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Fast Food Consumption, Lifestyle, and Employees' Mental Health: Impact Workplace Food Security and Sustainable Food Resilience

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Abstract: This study aims to examine the influence of fast-food consumption and lifestyle on the mental health of permanent employees in manufacturing companies and to discuss its implications for workplace food security. A quantitative approach was employed involving 121 permanent employees from manufacturing companies in Indonesia, selected using a total sampling technique. The research instruments included a fast-food consumption scale, a lifestyle questionnaire covering activity, interest, and opinion dimensions, and the Mental Health Inventory (MHI-38) to assess mental health. Data were analyzed using multiple linear regression. The novelty of this study lies in its integration of fast-food consumption, lifestyle, employee mental health, and workplace food security within the context of manufacturing companies, an area that has received limited empirical attention in Indonesia. Furthermore, this study extends the discussion of employee mental health by highlighting its connection not only with psychological factors but also with lifestyle patterns and food-related conditions in the workplace. The findings indicate that fast-food consumption and lifestyle jointly have a significant effect on employees' mental health ($p = 0.014 < 0.05$). Partial analysis reveals that fast-food consumption does not significantly influence mental health ($p = 0.070 > 0.05$), whereas lifestyle has a positive and significant effect ($p = 0.000 < 0.05$). These findings suggest that maintaining a healthy and balanced lifestyle contributes more substantially to employees' psychological well-being than fast-food consumption alone. The practical implications emphasize the need for manufacturing companies in Indonesia to integrate health



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promotion initiatives, nutrition education, and healthy lifestyle programs into organizational policies to improve employee mental health and strengthen food security in the workplace.

Keywords: fast-food consumption; lifestyle; employee mental health; workplace food security; manufacturing employees; Indonesia.

快餐消费、生活方式与员工心理健康：工作场所食品安全与可持续食品韧性的影响研究

摘要：本研究旨在考察快餐消费和生活方式对制造企业正式员工心理健康的影响，并探讨其对工作场所食品安全的启示。本研究采用定量研究方法，以印度尼西亚制造企业的121名正式员工作为研究对象，并采用全样本抽样方法进行样本选取。研究工具包括快餐消费量表、涵盖活动、兴趣和观点维度的生活方式问卷，以及用于评估心理健康状况的心理健康量表（Mental Health Inventory, MHI-38）。数据采用多元线性回归方法进行分析。本研究的创新性在于将快餐消费、生活方式、员工心理健康和工作场所食品安全整合到制造企业员工研究情境中，而这一领域在印度尼西亚尚缺乏充分的实证研究。此外，本研究拓展了员工心理健康的讨论视角，强调员工心理健康不仅与心理因素有关，也与工作场所中的生活方式模式和食品相关条件密切相关。研究结果表明，快餐消费和生活方式共同对员工心理健康具有显著影响（ $p = 0.014 < 0.05$ ）。进一步的部分分析显示，快餐消费对心理健康没有显著影响（ $p = 0.070 > 0.05$ ），而生活方式对心理健康具有正向且显著的影响（ $p = 0.000 < 0.05$ ）。这些结果表明，与单纯的快餐消费相比，保持健康且均衡的生活方式对员工心理福祉具有更为重要的促进作用。研究的实践意义在于，印度尼西亚制造企业有必要将健康促进措施、营养教育和健康生活方式项目纳入组织政策，以改善员工心理健康，并加强工作场所食品安全。

关键词：快餐消费；生活方式；员工心理健康；工作场所食品安全；制造业员工；印度尼西亚。

1. Introduction

The phenomenon of mental health disorders has increasingly gained global attention, particularly in modern work environments characterized by high demands and pressure. Mental health is a fundamental aspect of overall well being, as it directly affects employees' productivity, concentration, motivation, and emotional stability. In workplace settings, issues such as stress, anxiety, and burnout can lead to decreased performance, increased absenteeism, and a decline in quality of life.

An individual's mental health encompasses emotional, psychological, and social dimension show one thinks, feels, and behaves in daily life. Good mental health is not merely the absence of disorders but also the presence of psychological resilience and social adaptability. In complex work environments, mental health is often overlooked due to its non-physical nature and subtle early warning signs, underscoring the need

for managerial awareness in recognizing psychological distress among employees.

