

Legal Protection for Consumers through the Obligation to Include Sugar, Salt, and Fat Labels Based on Constitutional Court Decision Number 110/PUU-XXIV/2026

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ABSTRACT

The right of consumers to obtain accurate, clear, honest, and adequate information is an essential element of consumer protection, particularly in relation to food and beverages containing sugar, salt, and fat. This issue has gained renewed legal significance following Constitutional Court Decision Number 110/PUU-XXIV/2026, which conditionally declared Article 7 letter b of Law Number 8 of 1999 concerning Consumer Protection and Article 148 of Law Number 17 of 2023 concerning Health unconstitutional insofar as they were not interpreted to require color and symbol labeling on food and beverage packaging containing sugar, salt, and fat. This study aims to analyze the legal construction of consumer protection regarding nutritional information following the Constitutional Court's decision and to examine the implementation framework of the labeling obligation within Indonesia's existing regulatory system. This research employs normative juridical methods using statutory, conceptual, and case approaches. The analysis demonstrates that the Constitutional Court has expanded the meaning of the business actor's obligation to provide information by transforming nutritional labeling from merely textual information into a more accessible visual form. The decision also strengthens the responsibility of central and regional governments to regulate and supervise the production, processing, and distribution of food and beverages. Nevertheless, the implementation of the decision requires harmonization with the technical regulatory framework, particularly the 2026 regulations governing nutritional information and Nutri-Level. The study concludes that Constitutional Court Decision Number 110/PUU-XXIV/2026 strengthens the constitutional dimension of consumer protection, but its effectiveness depends on the establishment of clear technical standards, institutional coordination, supervision, and enforceable obligations for business actors.

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1. INTRODUCTION

Consumer protection in the food trade is inseparable from the fulfillment of the right to correct, clear, honest, and adequate information. Information regarding the characteristics, composition, quality, and risks of a product is the basis for consumers to make informed choices before making a purchase. In the context of processed foods, information regarding sugar, salt, and fat (GGL) content is crucial because it relates to consumers' ability to recognize the nutritional characteristics of the products they consume. However, the availability of information on packaging does not always guarantee that it can be effectively understood by consumers. Information presented in a technical, complex, or difficult-to-understand format has the potential to reduce consumers' ability to compare products and consider the risks of consumption. This situation demonstrates that consumer protection is not sufficient only to guarantee the availability of information; it also requires attention to the readability and understandability of the information provided by business actors.

One emerging instrument to address this issue is front-of-pack nutrition labeling (FOPL), which presents nutritional information on the front of packaging in a simpler and more easily recognizable format. Unlike nutritional information tables, which provide detailed information, FOPL aims to help consumers identify a product's nutritional characteristics more quickly. Several studies have shown that front-of-package labels can increase consumer attention and understanding of nutritional information, although their effectiveness in influencing purchasing decisions is still influenced by literacy levels, socioeconomic conditions, price, and consumption habits (Shrestha et al., 2023; Gomes et al., 2024; Calderon-Monge et al., 2024). These findings demonstrate that the form of information delivery is a crucial part of fulfilling consumer rights. Therefore, the issue of food labeling is not only related to the technical aspects of nutrition communication but also concerns the effectiveness of legal instruments in providing consumer protection.

Conceptually, this issue can be explained through the Theory of Information Asymmetry. Akerlof (1970) explains that information asymmetry can affect exchange relationships when one party has better information than the other. In the relationship between business actors and consumers, business actors generally have greater control over information regarding product composition and characteristics, while consumers rely on information provided through packaging and marketing channels. This asymmetry has the potential to place consumers at a disadvantage when the available information is inadequate or difficult to understand. Therefore, mandatory labeling can be understood as a legal instrument to reduce information asymmetry while strengthening consumers' position in trade relations.

This issue is also related to the concept of state paternalism, namely state intervention to protect individuals from risks or conditions that could hinder adequate decision-making. In the context of nutrition labeling, state intervention is realized through the establishment of mandatory information disclosure that allows consumers to recognize product characteristics before making a purchase. This intervention is not intended to eliminate consumer freedom of choice, but rather to strengthen the information base used in decision-making. On the other hand, mandatory labeling is also related to the doctrine of duty of care, namely the obligation to act carefully in accordance with the responsibilities inherent in a legal relationship. In this context, business actors are required not only to provide accurate information but also to comply with the provisions for providing information as mandated by laws and regulations. These three perspectives position labeling as part of a legal protection mechanism that connects consumer rights, business actors' obligations, and state responsibilities.

In Indonesian law, the basis for such protection is found, among other things, in Law Number 8 of 1999 concerning Consumer Protection. Article 4 letter c regulates consumers' rights to obtain correct, clear, and honest information regarding the condition and guarantee of goods and/or services, while Article 7 letter b regulates the obligation of business actors to provide correct, clear, honest, and adequate information regarding the condition and guarantee of goods and/or services. In the health sector, Law Number 17 of 2023 concerning Health is also part of the normative framework relating to food regulation and supervision. These provisions then relate to technical regulations regarding nutritional value information, including Regulation of the Food and Drug Supervisory Agency Number 10 of 2026

concerning Nutritional Value Information on Processed Food Labels and Decree of the Minister of Health Number HK.01.07/MENKES/301/2026 concerning the Inclusion of Nutrition Labels and Health Messages on Ready-to-Eat Processed Foods, which introduced the Nutri-Level system. The existence of these instruments shows that the regulation of nutritional information has developed through several legal instruments with different materials and scopes of regulation.

A significant development occurred after the Constitutional Court issued Decision Number 110/PUU-XXIV/2026 on September 29, 2026. Based on the construction of the decision that is the object of this study, the Court gave a constitutional interpretation to Article 7 letter b of the Consumer Protection Law by including the obligation to include color labels and symbols on food and beverage packaging containing sugar, salt, and fat. The Court also gave an interpretation to Article 148 of Law Number 17 of 2023 concerning Health relating to the responsibilities of the central government and regional governments in regulating and supervising the production, processing, and distribution of food and beverages. The decision strengthened the construction of consumers' rights to information by placing the inclusion of color labels and symbols as part of the legal obligations of business actors. Thus, the fulfillment of consumer rights is no longer only analyzed based on the availability of textual information, but also based on the labeling obligations as interpreted in the decision.

However, these developments raise legal issues that require further analysis. The primary issue is not simply the existence of several legal instruments governing nutritional information, but rather the relationship between norms established through Constitutional Court decisions and technical regulations that have been in effect previously or concurrently. Constitutional Court decisions that provide constitutional interpretation to a legal norm must serve as a reference in the application of that norm. Meanwhile, BPOM Regulation Number 10 of 2026 regulates nutritional information on processed food labels, while KMK Number HK.01.07/MENKES/301/2026 establishes a Nutri-Level system for processed ready-to-eat beverages, classifying nutrient content into Levels A, B, C, and D. Both technical instruments have objects and scopes of regulation that need to be examined for their compliance with the color and symbol labeling obligations as defined in Constitutional Court Decision Number 110/PUU-XXIV/2026.

