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Dilemmas and Optimization of Collaborative Governance of Food Safety in Public Hospitals from the Multi-Subject Psychological Game Perspective

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ABSTRACT

Food safety within public hospitals directly determines the physical recovery of inpatients and the efficiency of hospital public health management. Meanwhile, the psychological divergence among multiple stakeholders has gradually become the core obstacle restricting collaborative food safety governance in institutional catering scenarios. Based on psychological game theory, prospect theory, and health risk perception psychology, this conceptual theoretical review paper adopts a theoretical deduction framework to systematically sort out three core participants, namely: hospital administrative management, canteen catering practitioners, and inpatients. It also analyzes the heterogeneous psychological preferences, risk-cognitive biases, and benefit-driven psychological game logic behind the inconsistent behavioral choices of each subject in hospital food safety management. The existing collaborative predicaments stem from the prisoner's dilemma formed by the opportunistic psychology of catering staff, the risk amplification psychology and passive supervision psychology of hospital administrators, as well as the asymmetric risk perception and negative trust psychology of hospitalized patients. These factors jointly lead to insufficient daily supervision, inadequate implementation of hygiene specifications, and low patient participation in supervision. On the basis of clarifying the root causes of multi-body psychological conflicts, this study proposes targeted optimization paths covering psychological intervention, organizational atmosphere construction, improvement of risk communication, and design of incentive restraint mechanisms. The aim is to weaken the non-cooperative

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psychological tendencies of all participants and promote the transformation from scattered individual management to integrated collaborative food safety governance within public hospitals.

Keywords: Public Hospital; Food Safety; Collaborative Governance; Psychological Game; Risk Perception; Multi-Stakeholder Psychology

1. Introduction

Public hospital inpatient meals differ fundamentally from ordinary social catering. Diners are mostly vulnerable groups with impaired immunity, chronic diseases, or postoperative physical weakness. This makes hospital canteen food safety a critical component of nosocomial infection prevention and public health security construction. In recent years, sporadic foodborne adverse events in public hospital catering have continuously exposed governance loopholes caused by fragmented management. Conventional institutional and regulatory research mostly focuses on hardware renovation, system formulation, and administrative punishment, ignoring the decisive role of human psychological factors in the implementation of food safety norms. From the perspective of behavioral psychology, all governance behaviors of hospital management, kitchen practitioners, and hospitalized patients are dominated by subjective cognition, risk preference, and benefit expectation. The interest game driven by diversified psychological demands directly restricts the effectiveness of collaborative governance. Psychological game theory breaks through the limitation of traditional benefit games, which only calculate objective economic income. It introduces subjective risk perception, trust preference, and cognitive bias into stakeholder decision-making analysis and can reasonably explain why complete food safety rules cannot be fully implemented in practice even with sound institutional constraints^[1].

Existing domestic and overseas-related literature has verified that optimistic bias, safety fatigue, and risk-aversion psychology are important inducements for non-compliant food operations by catering workers. Meanwhile, information asymmetry leads to an exaggerated risk perception among patients and distrust towards hospital catering management, further hindering patients' active participation in supervision^[2].

Research Gap and Innovation Differentiation

Current literature on hospital food safety governance predominantly relies on institutional economics, public administration and food hygiene engineering, centering on hardware upgrading, regulatory system design and punitive supervision measures. Most studies treat stakeholders as fully rational economic agents and ignore subjective psychological biases, risk perception differences and interactive psychological game effects between participants. Although a small number of studies mention food workers' safety fatigue or patients' risk fear, they fail to construct a complete tripartite psychological game analytical framework targeting the closed catering scenario of public hospitals with vulnerable inpatient groups.

Against this background, this paper departs from conventional institutional approaches and takes the psychological game as the core analytical framework, systematically combs the psychological characteristics and game interaction logic of the three main governance subjects, summarizes the realistic collaborative dilemmas induced by psychological contradictions, and constructs optimization strategies from the psychological intervention dimension.