(Putri et al., 2015), mental health as a condition in which individuals are free from psychological symptoms and capable of functioning and adapting optimally when facing life challenges. Mulyadi (2017) that mental health is a state in which individuals are free from mental disorders and able to develop positive attitudes toward themselves and their surroundings, enabling them to create a meaningful and fulfilling life.

Modern workplace environments, mental health is often overlooked due to its non-physical nature and the subtlety of early warning signs. This condition highlights the importance of managerial awareness and sensitivity in recognizing symptoms of potential psychological distress among employees. Poor mental health has been shown significantly affect work quality, productivity, motivation, and employee loyalty to the organization (Meidina & Laura., 2022).

The Indonesia Health Survey (2023), aged over 15 years. Employed across various occupational sectors experience mental health problems at varying prevalence rates. Workers such as drivers, laborers, and domestic helpers show the highest prevalence (2.5%), followed entrepreneurs (1.4%), farmers or agricultural laborers (1.3%), private sector employees (1.2%), fishermen (1.2%), and state apparatus including military personnel, police officers, civil servants, and employees of state owned enterprises (0.7%). These findings indicate that mental health problems are a serious concern among workers, particularly in occupations associated with high-intensity workloads and stress levels.

A recent survey of Indonesian workers shows varying prevalence of mental health problems across occupations, suggesting that factors beyond job stress such as diet and lifestyle play a role. One lifestyle factor receiving increasing attention is fast-food consumption, especially among employees with high mobility and limited time. Fast food, selected for convenience and flavor, often includes processed products high in saturated fat, sugar, and sodium elements that may interfere with mood regulation, energy levels, and hormonal balance.

Lifestyle factor receiving increasing attention is the consumption of fast food, particularly among employees with high mobility and limited time for proper meals. Fast food is frequently chosen as a practical solution due to its convenience, accessibility, and strong flavor appeal. Fast food consumption began gaining popularity in the mid 20th century as part of modern lifestyles characterized by rapid activity and time efficiency Saputro (2000). In the present context, it has evolved into an integral part of everyday life, being perceived as economical, practical, and widely available (Harahap & Siregar, 2023).

Fast food generally consists of processed products high in saturated fats, sugar, and sodium, often containing additives such as preservatives and flavor enhancers (Valoka, 2017). The Indonesian Ministry of Health categorizes fast food into two types: Modern-style fast food (e.g., burgers, pizza, fried chicken, french fries, nuggets, sausages, donuts, ice cream, milkshakes, and soft drinks) and traditional fast food (e.g., meatballs, fried noodles, chicken noodles, fried rice, and soto). Wandasari, (2015). Excessive consumption of fast food may disrupt hormonal balance, affect mood regulation, decrease energy levels, and contribute to the development of mental health issues.

The growing and popularity of fast food both modern-style and local variations, have attracted the attention of diverse demographic groups. Fast food is not only favored by individuals seeking convenience but is also widely consumed by employees with busy lifestyles who prioritize time efficiency and practical meal preparation. This phenomenon is reflected in the

rapid increase in fast-food chain establishments across Indonesia. The Indonesian Café and Restaurant Entrepreneurs Association (APKRINDO), the fast-food restaurant sector experienced continued growth in the second quarter. (Prasetyo, 2023); (Pahrurozi & Nurtjahjadi, (2024).

The high demand for fast food is particularly evident in industrial regions City Cikarang in Indonesia, where major fast food outlets including Mie Gacoan, KFC, McDonald's, Burger King, HokBen, and Domino's Pizza are widely accessible. The concentration of these establishments indicates that fast food has become an integral component of many employees' daily routines. Beyond accessibility and convenience, workplace culture also plays a significant role in reinforcing this consumption pattern. Office meetings, informal celebrations, and group gatherings frequently involve fast food as a practical and shared meal option. Events such as birthdays or after work social activities further normalize fast-food consumption, gradually embedding it into routine workplace practices.

