Original Research Article
Understanding Breakfast Skipping: Perceptions among Senior High School Students

ABSTRACT

Breakfast is essential part of our meal. However, breakfast skipping is prevalent among students. This study explores the perception of breakfast skipping among Senior High School students at UM Digos College, focusing on the beliefs about breakfast and the perceived benefits of breakfast consumption. A survey conducted among 204 students revealed a high overall regard for breakfast, with significant recognition of its importance for cognitive and academic performance. Despite this, breakfast skipping remains a common practice due to various factors such as socio-economic, cultural, and personal preferences. The research employed a quantitative, descriptive method using a survey adapted from Nanney et al. (2016), which assessed beliefs and perceptions using a Likert scale. The study's findings indicate no significant differences in perceptions based on sex, academic strand, grade level, or age, suggesting that interventions should target a broad demographic rather than specific groups. The results underscore the need for comprehensive breakfast awareness programs and parental involvement to encourage regularbreakfast consumption. The study contributes to understanding the critical role of breakfast in students' cognitive and academic success, emphasizing the need for public health policies and educational programs to promote healthier breakfast habits among students.

Keywords: Breakfast, Breakfast Skipping, Senior High School, Students, Academic Strand, Perceptions

1. INTRODUCTION

Breakfast is one of the most important meals of the day (Rani et al., 2021). We typically eat breakfast, lunch, and dinner three times a day. By supplying the body with essential nutrients, breakfast becomes a critical contributor to the proper functioning of the brain (Peña-Jorquera et al., 2021). The global prevalence of breakfast skipping is influenced by various socio-economic, cultural, and lifestyle factors, making it a complex issue to address. In children, this tendency is exacerbated by physiological changes during puberty, such as the shift from a morning to an evening chronotype, which complicates the establishment of consistent breakfast habits (Mekonnen et al., 2020). Studies suggest that skipping breakfast leads to prolonged fasting and lower morning glucose levels, decreasing energy availability for the brain during critical morning hours. This can impair cognitive functions, including memory, attention, and executive function, essential for academic performance and daily activities (Wicherski et al., 2021).

Intervention studies have demonstrated that regular breakfast consumption can improve dietary quality and reduce cardiometabolic risks (Sievert et al., 2019). For instance, children and adolescents who consistently eat breakfast tend to have better overall nutrition, lower intake of unhealthy foods, and reduced incidence of overweight and obesity (Laermans&Depoortere, 2016). Despite these benefits, the cognitive deficits associated with breakfast skipping remain a significant concern. Lower glucose levels in the morning can

impair cognitive performance, leading to difficulties in concentration, learning, and memory retention. Research suggests that regular breakfast consumption correlates with better concentration and memory retention (Jirout et al., 2019).

Pengpid and Peltzer (2020) posit that breakfast consumption patterns change during adolescence. Students opted to skip breakfast because of so many academic pressures and activities. Thus skipping breakfast becomes a common practice among students. This pattern or practice causes undesirable outcomes among students. ALBashtawy (2017) highlights that students who skip breakfast cause many health problems and reduced performance in cognitive and psycho-social functions- hence lessening academic learning and achievement. Undeniably, breakfast consumption is an essential meal of the day (Gibney et al., 2018). Breakfast consumption avoids health problems and improves school connectedness and academic performance (Sampasa-Kanyinga& Hamilton, 2017). Thus, parents and other involved individuals have to establish a healthy model for their children by encouraging them to eat healthy breakfasts (ALBashtawy, 2017).

In the Philippines, although a high percentage of the population regularly consumes breakfast, there is significant concern regarding the nutritional quality of these meals (Timlin et al., 2008). Skipping breakfast can lead to prolonged fasting periods, resulting in lower glucose levels in the morning and reduced energy availability for the brain. This can impair cognitive functions such as memory, attention, and executive function, vital for academic performance and daily activities (Boschloo et al., 2012; Edefonti et al., 2014). Studies in the Philippines indicate that children and adolescents who skip breakfast have poorer academic performance, reduced attention spans, and lower test scores than their peers who eat breakfast regularly (Angeles-Agdeppa & Toledo, 2022). The issue is compounded by unhealthy eating patterns later in the day, leading to nutritional deficiencies that further impair cognitive abilities (Boschloo et al., 2012; Edefonti et al., 2014).