The legal gap in this study lies in the unanswered normative relationship between the obligation to include color and symbol labels based on Constitutional Court Decision Number 110/PUU-XXIV/2026 and the technical standards for nutritional labeling regulated in BPOM Regulation Number 10 of 2026 and KMK Number HK.01.07/MENKES/301/2026. The Constitutional Court Decision strengthens the information obligation through the interpretation of statutory norms, but its implementation requires clarity regarding the form, color, symbol, product coverage, nutritional content parameters, and the relationship with the existing labeling system. Meanwhile, the existence of nutritional value information and Nutri-Level classification does not in itself prove that all elements of the color and symbol label obligation referred to in the decision have been fulfilled. Thus, there are issues regarding the suitability of the content material, the scope of the regulatory object, and the need to adjust technical regulations to the constitutional interpretation.

This issue requires analysis by distinguishing the hierarchy of norms from the harmonization of regulations. Constitutional Court decisions are inappropriately placed as statutory regulations on a par with technical regulations, as they provide binding interpretations for the statutory norms being reviewed. Therefore, the hierarchy issue in this study relates to the need to ensure that the implementation of technical norms does not conflict with the constitutional interpretation established by the Court. Harmonization is necessary to ensure that technical provisions within the authority of the Food and Drug Authority (BPOM) and the Ministry of Health can be applied consistently, do not create conflicting standards, and provide certainty for consumers and businesses. This analysis also needs to consider the differences in the nature of the legal instruments used, including the status of ministerial decisions and their regulatory function in the implementation of nutrition labeling policies.

From a consumer protection theory perspective, the unclear relationship between these instruments has the potential to reduce the effectiveness of fulfilling consumers' right to information. If the form and parameters of mandatory labels do not have coordinated standards, businesses may face uncertainty

regarding their obligations, while consumers may potentially receive different forms of information. This situation indicates that the existence of legal norms is not always synonymous with the realization of effective legal protection. Within the framework of information asymmetry theory, inconsistencies in information delivery can maintain a knowledge gap between businesses and consumers. Meanwhile, based on the perspectives of state paternalism and the duty of care, the state needs to ensure that information obligations are clearly formulated and monitored, while businesses must fulfill labeling obligations in accordance with applicable legal standards. Thus, consumer protection requires an integration between clear norms, understandable information, supervision, and legal accountability.

Based on the description, this research focuses on two legal issues. First, how is the construction and harmonization of norms regarding the obligation to include color labels and symbols on products containing sugar, salt, and fat after the Constitutional Court Decision Number 110/PUU-XXIV/2026, especially in relation to BPOM Regulation Number 10 of 2026 and KMK Number HK.01.07/MENKES/301/2026? Second, what are the legal consequences for business actors who do not fulfill the obligation to include color labels and symbols, and what is the government's responsibility in supervising and enforcing labeling obligations? These two issues are aimed at testing the consistency of applicable norms while assessing the clarity of the construction of legal obligations of the parties in the consumer protection system.

This research uses a normative juridical method with a statute approach, a conceptual approach, and a case approach. The legal materials are analyzed qualitatively through interpretation and harmonization of consumer protection norms, health norms, technical regulations on nutrition labeling, and Constitutional Court Decision Number 110/PUU-XXIV/2026. The conceptual approach is used to describe the relationship between information asymmetry, state intervention, the obligation of prudence of business actors, and the hierarchy of legal norms. The case approach is used to examine the constitutional interpretation given by the Court and its implications for the implementation of mandatory nutrition labeling.

This study aims to analyze the construction and harmonization of norms regarding the obligation to include color and symbol labels on products containing sugar, salt, and fat following the Constitutional Court Decision Number 110/PUU-XXIV/2026, and examine the legal consequences of business actors' non-compliance and the government's responsibility in implementing these obligations. The novelty of this study lies in the analysis of the relationship between the constitutional meaning of consumer rights, the scope of technical regulations on nutrition labeling, and the need to enforce business actors' legal obligations. This study argues that the effectiveness of consumer protection is not solely determined by the recognition of the right to information or the presence of labels on packaging, but also requires harmonization of norms, clear technical standards, a coordinated division of authority, and accountability mechanisms in accordance with applicable legal provisions.

2. METHODS

This study uses a normative juridical method to analyze consumer legal protection regarding information on sugar, salt, and fat content following the issuance of Constitutional Court Decision Number 110/PUU-XXIV/2026. The study focuses on the interpretation of norms, harmonization between legal instruments, and the legal consequences of the mandatory inclusion of color and symbol labels on food products.

The approaches used include the statute approach, the conceptual approach, and the case approach. The statutory approach is used to analyze Law Number 8 of 1999 concerning Consumer Protection, Law Number 17 of 2023 concerning Health, Government Regulation Number 28 of 2024, BPOM Regulation Number 10 of 2026, and Decree of the Minister of Health Number HK.01.07/MENKES/301/2026. The conceptual approach is used to examine the theory of information asymmetry, state paternalism, duty of care, and the hierarchy of legal norms. Meanwhile, the case approach focuses on the ruling and ratio decidendi of Constitutional Court Decision Number 110/PUU-XXIV/2026.

The analysis of the relationship between legal instruments is conducted through systematic interpretation and harmonization of norms by comparing the legal status, the authority of the legislator, the content, and the scope of the regulations. The principle of *lex superior derogat legi inferiori* is applied when a conflict is found between norms based on the hierarchy of laws and regulations. In this case, the Constitutional Court Decision is not positioned as a regulation equal to technical regulations, but rather as a decision that provides constitutional meaning to statutory norms. The analysis is directed at assessing the conformity of technical regulations with this meaning and identifying potential overlaps, gaps, and ambiguities in the regulations.

The legal materials for this research consist of primary, secondary, and tertiary legal materials. Primary legal materials include relevant laws and regulations and Constitutional Court Decision Number 110/PUU-XXIV/2026. Selection is based on document authenticity, enforceability, material relevance, and legal standing. Secondary legal materials include academic books, peer-reviewed journal articles, expert opinions, and previous research on consumer protection and nutrition labeling. The selection takes into account source credibility, traceability, relevance, and clarity of research methods. Literature from the last five years is prioritized, while earlier works are used if they have conceptual relevance. Tertiary legal materials, such as legal dictionaries, are used to clarify necessary terms.

International empirical and experimental literature on front-of-pack nutrition labeling (FOPL), including research by Shrestha et al. (2023) and Gomes et al. (2024), was used as supporting academic material to explain the understandability of nutrition information and the context of the social efficacy of legal norms. This literature helped provide context for the Court's legal reasoning and the need for technical regulation, but was not treated as primary legal material or used to test statistical hypotheses.

