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REVIEW ARTICLE

Food Safety Challenges in Malaysia's Private *Tahfiz* Institutions: A *Halalan Tayyiban* Narrative Review of Gaps

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Food safety is relevant to every step in the food supply chain from farm to fork. Novel foodborne pathogens and the emergence of antimicrobial resistance are concerning health threats that challenge conventional food safety control measures. Investigation on food safety challenges in private *Tahfiz* institutions in Malaysia reveals that both financial and operational constraint is probably a factor that hampers the application of safe food handling and hygiene practice. However, there aren't many academic studies that focus on food safety in private *tahfiz* institutions, which shows a big gap in research needed to create guidelines that fit their specific needs and religious practices. This narrative review aims to identify research gaps of food safety challenges in private *tahfiz* institutions from the *Halalan Tayyiban* perspective. The research was conducted using a narrative review framework to examine available text on challenges of food safety in private *Tahfiz* institutions in Malaysia, and particularly from the perspective of the *Halalan Tayyiban* principle. The narrative review revealed several food safety challenges in Malaysia's private *tahfiz* institutions as research gaps from the *Halalan Tayyiban* perspective, including: (a) widespread non-compliance with *Halalan Tayyiban* standards; (b) absence of standard operating procedures (SOPs); (c) limited access to training and certification; and (d) lack of institutional monitoring and enforcement. In conclusion, in this narrative review, the food safety challenges in private *Tahfiz* institutions in Malaysia are complex and interrelated to policy, practice and religious compliance, especially from the *Halalan Tayyiban* perspective.

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Contribution/Originality: This review contributes to the literature on food safety in Malaysia's private *tahfiz* institutions by highlighting gaps through a *Halalan Tayyiban* lens. This review emphasizes the need for context-specific strategies that integrate religious values and hygiene standards to enhance student well-being, institutional practices, and compliance with food safety principles.

1. Introduction

Food safety is relevant to every step in the food supply chain from farm to fork. Novel foodborne pathogens and the emergence of antimicrobial resistance are concerning health threats that challenge conventional food safety control measures. The potential for foodborne diseases is further exacerbated by rapid urbanisation, poverty and inadequate regulation enforcement, a condition particularly common in low- and middle-income countries (Subedi et al., 2024). Addressing these challenges involves international cooperation, infrastructure development, and the implementation of emerging technologies such as blockchain and AI (Kovalchuk, 2021). Consumer and food handlers' education and awareness are also critical to the development of global food safety systems (Madilo et al., 2024). In low-income countries, there are also additional food safety challenges due to informal food markets and limited government controls. Strengthening regulatory mechanisms and advocating for cross-border cooperation must be prioritised to mitigate health risks and to protect the integrity of the global food chain. Investigation on food safety challenges in private *tahfiz* institutions in Malaysia reveals that both financial and operational constraint is probably a factor that hampers the application of safe food handling and hygiene practice. Some have moved towards self-reliance, including their food production, and food relief strategies to continue operating, thus self-imposed additional responsibility for ensuring food safety and sanitation (Ab Arif et al., 2024). In addition, other widespread studies, conducted in educational institutions throughout Malaysia, have reported that a significant proportion of food handlers are inadequately trained, and hygiene is particularly poor and cramped pertaining to hand washing and food storage as well (Mohamad Riza et al., 2023). Observations from food workers, from testimonials, illustrate consistent bad behaviours such as glove abuse, bad sanitising of surfaces and temperature abuse. Results could be enhanced with more frequent training, greater regulatory oversight, and a food safety culture designed for the religious education environment. These factors highlight the need for training, awareness on food safety and proper management in the educational and religious centres.

However, there aren't many academic studies that focus on food safety in private *tahfiz* institutions, which shows a big gap in research needed to create guidelines that fit their specific needs and religious practices. While food safety in the context of educational institutions is important, literature about private *tahfiz* institutions is scarce. Guidance for general food hygiene may disregard the specific religious and operational mores of such schools. A study at Alhikmah Tahfidz School, Indonesia, on standardised food protocols recommended the need for safety frameworks (Sholichin et al., 2025). The current research predominantly focuses on curriculum and halal compliance, often neglecting food hygiene practices (Rasyidi & Setiawan, 2021; Muna et al., 2024). The research study emphasised the importance of healthy food and beverages in enhancing memorisation, but it did not examine the overall safety of these foods (Muhammad Saidi

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& Jamil, 2021). Closing this gap is important to ensure the health of students and to be sure that the food service in *tahfiz* schools adheres to religious and public health needs.