Empirical evidence supports the relationship between fast-food consumption and lifestyle patterns. Harahap & Siregar (2023), that increased fast-food consumption among urban communities is associated with a decline in healthy lifestyle behaviors, including lower levels of physical activity, higher intake of fats and sugars, and reduced consumption of fruits and vegetables. The fast paced urban environment, limited time availability, and the convenience of accessing fast-food outlets were identified as primary drivers of this dietary shift. Their findings suggest that habitual fast-food consumption not only affects physical health but also contributes to the development of an overall unhealthy lifestyle, which may increase long-term risk of chronic diseases and psychological distress.

The prevalence of fast-food consumption in Indonesia is further confirmed by national survey data. A report DataBox (2023) indicated that a substantial proportion of Indonesians consume fast food at least once per week. Gender disaggregated findings revealed that women generally consume fast-food at low to moderate frequencies (one to three times per week), whereas men are more likely to report higher consumption frequencies (more than five times per week). These patterns suggest that consumption intensity varies to gender related lifestyle preferences and dietary behaviors, highlighting the need to consider demographic differences in analysis of fast-food consumption and its broader health implications.

A growing body of research highlights a strong link between dietary patterns and mental health. Bremner, et al (2020), emphasize that diet plays a significant role in mental health outcomes, particularly in development of depressive symptoms. Adenengsi & Rusman (2019) underscore the importance of structured eating habits in

maintaining both physical and psychological well being. Poor dietary behaviors, including high consumption of processed foods and fast food, have been associated with an increased risk of mental disorders. Marx, et al (2021). This studies have linked unhealthy dietary patterns with depression, anxiety, and related psychological conditions. Lassale, et al (2019). Evidence suggests that frequent consumption of highly processed foods such as red meat, processed meat products (e.g., sausages and nuggets), refined grains, high sugar intake, and saturated fats contribute to deteriorating mental health Lassale, et al (2019)

The growing popularity of both modern and local fast-food outlets, particularly in proximity to industrial zones, suggests that workers may increasingly rely on these meals as part of their daily routines. While such accessibility ensures the availability of food, it raises important concerns regarding food security in workplace. Food security extends beyond mere access to sufficient quantities of food; it also encompasses access to nutritious and health promoting dietary options. Inadequate diet quality and limited access to balanced nutrition have been associated with adverse mental health outcomes, including increased risks of depression and anxiety.

Empirical evidence supports the relationship between dietary patterns and mental health. Jacka, et al (2010) demonstrated that adherence to a Western dietary pattern characterized by high consumption of processed foods, red and processed meats, fast food, refined sugars, and high-fat products was significantly associated with greater odds of depression and anxiety among women. In contrast, a traditional dietary pattern rich in vegetables, fruits, fish, and whole grains exhibited a protective association with mental health. These findings underscore the importance of diet quality as a determinant of psychological well-being and highlight the potential mental health benefits of balanced nutritional intake.

In addition to dietary factors, the modern work environment presents substantial psychological challenges. Salma & Agustina (2023) emphasize that high job demands, productivity pressures, economic uncertainty, and digital transformation contribute to elevated levels of stress, anxiety, and burnout among workers. These occupational stressors may interact with unhealthy dietary behaviors, thereby compounding risks to mental well-being.

Although the present study did not find a statistically significant direct effect of fast-food consumption on mental health, the negative direction of the regression coefficient suggests a potential adverse association. This finding indicates that fast-food consumption may exert a harmful influence when combined with other unbalanced lifestyle factors, such as low physical activity, poor sleep quality, and high occupational stress. Therefore, diet, lifestyle behaviors,

and workplace food security should be conceptualized as interrelated determinants of mental health among manufacturing workers. A comprehensive approach that integrates nutritional improvement with workplace well-being strategies may be essential to promote sustainable physical and psychological health outcomes.

The novelty of this study lies in its integrative approach that simultaneously examines the effects of fast-food consumption and lifestyle on mental health among manufacturing employees in Indonesia while linking these relationships to the issue of workplace food security. Although previous studies have explored the associations between dietary habits, lifestyle factors, and mental health, these variables have largely been examined independently or within different occupational. To the best of our knowledge, no previous study has simultaneously investigated the relationships among fast-food consumption, lifestyle, mental health, and workplace food security within the manufacturing sector in Indonesia. This research therefore addresses an important gap in the literature by developing a more comprehensive framework that captures the interconnected nature of dietary behavior, lifestyle practices, and psychological well-being among manufacturing workers. This occupational group is characterized structured work schedules, demanding job responsibilities, and varying levels of access to food options, all of which may influence employees' mental health outcomes.