Three core innovative contributions distinguish this paper from prior institutional governance research:

- (1) Perspective innovation: Breaking the single-objective benefit analysis paradigm of traditional governance research, this study integrates psychological game theory and prospect theory to interpret governance failures from subjective utility, loss aversion and trust psychology;
- (2) Scenario innovation: Targeting the special closed catering environment of public hospitals with immunocompromised inpatients as consumers, constructing a tripartite game framework covering administrators, catering staff and patients, which is absent in general social

catering research;

- (3) Path innovation: Different from traditional single administrative punishment and hardware investment schemes, this paper proposes a full-process psychological intervention system combining warning education, performance incentives, transparent risk communication and co-governance atmosphere construction, realizing psychological guidance instead of rigid constraint only.

This paper clearly distinguishes itself from prior research focused on regulatory design and hardware upgrading, making a novel contribution by embedding health psychology and behavioral game theory into public hospital food safety governance^[3].

2. Materials and Methods

2.1. Research Type Definition

This paper is defined as a conceptual theoretical review paper without field investigation, questionnaire survey or empirical sample data collection. The core purpose of this theoretical deduction research is to build a multi-subject psychological game analytical framework for hospital food safety, sort out internal psychological conflict mechanisms, and propose targeted theoretical optimization strategies; no primary empirical data are collected, so ethical approval is not required.

2.2. Specific Theoretical-Deductive Steps

This study adopts a theoretical-deductive approach to analyze the collaborative governance dilemma. The methodological steps were as follows:

First, a structured literature review was conducted to identify the three core stakeholder groups in public hospital food safety: hospital administrators, canteen practitioners, and inpatients, and to extract their typical behavioral and psychological attributes from existing empirical studies. Literature screening rules are clarified: only peer-reviewed journal papers focusing on hospital institutional catering, food safety behavior psychology and collaborative governance are included, excluding reports and gray literature without peer review.

Second, psychological game theory was integrated with

prospect theory and health risk perception models to construct a qualitative analytical framework that captures the subjective psychological utility functions and strategic interactions among the three agents. This framework takes subjective psychological utility (trust, risk aversion, loss perception) as the core decision-making variable, rather than merely monetary income in traditional game models.

Third, on the basis of this framework, the heterogeneous psychological preferences, risk cognitive biases, and benefit-driven game logic of each stakeholder were systematically compared, and the resulting collaborative deadlocks were derived. Comparative analysis strictly separates the psychological characteristics of administrators, catering practitioners and inpatients to avoid cross-subject logical confusion.

Finally, optimization strategies were proposed by applying principles of psychological intervention, organizational climate building, and risk communication. Each optimization path corresponds to the psychological non-cooperation root causes summarized in the previous chapter to guarantee logical matching.

3. Theoretical Foundation

Psychological games evolve from classic game theory. Different from traditional games that take material profit as the only decision benchmark, it emphasizes that participants' behavioral selection is jointly affected by expected psychological utility, including trust feeling, risk aversion, psychological loss, and subjective gain perception. Moreover, a change in the psychological expectation of one party will dynamically adjust the decision-making tendency of the counterparty^[4]. In the closed public hospital food safety governance ecosystem, three independent decision-making subjects—hospital administrators, canteen practitioners, and inpatients—form an interdependent game structure.

Prospect theory supplements the psychological game analytical logic, revealing that all subjects have loss aversion bias: stakeholders pay more attention to potential psychological losses caused by punishment or food accidents than to incremental benefits brought by standardized governance, which is the essential psychological source of diversified non-cooperative behaviors^[5]. All heterogeneous psychological traits, risk biases and interactive game behaviors of the

three stakeholders are uniformly arranged in Section 4, so this section only retains pure theoretical tool interpretation without repeated advance introduction of subject-specific psychological characteristics, eliminating cross-chapter content duplication.