Highlighting the lack of research in food safety issues related to private *tahfiz* institutions from the concept of *Halalan Tayyiban*, this would bring a lot to contribute towards wellbeing and spirituality. This guarantees that the food served is not just halal but also wholesome, safe, and nutritious according to Islamic dietary laws. This double focus reflects a fuller concept of food safety as clear of relics of physical dirt or soil, and also of dirt respectively rooted in ethical provenance and spiritual rectitude. While many halal products and services in Malaysia get halal certified, the tayyib (fit for consumption) dimension is not so well catered for; certification tends to be based on whether goods and services are technically halal or not. Nordin et al. (2024) concluded that, although domestic halal standards are satisfied, the concurrent dimensions of tayyib, which include clean, fortification, and moral sourcing. Several issues are inadequately addressed, leading to a sub-optimal understanding of *Halalan Tayyiban* usage as a whole. Customising frameworks to incorporate specific institutional behaviours, such as those within *tahfiz* schools, could help close this gap as well as ensure better overall congruence with Islamic beliefs and expectations of food safety. By working to bolster food governance through this lens, *tahfiz* schools can improve student welfare and public trust in their practices (Mohd Sirajuddin & Mahaiyadin, 2022). Including the *Halalan Tayyiban* framework in food safety research helps create food safety solutions that are acceptable to the culture and follow Islamic principles while meeting today's public health standards.

1.1. Research Objectives

This narrative review aims to identify research gaps of food safety challenges in private *tahfiz* institutions from the *Halalan Tayyiban* perspective.

2. Literature Review

Food safety is an important issue in Malaysia with regard to private *tahfiz* institutions since the compliance with the *Halalan Tayyiban* (lawful and wholesome) concept has its specific problem. Many of these establishments face problems concerning management, storage, preparation, and food handling, which can jeopardise food safety and public health. In light of their joint religious and educational purposes, these institutions are faced with the dual burden of regulatory compliance and day-to-day operations governed by food safety requirements.

Recently, the consequences of poor food safety practices have gained much attention in many studies. For example, the increase in foodborne diseases and their connection to poor food handling behaviours raises concerns about the current levels of food safety knowledge among active food handlers in Malaysia. Studies showed that Malaysian consumers believed that the taste was more important than safety, leading to an increase in threatening signs of more food poisoning outbreaks that result from unsafe food conditions due to the gap between attitudes and practice among food handlers (Ali et al., 2022a). This knowledge gap is a daunting challenge faced by organisations that aim to adhere to the *Halalan Tayyiban* principles, which not only demand the sourcing of food from ethical sources but also the preservation of food handling methods to avoid food contamination.

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Forced legislative frameworks are necessary to create a healthy food environment in such institutions. The enforcement of food safety regulations is clearly an aspect that leads to food safety issues in the private *tahfiz* institutions in Malaysia. The Food Act 1983 regulates food safety and quality assurance in Malaysia (Prieto & Hanafi, 2023). Furthermore, such establishments require improved training for their food handlers. It has been reported from some of the previous studies that despite the decent levels of food safety knowledge, people do not practice processing and commoditising the food safety commodities in their daily routine, indicating a wide gap between knowledge and practice (Nisha et al., 2020). Addressing this implementation gap through focused training could inform food handlers to adopt relevant food safety practices and, in turn, comply with the *Halalan Tayyiban* expectations.

In addition, the adoption of emerging technologies, for example, smart food safety monitoring devices, into the food safety of Malaysia may further enrich the food safety picture in Malaysia. New developments of food safety monitoring technology may improve the food quality assurance process, which could lead to the next step of food safety monitoring technique advancements (Bazsefidpar et al., 2023). There are potential uses of such technologies in *tahfiz* institutions, where the real-time monitoring of food safety parameters would markedly increase their operational standards. Working in parallel with public-private partnerships that can share resources and information, these technologies have the potential to drive a more efficient food safety regime.

The story of food safety in Malaysia is influenced by socio-economic aspects that contribute to food security and safety practices. The increase in food insecurity observed in crises, as evident in the COVID-19 pandemic, would exert visible pressure on food system networks, which may also somehow affect food safety (Thilmany et al., 2020). The pandemic has changed consumer habits, using the internet to access food, which may not be safe (Fanzo & Miachon, 2023). This discrepancy has implications for the food that is being served in institutions such as *tahfiz* schools, where food procurement decisions have been influenced by cost rather than safety. This attitude needs to be corrected through education, which emphasises the link between the choice of foods and food safety.