Furthermore, this study contributes to the limited empirical evidence available in the Indonesian regarding the influence of dietary behavior and lifestyle on workers' mental health. The focus on manufacturing employees provides additional value, as this population faces unique challenges related to eating patterns, work-life balance, occupational demands, and psychological well-being. Another important contribution of this research is the incorporation of the workplace food security perspective, which encompasses the availability, accessibility, and utilization of nutritious food resources that support employee health within the workplace. By connecting mental health outcomes with workplace food security, this study extends existing research beyond individual-level determinants and highlights the importance of organizational and environmental factors in promoting employee well-being. Therefore, this study not only advances the literature on the determinants of workers' mental health but also provides an empirical foundation for the development of evidence-based organizational policies that integrate health promotion initiatives, nutrition education, healthy lifestyle programs, and workplace food security strategies to foster sustainable employee well-being.

2. Theoretical Framework Mental Health

Mental health is a crucial aspect of employees overall well-being, particularly in the context of manufacturing industries where high workloads and repetitive routines may contribute to psychological strain. It is not merely the absence of mental disorders but also the presence of emotional stability, resilience, and social satisfaction. Veit & Ware (1983), mental health represents a psychological balance between distress such as anxiety, depression, and emotional instability and psychological well-being, including positive emotions and life satisfaction.

Vitosmara, et al (2024) mental health as a condition in which individuals can realistically assess themselves, accept personal limitations, cope with difficulties, and experience happiness in everyday life. Furthermore, (Pedhu, 2022) emphasizes that mental health is reflected in an individual's ability to actively adapt to life stressors, maintain personal stability, and possess a realistic view of oneself and life situations.

In modern life, one of the external factors influencing mental health is dietary habits, particularly the consumption of fast food. Fast food, which is typically high in saturated fats, sugars, and sodium but low in essential nutrients, has been linked to an increased risk of mental health issues such as anxiety and depression due to its impact on brain function and emotional regulation. When individuals face psychological stress, they may resort to emotional eating behaviors, often turning to fast food as a form of temporary emotional relief. However, chronic reliance on such unhealthy eating patterns can lead to long-term negative effects on both physical and mental health.

In industrial work environments, external factors such as dietary patterns and lifestyle behaviors play a substantial role in shaping mental health outcomes. The widespread consumption of fast-food typically characterized by high levels of saturated fat, sugar, and sodium and low nutritional density, has increasingly been associated with emotional dysregulation, fatigue, and mood instability. Employees frequently rely on fast food as a practical response to time constraints and demanding workloads; however, sustained reliance on such dietary patterns may adversely affect both physical and psychological health. Conversely, individuals with stable mental health are generally more capable of managing stress effectively and maintaining balanced eating behaviors, suggesting the presence of a reciprocal relationship between diet and psychological well-being.

Vitosmara, et al (2024) conceptualize mental health as a psychological condition encompassing several essential dimensions, including the absence of excessive self-blame, the ability to maintain realistic self appraisal, acceptance of personal limitations, effective coping with life challenges, satisfaction in social relationships, and capacity to experience happiness. Individuals who demonstrate these characteristics are considered to possess a sound level of mental well-being.

Adjibade, et al (2019) examined the association between *ultra processed food* (UPF) consumption and risk of depression among French adults using a prospective cohort design based on data from the large scale NutriNet-Santé study. Dietary intake was classified according to the NOVA system, which categorizes foods based on their degree of processing, while incident depression was identified through self reported medical diagnoses or antidepressant use. The findings indicated that a higher proportion of UPF consumption was significantly associated with an increased risk of depression. This association remained statistically significant after adjustment for potential confounders, including age, sex, body mass index, physical activity, smoking status, and other socio-demographic and lifestyle factors. These results underscore the importance of diet quality particularly high intake of highly processed foods in relation to mental health outcomes.