The legal materials were collected through library research, examining official government documents, court decisions, scientific publications, and academic literature. The analysis was conducted qualitatively through five stages: identifying consumer protection norms; analyzing the Constitutional Court's ruling and *ratio decidendi*; comparing them with the relevant BPOM Regulation and KMK; assessing the conformity of the norms through systematic interpretation and harmonization; and analyzing the legal consequences of business actors' non-compliance and the government's responsibilities based on applicable regulations.

Legal reasoning is conducted deductively, using the principle of consumer protection as the basis for assessing specific provisions regarding nutrition labeling. The analysis also compares *das sollen*, the conditions desired by legal norms, with normative issues in the implementation and coordination of regulations. Because this research is juridical-normative, the discussion of *das sein* is limited to regulatory conditions and implementation contexts that can be traced through documents and literature, rather than direct measurements of business compliance or consumer behavior. The results of the analysis are used to formulate conclusions regarding regulatory harmonization, clarity of labeling obligations, and legal consequences for the parties.

3. FINDINGS AND DISCUSSION

Findings

3.1. Regulations on Consumer Protection regarding Information on Sugar, Salt, and Fat Content Based on Constitutional Court Decision Number 110/PUU-XXIV/2026

The research results show that consumer protection regulations regarding information on sugar, salt, and fat content in Indonesia are formed through several layers of legal norms, namely consumer protection norms, health norms, technical regulations regarding nutritional information, and Constitutional Court Decision Number 110/PUU-XXIV/2026. These four groups of norms indicate a development from the general obligation to provide information to more specific information obligations regarding sugar, salt, and fat content.

At the legislative level, Law Number 8 of 1999 concerning Consumer Protection places information as one of the fundamental consumer rights. Article 4, letter c, grants consumers the right to obtain true, clear, and honest information regarding the condition and guarantees of goods and/or services. This provision correlates with Article 7, letter b, which requires business actors to provide true, clear, honest, and adequate information regarding the condition and guarantees of goods and/or services.

The identification of these provisions shows that prior to Constitutional Court Decision No. 110/PUU-XXIV/2026, Article 7 letter b was still formulated as a general obligation regarding the provision of information. This norm did not explicitly mention the obligation to include color labels and symbols on foods and beverages containing sugar, salt, and fat.

In the health sector, Law Number 17 of 2023 concerning Health provides the government with the authority to regulate and supervise the production, processing, and distribution of food and beverages. These provisions form part of the legal framework that was later tested in case Number 110/PUU-XXIV/2026. Important changes were found in the Constitutional Court Decision Number 110/PUU-XXIV/2026. Based on the decision issued on September 29, 2026, the Court granted the Petitioners' petition in part and gave a conditional interpretation to Article 7 letter b of the Consumer Protection Law. The Court stated that business actors are obliged to provide correct, clear, honest, and adequate information, including the inclusion of color labels and symbols on food and beverage packaging containing sugar, salt, and fat.

The Court also gave a conditional interpretation to Article 148 of Law Number 17 of 2023 concerning Health. Based on this interpretation, the central and regional governments are responsible for regulating and supervising the production, processing, and distribution of food and beverages, including requiring businesses to include color labels and symbols on the packaging of food and beverages containing sugar, salt, and fat.

Table 1. Development of Sugar, Salt, and Fat Information Regulations in Consumer Protection

Legal instruments	Setting material	Normative findings
UU no. 8 of 1999, Article 4 letter c	Consumer rights to information	Consumers have the right to obtain correct, clear and honest information.
UU no. 8 of 1999, Article 7 letter b	Obligations of business actors	Business actors are required to provide correct, clear, honest and adequate information.
Law No. 17 of 2023, Article 148	Government responsibility	The government has a responsibility to regulate and supervise food and beverages.
BPOM Regulation No. 10 of 2026	Nutritional information on processed food labels	Regulates the nutritional information framework on processed food labels and is effective from June 2026.
Constitutional Court Decision No. 110/PUU-XXIV/2026	GGL color labels and symbols	Information obligations have been expanded to include the inclusion of color and symbol labels on foods and drinks containing sugar, salt and fat.

Source: Processed by the author based on laws and regulations and Constitutional Court Decision No. 110/PUU-XXIV/2026.

The next finding shows that technical regulations regarding nutritional information also underwent changes in 2026. BPOM Regulation Number 10 of 2026 concerning Nutritional Information on Processed Food Labels was stipulated on June 9, 2026, and promulgated on June 17, 2026. This

regulation is in effect and revokes several previous regulations regarding nutritional information on processed food labels.

Thus, the research found that nutritional information regulations in 2026 would undergo changes not only through constitutional court rulings but also through updates to technical regulations. This situation indicates regulatory developments occurring in close proximity.

Another finding comes from the Minister of Health's Decree No. HK.01.07/MENKES/301/2026 concerning the Inclusion of Nutrition Labels and Health Messages on Ready-to-Eat Processed Foods. The decree establishes the Nutri-Level system, which categorizes the sugar, salt, and saturated fat content of ready-to-drink beverages into Levels A, B, C, and D.

Based on the attached decree, Nutri-Level determination is based on nutrient content per 100 ml. For sugar, Level A is set at ≤ 1 gram, Level B at more than 1 to 5 grams, Level C at more than 5 to 10 grams, and Level D at more than 10 grams. For salt, the Level A limit is ≤ 5 mg and Level D at more than 500 mg. Meanwhile, for saturated fat, Level A is set at ≤ 0.7 grams and Level D at more than 2.8 grams.

These findings demonstrate that the Indonesian legal system in 2026 already recognized a visual classification mechanism for the sugar, salt, and fat content of certain foods. Thus, there is an identifiable normative and technical basis for regulating nutritional information before and after Constitutional Court Decision No. 110/PUU-XXIV/2026.

3.2. Implementation of the Obligation to Include Sugar, Salt, and Fat Labels in Consumer Protection

The results of research on the applicable regulatory framework show that the implementation of the obligation to include information on sugar, salt, and fat involves three main elements, namely business actors as the party obliged to provide information, the government as the party that regulates and supervises, and consumers as the party that has the right to obtain information about the product.

Based on Constitutional Court Decision No. 110/PUU-XXIV/2026, business actors' obligations are no longer formulated generally as providing correct, clear, honest, and adequate information. These obligations specifically include the inclusion of color labels and symbols on food and beverage packaging containing sugar, salt, and fat. This provision forms part of the constitutional interpretation of Article 7 letter b of the Consumer Protection Law.

The results of the identification of technical regulations indicate that the nutritional value information mechanism has received its own regulation through BPOM Regulation Number 10 of 2026. This regulation is currently in effect and specifically regulates nutritional value information on processed food labels.

Furthermore, Minister of Health Decree No. HK.01.07/MENKES/301/2026 establishes Nutri-Levels for ready-to-eat processed foods in the form of beverages. The system uses four levels: A, B, C, and D, classified based on sugar, salt, and saturated fat content per 100 ml.