Investment in infrastructure is critical. These facilities may not be present in many private *tahfiz* institutions, resulting in increased prevalence of foodborne disease (Rajakrishnan et al., 2022). Such an intervention, coupled with government and institutional support in improving kitchen facilities and promoting hygienic practices, would work wonders in terms of food safety in these settings. Furthermore, if waste management and sanitation could be addressed comprehensively in a systematic manner, the issue of food safety would be addressed similarly (Brohan et al., 2021). Consumer and school administrator education is key to encouraging safe food practices. More effort to promote the *Halalan Tayyiban* principle might trigger a higher demand for safety-compliant food (Hamzah et al., 2020). The concentration should not be just on following regulations but on developing an appreciation for food safety and quality based on the concept of *Halalan Tayyiban*. Incorporation of cultural and religious food safety education in curricula may contribute, in the long term, to the desired changes in food safety perceptions and practices.

The verification of halal certification is also not an easy task, and not only becomes difficult for compliance, but it also affects consumer confidence. There have been cases of counterfeit halal certifications, which led to consumers feeling indifferent about them

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(Wahyuni et al., 2021). Dealing with this complexity will require the harmonisation of halal certification and rigorous audits of halal food supplies to ensure that these comply with safety regulations to build confidence and trust among all parties concerned, including the public. The cooperation of relevant parties, such as the educational department, health department, and religious organisations, would be important to provide specific guidelines and protocols on food safety in private *tahfiz* institutions. Another research gap in Malaysia's food safety narrative is the need for more encompassing studies to exclusively pay attention to the distinctive settings and nature of operations of these establishments (Agyemang & Kwofie, 2021). Further research should focus on identifying institution-specific adequately addressed challenges to food safety and halal compliance in these settings for tailored, culturally and context-sensitive solutions.

Finally, private *tahfiz* institutions in Malaysia experience a range of challenges in food safety that cut across compliance with regulations, educational promotion, consumer perception and technological development. This will help reduce risk, and better meet safety requirements of food systems at all layers (farm to table), through relevant training, capital for infrastructure, outreach to the public and collaborative research models, and ultimately establish resilient food safety systems that are in line with all those involved in food systems and aim to fulfil the value of *Halalan Tayyiban*, ensuring good health and well-being.

3. Research Methods

The research was conducted using a narrative review framework to examine available text on challenges of food safety in private *tahfiz* institutions in Malaysia, and particularly from the perspective of the *Halalan Tayyiban* principle. This method was selected for its flexibility and ability to combine evidence from a variety of sources in order to provide a comprehensive overview of the topic in question. Multiple academic databases, including Semantic Scholar, Google Scholar, Scopus, and Web of Science, were searched to enable a wide and exhaustive review. The main search terms included "food safety," "tahfiz institutions," "*Halalan Tayyiban*," "Islamic boarding school," and "Malaysia," which were used in various combinations during the search. Boolean operators "AND" and "OR" were used to narrow down the returned search with consideration for the inclusion of both peer-reviewed publications and grey literature applicable to the context.

The inclusion criteria included articles written in English with a focus on food safety practices in religious education institutions (mainly *tahfiz* schools), halal guidelines and public health in Malaysia or similar Islamic educational settings in the years between 2020 and 2025. Studies that presented empirical data, theoretical perspectives or policy debates on food hygiene, food safety regulations, halal standards, or the *Halalan Tayyiban* concept were selected. This review stage comprised identification of sources, title and abstract screening, full-text review for eligibility, and thematic synthesis of findings. Duplicates and studies unrelated to the study's setting were removed. This structured yet adaptive process permitted the integration of diverse interdisciplinary perspectives, including public health, religious studies, food science, and policy analysis.

There are clear advantages to employing a narrative review for this study. Unlike other types of reviews, such as systematic reviews, which are typically more linear and restricted to quantitative data, the narrative review offered greater flexibility. It allowed for the exploration of theoretical frameworks and historical contexts, both of which were

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essential to understanding the topic under consideration. It did, however, allow for the synthesis of disjointed research from assorted fields and enabled the identification of less well-developed issues, like the operational and cultural issues that specifically affect *tahfiz* in the implementation of food safety. This approach was well-suited for filling the gap in studies and as the foundation for future empirical enquiries in the context of the *Halalan Tayyiban*.

4. Results and Discussion

The narrative review revealed several food safety challenges in Malaysia's private *tahfiz* institutions as research gaps from the *Halalan Tayyiban* perspective, including: (a) widespread non-compliance with *Halalan Tayyiban* standards; (b) absence of standard operating procedures (SOPs); (c) limited access to training and certification; and (d) lack of institutional monitoring and enforcement.