This study is anchored with Nutrition Theory. In Nutrition Theory, breakfast consumption is generally associated with improved cognitive performance, attention, and memory in children and adolescents. Skipping breakfast reduces concentration and impairs academic performance (Hoyland et al., 2009; Ogata et al., 2019). Breakfast habits are influenced by socio-economic, cultural, and individual factors, all of which affect pupils' academic achievements. Understanding these dynamics highlights the importance of regular breakfast for cognitive health and academic performance, informing public health policies and educational programs to encourage students to eat better breakfasts (Hallström et al., 2011).

The study focuses on the perceptions of Senior High School students about breakfast skipping. It explores two dimensions: Beliefs about breakfast, which refers to the belief regarding the value and benefits of eating breakfast, and perceptions of benefits of breakfast, which refers to the perceived benefits of consuming breakfast. This study aims to determine the perception of skipping breakfast among Senior High School (SHS) students. Specifically, it will seek answers for the following: (1) to determine the profile of respondents in terms of sex, strand, and age; (2) to assess the level of understanding of the following in terms of beliefs about breakfast and perceptions of benefits of breakfast; and (3) determine if there is a significant difference on the level of understanding breakfast skipping when respondents are analyzed by profile.

2. METHODOLOGY

2.1 Research Respondents

This study was conducted in a Senior High School in Digos City, Philippines. Moreover, the school offers the following academic strands: Science, Technology, Engineering, and Mathematics (STEM), Humanities and Social Sciences (HUMSS), Accountancy, Business, and Management (ABM), General Academic Strand (GAS), and Technical Vocational Livelihood (TVL) strand. Respondents of this study were SHS students who are officially enrolled in the School Year (SY) 2023 - 2024 which comes from any academic strands and are willing to participate in the study.

The use of a simple random sampling technique was carried out in the study. This sampling technique is based on the idea that this method has an inclusive and equitable representation of drawing samples from the general population (Gupta & Shabbir, 2008 as cited inDiquito et al., 2024).Moreover, a total of 204 respondents participated in this study using this sampling frame.

2.2 Research Instrument

This study used an adapted survey questionnaire from the instrument used by Nanney et al. (2016) entitled “Project BreakFAST: Rationale, design, and recruitment and enrollment methods of a randomized controlled trial to evaluate an intervention to improve school breakfast program participation in rural high schools”.In the instrument, there are two dimensions to be considered: Dimension 1: Beliefs about Breakfast, with four questions that explore the respondents’ belief regarding the value and benefits of eating breakfast; and Dimension 2: Perceptions of Benefits of Breakfast, with seven questions that aimed at understanding the respondents’ perceived benefits of consuming breakfast (Nanney et al., 2016).

The survey was designed to include quantitative items rated on a Likert scale pattern from the study of Bringula et al. (2012) as cited by Languita et al., 2023) (see Table 1).

Table 1: Range of Means and Interpretation

Range of Means	Numerical Value	Verbal Description	Descriptive Meaning
4.51 – 5.00	5	Very High	This means that the level of perceptions regarding breakfast is very high.
3.51 – 4.50	4	High	This means that the level of perceptions regarding breakfast is high.
2.51 – 3.00	3	Moderate	This means that the level of perceptions regarding breakfast is moderate.
1.51 – 2.50	2	Low	This means that the level of perceptions regarding breakfast is low.
1.00 – 1.50	1	Very Low	This means that the level of perceptions regarding breakfast is very low.

2.3 Research Design and Procedure

This study utilizes a quantitative research method, specifically descriptive research. Descriptive research is a method employed to describe and interpret characteristics of a population or phenomenon being studied (Bloomfield & Fisher, 2019; Chapman et al., 2005; Calmorin&Calmorin, 2007). Its focus is on answering the "what" question rather than the "how," "why," or "when" questions (Atmowardoyo, 2018).

The researchers followed three (3) stages to conduct the study properly. Firstly. The researcher obtained permission from the principal's office for data gathering. Secondly, a survey questionnaire via Google Forms was administered to many senior high school students as respondents during regular school hours. Lastly, data are analyzed using descriptive statistics to evaluate the demographic profile of the respondents and the general breakfast habits of the respondents. Mean, Mann-Whitney U and Kruskal-Willis tests identify significant differences in perceptions based on Sex, Academic Strand, Grade level, and Age. Mann-Whitney U test is a non-parametric test used when the assumptions of the t-test are not met (Mat et al., 2021). Kruskall-Wallis test is a non-parametric test used when the assumptions of One-Way ANOVA are unmet (Ostertagová et al., 2014).