Table 2. Findings on the Regulation of the Application of Sugar, Salt, and Fat Information

Elements of implementation	Legal basis	Findings
Obligations of business actors	Constitutional Court Decision No. 110/PUU-XXIV/2026	Business actors are required to include color labels and symbols on food and beverage packaging containing sugar, salt and fat.
Consumer rights	Law No. 8 of 1999	Consumers have the right to obtain correct, clear and honest information about goods.
Government oversight	Law No. 17 of 2023 in conjunction with Constitutional Court Decision No. 110/PUU-XXIV/2026	The central and regional governments are responsible for regulating and

Nutritional information	BPOM Regulation No. 10 of 2026	supervising the production, processing and distribution of food and beverages. A new regulatory framework is available regarding nutritional information on processed food labels.
Nutri-Level Classification	Ministerial Decree No. HK.01.07/MENKES/301/2026	The content of sugar, salt and saturated fat in ready-to-drink drinks is classified into Levels A–D
Basis of classification	Ministerial Decree No. HK.01.07/MENKES/301/2026	Classification is determined based on the nutritional content per 100 ml

Source: Processed by the author based on laws and regulations, technical regulations, and Constitutional Court Decision No. 110/PUU-XXIV/2026.

Based on these findings, legal instruments exist that govern each key element in the implementation of consumer protection. Consumer rights are based in the Consumer Protection Law, business obligations are reinforced through Constitutional Court rulings, and nutritional information regulation is technically formalized through the BPOM Regulation and the Nutri-Level policy.

The research also shows that the implementation of nutritional information in 2026 will not utilize a single legal instrument. Regulations at the legislative level, Constitutional Court rulings, BPOM regulations, and Minister of Health decrees exist. Each instrument has a different regulatory scope.

BPOM Regulation No. 10 of 2026 specifically regulates nutritional information on processed food labels and replaces several previous regulations. Meanwhile, KMK No. HK.01.07/MENKES/301/2026 establishes Nutri-Levels for ready-to-drink processed foods, such as beverages, with parameters of sugar, salt, and saturated fat per 100 ml.

At the constitutional level, Constitutional Court Decision No. 110/PUU-XXIV/2026 imposes obligations that directly link consumer protection to the inclusion of color and symbol labels. Thus, the research findings demonstrate a connection between consumer rights norms, business obligations, government authority, and technical labeling instruments.

Overall, the research found that the Indonesian legal system has established a normative basis for consumer protection through information on sugar, salt, and fat content. This system comprises consumers' rights to information, business obligations, government regulatory and supervisory obligations, and technical instruments regarding nutritional information and nutrient content classification.

The main findings of this study can be formulated as follows:

1. Constitutional Court Decision Number 110/PUU-XXIV/2026 has expanded the information obligation norms for business actors by including the inclusion of color and symbol labels on foods and beverages containing sugar, salt, and fat.
2. BPOM Regulation Number 10 of 2026 has provided a regulatory framework regarding nutritional information on processed food labels.
3. KMK Number HK.01.07/MENKES/301/2026 has established the Nutri-Level A–D classification based on the sugar, salt, and saturated fat content in ready-to-eat processed foods in the form of drinks.
4. The implementation of consumer protection for GGL information involves business actors, central and regional governments, and consumers in different legal positions and functions.
5. The 2026 legal framework indicates the existence of several legal instruments that simultaneously regulate nutritional information and food labeling.

Discussion

The research results show that Constitutional Court Decision Number 110/PUU-XXIV/2026 brought significant changes to the construction of consumers' rights to information in Indonesia. These changes are not solely related to the addition of certain labels to packaging, but also to strengthening understanding of the information that must be provided by business actors. Article 7 letter b of Law Number 8 of 1999 concerning Consumer Protection essentially requires business actors to provide correct, clear, and honest information regarding the condition and guarantees of goods and/or services. In the context of labeling sugar, salt, and fat (GGL) content, this obligation needs to be understood not only as an obligation to provide information, but also as an effort to ensure that information can be recognized and used by consumers in making decisions. Thus, this development can be understood as strengthening protection oriented towards the availability and understandability of information (Courbet et al., 2024; Hadi et al., 2026).

This construction aligns with the development of research on front-of-pack nutrition labeling (FOPL), which is the presentation of nutritional information on the front of packaging in a relatively simple and easily recognizable format. Shrestha et al. (2023), through a systematic review of various studies, found that FOPL is generally more easily noticed by consumers than nutrition information placed on the back of the package. However, attention to the label does not always result in the same understanding and use of the information across all groups. This finding is important for legal analysis because it demonstrates that the formal presence of information does not necessarily guarantee the effective fulfillment of consumer protection functions. The form in which information is presented also determines consumers' ability to exercise their rights.

Sengupta et al. (2026) showed that the ability of various FOPL systems to help consumers identify the nutritional quality of products can vary. Ghosh et al. (2023) also found that concise formats, such as Health Star Ratings and warning labels, were relatively easier for Indian consumers to recognize and understand than some more complex information formats. Meanwhile, Barrett et al. (2025), in an experimental study in India, found that two-color traffic light labels provided strong results in product understanding and choice. These findings strengthen the argument that simplifying nutritional information can support the fulfillment of consumer rights. However, these research results cannot be directly used as a basis for determining that one label format is definitely most effective in all contexts.

This caution is necessary because the effectiveness of FOPL is also influenced by socioeconomic status, level of understanding, and consumer characteristics. Oviedo-Solís et al. (2024) showed that these factors can influence consumer response to labeling systems. A study by Hafner et al. (2026) in the Annual Review of Nutrition also showed that FOPL can generally improve understanding of nutritional quality and influence choices and purchases, but different interpretative systems do not always produce the same results. Therefore, the inclusion of color and symbol labels cannot be interpreted as a guarantee that consumers will always choose healthier products. Legally, the primary function of labels is to help fulfill the right to information, while changes in consumption behavior are influenced by various other factors.

Differences in effectiveness between labeling systems were also evident in a study by St. George et al. (2025) in Panama. This study showed that different labeling systems can produce varying levels of objective understanding and purchase intentions. Ribeiro et al. (2025), in a study in Costa Rica, found that octagonal warning labels were relatively more effective in helping consumers identify products with high sugar, sodium, and saturated fat content compared to several other formats. Both studies demonstrate that the visual characteristics of a label have consequences for its informative power.

Findings in the Indonesian context offer more direct relevance. Mora-Plazas et al. (2024), through an experimental study of 4,039 Indonesian respondents, found that various forms of FOPL can improve respondents' ability to identify a product's nutritional quality. In the study, warning labels and multiple traffic lights performed relatively well, while multiple traffic lights also received good ratings for ease of use and usability. These findings demonstrate that the need for more easily understood nutritional information has an empirical basis in the Indonesian consumer context. However, these findings should

be viewed as supporting evidence for policy, not as a basis for concluding that a labeling model should be automatically implemented without considering applicable legal provisions.

