therefore, food handlers must stay informed about safety developments to avoid contamination and practice (Omar, 2020). Restaurant managers must ensure all employees practice necessary food safety measures (Jevšnik & Raspor, 2022), as consumers have become more vigilant about how food is handled and served (Aday & Aday, 2020; Meixner & Katt, 2020).

Prior studies have mainly focused on restaurant responses rather than on-site effectiveness (Zapata Cuervo et al., 2023; Messabia et al., 2022). Additionally, greater attention was paid to global restaurants, small businesses, and the hospitality industry as a collective whole rather than the particularities of independent restaurants (Dube et

al., 2021; Katare et al., 2021). Lastly, the earlier methodological approach was predominantly heavier on the survey, with limited qualitative findings on independent restaurants (Sun et al., 2022; Brizek et al., 2021). Drawing on the aforementioned investigational gaps, this pilot study was conducted to address the following research question: How effective were the strategies employed by independent restaurant owners in addressing the challenges of maintaining food safety during the COVID-19 pandemic?

Resilience and Adoption of Strategies in Restaurant Management

The Hospitality, Restaurant, and Institutional (HRI) industry in Malaysia was one of the fastest-growing sectors of the economy, propelled by tourism and consumer spending. In 2018 and 2019, the HRI service category contributed 54.7% and 55% to the Malaysian GDP, respectively (USDA Foreign Agricultural Service, 2019). Unfortunately, the sector suffered significantly during the COVID-19 pandemic, recording a 5.5% decline in 2020 and a subsequent 1.9% drop in HRI businesses (USDA Foreign Agricultural Service, 2021; 2022). This downturn was primarily caused by the pandemic and subsequent government-imposed restrictions. Below are some strategies implemented by business owners in response to these challenges:

Adaptations to stay afloat: transitioning to off-premises services

To survive during the pandemic, full-service restaurant operators explored various strategies to keep their doors open. One key strategy was adopting off-premises services, such as online food ordering and delivery (Shankar et al., 2022; Gavilan et al., 2021). Transitioning to off-premises services required restaurant owners to rethink how they operated, including shifting human capital and providing employee training (Lee & Ham, 2021; de Freitas & Stedefeldt, 2020). In Malaysia, the increase in food delivery was evident in the usage of applications like Foodpanda and Grabfood (Statista, 2023). As COVID-19 cases rose, more customers avoided dining indoors, prompting restaurants to offer take-out and delivery services (Jeong et al., 2022).

Embracing online food delivery

The pandemic drove restaurants to shift their strategies for OFD services in line with increased demand for convenient and contactless dining (Gavilan et al., 2021). OFD services allowed restaurants to reach more consumers, and customers enjoyed the convenience of ordering their favourite dishes with ease (Shankar et al., 2022). Besides third-party platforms like Swiggy, Zomato, and Uber Eats, some restaurants launched their own web applications to bring their services closer to their customers (Williams et al., 2020; Lo et al., 2020).

Reducing inter-personal contact

Restaurants also quickly supported private dining rooms and embraced contactless payment options like QR-code payment and e-wallets to address consumer concerns about germs and the spread of COVID-19 viruses (Zhong & Moon, 2022). In this regard, Roggeveen and Sethuraman (2020) argue that digital payment systems are a safer alternative to cash, reducing the risk of COVID-19 transmission.

Adapting indoor dining practices

Restaurant owners needed to ensure safe dining environments to encourage consumers to return to indoor dining when COVID-19 restrictions were eased. This involved reorganising dining spaces to comply with social distancing guidelines (Kim & Liu, 2021). Some restaurants removed tables altogether, while others marked certain tables as unavailable to maintain distance (Zhang et al., 2021). On the other hand, some table chairs were removed so that seating could be more spaced out. These changes aimed to provide a safe and pleasant dining experience while adhering to hygiene standards and safety protocols (Chen et al., 2021).

Enhancing cleaning and safety measures

There were additional concerns related to the COVID-19 outbreak; diners were reported as being more cautious about indoor dining (Palabiyik et al., 2023; Yang et al., 2020). Therefore, restaurants needed to implement operational enhancements that promoted cleaner environments, including improved cleaning practices and thorough training in ensuring COVID-19 safety measures were adhered to by staff (Jeong et al., 2022).