3. RESULTS AND DISCUSSION

3.1 Demographic Profile of Senior High School Students

Table 2 shows the demographic profile of the respondents. In terms of sex, female respondents consist of the majority of the respondents (*f*=122, %=59.80) compared to male respondents (*f* =82, %=40.20). In terms of the strand, majority of the respondents are from STEM (*f* =85, %=41.70), followed by HUMSS (*f* =77, %=37.70), ABM (*f* =23, %=11.30), GAS (*f* =10, %=4.90), and TVL (*f* =9, %=4.40) respectively. While, in terms of age, majority of the respondents were aged 16 to 17 years old (*f* =118, %=57.80), followed by 18 to 19 years old (*f* =76, %=37.30) and 20 to 22 years old (*f* =10, %=4.90) respectively.

Table 2: Demographic Profile of Respondents (n=204)

	Profile	***f***	**%**
Sex			
	Male	82	40.20
	Female	122	59.80
Sex			
	HUMSS	77	37.70
	STEM	85	41.70
	ABM	23	11.30
	GAS	10	4.90
	TVL	9	4.40
Age			
	16-17 y.o.	118	57.80
	18-19 y.o.	76	37.30
	20-22 y.o.	10	4.90

3.2 Level of Senior High School Students' Perceptions about Breakfast Skipping

Table 3 presents the level of students' perceptions about breakfast skipping in terms of beliefs about breakfast and perceptions of the benefits of breakfast. The overall perception of skipping breakfast can be interpreted as high ($\bar{x}$=3.67, SD=0.82). This means that students give high regard to having breakfast. In terms of beliefs about breakfast, the respondents have a high level of perception in this indicator ($\bar{x}$=3.70, SD=0.84). This result agrees with the statement of Zeballos and Todd (2020)that Skipping meals lowers daily calorie intake. However, decreasing overall diet quality, significantly when breakfast is skipped, could harm health over time.

Missing meals regularly might affect your metabolism and slow down your metabolism to save energy. This may eventually cause metabolic dysfunction and make weight management more difficult. Missing meals can seriously harm general health and well-being, even if it seems easy to save calories. Instead, the key to long-term health and energy levels is to maintain a balanced diet with regular, nourishing meals and snacks throughout the day (Paoli et al., 2019).

Moreover, in terms of the indicator perceptions of the benefits of breakfast, the respondents have demonstrated a high level of perception ($\bar{x}$=3.63, SD=0.79). This means that respondents generally perceive breakfast to be beneficial. This result agrees with the statement of (Fujiwara et al., 2009). The study looked at how individuals perceived the advantages of breakfast. Breakfast has an overall mean score of 3.63, indicating that people's opinions about it are generally positive.

Table 3:Level of Senior High School Students' Perceptions about Breakfast Skipping

Indicators	Mean	SD	Remarks
Beliefs about Breakfast	3.70	0.84	High
Perceptions of Benefits of Breakfast	3.63	0.79	High
Overall Mean	3.67	0.82	High

3.3 Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Sex using Mann-Whitney U Test

Table 4 shows the result of the Mann-Whitney U test comparing the perception of skipping breakfast among the respondents when grouped according to Sex. It can be observed that all dimensions have *p*-values greater than 0.05, which means that we failed to reject the null hypothesis. This indicates no significant differences in all dimensions when the respondents are grouped according to Sex. This suggests that interventions or educational programs to promote healthy breakfast habits may need to consider factors other than sex, such as individual preference. This implies that a more personalized and inclusive approach to promoting healthy breakfast habits may be more effective than targeting interventions solely based on Sex.

Moreover,Table 4 shows no statistically significant differences in beliefs and perceptions of benefits between male and female senior high school students. All p-values are well above the conventional threshold of 0.05, leading to the decision to fail to reject the null hypothesis in each case. This suggests that Sex does not significantly influence these specific perceptions among the students studied. The result agrees with the statement of Lindroos et al. (2021) and Jacob and Panwar (2023). The discovery that opinions about skipping breakfast are not substantially different based on a person's Sex is consistent with earlier studies showing the minimal impact of Sex on eating habits. This is consistent with the knowledge that a wide range of non-sex-specific factors, such as personal preferences, influence breakfast behaviors(Kuwahara et al., 2022).

