NST Proceedings
OPEN ACCESS

Conference Paper

The Influence of the Ability to Read Food Labels on Compliance with Reading Food Product Labels among Nutrition Students of Provinsi Kepulauan Riau

Citra Dewi Anggraini, Haqqelni Nur Rosyidah*, Amalina Rizma, Herviana, Siska Pratiwi, Desy

Institut Kesehatan Mitra Bunda, Batam, Indonesia

*Corresponding author:
E-mail:
haqqelnin@gmail.com

ABSTRACT

Reading food labels among students is currently important to prevent consume excessive amounts of certain nutrients, resulting in excess nutrition or deficiencies in certain nutrients needed by the body. Substance information obtained from food labels is an important source of nutritional information but is usually underutilized by consumers. The information on food labels helps consumers become savvy about their food choices. This research using cross sectional design. Respondents in this study were students from the students of the nutrition undergraduate study program in Institut Kesehatan Mitra Bunda with a total of 47 respondents. Sample selection was carried out using purposive sampling. The data collection method in this study was through a questionnaire. Respondent's will fill in the questionnaire given themselves by following the instructions that will be explained before filling out the questionnaire by the data collection team. Data on respondents' ability to read nutritional value information labels was obtained from several multiple choice questions regarding the quantitative information contained in the food labels. It was found that of the 38 respondents who had good ability to read nutritional value information labels, there were 55.3% (21 respondents) who did not comply with reading nutritional value information labels. Then the statistical test results obtained were 0.908. Majority of respondents have good abilities but are not obedient in reading nutritional value information labels. The behavior of reading food labels can be used as a preventive and promotive to maintain health.

Keywords: Food label, compliance, food product

Introduction

Recently, packaged foods are now very much in demand by consumers of various age groups. Packaged food is more practiced than the others and easy to reach (Novitamanda et al., 2020). That's the reasons people highly consumed packaged food than real food and affected their eating patterns. Eating patterns can influences consumers to choose various packaged food and each packaged foods offers multiple advantages, such as brand, ingredient composition and in terms of nutritional content (Pamelia, 2018).

In the other hand, there are still many people are lack of awareness about the nutritional content in packaged food cause people tend not to read the food labels printed on the packaging (Nisa et al., 2024). Food labels are information about a product in the form of images, writing, or a combination of both that appears on the packaging. Food labels printed on the packaging must use clear, easy to read and proportional writing (BPOM, 2020).

The ability to read food labels is very necessary for consumers to influence knowledge and attitudes affected compliance read labels to food choices (Santoso et al., 2018). It is hoped that

more consumers who comply with reading food labels will be able to prevent excessive consumption of certain nutrients, resulting in excess nutrients or deficiencies of certain nutrients that the body needs. Substance information obtained from food labels is an important source of nutritional information but is usually underutilized by consumers (Septilia, 2024).

The age groups that are considered minimal in implementing compliance in reading labels when selecting types of packaged food are late teenagers and early adults. Many factors influence the level of compliance, one of which is considering product taste, product purchasing habits, and not paying attention to the impact of nutritional information on food labels (Rosyidah et al., 2023; Sinaga & Simanungkalit, 2019). The research aim is to determine the influence of the ability to read food labels on label reading compliance among nutrition students in Kepulauan Riau.

Material and Methods

The Method is cross-sectional research design with a population of undergraduate Nutrition study program students in the Riau Islands Province. The sample size for this research was based on the total sampling formula, resulting in a sample size of 47 respondents. The sample selection was carried out using a purposive sampling technique which had the criteria of being active students in the undergraduate nutrition study program in 2023. Primary data was obtained from filling out questionnaire instruments by respondents. Data on respondents' ability to read nutritional value information labels was obtained from several multiple choice questions regarding quantitative information contained in labels, calculating this information and ability to choose food. There are 6 questions with a score of 0 if the answer is wrong and a score of 1 if the answer is correct in each question. Then the total score is categorized into good ability if ≥median and poor ability if <median. Data on label reading compliance was obtained from questionnaire questions regarding how often respondents read nutritional value information labels with answers always, often, sometimes, rarely, and never. Based on the answer choices, it was categorized as compliant if the answer always/often read nutritional value information labels and non-compliant if the answer was sometimes/rarely/never read nutritional value information labels. The data analysis used includes univariate analysis to get an overview of each variable and bivariate analysis to identify variables that are thought to be related to the dependent variable, compliance with reading labels, and nutritional composition. Bivariate analysis was carried out using the chi square test method with a value of $\alpha = 0.05$.

Results and Discussion

The results of the distribution of the ability to read nutritional value information labels in Table 1 illustrate that the majority of respondents have a good level of ability to read labels (80.9%) regarding the quantitative information contained in the labels, calculating this information and the ability to choose food.