According to Kim *et al.* (2021), visible cleaning and sanitation practices are important in reducing service encounters that could trigger restaurant customers' fears.

Ground Theory

This study is based on the premise of the transformative learning theory, which explores how individuals adapt their thinking in response to new information and experiences (Mezirow, 1997). A review by Paprock (1992) outlines Mezirow's ten phases of transformative learning. However, these phases are not always sequential, and not all phases may be experienced in every instance. These phases include a disorienting dilemma, self-examination, critical assessment, recognition of the need for change, exploration of new roles, planning a course of action, acquiring knowledge and skills, trying new roles, building self-competence, and reintegrating transformed roles into life.

Since the pandemic created conditions for 'disorienting dilemmas' to occur, the challenges it posed would prompt hospitality practitioners to reevaluate their business (Hao et al., 2020; Altinay & Arici, 2022). Although the theory has been explored within the hospitality and tourism sectors (Coghlan & Weiler, 2018), there is limited research on how restaurant owners (particularly the independent ones) might undergo transformative learning during a crisis like the COVID-19 pandemic.

METHODOLOGY

Before conducting a full-scale study in the field, this pilot research employed a qualitative approach to explore the effectiveness of the strategies employed by an independent restaurant owner in navigating food safety challenges during the COVID-19 pandemic. The data were collected in May 2024 through an in-depth, open-ended, semi-structured interview conducted at the restaurant owned by the participant. The interview, conducted in the participant's preferred language (*Bahasa Malaysia*), lasted approximately 30 minutes. The participant signed a written informed consent form prior to the interview and was also assured of confidentiality and anonymity.

Regarding the study sample, a single independent restaurant owner from Bandar Segamat, Johor, Malaysia, was purposively selected based on a referral from a researcher colleague. She was invited to participate through a WhatsApp message. The participant met the inclusion criteria of being an independent restaurant owner with at least six years of experience in the industry. The business would have been excluded if it had belonged to a franchise or chain restaurant. Additionally, the participant kept the restaurant business going during the COVID-19 pandemic.

The objectives of the study were explained to the participants. An interview guide was utilised to facilitate the conversation and ensure the study objectives were met. The interview was recorded and subsequently transcribed by a bilingual researcher fluent in both English and Bahasa Malaysia. The translated transcript was subjected to a thematic analysis to identify preliminary patterns and themes. Using Braun and Clarke's (2006) six-stage model, this process included familiarising oneself with the data, creating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing the report.

Ethical Considerations

Ethical approval for this study was obtained from the university Research Ethics Committee (Ref. No.: REC/05/2024 (PG/MR/172)).

RESULTS

The analysis revealed four key themes: the challenges of compliance with evolving regulations, the impact of financial constraints on food safety practices, the adaptive capacity for strategy implementation, and the role of transformative learning in overcoming the impact of the pandemic.

Challenges of Compliance with Evolving Regulations

The restaurant owner faced significant challenges in complying with constantly changing COVID-19 regulations while striving to maintain food safety standards. Frequent inspections by various authorities added to the burden of compliance. According to the participant, many agencies often came to check her restaurant. "Sometimes the municipal council, sometimes the police, it was really annoying." Her frustration was palpable as she recounted the intensive inspections, "During Ramadan, if I'm not mistaken, the people from the municipal council, health office, and the police came in 5 or 6 cars."

Ensuring customer compliance with safety measures, such as mask-wearing and social distancing, proved difficult. The owner mentioned, "There were stubborn people who wanted to dine in even though it wasn't allowed." She also noted, "We had to be understanding; sometimes they were truck drivers, and they wanted to eat, but they couldn't eat in their lorry," highlighting the challenges in enforcing safety measures while accommodating the needs of specific customers.

Impact of Financial Constraints on Food Safety Practices

Financial constraints had a direct impact on the restaurant's ability to maintain optimal food safety practices. The owner expressed her woes, "It was financially painful. Money wasn't coming in. It was hard to pay the electricity bills, water bills, everything." Supply chain disruptions and increased ingredient costs further compounded these challenges. The owner noted, "It was hard to get supplies. Vegetables were expensive, and not many lorries were operating."

Moreover, the frequent breakdown of temperature scanners added to the financial burden faced by the restaurant in maintaining the necessary equipment for COVID-19 safety protocols. The owner mentioned, "The thing that scans, it breaks down quickly," and further elaborated, "We had to replace it many times. Then there's the sanitiser." These remarks highlighted the additional expenses incurred by the restaurant owner as she had to make repeated purchases of temperature scanners and other essential safety equipment during an already financially challenging period.