In the Indonesian context, Munandar (2022) analyzed the relationship between fast-food consumption and depressive symptoms among adults using data from the fifth wave of the Indonesia *Family Life Survey* (IFLS-5). The study found that individuals who frequently consumed fast-food were more likely to report depressive symptoms compared with those who consumed it infrequently. The association remained significant after controlling for socio-demographic variables and lifestyle factors. These findings provide empirical support within Indonesia that modern dietary patterns high in fat, sugar, and sodium may negatively affect mental health. Furthermore, the study highlights the importance of nutrition based preventive approaches in promoting psychological well-being among adults.

Sanchez, Zazpe & Gonzalez (2012), in a prospective study, reported that high consumption of fast food and commercial baked goods was associated with an increased risk of depression. Individuals with greater intake of these foods demonstrated a significantly higher likelihood of developing depressive symptoms compared with those who consumed them less frequently, even after adjustment for socio-demographic characteristics and lifestyle variables. The authors concluded that dietary patterns rich in trans fats, added sugars, and processed products contribute to elevated risks of mood disorders, thereby reinforcing evidence that diet quality constitutes an important determinant of mental health.

Fast Food Consumption

Fast food has become an integral element of modern lifestyles, particularly among urban populations and working adults in industrial sectors. Its popularity stems from convenience, affordability, and accessibility, aligning with the fast-paced nature of contemporary work environments. Harahap & Siregar (2023), describe

fast-food as a practical and easily prepared product, designed for quick consumption and efficient packaging characteristics that make it appealing to individuals with limited time for meal preparation.

However, despite its convenience, fast food typically contains high levels of sugar, sodium, saturated fats, and calories while lacking essential micronutrients such as vitamins, minerals, amino acids, and dietary fiber (Permatasari, et al, 2024). This nutritional imbalance contributes to a higher risk of obesity, metabolic syndrome, and other non-communicable diseases. Janah & Lastariwati, (2016) further emphasize that regular consumption of fast food may result in poor dietary quality and excessive caloric intake.

From a food security perspective, these patterns raise serious implications. Food security is not solely defined by food availability but also nutritional adequacy, safety, and sustainability. When fast food becomes a dominant dietary option among employees, it may create a condition of “hidden hunger” a state where caloric needs are met but essential nutrients are lacking. This phenomenon can undermine long-term workforce health and productivity, particularly in manufacturing environments where physical stamina and cognitive focus are crucial.

Therefore, addressing fast-food consumption within the framework of workplace food security is essential. Employers and policymakers should promote balanced and accessible meal options at workplaces, implement nutrition education programs, and encourage employees to adopt healthier eating behaviors. Ensuring that workers have reliable access to safe, nutritious, and affordable food is not only a public health concern but also a strategic investment in human capital, workplace well-being, and sustainable productivity.

Lifestyle

Lifestyle plays a crucial role in determining an individual's overall health and psychological well-being. World Health Organization (WHO), approximately 60% of factors influencing health and quality of life are directly associated with lifestyle choices. Unhealthy habits such as poor dietary intake, irregular sleep, lack of physical activity, and overreliance on technology can increase the risk of both physical and mental health problems (Suharmanto, 2024). These conditions are particularly relevant in industrial and manufacturing settings, where long working hours and high job demands often lead to lifestyle imbalances and psychological distress.

Modern lifestyles are often characterized by intensive use of technology, irregular sleep patterns,

imbalanced dietary habits, and minimal physical activity, all of which have been strongly linked to an increased risk of mental health disorders. Suharmanto (2024) emphasizes that lifestyle has a substantial impact not only on physical health but also on mental well-being and overall quality of life.

Shalahuddin & Irsyadi (2024) emphasize that lifestyle components such as poor sleep quality, unhealthy eating behaviors, and lack of exercise contribute significantly to symptoms of anxiety and depression. For employees in manufacturing sectors, these challenges are compounded by occupational stress and limited access to nutritious meals during work hours. Sitepu (2022) lifestyle as a multidimensional concept encompassing activities, interests, and opinions each influencing how individuals make daily choices that affect their well-being.

In workplace, unhealthy lifestyle behaviors may manifest in the form of malnutrition, poor dietary intake, smoking habits, alcohol consumption, substance misuse, and prolonged exposure to stress. These detrimental lifestyle patterns can negatively affect both the physical and mental health of employees. Furthermore, technological advancements, particularly internet and smartphone use, can also introduce new health challenges. Excessive and unregulated use of digital devices may trigger physical fatigue, psychological burnout, and social withdrawal (Vidal, et al, 2000).