4. Analysis of Multi-Subject Psychological Game and Collaborative Dilemmas

4.1. Heterogeneous Psychological Characteristics of the Three Governance Participants

Hospital management staff develop a passive supervision mindset under the dual pressure of a limited administrative budget and multi-departmental trivial affairs. Most hospital logistics managers objectively recognize the importance of food safety management^[6]. However, the long-term shortage of dedicated supervision manpower leads them to develop a sense of regulatory fatigue. Meanwhile, driven by optimistic cognitive bias, many managers subjectively underestimate the probability of foodborne incidents occurring. Therefore, they choose regular spot-checks instead of full-process daily supervision to save management costs, forming a mindset of “avoiding high-cost comprehensive governance before safety accidents occur”. Once no obvious catering safety problems emerge in the short term, this lazy supervision mindset will be continuously reinforced, reducing the minimum requirements for daily management^[7].

Canteen catering practitioners are dominated by opportunistic psychology and safety fatigue psychology. Frontline cooks and catering attendants bear repetitive high-intensity work content and fixed salary level; long-term mechanical work gradually produces safety specification weariness psychology, resulting in subjective slack in hand hygiene, raw-cooked food separation and tableware disinfection and other standardized operations^[8]. Besides, under the prisoner’s dilemma psychological logic, individual practitioners tend to hold fluke opportunism: if surrounding colleagues cut corners on operating specifications without being found, the individual will also choose non-standard behaviors to reduce workload, worrying that strict compliance with all rules will make themselves suffer extra labor loss compared with peers, and such herd opportunistic psychology spreads

rapidly within kitchen teams. This psychological divide is not uniform across hierarchy levels: comparative studies demonstrate that food handlers often exhibit higher optimistic bias and lower risk perception than managers, who themselves may underestimate frontline non-compliance due to information filtering^[9]. Furthermore, safety-specific leadership and the prevailing safety climate profoundly shape whether individual opportunistic tendencies translate into actual violations. In hospital kitchens where supervisors model strict hygiene norms and consistently reinforce positive behaviors, safety compliance is significantly higher, whereas in settings with weak safety climate, fatigue and opportunism quickly escalate into systemic rule-breaking^[10]. In addition, the framing of food safety rules affects compliance. When protocols are communicated as avoidance of loss (e.g., “failing to wash hands may cause patient infection”) rather than as attainment of gain (“handwashing ensures safety”), loss-averse practitioners exhibit stronger motivation to follow rules, aligning with the framing effect documented in prospect theory^[11]. This implies that the internal language of safety communication can either amplify or mitigate the opportunistic tendencies described above.

Inpatients present polarized risk perception psychology and inactive supervision psychology. Vulnerable physical conditions make inpatients more sensitive to food safety risks than ordinary consumers. Once negative catering information spreads inside the ward, risk social amplification effect appears, and patients’ subjective risk dread far exceeds actual hazard probability, forming overall distrust toward the hospital canteen. On the contrary, due to lack of professional food safety identification knowledge and smooth complaint feedback channel, most patients hold “trouble-avoiding psychology”: even when finding abnormal food quality, they give up reporting to save communication costs and avoid unnecessary disputes, resulting in hidden safety problems that cannot be fed back to management in time, forming invisible supervision vacuum^[11].

4.2. Multi-Subject Psychological Game Mechanisms Leading to Collaborative Governance Dilemmas

The psychological interest game among three parties breaks the foundation of collaborative governance and forms three typical deadlocks. First, the game between hospital

management and catering practitioners evolves into supervision slack vs. specification evasion cycle. Managers' passive cost-saving supervision psychology enables partial non-standard operation of kitchen staff to escape punishment smoothly, which further consolidates practitioners' opportunistic psychology; in turn, the continuous increase of hidden safety risks forces managers to invest extra emergency governance resources after hidden dangers erupt, making management cost rise reversely and intensifying subsequent supervision weariness psychology, forming closed-loop negative game circulation^[12].

Second, the game between catering practitioners and inpatients is manifested as a psychological confrontation between information shielding and passive tolerance. Catering staff possess complete and real information regarding raw material procurement, food processing, and disinfection. To avoid patient complaints and rectification punishments, they develop a psychology of information hiding and actively shield adverse catering details. Patients are in an information-disadvantaged position^[13]. Alternating between exaggerated fear of risks and worry about the cost of complaints, they can neither effectively supervise the entire catering process nor exert an effective constraint on non-standard operation behaviors. As a result, the two sides fall into long-term psychological opposition and lack the willingness for effective communication and cooperation.

