

Study of Requirement, Preventive Controls Measures and Policy to Ensure Food Safety and Public Health

Nasir Uddin¹, R Sultana², MA Bari³, A Nahar⁴, M Rahman⁵, J Ribero⁶

¹Prof. Dr. Md. Nasir Uddin, Director, Institute of Public Health, Dhaka

²Dr. Rasheda Sultana, Additional Director General (Administration), DGHS, Dhaka

³Prof. Dr. M.A. Bari, Professor & Head, CARS, Dhaka University, Dhaka

⁴Matiur Rahman, Food Analyst, National Food Safety Laboratory, IPH, Dhaka

⁵Dr. James Jacob Ribero, Researcher, IMRC, Dhaka

Correspondence: Matiur Rahman, Food Analyst

National food Safety Laboratory, IPH, Dhaka

Cell no: 01740654408, e-mail: matiurmrahman@yahoo.com

ABSTRACT

Background: Health policy is a multi-disciplinary public policy approach to specify the source of funding that can be applied to the action, the planning and management, in the present context, to further the cause of food safety. In Bangladesh, many agencies are engaged in food safety issues leading to variations in the laboratory findings in food testing and its implementation.

Objectives: The study analyzed the discrepancy between the application of the regulations and the actual situation. It also assessed the current rules and regulations for food safety understand the picture of the rules, its user, and execution; and informed the policymakers about evidence-based decision-making processes.

Methodology: The study design was descriptive cross-sectional study with a bottom-up approach. The study comprised of field-level surveys from general buyers, retailers and super shop personnel (n=205) as well as group discussions among academicians, regulatory investigators and policy makers.

Findings: From the survey and the subsequent group discussions, it was found out that handling of baby food is not maintained, seller-buyers relationship is not optimal, cold chain is not maintained from production to the table, imported food items checking/testing is not adequate, raw materials often lack adequate checking and testing of shelf life of food items is virtually non-existent. It was also opined that excessive numbers of Food Safety laws and multiple agencies are dealing with it which is perceived as a hassle. Training on food safety is not adequate, and the quantity and quality of inspection manuals, protocols, guidelines, SOPs and checklists are insufficient. The monitoring is irregular and uncoordinated with multiple agencies. In the Integration Meeting of Policy Makers and Academicians, similar observations and concerns were made.

Conclusion: the food safety and public health component is a crucial component that needs to be addressed in a multi-disciplinary and integrative approach. It also requires regular updates as the prevailing situation and socio-technological status changes quickly. Findings and recommendations of the present study will help policy and decision makers to formulate a strong and effective health policy for all ensuring food safety and public health.

Keywords: Food Safety, Public Health policy, Monitoring, Integration, Policy guideline

Introduction:

Health policy specify the source of funding that can be applied to the action, the planning and management arrangements to be adopted for the implementation of the policy, and the relevant institutions to be involved (WHO glossary of terms; Geneva; 1984) Health policy planning and implementation is a multi-disciplinary approach to public policy that aims to explain the interaction between institutions, interests, and ideas in the policy development. It is practical to look back and plan, understand past policy failures and successes, and plan for future policy implementation. In order to advance, public policy frameworks and theories must be used more frequently in the context of health policy, research design must be explicitly considered in the study, and attention must be paid to how positions of power affect the information they produce. Informed decision-making leads to the development of effective public health policy based on evidence. We need to understand the risk factors of rules and regulations which interact with and build conflict. Health and health policy issues are complex, and an integrative, multi-disciplinary approach is crucial to ensure that research provides relevant, high-quality evidence to inform health policy. Partnerships among health specialists and others can help sustain innovative approaches to solving complex problems and reduce the imbalance.

Objectives

The general objective of this study was to analyze the discrepancy between the application of the regulations and the actual situation. Specifically, the study attempted to assess the current rules and regulations for food safety, to understand the picture of the rules, their user, and execution.

In Bangladesh, many agencies under different ministries are related to implementing food safety rules to ensure food safety. Ministries with agencies entrusted with food safety issues are depicted below:

National food safety management advisory council

To carry out the purposes of Safe food act 2013, there shall be a council to be called the National Food Safety Management Advisory Council.