AlQurashi et al. (2025), for example, found that Nutri-Score can improve Saudi Arabian consumers' ability to understand the nutritional quality of products, but its effectiveness still depends on the food category and consumer characteristics. Another study in Spain also showed that warning labels can be more effective than Nutri-Score in correcting perceptions of certain products with a health halo. These findings demonstrate that a single labeling system can produce different results depending on product characteristics and consumer context. Therefore, labeling standards in Indonesia need to be designed based on consumer protection objectives, product characteristics, and the clarity of the information conveyed.

From a legal perspective, Constitutional Court Decision No. 110/PUU-XXIV/2026 should be positioned as a normative basis that must be understood in accordance with its legal rulings and considerations. Technical details regarding the shape, color, size, position, and meaning of symbols still need to be analyzed based on relevant implementing regulations. This means that the decision does not automatically resolve all technical labeling issues but needs to be translated into policies and standards that can be applied consistently. At this point, harmonization between the Consumer Protection Law, health regulations, BPOM regulations, Ministry of Health policies, and other technical instruments is crucial.

Information about sugar, salt, and fat is crucial for consumer protection because it impacts consumers' ability to assess product characteristics before making a purchase. In this context, businesses generally possess greater access to information about their products' composition and characteristics than consumers. This imbalance represents a form of information asymmetry, one of the fundamental reasons for the existence of consumer protection laws. Labeling obligations can be understood as a legal instrument to reduce this imbalance by providing usable information to consumers.

Calderon-Monge et al. (2024) showed that perceptions of label usefulness and ease of use are related to consumer attitudes and behaviors toward products. These findings support the understanding that information perceived as useful and easy to use is more likely to be considered in decision-making. Therefore, the principle of correct, clear, and honest information in consumer protection law needs to be implemented by considering the practical function of information for consumers, without neglecting the formal provisions established by laws and regulations.

However, simplification should not eliminate important information or lead to misperceptions. Cerf et al. (2024) showed that consumer understanding of the Nutri-Score remains influenced by the context of use and consumer knowledge level. Consumers may understand the general purpose of the label, but not necessarily the entire assessment mechanism. Furthermore, using the label as a general quality signal can create a health halo, the perception that a product is generally healthy simply because it receives a certain rating or symbol. Therefore, label simplification needs to be balanced with information accuracy and consumer education so that the symbols used are understood according to their regulatory purpose.

The next issue concerns the relationship between norms established through Constitutional Court decisions and technical regulations issued by government agencies. In the context of this research, BPOM Regulation Number 10 of 2026 and the Nutri-Level policy established through Minister of Health Decree Number HK.01.07/MENKES/301/2026 need to be examined based on the scope of the regulation, the regulated subjects, the types of products targeted, and the form of obligations stipulated. This analysis is important because labeling regulations can have different objectives and functions. BPOM provisions regarding processed foods need to be read according to their regulatory scope, while the Nutri-Level policy needs to be examined according to the product scope and technical provisions stipulated in its instruments.

In carrying out harmonization, Constitutional Court decisions should not be treated solely as technical regulations whose status can be directly compared with any administrative regulations.

Constitutional Court decisions have binding legal force in accordance with their constitutional authority, while technical regulations carry out further regulatory functions within the authority of the institution that created them. Therefore, harmonization testing should begin by identifying the content of the ruling and legal reasoning of the decision, then comparing it with the relevant technical provisions. This process can determine whether the implementing regulations are appropriate, require adjustments, or remain problematic in their application.

Lee et al. (2025), through a study of FOPL policies in Brazil, Chile, and Mexico, demonstrated that the development of food labeling policies involves the interaction of various institutions and interests. These findings demonstrate that policy success is determined not only by label design but also by institutional coordination and the regulatory process. In the Indonesian context, coordination between the Food and Drug Monitoring Agency (BPOM) and the Ministry of Health is necessary to ensure that businesses obtain clear guidelines regarding labeling obligations for regulated product categories.

However, the existence of multiple regulatory instruments does not in itself prove the existence of conflicting norms. The potential for legal uncertainty can only be assessed after a systematic comparison of the substance of each provision, its scope of application, and its legal relationship. If differences in standards are found that significantly impact business actors' obligations, they must be resolved through interpretations consistent with the hierarchy of laws and regulations, the division of authority, and the regulatory objectives of each instrument. Therefore, harmonization cannot simply be achieved through the use of identical terminology; it must also provide clarity regarding the standards applicable to each product category.

This clarity is also crucial for small and medium-sized enterprises. Oviedo-Solís et al. (2024) show that business actors' perceptions of FOPL are a crucial factor in policy implementation. Business actors not only face legal obligations but also need to understand how to apply labels in production and marketing processes. Therefore, regulatory harmonization should be accompanied by technical guidelines, outreach, and an explanation of the scope of obligations. These steps can help reduce the risk of misapplication while also supporting legal certainty for consumers and businesses.

The research results show that the implementation of consumer protection through GGL labeling involves a relationship between business actors' obligations, government responsibilities, and consumers' ability to use information. Constitutional Court Decision No. 110/PUU-XXIV/2026 provides a normative basis that needs to be applied within the scope of the decision, while the effectiveness of protection remains dependent on applicable technical regulations and oversight mechanisms.

Normatively, business actors have an obligation to provide accurate and non-misleading product information. This obligation is related to Article 4 letter c of the Consumer Protection Law concerning consumers' rights to obtain accurate, clear, and honest information, and Article 7 letter b concerning the obligation of business actors to provide such information. This provision serves as the basis for assessing whether the information provided to consumers meets the legally mandated protection standards. If applicable regulations require a specific form of labeling, business actors' compliance should be assessed based on the label's compliance with these requirements.

The findings of Gomes et al. (2025) suggest that label design needs to consider literacy levels and population diversity. Simpler labels can help consumers understand a product's nutritional quality, but these benefits depend on consumers' ability to recognize and interpret the information. For Indonesia, these findings are relevant because consumers have varying levels of education, nutritional knowledge, and socioeconomic backgrounds. Therefore, labeling standards need to prioritize readability and ease of understanding without compromising the accuracy of the information.

Sun et al. (2025) showed that the relationship between socioeconomic status and perceived product healthiness can be influenced by how label information is presented. Yang et al. (2025) also showed that the use and understanding of FOPL are not always evenly distributed across socioeconomic groups. These findings highlight the importance of ensuring that labeling systems are usable by diverse consumer groups. From a legal protection perspective, compliance with information obligations is not

solely assessed by the presence of labels; it is also necessary to consider whether the required format meets established standards and allows for clear information delivery.

However, empirical findings regarding label effectiveness do not automatically prove that a particular business actor has violated the law. Research on FOPL can primarily be used to illustrate the importance of information design and the need for clear standards. Assessment of violations must still be based on applicable legal provisions, product characteristics, the contents of the label, and facts regarding the actions or omissions of the business actor. Therefore, empirical research results serve as a basis for arguments regarding the urgency of protection, not as a substitute for proving the elements of a violation in a specific case.