Adaptive Capacity for Strategy Implementation

Despite numerous challenges, the owner demonstrated adaptability in implementing new strategies to ensure food safety. Strict adherence to COVID-19 regulations was a key measure taken. "If they came with children or their spouses, we had to ask them to sit at the far end."

The restaurant also adapted its operations financially by reducing staff and increasing the owner's involvement in food preparation and service. The owner explained, "During COVID, it was just three of us. I cooked alone, and my two children managed the front, making drinks and serving customers." This adjustment in roles and responsibilities showed the owner's flexibility in responding to the challenges.

Furthermore, the restaurant embraced new service models to maintain food safety and business continuity. "We started doing more deliveries, even though we didn't do them before. We used Grab." The adoption of food delivery services demonstrated the restaurant's ability to innovate and adapt to the changing market conditions caused by the COVID-19 crisis.

Role of Transformative Learning in Overcoming the Impact of the Pandemic

The owner reflected on the limitations of certain strategies, stating, "I don't dare to say if it was effective. Sometimes, we had to be lenient, like if customers came with children, we couldn't just let them leave their children in the car." This critical examination of existing practices aligned with the transformative learning theory by Mezirow (1997). For example, the owner's comments on the difficulties experienced during the pandemic evidenced a transformative learning process. The owner explained, "We couldn't do much. We were bored. We didn't know what to do. Money wasn't coming in." Apparently, the owner had evaluated the state of affairs critically and was aware of the need to change, in line with the transformative learning theory, which suggests that awareness of one's biases, assumptions, and values is necessary in a crisis. The owner had come to

value the need for change to meet operational requirements. She elaborated, "If they ordered food, we delivered it to their homes. Even if someone was sick or something, we still provided our service." Despite the challenges, this openness to new ways of operating and serving customers was aligned with the transformative learning process.

The owner's reflection on the importance of community support during the pandemic also highlighted a shift in perspective. The owner mentioned, "The people here, they had a Yasin recital group and a mosque group, already had our phone number, so they called via WhatsApp and asked us to deliver food." This recognition of the role of community networks in supporting the local independent restaurant during the pandemic crisis implied that a transformative learning experience had altered the owner's understanding of her business relationship with its community.

DISCUSSION

The results of this pilot study shed light on the efficacy of the strategies employed by an independent restaurant owner in navigating challenges in maintaining food safety during the COVID-19 pandemic. First, the challenges of compliance with evolving regulations faced by the independent restaurant owner in this study were consistent with the experiences of food businesses worldwide. For instance, as regulations evolved to curb the transmission of the virus, factors like demographics and social influences impacted the owner's responses to the changes in rules and guidelines (Ukonu & Mbamalu, 2021). These findings were supported in the present study as the restaurant owner acknowledged that she did not "dare to say if it was effective" in enforcing social distancing rules because she frequently had to tolerate customers who brought children, allowing them to dine together or allowing truck drivers to dine on the premises. The owner admitted that there were instances when she had to be "lenient" and offered explanations for non-compliance in the event inspectors visited the restaurant. Such findings demonstrate the challenges independent restaurants face in trying to strike a balance between strict adherence to changing safety guidelines and maintaining a high level of customer satisfaction. The above-mentioned non-compliances are consistent with Akesson *et al.* (2022), who found that a significant number of customers did not follow the SOPs during the COVID-19 pandemic.

Second, the severe financial strain experienced by the independent restaurant owner impacted her entire operations, raising concerns about the sustainability of food safety procedures. The owner lamented the fall in revenue. Findings in this and previous studies confirm that a lack of revenue and higher expenses hampered small food businesses' ability to invest in necessary food safety supplies, equipment, and training (Aday & Aday, 2020). Moreover, supply chain issues further increased the price of ingredients (Nurul Eiman *et al.*, 2021), jeopardising strict compliance with safety procedures. The owner's situation exemplified this vicious cycle as she was forced to downsize her staff and adopt cost-cutting measures such as cooking alone while struggling with bills and providing for her family. Financial constraints posed a challenge when essential equipment, such as the temperature scanner, broke down frequently and had to be replaced. These experiences highlight the critical need for targeted financial aid and resources to help independent restaurants maintain food safety standards during a public crisis.