Table 4: Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Sex using Mann-Whitney U Test

Indicators	Statistic	*p*
Beliefs about Breakfast	4550	.272
Perceptions of Benefits of Breakfast	4588	.316

3.4Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Strand using Kruskal-Wallis Test

Table 5 shows the Kruskal-Wallis test result comparing the respondents' perception of skipping breakfast when grouped according to Strand. It can be observed that all dimensions have *p*-values greater than 0.05, which means that we failed to reject the null hypothesis. This indicates no significant differences in all dimensions when the respondents are grouped according to their Strand. This suggests that perceptions of skipping breakfast among respondents do not significantly vary based on their academic Strand.

Table 5: Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Strand using Kruskal-Wallis Test

Indicators	X^2	*df*	*p*
Beliefs about Breakfast	1.90	4	.755
Perceptions of Benefits of Breakfast	2.08	4	.722

The result is supported by Halissam et al. (2024). The study highlights that skipping breakfast has no impact regardless of academic strand. Students who regularly skipped breakfast still managed to perform well academically. Interventions addressing breakfast-skipping behaviors may need to target all academic strands equally rather than focusing on specific strands. This implies that factors other than academic interests may influence breakfast habits, highlighting the need for comprehensive approaches considering individual preferences (Affinita et al., 2013).

3.5 Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Grade Level using Mann-Whitney U Test

Table 6 shows the result of the Mann WhitneyU test comparing the perception of skipping breakfast among the respondents when grouped according to grade level. It can be observed that all dimensions have p-values greater than 0.05, so we fail to reject the null hypothesis. This indicates no significant differences in the beliefs about breakfast, and perceptions of the benefits of breakfast when the respondents are grouped according to grade level.

This suggests that the students' attitudes and behaviors about breakfast are consistent across grades. This consistency may be due to various reasons like shared school culture or education programs emphasizing the value of breakfast.

Table 6: Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Grade Level using Mann-Whitney U Test

Indicators	Statistic	*p*
Beliefs about Breakfast	4550	.272
Perceptions of Benefits of Breakfast	4588	.316

The result agrees with the statements of Badrasawi, Anabtawi, and Al-Zain (2021) and Ma et al. (2020). Research studies highlight that perceptions and beliefs regarding the importance of breakfast are similar across grade levels. They contend that taking breakfast includes parental influence and the desire to improve energy levels and cognitive performance (Doughty et al., 2020).

3.6Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Age using Kruskal- Wallis Test

Table 7 shows the result of the Kruskal-Wallis test comparing the perception of skipping breakfast among the respondents when grouped according to Age. It can be observed that all dimensions have p-values greater than 0.05, which means that we failed to reject the null hypothesis. This indicates no significant differences exist in Dimension 1: Beliefs about Breakfast, and Dimension 2: Perception of benefits breaks when the respondents are grouped according to Age. This suggests that perceptions of skipping breakfast among respondents do not significantly vary based on their Age.

Table 7: Significant Difference in the Perception of Skipping Breakfast among the Respondents when grouped according to Strand using Kruskal-Wallis Test

Indicators	X^2	*df*	*p*
Beliefs about Breakfast	4.531	2	.104
Perceptions of Benefits of Breakfast	0.596	2	.742

The result agrees with the studies of Dean et al. (2009),Jacob and Panwar (2023), and Heo et al. (2021). They contend that Age alone did not result in significant differences in breakfast habits, beliefs, or perceptions of its benefits.

4. CONCLUSION

Breakfast is one of the essential parts of our meals. It supplies us with the necessary nutrients and energy to do our daily chores and activities well. However, some individuals opted to skip breakfast for whatever reasons they had in mind. Thus, this study explores the perceptions about breakfast among senior high school students. The findings suggest that skipping breakfast is common among students, who generally agree with its importance but hold different opinions about its precise advantages. It also implies that interventions promoting healthy breakfast habits among senior high students should adopt a comprehensive approach that considers individual preferences rather than focusing on specific demographic groups. The lack of significant differences across demographic categories indicates that factors other than Sex, academic interests, grade level, and Age play a crucial role in shaping breakfast behaviors.