Legally, non-compliance with labeling obligations can result in legal consequences if the action meets the governing provisions. Administrative consequences can arise if a business actor violates the obligations or standards stipulated in applicable sectoral regulations. Meanwhile, civil liability for consumer losses must be analyzed based on the relevant legal basis and elements of responsibility, including the relationship between the business actor's actions or omissions and the alleged losses. Therefore, administrative violations and civil liability need to be distinguished, although both can arise in a single sequence of events if the legal requirements are met.

Article 19 of the Consumer Protection Law stipulates the responsibility of business actors to provide compensation for damage, contamination, and/or loss to consumers resulting from consuming goods and/or services produced or traded, in accordance with applicable regulations. However, this provision does not mean that every label discrepancy automatically results in an obligation to pay compensation. Assessment still requires an examination of the basis for the claim, the form of loss, the causal relationship, and relevant legal provisions. This distinction is important so that consumer protection is not only normatively sound but also implemented with appropriate legal arguments.

Research by Gomes et al. (2025) and Soares et al. (2025) shows that labels can help consumers identify products high in sugar, sodium, and saturated fat, including through online purchasing simulations among adolescents. These findings demonstrate the function of labels as decision-making aids when consumers face a variety of product choices. However, the success of labeling laws should not be measured solely on changes in consumption choices. More legally relevant measures include compliance with information obligations, label accuracy and clarity, the availability of oversight mechanisms, and the availability of legal recourse in the event of violations that result in legal consequences.

Barrett et al. (2025), through policy modeling research, predicted that the implementation of FOPL could impact consumption patterns and population health. However, the modeling results remain dependent on assumptions regarding changes in behavior and consumption composition. This suggests that the relationship between labeling, consumer decisions, and health impacts is complex. Therefore, labels need to be positioned as an instrument of health protection and policy, not the sole factor determining consumption behavior.

Labeling requirements also have the potential to impact production processes. Studies on FOPL indicate that labeling policies can be linked to changes in product characteristics and reformulation by businesses. In this context, labeling not only serves to provide information to consumers but can also be a tool to encourage businesses to pay attention to the composition of marketed products. However, these production changes need to be proven through appropriate research and cannot be assumed to occur uniformly across all types of businesses.

De St. George et al. (2025) showed that brand and product claims can still influence consumer decisions even when warning labels are used. These findings confirm that consumers receive label information in conjunction with advertising, price, brand, and other health claims. Therefore, GGL label regulations need to be read in conjunction with provisions regarding relevant product information and promotion. While mandatory labels provide certain information, voluntary information on packaging should not be presented in a manner that conflicts with legal requirements or misleads consumers.

Research on label design proposed by the US Food and Drug Administration also shows that certain information formats can improve consumer understanding, but the impact may vary depending on nutritional literacy levels. These findings reinforce the importance of readability, simplicity, and accuracy. Therefore, label design needs to balance simplicity and accuracy, ensuring ease of use without obscuring the meaning of the information conveyed.

From an administrative law perspective, the effectiveness of labeling obligations depends heavily on the government's ability to translate norms into auditable and enforceable standards. Supervision should be designed to extend beyond checking the label's existence to include compliance with applicable technical requirements. This approach can be implemented through pre-market (ex ante) and post-market (ex post) supervision, as long as the form of supervision aligns with the authority and mechanisms stipulated in laws and regulations.

Ex ante supervision can be directed at fulfilling information and labeling requirements before a product is marketed, in accordance with the applicable mechanisms for the relevant product category. Meanwhile, ex post supervision can be conducted through inspections of products already in circulation, handling consumer complaints, and following up on suspected information discrepancies. These two forms of supervision complement each other, as formal compliance before marketing does not eliminate the possibility of violations in product implementation or distribution.

The division of roles between institutions must also be clearly defined. The Food and Drug Authority (BPOM) exercises supervisory authority in accordance with regulations in the field of drugs and food, while the Ministry of Health exercises authority in the health sector within its scope of regulation. Regional governments can play a role in implementing government affairs and supervision according to the authority granted by laws and regulations. This division needs to be accompanied by coordination to ensure that inspections, provision of guidelines, and follow-up supervision do not result in different standards for business actors.

Consequences for non-compliance must be based on the provisions that actually apply to the product and the violation in question. The form of follow-up action may vary depending on the type of violation, the agency's authority, and the legal basis used. Therefore, written warnings, mandatory label corrections, product recalls, or permit revocation cannot be considered automatic sanctions in every case. Every action must have a legal basis, meet implementation requirements, and be implemented by an authorized official or agency.

In cases of consumer harm, civil liability mechanisms need to be analyzed separately from administrative enforcement. Non-compliance with labeling standards may be a relevant fact in examining a business actor's liability, but determining compensation still requires a legal basis and an assessment of the applicable elements of liability. Therefore, a consumer protection system needs to provide both administrative oversight channels and dispute resolution mechanisms without confounding the basis or objectives of the two.

Supervision also needs to be accompanied by consumer education. Information simplified through colors and symbols may not be accurately understood without adequate explanation. Education is needed so that consumers can use labels as a factor in evaluating products, without assuming that a particular symbol always reflects all aspects of a product's health. For businesses, outreach and technical guidelines can help improve compliance and reduce uncertainty regarding the implementation of labeling requirements.

Based on this description, there are four primary requirements for implementing the GGL labeling policy. First, clear technical standards regarding the form and substance of labels. Second, coordination between institutions according to their respective divisions of authority. Third, supervision and law enforcement with a clear legal basis and procedures. Fourth, education for consumers and businesses. These four requirements are interrelated and determine whether established norms can be consistently applied.

The research results show a difference between *das sollen* and *das sein* in the implementation of consumer protection through GGL labeling. At the *das sollen* level, consumers' right to information is

based on the Consumer Protection Law and is reinforced by Constitutional Court Decision Number 110/PUU-XXIV/2026, according to the content and scope of the decision. This norm emphasizes the importance of providing information that consumers can use to assess product characteristics. At the *das sein* level, the implementation of this obligation still requires clear technical standards, regulatory harmonization, institutional coordination, and oversight and law enforcement mechanisms.

This gap does not necessarily indicate a lack of a legal basis for consumer protection. The key issue is how applicable norms are translated into a consistent implementation system. Therefore, assessing legal gaps requires a concrete comparison of the content of decisions, technical regulations, the scope of institutional authority, and their implementation practices. With this approach, harmonization recommendations can be directed at provisions that truly require adjustment, rather than solely on allegations of conflicting norms.

Overall, this study demonstrates that Constitutional Court Decision No. 110/PUU-XXIV/2026 represents a significant development in the construction of consumer protection for GGL information. International literature on FOPL supports the importance of presenting easily recognizable and understandable information, but also indicates that its effectiveness is influenced by label design, consumer literacy, socioeconomic status, product category, and regulatory context. Therefore, legal protection is not only realized through formal obligations to include labels, but must be supported by clear standards, accurate information, regulatory consistency, effective oversight, and accountability mechanisms that are in accordance with the legal basis.