Sitepu (2022), lifestyle is a multidimensional concept that reflects how individuals express themselves through their daily choices and behaviors. It consists of several aspects: activities, interests, and opinions.

Food consumption patterns especially the rising dependence on fast-food become an essential part of the lifestyle discourse. Fast food is often chosen for convenience, yet its low nutritional quality poses long-term health risks. The easy accessibility of fast-food within industrial areas raises critical concerns regarding workplace food security, which involves not only the availability of food but also its nutritional adequacy and health value.

Promoting workplace food security means ensuring that employees have consistent access to safe, nutritious, and balanced meals that support both physical and mental resilience. Manufacturing companies therefore hold a strategic role in implementing health oriented policies, such as providing healthy cafeteria options, setting balanced meal schedules, and encouraging active lifestyles through workplace wellness programs. A sustainable and health conscious lifestyle, supported by food secure environments, is fundamental to maintaining employees' mental health, work performance, and long-term productivity.

3. Methods

This study employed a quantitative approach with a cross-sectional research design to examine the

relationships among the study variables at a single point in time. A quantitative approach was selected because it enables researchers to obtain objective and measurable data, thereby facilitating the identification of the effects of independent variables on the dependent variable and providing empirical evidence regarding the relationships among the variables under investigation (Creswell & Creswell, 2022).

The study was conducted at a manufacturing company engaged in the production of industrial raw materials and located in Cikarang, Bekasi, West Java, Indonesia. The study population consisted of 121 employees who met the research criteria. A saturated sampling technique (census sampling) was employed, whereby all members of the population who met the inclusion criteria were selected as respondents. This technique was considered appropriate because the population size was manageable and all members possessed characteristics relevant to the research objectives (Etikan, et al, 2016).

The inclusion criteria were male and female employees from diverse religious backgrounds (Islam, Christianity, Buddhism, Hinduism, and others) and ethnic groups (Javanese, Sundanese, Batak, and others), aged between 20 and 47 years, employed at the company for more than three years, consuming fast food more than three times per day or more than twelve times per week, and having no history of mental disorders, depression, or the use of psychiatric medication. The exclusion criteria included employees with less than three years of work experience, those older than 47 years, individuals who consumed fast food fewer than two times per day, and those currently undergoing treatment for mental health conditions.

Data were collected using a self-report questionnaire based on a likert scale to assess respondents' level of agreement with statements related to the study variables. The likert scale is widely recognized as an effective instrument for measuring attitudes, perceptions, and opinions in social and psychological research (Joshi et al., 2015).

Mental health was measured using the Mental Health Inventory (MHI-38), which consists of 38 items covering two primary dimensions: psychological well-being and psychological distress. Fast-food consumption was assessed using an instrument adapted from Harahap & Siregar (2023), comprising 20 items representing the dimensions of packaging convenience, ease of preparation, practicality, and simplicity of processing. Lifestyle was measured using a scale adapted from Sitepu (2022), consisting of 24 items that assess activities, interests, and opinions.

The collected data were analyzed using multiple linear regression analysis to determine the extent to which fast-food consumption and lifestyle influence mental health, both simultaneously and individually (Sugiyono, 2021). Multiple linear regression was

selected because the study involved more than one independent variable that was expected to contribute to variations in the dependent variable.

Ethical considerations were carefully addressed throughout the research process. All participants provided informed consent prior to their participation. Furthermore, the study adhered to the principles of confidentiality, anonymity, and participants' right to withdraw from the study at any time without any consequences. All data collected were used exclusively for academic and research purposes.

4. Hypothesis

The hypotheses in this study were formulated to examine the relationship between fast-food consumption, lifestyle, and mental health among employees working in the manufacturing sector.

The first hypothesis (**H1**) proposes that fast-food consumption and lifestyle simultaneously have a significant influence on employees mental health implications workplace food security.

The second hypothesis (**H2**) focuses specifically on the effect of fast-food consumption on mental health implications workplace food security.