Table 1. Distribution of respondents based on level of ability to read nutritional value information labels among nutrition students of Riau Islands Province, Batam in 2023

Ability to read Nutritional Value Information Labels	n	%
Poor Ability	9	19.1
Good Ability	38	80.9
Total	**47**	**100**

The ability to read labels on food packaging is very important because it can help consumers find out the ingredients contained in the food. Apart from that, consumers who are at risk of certain diseases can also estimate the dangers that may occur based on information on nutritional content listed on packaged food labels (Kementerian Republik Indonesia, 2014).

The results of this study show that as many as 80.9% of nutrition students have a good ability to read labels with nutritional value information. These results are in line with the results of research conducted by Maulida which shows that the majority of nutrition students (74.4%) have sufficient knowledge about food labels. This is because respondents have received basic nutritional material so it can help them understand the nutritional value information listed on food packaging (Maulida, 2019). Aprianti obtained different results which state that as many as 96.1% of respondents of productive age have low nutritional value information literacy. This is related to residence in rural areas, marital status, living with family, low education level, and working not in the health sector (Aprianti et al., 2023).

Table 2. Distribution of respondents based on compliance with reading nutritional value information labels among nutrition students of Riau Islands Province, Batam in 2023

Compliance Level	n	%
Compliant	26	55.3
Uncompliant	21	44.7
Total	**47**	**100**

In this study, the results obtained in Table 2 illustrate respondents' compliance in reading nutritional value information labels. Uncompliant respondents (55.3%) had a greater distribution than compliant respondents (44.7%) in reading nutritional value information labels.

Compliance with reading nutritional value information labels among nutrition students showed that 55.3% of respondents were in the uncompliant category. These results are almost the same as previous research on nutrition students at the Walisongo State Islamic University, Semarang. Based on the analysis of compliance in reading the nutritional value information, it was found that 73.3% of respondents' compliance was classified as sufficient and there was still a lack of compliance in reading labels in the good category. This is because as many as 51.2% of respondents are known to rarely read serving sizes, protein information, and energy adequacy.[10] Lack of compliance can also be caused by respondents not prioritizing nutritional value information when reading label information on packaging. Respondents' main priority in reading food labels is the product name and expiration date (Pane, 2016).

Table 3. Results of bivariate analysis of the influence of the ability to read nutritional value information labels on compliance with reading nutritional value information labels among nutrition students in Riau Islands Province, Batam, 2023

Ability to Read Nutritional Value Information Labels	Compliance with Reading Nutritional Value Information Labels				Total		OR	p-value
	Uncompliant		Compliant					
	n	%	n	%	n	%		
Poor Ability	5	55.6	4	44.4	9	100		
Good Ability	21	55.3	17	44.7	38	100	1,012	0,987
Total	**26**	**55.3**	**21**	**44.7**	**47**	**100**		

Based on the results of the analysis between the ability to read nutritional value information labels and compliance with reading nutritional value information labels, it was found that of the 38 respondents who had good ability to read nutritional value information labels, there were 55.3% (21 respondents) who were uncompliant in reading nutritional value information labels. Then the statistical test results obtained were 0.908 so it could be concluded that there was no significant relationship between the ability to read nutritional value information labels and compliance with reading nutritional value information labels.

The results of statistical analysis stated that there was no significant relationship between the ability to read nutritional value information labels and compliance with reading nutritional value information labels. The results of this study indicate that not all respondents with good label reading skills adhere to reading nutritional value information labels. These results are in line with research conducted by Zahara and Triyanti which stated that knowledge of nutrition and food labels was not significantly related to compliance with reading nutritional information labels. This could be caused by respondents not being interested in the nutritional value information contained in food packaging (Devi et al., 2013).

Different results were obtained in other studies which stated that there was a positive relationship between the level of knowledge of packaged food labels and the practice of selecting packaged food, where the better the respondent's level of knowledge, the better they were in the practice of selecting packaged food. This is because good knowledge will make it easier for consumers to understand and read nutrition labels (Devi et al., 2013). The process of forming compliance includes attention, understanding, memory, and decision-making to understand the relationship between nutritional knowledge and the use of food labels. Therefore, good consumers will use their knowledge to understand nutritional value information and use this information to make decisions when purchasing food (Priyoto 2014).

The level of compliance in reading food labels is not only related to knowledge or ability to read nutritional value information labels. Several factors that can influence compliance with reading nutritional value information labels include not having time to read, ignoring food labels, not understanding the percentage of information on labels, not having the motivation to read them, food labels being less attractive and not feeling it is important to read food labels (Darkwa, 2014). Apart from that, a lack of awareness of the relationship between nutrition and health can also influence consumers' food choices, which has an impact on respondents' level of compliance in reading food labels (Ady & Sumarmi, 2019). Therefore, nutrition students should be able to increase their awareness and compliance with health. One way is to get used to reading the nutritional value information labels on food packaging before buying the product.