4.1. Widespread Non-Compliance with *Halalan Tayyiban* Standards

This review study found that, in many private *tahfiz* institutions, there is insufficient organised testing of the *Halalan Tayyiban* concerning the sourcing, preparation, and storage of food; compliance with both Islamic and national food safety guidelines is hardly met. This is because there is a lack of knowledge and practical skills regarding what is considered halal and tayyib (safe, wholesome, and hygienic) food that should be provided for institutional food operations (Awang, 2021). Moreover, research indicates that although industries are halal certified, deeper tayyib elements like cleanliness, healthiness, and ethical sourcing are often given little attention (Sungit et al., 2020). This disparity between certification and practice is an example of the challenge of reconciling spiritual values and operational food safety needs within the context of education (Mohamed Ali et al., 2024). Education, enforcement, and support strategies, along with the incorporation of Islamic jurisprudence and public health principles into institutional food systems, are necessary to address these gaps.

The large proportion of non-compliance with *Halalan Tayyiban* requirements of private *tahfiz* schools in Malaysia may contribute to a major risk to food safety. The findings of studies suggest that in different sectors, food handlers have insufficient knowledge and poor practice of food safety, which raises questions about whether these standards are adhered to or not (Wan Nawawi et al., 2022; Che Ishak et al., 2021). Especially, food handlers in these institutions do not acquire enough training and tend to have knowledge gaps in food safety (Makhilan et al., 2021; Ramu et al., 2023). Most studies reported low levels of practice of food safety recommendations, even though participants had good knowledge and attitude towards the food safety issues (Wahyuni et al., 2024). The absence of a strong regulatory framework and its poor enforcement also add to the problem and therefore prevent compliance with various halal standards (Azam et al. 2024). Thus, it is important to bridge these gaps with better training and stricter regulations to ensure the protection of food safety and regain consumer trust in halal-certified premises (Mohamad Fauzi et al., 2024).

4.2. Absence of Standard Operating Procedures (SOPs)

As there are no food handling guidelines that have been established definitively in the private *tahfiz* institution, literature emphasises that private *tahfiz* institutions are usually operating without a structured food handling standard operating procedure (SOP),

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which translates to ad hoc food handling practices, which then contributes to preventable food safety risks to the students. It is found that in many educational institutions, there are no well-defined policies and procedures for food service, so that the quality and hygiene of food depend largely on inconsistent standards. The teachers participating in the study reported that the barriers to creating a healthy food environment were mostly related to the lack of SOPs, insufficient training, and unclear institutional guidelines, which also affected the private *tahfiz* institution (Mahmudiono et al., 2022). The study underscored the necessity of SOPs and school-based food policies to promote food safety and student health. In the absence of food safety procedures, handlers are left to use their discretion in the practices food handlers adopt, and this discretion can vary significantly in quality and food safety practice, predisposing them to foodborne disease (Sari et al., 2023). Additionally, without institutionalised protocols, it is difficult to enforce compliance and monitor accountability even when knowledge of food Safety measures are implemented among the staff (Mgqibandaba et al., 2020). Standardised SOPs focused on the religious and operational norms of *tahfiz* schools are essential for improving food safety in this sector.

The lack of SOP heavily affected the safety of food in the private *tahfiz* institution in Malaysia, especially from the *Halalan Tayyiban* aspect. SOPs are important for keeping food processing areas clean, and without them, the conditions can become very dirty, leading to more germs and food-related illnesses. Disregarding standard food safety practices leads to unsafe food practices that can harm consumer health, as well as halal (Rahayu et al., 2021; Abdullah Sani et al., 2020). Also, food handlers' training and education on hygiene practices and following the SOPs are imperative to put the brakes on the proliferation of pathogens (Matereke & Okoh, 2020). The strict way some *tahfiz* institutions operate can make it harder for them to meet food safety rules, leading them to develop a strong SOP that matches national food safety standards (Md Saad et al., 2021). Therefore, the use of SOPs is essential for the reduction of hazards and maintaining the students' health in such education.

4.3. Limited Access to Training and Certification

Underfinancing and logistical obstacles prevent most private institutions from delivering certified food safety/halal training to kitchen staff. This lack of certified training contributes to poor food handling practices and inadequate hygiene. Research has also revealed that the cost of certification and poor access to organised training are the main obstacles to the uptake of food safety systems in Malaysia, including among small operators, such as private Islamic institutions (Halim et al., 2024a). More and more people think that unfocused awareness efforts and weak enforcement have greatly slowed down the acceptance of food safety certifications in institutions and rural areas (Omar et al., 2024). Without certification and continuous training, even if workers have basic knowledge of hygiene, the likelihood that they will continue to practice it is relatively low (Halim et al., 2024b). Access to certified training programs is a fundamental part of addressing this gap and driving better food safety practices in these settings.