The third hypothesis (**H3**) examines the effect of lifestyle on mental health implications workplace food security

5. Results

Table 1 Validity and Reliability Test Instrument

Variable	Validity	Reliability
Mental Health	0,660 – 0,825	0,956
Fast-Food Consumption	0,486 - 0,690	0,784
Life Style	0,716 - 0,855	0,941

Based on Table 1, the mental health variable has validity coefficients 0.660 - 0.825 and a reliability coefficient of 0.956, significant a very high level of internal consistency. Hair et al., (2019), a validity coefficient above 0.30 and a reliability coefficient (*Cronbach's Alpha*) exceeding 0.70 indicate that the measurement instrument is both valid and reliable. Therefore, the results confirm that the mental health instrument used in this study is suitable for further analysis.

The fast-food consumption variable validity values 0.486 - 0.690, a reliability coefficient of 0.784. Although the validity range is lower than that of the other variables, it still exceeds the minimum acceptable threshold, suggesting that the items are adequately representative of the construct (Sugiyono, 2021).

Meanwhile, the lifestyle variable validity coefficients 0.716 - 0.855, with a reliability coefficient

of 0.941, reflecting strong item correlation and measurement consistency. These results are consistent with previous research, which emphasizes that reliability values above 0.90 indicate excellent measurement stability (Sekaran & Bougie, 2022).

Table 2 Characteristic Respondent

Characteristic	Frequency	Percentage
Categorical Age		
Young Adult (20-39)	108	89.26%
Middle Adult (40-64)	12	10.74
Total	120	100%
Gender		
Male	48	39.67%
Female	72	60.33%
Total	120	100%
Place of resident		
Bekasi	57	47.11%
Cikarang	45	37.19%
Karawang	19	15.70%
Total	120	100%
Division		
Staff	33	27.27%
PDL (Production Direct Labour)	55	45.46%
NPDL (Non Production Direct Labour)	33	27.27%
Total	120	100%

Based on table 2. The results of the grouping show that the majority of respondents within the *young adult* category (aged 20–39 years), totaling 108 individuals or 89.26% of all participants. The young adult phase is generally characterized by increased work activity, lifestyle exploration, and the formation of social and professional identity. At this stage, individuals tend to be more socially active and are more susceptible to environmental influences, including patterns of food consumption and daily habits. This has important implications for the analysis of lifestyle and fast-food consumption patterns, both of which have the potential to directly or indirectly affect mental health conditions.

In terms of gender distribution, the majority of respondents in this study female 73 respondent 60.33% indicating a higher representation compared to male employees. One possible reason for this dominance is nature of available job positions, particularly in

production or packaging departments, which often require precision, accuracy, and manual dexterity. These characteristics are generally more aligned with skill profiles of female workers residing around company area. Additionally, company recruitment policies may also consider work efficiency and operational needs, which indirectly shape the gender composition of workforce.

Most respondents in this study residence in Bekasi area, 57 respondent (47.11%) of the total respondents. Bekasi, particularly the eastern part and Cikarang border area, is a densely populated residential zone located near industrial districts, making it a strategic and efficient place to live for factory workers. The transportation, boarding houses, rented rooms, and worker housing makes Bekasi a preferred residential area for permanent employees in this company.

The distribution of respondents based on work division shows that highest from the Production Direct Labour (PDL) division, 55 respondent (45.45%) of all respondents. The company frequently recruits for PDL positions because this division plays a crucial role in maintaining production flow, meeting operational targets, and ensuring product output stability. Given the high demand for labor in production sector, it is reasonable that PDL division represents the largest portion of respondents in this study.

Table 3 Summary Model

Model	R	R Square	R Square Change
1	0.611	0.374	0.374
2	0.597	0.356	0.356

Table 3 presents the regression results for lifestyle and fast food consumption as predictors of mental health. In Model 1, both variables were entered simultaneously into the regression equation. The analysis Regression 0.611 and R-Square value of 0.374, indicating that fast-food consumption and lifestyle collectively explain 37.4% of variance in employees' mental health, while the remaining 62.6% is influenced by other factors not included in the model.

Model 2, when lifestyle was analyzed R value 0.597, and R-Square value 0.356, suggesting that lifestyle, explains 35.6% of the variation in mental health, indicating a strong relationship.