The Council shall consist of the following members, namely:

- (a) Minister in charge of the Ministry of Food, who shall also be its President;
- (b) Cabinet Secretary, who shall also be its Vice-President;
- (c) A member of the Parliament nominated by the Speaker of the House of the Nation;
- (d) Secretary, Ministry of Public Administration;
- (e) Secretary, Ministry of Home Affairs;
- (f) Secretary, Ministry of Health and Family Welfare;
- (g) Secretary, Ministry of Commerce;
- (h) Secretary, Ministry of Agriculture;
- (i) Secretary, Ministry of Fisheries and Livestock;
- (j) Secretary, Ministry of Environment and Forest;
- (k) Secretary, Ministry of Industries;
- (l) Secretary, Ministry of Science and Technology;
- (m) Secretary, Ministry of Information;
- (n) Secretary, Local Government Division;
- (o) Secretary, Finance Division;
- (p) Secretary, Legislative and Parliamentary Affairs Division;
- (q) Chairman, Bangladesh Council of Scientific and Industrial Research;
- (r) Chairman, Bangladesh Atomic Energy Commission;
- (s) Chairman, Bangladesh Food Safety Authority; (t) Director General, Directorate of Health Services;
- (u) Director General, Directorate of Food;
- (v) Director General, Directorate of National Consumer Rights Protection;
- (w) Director General, Bangladesh Standards and Testing Institution;
- (x) Director General, Bangladesh Accreditation Board;
- (y) Director, Institute of Nutrition and Food Science, University of Dhaka;
- (z) Chairman, Department of Chemistry, University of Dhaka;
- (za) President, Federation of Bangladesh Chambers of Commerce and Industries;
- (zb) a City Corporation Mayor and a Upazilla Parisad Chairman nominated by the Government; and
- (zc) Secretary, Ministry of Food, who shall also be

Legal framework of food safety in bangladesh

1. Safe food Act 2013 and realated with this Act more 17 rules , regulation
2. Panal Code, 1860
3. Food Special Cours Act 1956

4. Pure Food Ordinance 1959
5. Control of Essential Commodities act 1956
6. Cantonment Pure food Act, 1966
7. Fish and Fish products inspection and control ordinance 1983
8. Special Power Act, 1974
9. Pesticide ordinance, 1971
10. BSTI ordinance, 1985
11. Breast Milk substitute Ordinance, 1983
12. Vhokta Odhikar Sonrangkon Aain, 2009
13. Iodine Deficiency Disorders Prevention Act 1989
14. City corporation Act 2009
15. Mobile court Act 2009

Methodology:

The study design was a descriptive cross-sectional study with a bottom-up approach among the stakeholders of the food safety component of the health policy. The study comprised field-level surveys from general buyers, retailers, and super shop personnel (n=205). About 10% of the survey data was rechecked or cross-checked to increase the reliability of the data to be analyzed. Face-to-face interviews among surveyed persons and group discussions among suppliers and manufacturers were undertaken to identify perceived gaps between the current rules, regulations, and laws and their implementations. Finally, an Integration meeting was held between Regulatory investigators, Policymakers, and Academicians to find ways to reconcile the gaps and seek policy recommendations.

Findings and results

A total of 205 respondents were interviewed (101 general buyers, 53 retailers, and 51 super shops) from the Dhaka city area. The majority of consumers (23.8%), retailers (28.3%), and super shop personnel (39.2%), according to the survey (n=205, 101 consumers, 53 retailers, and 51 super shops), purchased or sold numerous food products per each transaction. Most regular buyers (87.1%) knew about foodborne diseases, and most retailers and super shop employees knew that their items may contain preservatives (69.8% and 92.2%, respectively). Regarding package puncturing to stack more packets on the racks, most retailers and super shop employees (52.8% and 66.7% respectively) acknowledged that this practice harms food but blamed the suppliers. Most retailers (86.8%) and super shop staffs (96.1%) were aware of current food safety legislation, which they learned through word-of-mouth (45.3% & 11.8%, respectively), followed by news (35.0% & 17.6%) and training (5.7% & 66.7% respectively). Despite training, only 44.9% of supermarket employees knew all the authorities responsible for enforcing food safety rules. Food safety violations landed to 15.1% of retailers and 7.8% of super shop employees. Concerning the various Food safety requirements, 18.9% of retailers and 15.7% of super shop employees saw this as a problem. Food safety laws are known by 96.1% of super shop staffs, and packaging laws are known by 78.4%, while this is 86.8% and 58.5% for retailers, respectively.