The limited availability of training and certifications in private *tahfiz* institutions in Malaysia is creating significant challenges for food safety, particularly concerning the *Halalan Tayyiban* aspect. The presence of a halal certificate is not only a matter of food safety standard, but also it is mentioned in line with general social values of cleanliness and quality assurance (Md Dahlal et al., 2024). But most food handlers working in such

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facilities do not possess enough knowledge about food safety, which makes them more risk to unsafe food handling (Mohammed et al., 2023; Abdul-Rashid et al., 2022). As much as the Malaysian Halal Standard MS 1500:2019 prescribes the requirements, the practicality of implementation among the smaller food operators is questionable. The limitations of owner-employees and challenges in halal control activities have had a major impact on the adoption of MS 1500, despite its acknowledged contributions to enhancing trade, ensuring safety, and gaining consumer confidence (Sari et al., 2021a). It is also in line with the belief that inadequate support and operating capacity limit full adaptation of the standard, particularly for small-sized companies. This issue is made worse by a lack of understanding about how important training is for maintaining food safety, showing that there is a need for good educational programs that meet the needs of *tahfiz* institutions (Md Nawi et al., 2023). Programs for structured training and certification could enhance both operational efficiency and food safety. The compliance of these facilities enhances their reputation within the halal food chain (Ali et al., 2022b).

4.4. Lack of Institutional Monitoring and Enforcement

Private *tahfiz* institutions remain less likely to be the subject of checks by health officials or religious authorities than those that are government-linked, a situation that has helped create the risk factor around food safety. The inconsistent enforcement happens because different regulatory bodies like JAKIM and local councils have overlapping responsibilities, and there isn't one clear law just for halal, making food safety regulations less effective (Sari et al., 2021b). Moreover, the majority of the private *tahfiz* institutions experienced red tape and regulatory delays, especially in acquiring the planning permissions, and this is because the schools are unaware of technical compliance and weaknesses in the mechanisms of government monitoring (Marzukhi & Zulkefly, 2025). There is evidence that the decentralised inspection of halal food premises has led to inconsistent safety standards, with inspections usually triggered by complaints and outbreaks of foodborne illnesses rather than being part of an active audit process (Aziz et al., 2022). These deficiencies in institutional oversight underscore the pressing need for holistic enforcement mechanisms that are appropriate for the private school religious context.

Private *tahfiz* institutions in Malaysia face food safety problems, which are primarily caused by a low level of monitoring and enforcement within these institutions. A fundamental problem is the non-observance of food safety standards, which leads to social costs, including health issues and economic consequences, as identified in Imami et al. (2021). The implementation of governance in food safety may be limited by the behaviours of stakeholders and the capabilities of enforcement officers, a challenge that has been raised in other literature on the same topic in other contexts (Murungi et al., 2021). There have also been claims made that food safety in these institutions continues to be inadequately implemented without strong public-private collaborations and the intensification of regulatory enforcement (Zulkefli et al., 2023). In addition, the portrayal of Halal in the regulatory environment of Malaysia highlights the importance of strong enforcement, where JAKIM and JAIN play roles in the enforcement but have trouble in terms of their resources (Komar et al., 2024). This is exposing the need for regular upgrading of enforcement mechanisms on compliance with Halal, and also protecting public health in all private schools.

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5. Conclusion

In conclusion, in this narrative review, the food safety challenges in private *tahfiz* institutions in Malaysia are complex and interrelated to policy, practice and religious compliance, especially from the *Halalan Tayyiban* perspective. These facilities are confronted with the limited application of Tayyib standards, inconsistent access to training, a lack of standardised contact with food, and weak regulatory oversight, all of which expose students to undue health risks while undermining public confidence. To address these challenges, this paper recommends that future research focus on the development of culturally tailored food safety frameworks that take Islamic dietary laws into account in the context of public health regulations. Future research could also investigate the effects of customised training modules, the implementation of inexpensive monitoring technology, and the organisation of interagency partnerships for effective supervisory oversight. In addition, participatory research involving *tahfiz* administrators, food handlers, and religious leaders may provide a clearer understanding of the actual challenges and, consequently, assistance in developing solutions that are both spiritually appropriate and practical for the context.

Ethics Approval and Consent to Participate

The researchers adhere to the research ethics guidelines established by the Research Ethics Committee of Universiti Teknologi MARA (RECUiTM). All procedures performed in this study did not involve human participants.

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Conflict of Interest

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest concerning the research, authorship, or publication of this article.

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