RECOMMENDATIONS

Based on the study, to address the effects of skipping breakfast among senior high school students, the institution must promote breakfast awareness programs that will educate students about the benefits of eating breakfast in terms of their cognitive and health aspects. Parents also play an essential role in this initiative. Thus, parents must be given workshops or informational sessions to highlight the value of breakfast for their children's overall health and academic performance. These educational programs and interventions should target all students equally and address barriers such as lack of time and appetite to encourage regular breakfast consumption for its health and nutritional benefits.

REFERENCES

Affinita, A., Catalani, L., Cecchetto, G., De Lorenzo, G., Dilillo, D., Donegani, G., Fransos, L., Lucidi, F., Mameli, C., Manna, E., Marconi, P., Mele, G., Minestroni, L., Montanari, M., Morcellini, M., Rovera, G., Rotilio, G., Sachet, M., & Zuccotti, G. V. (2013). Breakfast: a multidisciplinary approach. Italian Journal of Pediatrics, 39(1), 44. https://doi.org/10.1186/1824-7288-39-44

Albashtawy, M. (2017). Breakfast Eating Habits Among Schoolchildren. Journal of Pediatric Nursing, 36, 118–123. https://doi.org/10.1016/j.pedn.2017.05.013

Angeles-Agdeppa, I., Custodio, Ma. R. S., & Toledo, M. B. (2022). Breakfast in the Philippines: food and diet quality as analyzed from the 2018 Expanded National Nutrition Survey. Nutrition Journal, 21(1), 52. https://doi.org/10.1186/s12937-022-00804-x

Atmowardoyo, H. (2018). Research Methods in TEFL Studies: Descriptive Research, Case Study, Error Analysis, and R & D. Journal of Language Teaching and Research, 9(1), 197. https://doi.org/10.17507/jltr.0901.25

Badrasawi, M., Anabtawi, O., & Al-Zain, Y. (2021). Breakfast characteristics, perception, and reasons of skipping among 8th and 9th-grade students at governmental schools, Jenin governance, West Bank. BMC Nutrition, 7(1), 42. https://doi.org/10.1186/s40795-021-00451-1

Bloomfield, J., & Fisher, M. (2019). Quantitative Research Design. Journal of the Australasian Rehabilitation Nurses Association, 22(2).

Boschloo, A., Ouwehand, C., Dekker, S., Lee, N., de Groot, R., Krabbendam, L., & Jolles, J. (2012). The Relation Between Breakfast Skipping and School Performance in Adolescents. Mind, Brain, and Education, 6(2), 81–88. https://doi.org/10.1111/j.1751-228X.2012.01138.x

Bringula, R. P., Batalla, Ma. Y. C., Moraga, S. D., Ochengco, L. D. R., Ohagan, K. N., &Lansigan, R. R. (2012). School Choice of Computing Students: A Comparative Perspective from Two Universities. Creative Education, 03(06), 1070–1078. https://doi.org/10.4236/ce.2012.326161

Calmorin, L., &Calmorin, M. (2007). Research Methods and thesis writing.

Chapman, S., McNeill, P., &Mcneill, P. (2005). Research Methods. Routledge. https://doi.org/10.4324/9780203463000

Dean, M., Raats, M. M., Grunert, K. G., & Lumbers, M. (2009). Factors influencing eating a varied diet in old age. Public Health Nutrition, 12(12), 2421–2427. https://doi.org/10.1017/S1368980009005448

Diquito, T. J. A., Acuña, A. R., Garcia, J. R., &Laganson, J. B. C. (2024). Analysis of Students' Climate Change Learning Using the Affective Domain of Learning. Revista de Gestão Social e Ambiental, 18(6), e05908. https://doi.org/10.24857/rgsa.v18n6-075

Doughty, K., Treu, J., & Eckner, K. (2020). Qualitative analysis of students' breakfast habits and school breakfast participation in two public school districts. Journal of Child Nutrition and Management, 44(2).

Edefonti, V., Rosato, V., Parpinel, M., Nebbia, G., Fiorica, L., Fossali, E., Ferraroni, M., Decarli, A., &Agostoni, C. (2014). The effect of breakfast composition and energy contribution on cognitive and academic performance: a systematic review. The American Journal of Clinical Nutrition, 100(2), 626–656. https://doi.org/10.3945/ajcn.114.083683

Fujiwara, T., Sato, N., Awaji, H., Sakamoto, H., & Nakata, R. (2009). Skipping breakfast adversely affects menstrual disorders in young college students. International Journal of Food Sciences and Nutrition, 60(sup6), 23–31. https://doi.org/10.1080/09637480802260998