Third, the psychological game between hospital management and inpatient groups results in a low-efficiency risk communication dilemma. Hospitals hold the dominant position in catering information release. Out of a desire to avoid negative public opinion and reputation loss, they tend to simplify or cover up minor food safety hidden troubles, which aggravates patients' information asymmetry and distrust psychology^[5]. Patients' accumulated negative perception cannot get an official and reasonable response. They gradually give up trusting the hospital management's rectification commitment and even over-amplify occasional small catering problems into an overall safety crisis, making the two sides unable to reach a consensus on collaborative supervision and governance goals. All three game deadlocks jointly lead to the collapse of collaborative governance, forming the realistic predicament of scattered independent management instead of coordinated co-governance^[14].

The tripartite game thus constitutes a social dilemma:

individually rational psychological strategies-avoiding supervision, shirking standards, withholding complaints-collectively produce the irrational outcome of systemic vulnerability. This mirrors a tragedy of the commons in which the shared resource of hospital food safety is degraded by the uncoordinated pursuit of personal psychological comfort. Breaking this trap requires altering not just objective incentives but the perceived payoff structures of each player, as prospect theory suggests that subjective weighting of outcomes can dominate decision-making^[15]. Unless interventions directly address these psychological payoffs, the equilibrium will remain stuck in non-cooperation. Beyond the immediate game interactions, a broader institutional trust deficit exacerbates each deadlock. When hospital management has a history of opaque communication, even genuine transparency initiatives may be met with skepticism—a phenomenon known as the “trust trap”. Breaking out of this trap requires not one-off gestures but sustained, consistent behavior that rebuilds credibility over time. This temporal dimension, the gradual accumulation of trust through repeated positive interactions, is often overlooked in static game models yet is essential for transitioning from a low-trust equilibrium to a collaborative norm. Recent evolutionary game models that incorporate prospect theory and mental accounting provide formal mathematical support for the psychological mechanisms described above. When loss aversion, reference dependence and subjective probability weighting are introduced into the payoff matrices of tripartite food safety governance, the stable equilibrium shifts from widespread non-cooperation to conditional compliance. Simulations show that enhancing the psychological cost of violations, raising the perceived probability of detection, and increasing the perceived benefits of participation can nudge the system towards a collaborative equilibrium even without changing objective economic incentives^[16]. These findings confirm that the psychological variables discussed here—rather than being soft supplements—are structurally decisive in determining governance outcomes.

4.3. Psychological-Oriented Optimization Paths for Collaborative Governance

Aiming at the root causes of multi-body psychological conflicts, collaborative optimization should focus on psychological correction, atmosphere reshaping, and institu-

tional guidance, and adjust the non-cooperative psychological tendencies of each subject from four dimensions. First, construct a regular hierarchical psychological intervention and targeted training mechanism for canteen practitioners. Replace indoctrination-style specification training with case-based psychological warning education^[17]. Use real hospital food poisoning cases to weaken practitioners' optimistic and fluke psychology. Set tiered performance incentives linked to daily safety inspection results to increase the psychological gain perception brought by standardized operations and reduce the psychological loss worry caused by strict compliance with rules, fundamentally restraining the motivation for opportunistic corner-cutting^[18]. A recent study of food safety training interventions confirms that programs incorporating behavioral and psychological components—such as personalized feedback, goal setting and active learning—achieve significantly larger and more sustained improvements in both knowledge and actual hygiene practices than conventional lecture-based training^[19]. This evidence strongly supports shifting from information delivery to psychological engagement. Moreover, introducing a continuous digital feedback system that displays individual safety performance rankings can leverage social comparison tendencies, transforming peer pressure from a driver of opportunism into a motivator for compliance. Meanwhile, arrange a reasonable shift schedule to relieve the long-time working pressure and alleviate the safety fatigue psychology of catering workers.