Knowledge of Legislation		
Respondents	Food Safety Laws	Packaging Laws
Retailers	86.8%	58.5%
Super shops	96.1%	78.4%

Medium for Knowledge of Legislation			
Respondents	Training	News	Word of Mouth
Retailers	5.7%	35.0%	45.3%
Super shops	66.7%	17.6%	11.8%

According to the interviews and group discussions, the handling of baby food is not maintained, the seller-buyer relationship is not optimal, the cold chain from production to the table is not maintained, imported food items checking/testing is not adequate, raw materials frequently lack adequate checking and testing, and shelf-life tests of food items is virtually non-existent. According to the respondents, there are excessive Food Safety laws, and many agencies are dealing with them, which is viewed as a burden by the relevant stakeholders. Food safety training, as were the quantity and quality of inspection manuals, protocols, guidelines, SOPs, and checklists, was found to be insufficient. Monitoring was also viewed as generally sporadic and uncoordinated, with several authorities participating, discouraging and demotivating stakeholders. Similar observations and concerns were raised during the integration meeting with policymakers and academics. Chemical contamination was discovered to be difficult to eradicate or mitigate, and it must be addressed first since it is more difficult to eliminate or mitigate than microbiological and other types of contamination. Some package labelling was observed to be too small or illegible, and not informative enough to the buyers.

Discussion

In this study opined by the survey respondents that there is excessive numbers of Food Safety laws and multiple agencies are dealing with it which was perceived as a hassle by the relevant stakeholders. Policy Makers and Academicians discussed the course of actions to ensure food safety in the final integrative meeting, and recommended that a country-wide food safety strategy is strongly needed with specific mission, vision, objectives and goals to ensure safe food for all. The findings draw parallel findings to the Lee et al. (1998) used matched country comparisons to investigate factors influencing the development of vital national planning programs. They compared four countries: Bangladesh/Pakistan, Tunisia/Algeria, Zimbabwe/Zambia, and Thailand/Philippines. The comparisons enabled the researchers to point to three factors that shaped the development of effective programs: the formation of coalitions among policy elites, the spread of policy risk, and the country's financial and institutional stability. From the survey and the subsequent group discussions, it was found out that handling of baby food is not maintained, seller-buyers relationship is not optimal, cold chain is not maintained from production to the table, imported food items checking/testing is not adequate, raw materials often lack adequate checking and testing of shelf life of food items is virtually non-existent. Furthermore, it was also discovered that the training on food safety is not adequate, and the quantity and quality of inspection manuals, protocols, guidelines, SOPs and checklists are insufficient. In the Integration Meeting of Policy Makers and Academicians, similar observations and concerns were made. These findings are analogous to the study on Policy framing and crisis narratives around food safety in Vietnam (Christophe Béné, 2020) which shows that the implication of "distorted" framing is a risk for the decision-makers to "overfocus" their attention on this short-term issue and lose sight of some other longer-term structural trends such as the emergence of obesity in Vietnamese urban population.

Recommendations and conclusion

Policy Makers and Academicians discussed the course of actions to ensure food safety in the final integrative meeting, and recommended that a country-wide food safety strategy is strongly needed with specific mission, vision, objectives and goals to ensure safe food for all. Operationally, they urged preferably for uniform and integrated activities by a single agency as a one-stop service. It was advised to maintain the quarantine process and perform tests of all imported food items regularly at the port of entry. Thus, ensuring that the food safety issues are not only targeted to the end products at the seller's end but start at the production level/port of entry-level for food items. Maintaining GMP, GAP and improving/developing the good Animal Husbandry practices were deemed necessary. As media and now-a-days social media sometimes create social problems through incomplete messages, the need was felt to inform good messages to them through regular information/awareness programs. Regular trainings, certifications and awareness programs are a must to upheld the quality of food safety

operations. It was also discussed about adequacy of budgetary, logistic and security support for food safety personnel, and recommended to strengthen them to a higher level. As an excessive number of laws/ordinances and agencies related to food safety is perceived as a hassle by stakeholders, it was recommended to streamline and integrate them.