Gibney, M., Barr, S., Bellisle, F., Drewnowski, A., Fagt, S., Livingstone, B., Masset, G., Varela Moreiras, G., Moreno, L., Smith, J., Vieux, F., Thielecke, F., & Hopkins, S. (2018). Breakfast in Human Nutrition: The International Breakfast Research Initiative. Nutrients, 10(5), 559. https://doi.org/10.3390/nu10050559

Gupta, S., & Shabbir, J. (2008). On improvement in estimating the population mean in simple random sampling. Journal of Applied Statistics, 35(5), 559–566. https://doi.org/10.1080/02664760701835839

Halissam, B.-N., Janier, J., Sabbaha, N., & Soliva, K. J. (2024). Factors of Skipping Breakfast and its impact to academic performance of Grade 11 GAS Students in MSU-SULU Senior High School. Ignatian International Journal for Multidisciplinary Research.

Hallström, L., Vereecken, C. A., Ruiz, J. R., Patterson, E., Gilbert, C. C., Catasta, G., Díaz, L.-E., Gómez-Martínez, S., González Gross, M., Gottrand, F., Hegyi, A., Lehoux, C., Mouratidou, T., Widham, K., Åström, A., Moreno, L. A., & Sjöström, M. (2011). Breakfast habits and factors influencing food choices at breakfast in relation to socio-demographic and family factors among European adolescents. The HELENA Study. Appetite, 56(3), 649–657. https://doi.org/10.1016/j.appet.2011.02.019

Heo, J., Choi, W.-J., Ham, S., Kang, S.-K., & Lee, W. (2021). Association between breakfast skipping and metabolic outcomes by sex, age, and work status stratification. Nutrition & Metabolism, 18(1), 8. https://doi.org/10.1186/s12986-020-00526-z

Hoyland, A., Dye, L., & Lawton, C. L. (2009). A systematic review of the effect of breakfast on the cognitive performance of children and adolescents. Nutrition Research Reviews, 22(2), 220–243. https://doi.org/10.1017/S0954422409990175

Jacob, J. S., & Panwar, N. (2023a). Effect of age and gender on dietary patterns, mindful eating, body image and confidence. BMC Psychology, 11(1), 264. https://doi.org/10.1186/s40359-023-01290-4

Jacob, J. S., & Panwar, N. (2023b). Effect of age and gender on dietary patterns, mindful eating, body image and confidence. BMC Psychology, 11(1), 264. https://doi.org/10.1186/s40359-023-01290-4

Jirout, J., LoCasale-Crouch, J., Turnbull, K., Gu, Y., Cubides, M., Garzione, S., Evans, T. M., Weltman, A. L., & Kranz, S. (2019). How Lifestyle Factors Affect Cognitive and Executive Function and the Ability to Learn in Children. Nutrients, 11(8), 1953. https://doi.org/10.3390/nu11081953

Kuwahara, M., Tahara, Y., Suiko, T., Nagamori, Y., & Shibata, S. (2022). Effects of Differences of Breakfast Styles, Such as Japanese and Western Breakfasts, on Eating Habits. Nutrients, 14(23), 5143. https://doi.org/10.3390/nu14235143

Laermans, J., &Depoortere, I. (2016). Chronobesity: role of the circadian system in the obesity epidemic. Obesity Reviews, 17(2), 108–125. https://doi.org/10.1111/obr.12351

Languita, J. M. S., Ligtas, J. B., Baron, D. C., &Diquito, T. J. A. (2023). Preferred Style of Teaching and Learning by College Students in the New Normal. American Journal of Multidisciplinary Research and Innovation, 2(1), 74–82. https://doi.org/10.54536/ajmri.v2i1.1209

Lindroos, A. K., Moraeus, L., Sipinen, J. P., Lemming, E. W., & Patterson, E. (2021). The Contribution of Foods and Beverages of Low Nutritional Value to the Diets of Swedish Adolescents, by Food Group, Time and Place. A Nationally Representative Study. Nutrients, 13(7), 2450. https://doi.org/10.3390/nu13072450

Ma, X., Chen, Q., Pu, Y., Guo, M., Jiang, Z., Huang, W., Long, Y., & Xu, Y. (2020). Skipping breakfast is associated with overweight and obesity: A systematic review and meta-analysis. Obesity Research & Clinical Practice, 14(1), 1–8. https://doi.org/10.1016/j.orcp.2019.12.002