Third, despite facing numerous challenges during the COVID-19 pandemic, the restaurant owner was able to adapt and apply new measures to maintain food safety. The owner demonstrated exceptional flexibility in implementing recommended strategies, such as strict adherence to protocols like having visitor logs, temperature checks, and hand sanitiser, all in line with COVID-19 pandemic guidelines (Wei *et al.*, 2022). The owner also adapted operationally by reducing staff and increasing her personal involvement in food preparation and service to cope with mounting financial pressure. The restaurant owner also embraced innovative service models like food delivery platforms to reduce in-person contact risks while maintaining business continuity (Esposito *et al.*, 2021). She stated that she did not make use of food delivery services such as Grab before the pandemic. These experiences vividly illustrated the critical role of an agile, resilient mindset and a willingness to innovate in the face of adversity, enabling the independent restaurant to navigate unprecedented disruptions while prioritising food safety.

Fourth, the restaurant owner's experience exemplified a transformative learning process that fostered resilience and adaptability throughout the COVID-19 pandemic. Through critical self-reflection spurred by extreme

financial challenges, the owner reevaluated long-held practices and beliefs about business operations. Her reflective reassessment of the challenging situation aligned with the core principles of the transformative learning theory (Mezirow, 1997). Furthermore, the owner demonstrated a willingness to learn and adapt by embracing innovative solutions like food delivery service ("We also use Grab") and increasing her personal involvement in operations ("I cooked alone"). The owner's recognition of community support from locals like the "Yasin recital group" and a "mosque group" for customer outreach suggested a transformed understanding of the restaurant's relationship with its community. Leveraging community connections showed how transformative learning, characterised by critical reflection, could foster resilience and adaptability, enabling independent restaurants to navigate unprecedented crises successfully (Duchek, 2020). In this pilot study, the owner's transformative journey offered initial insights into the learning processes that could empower small independent restaurant businesses to overcome disruptive challenges during a crisis.

CONCLUSION

The results of the pilot study add to existing knowledge on the efficacy of independent restaurant owners in navigating food safety challenges during the COVID-19 pandemic. The findings indicated that despite employing various strategies, including rigorous adherence to COVID-19 procedures and adopting innovative service delivery, the restaurant experienced mixed results due to financial constraints, supply chain challenges, and other practical limitations.

Aligning with Fairlie's (2020) study, financial constraints have emerged as a primary struggle for small business owners. Adhering to stringent sanitation and sanitisation standards to eliminate harmful pathogens and maintain food safety (Nurul Eiman et al., 2021) requires substantial financial support. Other studies have also emphasised the vulnerabilities in the food supply chain, highlighting concerns over food production, processing, distribution, and consumer demand (Aday & Aday, 2020; Nicola et al., 2020).

Recognising other practical challenges, such as the frequent breakdown of temperature scanners and adjustment to work methods due to staff downsizing, are some of the critical issues that warrant attention from policymakers and stakeholders. Unlike franchise or chain systems, independent restaurant owners require extra guidance and financial support to sustain food safety protocols such as the use of digital menus, digital thermometers, and no-touch hand sanitisers (Mohammadi-Nasrabadi et al., 2021).

Additionally, the pilot findings revealed a general conceptualisation of transformative learning and the role of community support. A full-scale future study could investigate potential areas for transformative learning among independent restaurant owners during or post-pandemic crisis, such as understanding how owners make sense of the pandemic as a 'disorienting dilemma,' the specific strategies used by owners to 'reconstruct their understanding' of restaurant business, and the role of social support networks and external resources in facilitating transformative learning.

This pilot study has a few limitations. First, the generalisability of the findings is limited due to the interview responses taken from a single participant. Thus, the findings may not represent the perspectives of independent restaurant owners as a whole. Second, the study's reliance on the independent restaurant owner's perspective may not fully capture the diverse range of viewpoints held by other stakeholders. Finally, the study utilised a Point in Time (PiT) methodology without extensively exploring their long-term viability or implications. Future research could investigate the long-term impact of the pandemic on food safety practices and the enduring sustainability of implemented strategies.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request. Data sharing is subject to ethical and confidentiality constraints.

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Conflict of Interests

The authors declared that they have no conflict of interests.

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