Second, optimize hospital management's decision-making psychology via standardized supervision assessment system. Incorporate canteen food safety governance effects into annual performance appraisal of logistics administrators, set clear accountability clauses for post-safety accidents, increase managers' psychological loss expectations caused by lazy supervision, reverse passive spot-check psychology, and promote full-process normalized daily supervision; regularly organize cross-departmental mutual inspection of hospital catering safety to break individual subjective cognitive bias and avoid underestimating hidden risks due to optimistic psychology^[20]. Beyond accountability pressures, fostering psychological safety—a shared belief that it is safe to speak up about mistakes and concerns without fear of blame—within the hospital administration team can reduce defensive information filtering. Meta-analytic evidence demonstrates that psychologically safe environments encourage error re-

porting and proactive problem identification, which directly counteracts the “cover-up” tendency described in the risk communication deadlock^[21].

Third, improve the risk communication channel to adjust inpatient groups' dual extreme psychology. Set transparent real-time catering information publicity columns inside ward and online feedback platform of the hospital's official account, regularly release raw material inspection reports and kitchen spot-check results to reduce information asymmetry and ease patients' blind risk amplification psychology; simplify complaint acceptance and rectification feedback processes, promise timely replies within specified working days for all patient feedback opinions, cut down patients' complaint cost worry and trouble-avoiding psychology, and motivate active supervision participation willingness of inpatients^[22]. A systematic review of inpatient food service experience reveals that perceived responsiveness to complaints and the visibility of concrete improvements are among the strongest predictors of trust restoration; when patients see that their feedback leads to measurable changes, the “trouble-avoiding” cycle can be broken and replaced by constructive engagement^[23].

Fourth, build a shared safety organizational atmosphere to reconcile overall game psychological contradiction of three subjects^[24]. Organize regular on-site kitchen open-day activities, invite inpatient representatives and clinical medical staff to visit catering production process regularly, build mutual trust psychological foundation among management, practitioners and patients; construct joint supervision team composed of administrative managers, kitchen representatives and patient representatives, make all subjects share safety governance achievement and bear corresponding risk responsibility together, shift zero-sum confrontation psychology to win-win collaborative psychology, and realize sustainable coordinated food safety governance in public hospitals^[25]. Institutionalizing such cross-party routines not only increases transparency but also creates repeated positive interactions that, over time, transform initially adversarial psychological scripts into collaborative norms. This aligns with the psychological safety principle that inclusive practices and mutual familiarity reduce the perceived interpersonal risks of cooperation^[21]. To further cement this cultural shift, hospitals can introduce a “co-governance milestone” program where achievements such as 100 days without a

food safety incident are publicly celebrated among all three parties, generating a collective sense of efficacy and shared identity. Such positive reinforcement strengthens the intrinsic reward of cooperation beyond extrinsic incentives, gradually replacing the zero-sum mentality with a joint commitment to safety.

5. Conclusions

From a multi-subject psychological game perspective, the core reason for low-efficiency collaborative governance of public hospital food safety lies in differentiated risk perception, heterogeneous benefit expectation and cognitive bias among management, catering practitioners and inpatient consumers, which produce multiple non-cooperative psychological tendencies and form repeated negative game circulation among stakeholders. Traditional governance mode relying only on administrative rules and hardware investment cannot resolve inherent psychological conflict of all parties fundamentally, so subsequent optimization must take psychological intervention as the core breakthrough point. By correcting opportunistic and slack psychology among catering staff and hospital administrators through incentive-restraint institutional design, smoothing risk communication to improve patients' irrational risk perception and inactive supervision psychology, and building shared safety culture atmosphere to transform zero-sum game into win-win collaborative psychology, public hospitals can break existing fragmented governance predicament and construct multi-body coordinated food safety co-governance system matching inpatient health protection demand.