In conclusion, the food safety and public health component of health policy is a crucial component that needs to be addressed in a multi-disciplinary and integrative approach. It also requires regular updates as the prevailing situation and socio-technological status changes quickly. It is hoped that the findings and recommendations of the present study will help policy and decision makers to formulate a strong and effective health policy for all ensuring food safety and public health.

References:

1. Baumgartner FR, Jones BD. *Agendas and instability in American politics.*, 1993 Chicago and London The University of Chicago Press
2. Bossert T. Analyzing the decentralization of health systems in developing countries: decision space, innovation and performance, *Social Science and Medicine*, 1998, vol. 47 (pg. 1513-27)
3. Brady HE, Collier D. , *Rethinking social inquiry: diverse tools, shared standards.* , 2004 Lanham, MD Rowman and Littlefield Publishers, Inc
4. Brewer G, deLeon P. , *The foundations of policy analysis.*, 1983 Monterey, CA Brooks/Cole
5. Brugha R, et al. *Global Fund Tracking Study: a cross-country comparative analysis*, Final Report, 2005 2 August 2005. Online at: http://www.theglobalfund.org/en/files/links_resources/library/studies/IE13_full.pdf
6. Brugha R, Starling M, Walt G. GAVI, the first steps: lessons for the Global Fund *The Lancet*, 2002, vol. 359 (pg. 435-8)
7. Brugha R, Donoghue M, Starling M, et al. *The Global Fund: managing great expectations*, *The Lancet*, 2004, vol. 364 (pg. 95-100)
8. Buse K, Mays N, Walt G. , *Making health policy.* 2005 Milton Keynes, UK Open University Press
9. Dye T. , *Top down policy making.*, 2001 New York & London Chatham House
10. Edgell S, Hetherington K, Warde A. , *Consumption matters.*, 1996 Oxford Blackwell Publishers
11. Exworthy M. Policy to tackle the social determinants of health: using conceptual frameworks to understand the policy process, 2007 Paper presented to a Workshop on Health Policy Analysis 21–22 May 2007 London
13. Exploring customers' perceptions of food adulteration at bazaars and supermarkets in Dhaka, Bangladesh; a qualitative exploration Dalia Yeasmin et al *BMC Public Health* volume 23, Article number: 206 (2023)
14. Fassin D, Schneider H. *The politics of AIDS in South Africa: beyond the controversies (Education and Debate)*, *British Medical Journal*, 2003, vol. 326 (pg. 495-7)
15. George AL, Bennett A. , *Case studies and theory development in the social sciences.*, 2004 Cambridge, MA MIT Press
16. Gilson L, Raphaely N. *The terrain of health policy analysis in low and middle income Countries: a review of the literature 1994–2005*, 2007 Paper presented to a Workshop on Health Policy Analysis 21–22 May 2007 London
17. Grindle M, Thomas J. , *Public choice and policy change.*, 1991 Baltimore, MD
18. Johns Hopkins University Press
19. Anderson K (2010) *The Political Economy of Agricultural Price Distortions*. Cambridge and New York: Cambridge University Press.
20. Anwar S, Nguyen LP (2010) Foreign direct investment and economic growth in Vietnam. *Asia Pacific Business Review* 16(1–2): 183–202.
21. Baumgartner FR, Jones BD (2009) *Agendas and Instability in American Politics*. Chicago: University of Chicago Press, Second edition.
22. Béné C (2005) the good, the bad and the ugly: Discourse, policy controversies, and the role of science in the politics of shrimp farming development. *Development Policy Review* 23(5): 585–614.
23. Bangladesh has highest number of food safety laws in world, *Daily Observer*; 30 June 2014 Dhaka.
24. Food adulteration has increased alarmingly across the country, "Almost all the foods we Eat are adulterated"; Health & family welfare Minister; [//www. Dhaka.tribune. Com/ bangladesh/ 2022/11/01](http://www.Dhaka.tribune.Com/bangladesh/2022/11/01)