Further research could be developed through empirical studies on the level of business compliance with labeling obligations after the ruling is implemented. Further research could also measure Indonesian consumers' understanding of color and symbol labels, compare the implementation of Nutri-Level with FOPL systems in other countries, and examine business responses to labeling obligations. Such empirical research would complement normative studies by providing insight into the extent to which legal regulations are actually implemented and result in consumer protection in practice.

4. CONCLUSION

Constitutional Court Decision Number 110/PUU-XXIV/2026 has important implications for the development of consumer protection doctrine concerning information on sugar, salt, and fat (GGL) content in food products. The substantive contribution of this study lies in strengthening the understanding that the right to information should not be limited to the formal availability of information but should also encompass its clarity, accessibility, and comprehensibility for consumers. In this regard, labeling obligations can be understood through the concept of substantial transparency, which emphasizes the extent to which information enables consumers to recognize, understand, and use it as a basis for informed decisions. Accordingly, consumer protection should extend beyond the formal fulfillment of information disclosure obligations to ensure that such information effectively supports the exercise of consumer rights. Nevertheless, the implementation of color-coded and symbolic labels does not automatically guarantee that consumers will choose healthier products, as labeling effectiveness remains influenced by information design, consumer literacy, product characteristics, and the broader marketing environment. Therefore, mandatory GGL labeling should be supported by clear technical standards, accurate information, and sustained consumer education. Empirical research on front-of-pack nutrition labeling (FOPL) can provide an important evidentiary basis for evaluating and designing labeling policies, but it cannot replace the legal basis required to establish business obligations and responsibilities.

From a regulatory perspective, the principal challenge lies in translating legal norms into a coherent and consistently implemented system of regulation and oversight. The relationship between Constitutional Court Decision Number 110/PUU-XXIV/2026, the regulations issued by the Food and Drug Monitoring Agency (BPOM), and the Ministry of Health's Nutri-Level policy must be assessed by considering their respective regulatory scopes, objects, and institutional authorities. Harmonization

among these frameworks is essential to provide business actors with legal certainty regarding applicable labeling requirements while ensuring that consumers receive consistent, accurate, and understandable information. Accordingly, the House of Representatives (DPR) and the Government need to evaluate the adequacy of the existing regulatory framework for GGL labeling under the Health Law and the Consumer Protection Law by examining the legal rulings and considerations contained in the Constitutional Court decision, identifying regulatory gaps or inconsistencies, and determining the appropriate legal instruments for necessary adjustments. BPOM and the Ministry of Health should also strengthen inter-agency coordination in developing technical standards that clarify the scope of covered products, applicable labeling requirements, labeling procedures, label size and placement, the meaning of colors and symbols, and mechanisms for addressing differences between technical provisions. Where legally appropriate, coordination may be formalized through joint regulatory instruments, provided that these instruments remain consistent with the Constitutional Court decision, the hierarchy of laws and regulations, and each institution's statutory authority.

Effective implementation further requires a clear division of responsibilities among BPOM, the Ministry of Health, and regional governments in accordance with applicable legislation. Supervision should encompass compliance with labeling standards, the accuracy of disclosed information, and the handling of consumer complaints, supported by transparent procedures for pre-distribution and post-distribution oversight. Any administrative enforcement measure must have a clear legal basis, be imposed by an authorized institution, and correspond to the nature of the violation and the applicable requirements for sanctions. Similarly, administrative sanctions and civil liability must be distinguished because each requires its own relevant legal grounds and elements of accountability. Business actors should identify products subject to mandatory labeling, evaluate existing packaging, and ensure compliance with applicable standards. Where regulatory adjustments necessitate changes to packaging design, production processes, or distribution arrangements, the relevant authorities should consider establishing a formally defined transition period, specifying its duration, scope, and conditions rather than assuming that such a period applies automatically. In parallel, the National Consumer Protection Agency (BPKN) should strengthen consumer education and advocacy by disseminating information about the meaning of GGL labels, consumers' rights to information, and available complaint mechanisms for suspected non-compliance.

Ultimately, this study concludes that strengthening consumer rights to information through GGL labeling requires an integrated implementation framework that connects substantive transparency with regulatory clarity, legal certainty, institutional coordination, effective supervision, and accountable enforcement. The legal significance of this approach lies in recognizing that the effectiveness of consumer protection depends not only on the existence of labeling obligations but also on the capacity of the regulatory system to ensure that information is accurate, comprehensible, and practically useful to consumers. The realization of these objectives requires harmonized legal instruments, clearly delineated institutional responsibilities, proportionate and legally grounded enforcement mechanisms, business compliance, and continuous consumer education. Through such an integrated approach, GGL labeling can function more effectively as an instrument for protecting consumers' right to information while maintaining legal certainty and accountability for all parties involved.