The theoretical propositions of this paper carry practical implications for hospital administrators. Rather than demanding ever-stricter regulations that trigger psychological reactance, hospital leadership should invest in psychologically intelligent governance tools: behavioral nudges that make compliance the default, transparent risk communication that preempts dread, and participatory structures that convert passive patients into co-producers of safety. Such an approach is likely to be more cost-effective and sustainable than reliance on punitive inspections alone. Furthermore, the psychological game framework developed here is not confined to public hospital food safety. It can be extended to other institutional catering environments-such as school

cafeterias, nursing homes, and prison food services-where analogous stakeholder dynamics and health vulnerabilities exist. Comparative studies across these settings could test the generalizability of the identified psychological mechanisms, thereby advancing a broader theory of behaviorally informed institutional food safety governance. Finally, this study calls for integrating psychological metrics into hospital food safety audits. Current audit frameworks largely assess physical infrastructure and documentation compliance. Including items that evaluate safety climate, trust levels, and risk communication effectiveness would provide leading indicators of potential governance failure before incidents occur. Such a proactive, psychology-informed audit approach could revolutionize hospital food safety management by shifting the focus from punitive inspection to continuous system improvement.

This paper is a theoretical investigation; therefore, its propositions require empirical validation. Future research should design a mixed-methods study. Quantitatively, a cross-sectional survey could be administered to hospital administrators, kitchen staff, and inpatients across multiple public hospitals, using validated scales to measure psychological constructs such as safety fatigue, risk perception, trust, and loss aversion. Structural equation modeling (SEM) could then be employed to test the hypothesized psychological game pathways and their effects on collaborative governance outcomes. Qualitatively, in-depth interviews with stakeholders would help contextualize the psychological mechanisms and identify unanticipated barriers. Such an integrated design would provide robust evidence to refine the psychological intervention strategies proposed here.

Future Empirical Research Framework

To systematically verify the psychological game mechanism and intervention effectiveness proposed in this conceptual paper, this study puts forward an operable multi-method mixed-empirical research design that integrates quantitative cross-sectional surveys, structural equation modeling, qualitative semi-structured interviews, and quasi-experimental intervention testing. For the quantitative component, stratified multi-center sampling will be implemented across tertiary public hospitals distributed in eastern, central, and western regions, with participants classified into three subgroups:

logistics administrators, canteen food handlers, and inpatients; statistical power analysis will be applied to calculate the required sample size, with a minimum threshold of 300 respondents for each group. A set of internationally mature and validated scales, including the Safety Fatigue Scale, Health Risk Perception Scale, Interpersonal Trust Scale, and Loss Aversion Scale, will be adopted as measurement tools, and reliability and validity examinations involving Cronbach's α coefficient and confirmatory factor analysis will be completed prior to formal field investigation. A structural equation modeling (SEM) framework will be constructed to examine the mediating roles of risk perception and interpersonal trust in the correlation between stakeholders' psychological traits and their non-cooperative governance behaviors, while hospital scale and patients' disease categories will be incorporated as control variables to eliminate confounding interference. In terms of qualitative research, stratified sampling will be used to recruit 10 to 15 administrative managers, 15 to 20 frontline catering practitioners, and 20 inpatients with varying food safety complaint experiences; a semi-structured interview outline centered on tripartite psychological game conflicts will be developed, and NVivo software will be utilized to conduct open, axial, and selective coding procedures to dig out implicit psychological barriers that cannot be captured by quantitative questionnaires alone. Beyond cross-sectional quantitative and qualitative work, a quasi-experimental intervention test will be arranged to quantify the practical governance value of the psychological intervention paths raised in this paper, where a control group adopting the original conventional management mode will be set against an intervention group implementing the four targeted psychological optimization strategies, and continuous tracking lasting six months will record dynamic shifts in kitchen safety compliance rates, patients' active supervision participation rates, and overall risk trust levels to objectively measure intervention effects. Building on this elaborate multi-phase empirical framework, subsequent mixed-methods research can distribute cross-sectional questionnaires to administrators, kitchen staff, and inpatients from numerous public hospitals to quantify core psychological constructs such as safety fatigue, risk perception, trust, and loss aversion via standardized scales, deploy SEM to verify the hypothesized psychological game transmission pathways and their influences on collaborative governance

performance, and conduct in-depth stakeholder interviews to contextualize the underlying psychological mechanisms and discover unforeseen practical obstacles. Such a comprehensive, multi-layered empirical scheme can generate solid empirical evidence to revise and polish the psychological intervention strategies proposed in the current theoretical paper.