Mat Roni, S., &Djajadikerta, H. G. (2021). Non-Parametric Tests. In Data Analysis with SPSS for Survey-based Research (pp. 219–260). Springer Singapore. https://doi.org/10.1007/978-981-16-0193-4_10

Mekonnen, T., Havdal, H. H., Lien, N., O'Halloran, S. A., Arah, O. A., Papadopoulou, E., & Gebremariam, M. K. (2020). Mediators of socioeconomic inequalities in dietary behaviours among youth: A systematic review. Obesity Reviews, 21(7). https://doi.org/10.1111/obr.13016

Nanney, M. S., Shanafelt, A., Wang, Q., Leduc, R., Dodds, E., Hearst, M., Kubik, M. Y., Grannon, K., & Harnack, L. (2016). Project BreakFAST: Rationale, design, and recruitment and enrollment methods of a randomized controlled trial to evaluate an intervention to improve school breakfast program participation in rural high schools. Contemporary Clinical Trials Communications, 3, 12–22. https://doi.org/10.1016/j.conctc.2015.12.009

Ogata, H., Kayaba, M., Tanaka, Y., Yajima, K., Iwayama, K., Ando, A., Park, I., Kiyono, K., Omi, N., Satoh, M., & Tokuyama, K. (2019). Effect of skipping breakfast for 6 days on energy metabolism and diurnal rhythm of blood glucose in young healthy Japanese males. The American Journal of Clinical Nutrition, 110(1), 41–52. https://doi.org/10.1093/ajcn/nqy346

Ostertagová, E., Ostertag, O., & Kováč, J. (2014). Methodology and Application of the Kruskal-Wallis Test. Applied Mechanics and Materials, 611, 115–120. https://doi.org/10.4028/www.scientific.net/AMM.611.115

Paoli, A., Tinsley, G., Bianco, A., & Moro, T. (2019). The Influence of Meal Frequency and Timing on Health in Humans: The Role of Fasting. Nutrients, 11(4), 719. https://doi.org/10.3390/nu11040719

Peña-Jorquera, H., Campos-Núñez, V., Sadarangani, K. P., Ferrari, G., Jorquera-Aguilera, C., & Cristi-Montero, C. (2021). Breakfast: A Crucial Meal for Adolescents' Cognitive Performance According to Their Nutritional Status. The Cogni-Action Project. Nutrients, 13(4), 1320. https://doi.org/10.3390/nu13041320

Pengpid, S., & Peltzer, K. (2020). Skipping Breakfast and Its Association with Health Risk Behaviour and Mental Health Among University Students in 28 Countries . Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, Volume 13, 2889–2897. https://doi.org/10.2147/DMSO.S241670

Rani, R., Dharaiya, C. N., & Singh, B. (2021). Importance of not skipping breakfast: a review. International Journal of Food Science & Technology, 56(1), 28–38. https://doi.org/10.1111/ijfs.14742

Sampasa-Kanyinga, H., & Hamilton, H. A. (2017). Eating breakfast regularly is related to higher school connectedness and academic performance in Canadian middle- and high-school students. Public Health, 145, 120–123. https://doi.org/10.1016/j.puhe.2016.12.027

Sievert, K., Hussain, S. M., Page, M. J., Wang, Y., Hughes, H. J., Malek, M., &Cicuttini, F. M. (2019). Effect of breakfast on weight and energy intake: systematic review and meta-analysis of randomised controlled trials. BMJ, l42. https://doi.org/10.1136/bmj.l42

Timlin, M. T., Pereira, M. A., Story, M., & Neumark-Sztainer, D. (2008). Breakfast Eating and Weight Change in a 5-Year Prospective Analysis of Adolescents: Project EAT (Eating Among Teens). Pediatrics, 121(3), e638–e645. https://doi.org/10.1542/peds.2007-1035

Wicherski, J., Schlesinger, S., & Fischer, F. (2021). Association between Breakfast Skipping and Body Weight—A Systematic Review and Meta-Analysis of Observational Longitudinal Studies. Nutrients, 13(1), 272. https://doi.org/10.3390/nu13010272

Zeballos, E., & Todd, J. E. (2020). The effects of skipping a meal on daily energy intake and diet quality. Public Health Nutrition, 23(18), 3346–3355. https://doi.org/10.1017/S1368980020000683