Conclusion

The research statistical test results obtained were 0.908, so it could be concluded that there was no significance. There were 55.3% who did not comply with reading nutritional value information labels. That could be concluded the ability to read nutritional value information labels is not the only factor for compliance with reading nutritional value information labels. Several factors would influence compliance with reading nutritional value information labels.

Acknowledgment

References

Ady, D. D. W., & Sumarmi, S. (2019). Kebiasaan membaca label gizi berhubungan dengan asupan natrium pada wanita dewasa. *Amerta Nutrition* 3(3), 406-412. doi:10.20473/amnt.v3i3.2019.158-163.

Aprianti, A., Mubarokah, K., Yuantari, M. G. C., & Rahma, N. S. (2023). Nutrition fact literacy in productive age communities in Semarang City, Indonesia. *Amerta Nutrition* 7(3). doi:10.20473/amnt.v7i3.2023.406-412.

BPOM. (2020). *Pedoman label pangan olahan*.

Darkwa, S. (2014). Knowledge of nutrition facts on food labels and their impact on food choices on consumers in Koforidua, Ghana: A Case Study. *South African Journal of Clinical Nutrition,* 27(1), 13-17. doi:10.1080/16070658.2014.11734479.

Devi, V. C., Sartono, A., & Isworo, J. T. (2013). Praktek pemilihan makanan kemasan berdasarkan tingkat pengetahuan tentang label produk makanan kemasan, jenis kelamin, dan usia konsumen di Pasar Swalayan ADA Setiabudi Semarang. *Jurnal Gizi,* 2(2), 1-12. https://doi.org/10.26714/jg.2.2.2013.%25p

Kementerian Republik Indonesia. (2014). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 41 Tahun 2014*.

Maulida, A. A. (2019). Membaca label pangan pada mahasiswa gizi UIN Walisongo Semarang. *Skripsi.* Program Studi Gizi Fakultas Psikologi dan Kesehatan Universitas Islam Negeri Walisongo Semarang.

Nisa, L., Nuryanto, N., Purwanti, R., & Dieny, F. F. (2024). Hubungan pengetahuan dan sikap terkait label pangan dengan kepatuhan membaca label pangan pada mahasiswa Universitas Diponegoro. *Journal of Nutrition College, 13*(1), 81-88. https://doi.org/10.14710/jnc.v13i1.40154

Novitamanda, A. D., Prayitno, N., & Nurdianty, I. (2020). Keterpaparan informasi berhubungan dengan kebiasaan membaca label pangan produk kemasan pada mahasiswa FIKES UHAMKA. *ARGIPA (Arsip Gizi dan Pangan),* 5 (2), 92-99. doi:10.22236/argipa.v5i2.3968

Pamelia, I. (2018). Perilaku konsumsi makanan cepat saji pada remaja dan dampaknya bagi Kesehatan. *Jurnal Ilmu Kesehatan Masyarakat, 14*(2), 144-153. doi:10.19184/ikesma.v14i2.10459

Pane, P. S. (2016). Analisis Tingkat Kepatuhan Membaca Label Pangan Pada Mahasiswa Gizi Institut Pertanian Bogor. *Skripsi.* Departemen Gizi Masyarakat Fakultas Ekologi Manusia: IPB

Priyoto. (2014). *Teori sikap dan perilaku dalam kesehatan.* Yogyakarta: Nuhu Medika

Rosyidah, H. N., Wirakesuma, M. T., & Rosanti, A. (2023). Gambaran sikap terhadap kesehatan dan label produk pangan pada mahasiswa jenjang sarjana program studi gizi di Kepualauan Riau. *Jurnal Ilmu Kedokteran dan Kesehatan Indonesia,* 3(1), 91–96. https://doi.org/10.55606/jikki.v3i1.1121

Santoso, I., Mustaniroh, S. A., & Pranowo, D. (2018). Keakraban produk dan minat beli frozen food: Peran pengetahuan produk, kemasan, dan lingkungan sosial. *Jurnal Ilmu Keluarga dan Konsumen*, *11*(2), 133-144, doi:10.24156/jikk.2018.11.2.133.

Septilia, D, A. (2024). Hubungan pengetahuan membaca label makanan kemasan dan kepatuhan membaca label makanan kemasan dengan status gizi pada remaja slta di Kecamatan Singgahan. *Jurnal Pembaruan Kesehatan Indonesia, 1*(1).

Sinaga, C., & Simanungkalit, S. F. (2019). Faktor-faktor yang berhubungan dengan perilaku membaca label informasi gizi. *Jurnal Endurance, 4*(1), 192. doi:10.22216/jen.v4i1.3890.