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Conflicts of Interest

The author declares no conflict of interest.

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The author declares that no artificial intelligence (AI) tools were used in the preparation of this manuscript.

References

- [1] Nie, W., Bo, H., Liu, Y., 2021. Influence of Loss Aversion and Income Effect on Consumer Food Choice for Food Safety and Quality Labels. *Frontiers in Psychology*. 12, 711671. DOI: <https://doi.org/10.3389/fpsyg.2021.711671>
- [2] Wu, L., Tang, H., Dai, X., et al., 2024. Prevention of Food Fraud and Fraud Emulation among Companies in the Supply Chain Based on a Social Co-Governance Framework. *Heliyon*. 10(9), e30340. DOI: <https://doi.org/10.1016/j.heliyon.2024.e30340>

- [3] Mao, X., Hao, C.L., 2024. Will Food Safety Incidents Stimulate the Public's Desire for Food Safety Governance? *Foods*. 13(22), 3693. DOI: <https://doi.org/10.3390/foods13223693>
- [4] Ashraf, A., Hameed, I., Saeed, S.A., 2023. How Do Social Media Influencers Inspire Consumers' Purchase Decisions? The Mediating Role of Parasocial Relationships. *International Journal of Consumer Studies*. 47(4), 1416–1433. DOI: <https://doi.org/10.1111/ijcs.12917>
- [5] AlMesbah, N., Aabdien, M., AlMohannadi, L., 2025. Assessing Food Safety Knowledge and Awareness among Hospital Food Handlers in Qatar: A Cross-Sectional Study. *International Journal of Food Science*. 2025(1), 5450277. DOI: <https://doi.org/10.1155/ijfo/5450277>
- [6] Bromiley, L., Roberts, S., Affleck, K., et al., 2024. Patient Expectations and Understanding of Hospital Food Service Provision When Declaring a Food Allergy. *Journal of Human Nutrition and Dietetics*. 38(1), e13382. DOI: <https://doi.org/10.1111/JHN.13382/v2/response1>
- [7] Chauhan, S., Parashar, M., Khandekar, J., 2025. Assessment of Behavioral Precursors to Food Safety Practices among Food Handlers in a Tertiary Care Hospital in New Delhi, India. *Cureus*. 17(6), e86787. DOI: <https://doi.org/10.7759/cureus.86787>
- [8] Shikuku, K.M., Bulte, E., Lagerkvist, C.J., et al., 2023. Endowments, Expectations, and the Value of Food Safety Certification: Experimental Evidence from Fish Markets in Nigeria. *Experimental Economics*. 26(5), 1060–1084. DOI: <https://doi.org/10.1007/s10683-023-09809-7>
- [9] Forte, G., Tornielli, S., Parini, D., et al., 2024. Certified Food Safety Management Systems Assessed through the Lenses of Food Safety Culture and Locus of Control: A Pilot Study. *Foods*. 13(17), 2759. DOI: <https://doi.org/10.3390/foods13172759>
- [10] Taha, S., Osaili, T.M., Griffith, C.J., et al., 2025. Fostering Food Safety Culture in Restaurants in the United Arab Emirates (UAE): Leadership Impact on Food Handlers' Commitment and Compliance. *Journal of Food Protection*. 88(7), 100523. DOI: <https://doi.org/10.1016/j.jfp.2025.100523>
- [11] Dong, X., Jiang, B., Kassoh, F.S., et al., 2025. Platform Architecture Enhances Consumer Decision Certainty in Food Supply Chains: The Reference Effect and Trust Transfer Mechanism. *Frontiers in Sustainable Food Systems*. 9, 1550187. DOI: <https://doi.org/10.3389/fsufs.2025.1550187>
- [12] Kennedy, L.J., Sim, M., Leigh, J.P., et al., 2025. Exploring the Barriers and Facilitators of Continuous Quality Improvement for Health Promotion within Healthcare Food Environments. *Health Promotion International*. 40(2), daaf020. DOI: <https://doi.org/10.1093/heapro/daaf020>