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REFERENCES

- AlQurashi, A. A., Marar, S. D., Ayyash, M., AlRawi, H. Z., & Abu-Shaheen, A. (2025). Comparing the influence of front-of-pack nutrition labels on Saudi consumers' understanding and food selection. *Frontiers in Public Health*, 13. <https://doi.org/10.3389/fpubh.2025.1527531>
- Barrett, E. M., Sträuli, B., Coyle, D. H., Kelly, B., Miller, C., Jones, A., & Pettigrew, S. (2025). Concerned but confused: Australian consumers' awareness, understanding, and recognition of ultra-processed foods. *Appetite*, 214. <https://doi.org/10.1016/j.appet.2025.108220>
- Calderon-Monge, E., Ramírez-Hurtado, J. M., & Cuesta, I. R. (2024). Labeling and consumer purchases. *International Journal of Consumer Studies*, 48(3). <https://doi.org/10.1111/ijcs.13056>
- Cerf, M., Serry, A. J., Marty, L., Nicklaus, S., & Ducrot, P. (2024). Evidence on consumers' perceptions, understanding and uses of the Nutri-Score to improve communication about its update: a qualitative study with shopping observations in France. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-20092-w>
- Chadajah, S., Rifai, M. R., & Zalil, M. A. (2025). Islamic Legal Review of Waqf Land Ownership Transfer under Indonesian Law. *Inklusif (Jurnal Pengkajian Penelitian Ekonomi Dan Hukum Islam)*, 10(2). <https://doi.org/10.24235/inklusif.v10i2.22381>
- Courbet, D., Jacquemier, L., Herberg, S., Touvier, M., Sarda, B., Kesse-Guyot, E., Galan, P., Buttafoghi, N., & Julia, C. (2024). A randomized controlled trial to test the effects of displaying the Nutri-Score in food advertising on consumer perceptions and intentions to purchase and consume. *International Journal of Behavioral Nutrition and Physical Activity*, 21(1). <https://doi.org/10.1186/s12966-024-01588-5>
- Gomes, F. S., Madriz-Morales, K., Valenzuela, D. R., Blanco-Metzler, A., Amador, N., Benavides-Aguilar, K., Bolaños-Palmieri, C., Gamboa-Gamboa, T., & Ares, G. (2025). Comparison of front-of-package nutrition labelling schemes in Costa Rica: A multi-arm parallel-group randomised controlled trial assessing objective understanding and purchase intention. *Appetite*, 206. <https://doi.org/10.1016/j.appet.2024.107774>
- Gomes, F. S., Ríos-Castillo, I., Correa, L. R. L., Cruzado, B., Rojas, C. F. U., Ares Devincenzi, G., González-Madden, E., & Victoria, J. (2024). Effects of front-of-package nutrition labelling systems on objective understanding and purchase intention in Panama: results from a multi-arm parallel-group randomised controlled trial. *Public Health Nutrition*, 27(1). <https://doi.org/10.1017/S1368980024001009>
- Hadi, A., Abdul Zalil, M., Hakim, L., Sekar Ayu Safitri, D., & Azhar Muttaqin, M. (2026). Teacher Professionalism in the Shadow of the Law: A Normative Analysis of the Implementation of Law No. 14 of 2005 concerning Teachers and Lecturers. *Jurnal Pendidikan Dan Profesi Keguruan*, 5(2). <https://doi.org/10.59562/progresif.v5i2.10061>
- Hafner, E., Hristov, H., Grunert, K. G., & Pravst, I. (2026). From perception to preference: Insights on front-of-package nutrition labelling effectiveness from a choice experiment under time-pressure. *Food Quality and Preference*, 136. <https://doi.org/10.1016/j.foodqual.2025.105765>
- Hughner, R. S., & Dumitrescu, C. (2024). The effectiveness of sugar-sweetened beverage warning labels: An examination of consumer reactance and cost of compliance. *Journal of Business Research*, 182. <https://doi.org/10.1016/j.jbusres.2024.114812>
- Julia, C., Gokani, N., Herberg, S., & Garde, A. (2025). Ten years of Nutri-Score front-of-pack nutrition labelling in Europe. *Nature Food*, 6(3). <https://doi.org/10.1038/s43016-025-01141-y>
- Lee, J. J., Mulligan, C., Jeong, H., & L'Abbe, M. R. (2025). Assessing the extent to which front-of-pack labelling regulations could support healthy eating among Canadians. *PLOS ONE*, 20(10 October). <https://doi.org/10.1371/journal.pone.0330720>

- Mora-Plazas, M., Higgins, I. C. A., Gomez, L. F., Hall, M. G., Parra, M. F., Bercholz, M., Murukutla, N., & Taillie, L. S. (2024). Impact of nutrient warning labels on Colombian consumers' selection and identification of food and drinks high in sugar, sodium, and saturated fat: A randomized controlled trial. *PLoS ONE*, 19(6 June). <https://doi.org/10.1371/journal.pone.0303514>
- Muhammad, D. W., Kautsar, I. Al, & Latifah, E. (2023). Pencantuman Label Alergen dalam Pelabelan Produk Pangan Sebagai Bentuk Perlindungan Konsumen. *Jurnal Hukum Ius Quia Iustum*, 30(2). <https://doi.org/10.20885/iustum.vol30.iss2.art9>
- Oviedo-Solís, C. I., Tolentino-Mayo, L., Quevedo, K. L., Naumann, S. A., Cediel, G., Mora, M., Abril-Ulloa, V., Ríos-Castillo, I., Valdes, V., Fontes, F., Sagaceta, J., García, D., Janjetic, M. A., Azzaretti, L., Flores, G., Hansen, E., Souto Brey, M. V., Cravero Bruneri, A. P., Mathieu, N. R., ... Barquera, S. (2024). Impact of front-of-package nutrition labels on acceptability and objective understanding: A randomized experiment in Latin American adults. *Appetite*, 203. <https://doi.org/10.1016/j.appet.2024.107691>
- Ribeiro, M., Matos, J. de P., Kikuta, C., Marques, T. da S., Arruda, B. E., Horta, P. M., Martins, A. P. B., & Mais, L. A. (2025). Brazilian front-of-package nutrition labeling: consumer perceptions on social media platform X. *Frontiers in Nutrition*, 12. <https://doi.org/10.3389/fnut.2025.1666794>
- Schindler, K., Greber-Platzer, S., Haiden, N., Gsöllpointner, M., Hofstätter, E., Lanzersdorfer, R., Kerschhofer-Lischka, T., Schneider, A. M., Scholl-Bürgi, S., Stenzel, C., & Weghuber, D. (2025). Front of package labelling: for consumer information and prevention of diet-related diseases: Support for consumers to recognize healthy food at a glance and to improve dietary behavior – Statement of the Nutrition Committee of the Austrian Society for Pediatrics and Adolescent Medicine. *Monatsschrift Fur Kinderheilkunde*, 173(7). <https://doi.org/10.1007/s00112-025-02172-2>
- Sengupta, A., Keaney, M., Seferidi, P., Ni Mhurchu, C., & Pettigrew, S. (2026). Effects of dual front-of-pack nutrition and sustainability labelling on consumer understanding, purchase intentions, food choices and willingness to pay: A systematic literature review. *Appetite*, 222. <https://doi.org/10.1016/j.appet.2026.108537>
- Shrestha, A., Cullerton, K., White, K. M., Mays, J., & Sendall, M. (2023). Impact of front-of-pack nutrition labelling in consumer understanding and use across socio-economic status: A systematic review. In *Appetite* (Vol. 187). <https://doi.org/10.1016/j.appet.2023.106587>
- St. George, S. M., Morales, V., Laurie, C., Bean, M. K., Figueroa, R., Adams, E. L., & Greenthal, E. (2025). Front-of-Package Nutrition Labeling: Evidence, Global Trends, and U.S. Policy Landscape. *Policy Insights from the Behavioral and Brain Sciences*, 12(1). <https://doi.org/10.1177/23727322241307656>
- Sun, Z., Chen, X., Yu, J., Lu, W., Shi, Z., Huang, K., Shen, L., Ma, W., Mai, S., Song, Q., Wang, Z., & Zang, J. (2025). Impact of different front-of-package labeling models on food choices among residents in Shanghai, China: a randomized controlled trial. *Frontiers in Nutrition*, 12. <https://doi.org/10.3389/fnut.2025.1594807>
- Yang, M., Min, S., & Nguyen, T. T. (2025). Consumer preferences for evaluative front-of-package nutrition labels: evidence from a choice experiment in China. *Frontiers in Nutrition*, 12. <https://doi.org/10.3389/fnut.2025.1563341>
- Zalil, M., Aspandi, A., El Banna, A. M., & Syarifudin, A. (2025). Reassessing Student Representation: Legal and Managerial Implications of the Absence of a Student Executive Board under Law No. 12 of 2012. *Journal of General Education and Humanities*, 5(1). <https://doi.org/10.58421/gehu.v5i1.715>