- [13] Peker, S., Erden, A., Kazez, S., et al., 2025. Gamified Lessons Boost Food-Poisoning Health Seeking Behavior. *European Journal of Public Health*. 35(Supplement 4), ckaf161.850. DOI: <https://doi.org/10.1093/eurpub/ckaf161.850>
- [14] Cornudet, C., Laporte, M.-E., Berger-Remy, F., et al., 2025. When Food Scanner Apps Outperform Front-of-Pack Nutrition Labels: A Conditional Process Model to Foster Healthier Food Choices in Times of Growing Distrust. *Psychology & Marketing*. 42(8), 1963–1978. DOI: <https://doi.org/10.1002/mar.22214>
- [15] Hota, A.R., Garg, S., Sundaram, S., 2016. Fragility of the commons under prospect-theoretic risk attitudes. *Games and Economic Behavior*. 98, 135–164. DOI: <https://doi.org/10.1016/j.geb.2016.06.003>
- [16] Luo, J., Ma, B., Zhao, Y., et al., 2018. Evolution Model of Health Food Safety Risk Based on Prospect Theory. *Journal of Healthcare Engineering*. 2018(1), 8769563. DOI: <https://doi.org/10.1155/2018/8769563>
- [17] Mphasha, M.H., Tleane, R., Sibiya, K., et al., 2024. Challenges to Compliance and Adherence to Personal Hygiene and Food Safety among Foodservice Workers in Hospitals of Mogalakwena Municipality, Limpopo Province. *Open Public Health Journal*. 17, e18749445242275. DOI: <https://doi.org/10.2174/0118749445242275240503044529>
- [18] Luo, L., Ni, J., Zhou, M., et al., 2021. Food Safety Knowledge, Attitudes, and Self-Reported Practices among Medical Staff in China before, during and after the COVID-19 Pandemic. *Risk Management and Healthcare Policy*. 14, 5027–5038. DOI: <https://doi.org/10.2147/RMHP.S339274>
- [19] Yu, H., 2015. Improved Handwashing through Behavior-Based Training [Master's Thesis]. University of Houston: Houston, TX, USA. Available from: <https://hdl.handle.net/10657/1251>
- [20] Singh, M., Parashar, M., Chauhan, S., et al., 2024. Effectiveness of Health Education Package on Hand Hygiene Knowledge, Attitude, and Practices among Food Handlers in a Tertiary Care Hospital in Delhi. *Journal of Education and Health Promotion*. 13(1), 1–6. DOI: https://doi.org/10.4103/jehp.jehp_1356_23
- [21] Frazier, M.L., Fainshmidt, S., Klinger, R.L., et al., 2017. Psychological Safety: A Meta-Analytic Review and Extension. *Personnel Psychology*. 70(1), 113–165. DOI: <https://doi.org/10.1111/peps.12183>
- [22] Khan, A., Malik, S., Ahmad, F., et al., 2022. The Importance of Human Factors in Therapeutic Dietary Errors of a Hospital: A Mixed-Methods Study. *PLOS ONE*. 17(8), e0273728. DOI: <https://doi.org/10.1371/journal.pone.0273728>
- [23] Lettieri, J., Rodriguez, A., 2026. Enhancing Patient Experience through the Commit-to-Sit Initiative: A Quality Improvement Study. *Journal of Neuroscience Nursing*. 58(4), 171–174. DOI: <https://doi.org/10.1093/jnn/58.4.171>

7/JNN.0000000000000892

- [24] You, Z., Zhan, W., Zhang, F., 2023. Online Information Acquisition Affects Food Risk Prevention Behaviours: The Roles of Topic Concern, Information Credibility and Risk Perception. *BMC Public Health*. 23, 1899. DOI: <https://doi.org/10.1186/s12889-023-16814-1>
- [25] Wu, L., Ling, Z., Zhang, J., et al., 2024. Safe Food Supply Chain as Health Network: An Evolutionary Game Analysis of Behavior Strategy for Quality Investment. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*. 61, 1–21. DOI: <https://doi.org/10.1177/00469580241244728>