These findings suggest that lifestyle has a more dominant and consistent influence on employees' mental health than fast-food consumption. In other words, while dietary habits may contribute to mental well-being to a certain extent, the broader dimensions of

lifestyle such as physical activity, social engagement and stress management play a more substantial role in determining overall psychological health (Sarafino & Smith, 2020).

2	(Constant)	-	35,78	-	0,000
		194,911			5,448
	Life Style	5,027	0,620	0,597	
					8,109 0,000

Table 4 Anova Model

Model	Categorical	Df	F	Sig.
1	Regression	2	35,196	0,000
	Residual	118		
	Total	120		
2	Regression	1	65,763	0,000
	Residual	119		
	Total	120		

Table 4. presents the results of the ANOVA test for both regression models. Model 1, which includes both lifestyle and fast-food consumption as independent variables, the analysis produced an F-Value of 35.196 (≥ 1.96) with a *significance level* (Sig.) of 0.000 (≤ 0.05). This finding indicates that the overall regression model is statistically significant, meaning that lifestyle and fast-food consumption, when considered together, have a significant simultaneous effect on employees’ mental health. In other words, both variables collectively contribute to predicting variations in mental health among respondents.

Model 2, which examines only the lifestyle variable, ANOVA F-Value of 65.763 with a *significance* value of 0.000, also below 0.05 threshold. This confirms that lifestyle alone has a statistically significant effect on mental health. Furthermore, the higher F-value in the Stepwise Model compared to Enter Model suggests that lifestyle individually provides a stronger and more consistent contribution to predicting mental health outcomes than when combined with fast-food consumption. These results reinforce notion that lifestyle factors which include daily habits, physical activity, and social interactions are more influential determinants of psychological well-being than dietary factors alone (Ohrnberger, Fichera & Sutton, 2017).

Table 5 Coefficient Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-	51,012		-	0,014
		127,874			2,507	
	Fast-Food Consumption	-1,779	0,974	-0,134	-	0,07
					1,827	
	Life style	4,595	0,618	0,581		0
					7,919	

Table 5 presents results of multiple linear regression analysis for both models in Model 1, which fast-food consumption and lifestyle as independent variables, the regression results show that fast-food consumption has a standardized coefficient (β) -0.134 , with a *t-value* of -1.827 (≤ 1.96) and a significance level of 0.070 (≥ 0.05). These values indicate that fast-food consumption does not have a significant effect on employees’ mental health.

Conversely, lifestyle variable shows a standardized coefficient (β) of 0.581 , a *t-value* of 7.919 (≥ 1.96), and a significance level of 0.000 (≤ 0.05). This result demonstrates that lifestyle has a significant positive influence on mental health, meaning that a healthier and more balanced lifestyle tends to enhance psychological well-being.

Model 2, lifestyle is analyzed as a single predictor, findings reinforce previous results. The *standardized coefficient* (β) is 0.597 , with a *t-value* of 8.109 (≥ 1.96) and a significance level of 0.000 (≤ 0.05), further confirming that lifestyle has a strong and statistically significant effect on mental health. These findings suggest that mental well-being is more strongly associated with lifestyle factors such as physical activity, rest patterns, and social engagement than with dietary habits alone. A supportive lifestyle that promotes balance between work and personal life can reduce stress and improve psychological resilience, while poor lifestyle choices may lead to deteriorating mental health (Steptoe, Deaton & Stone, 2015).

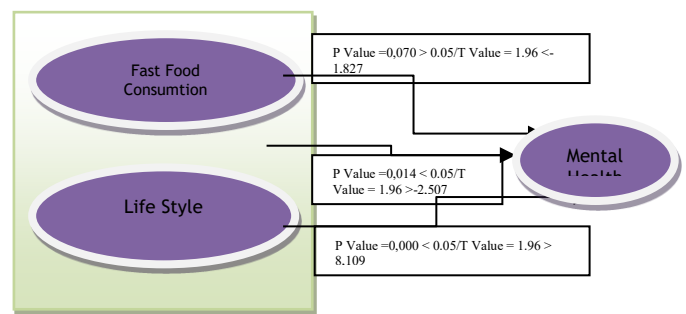


Figure 1 Research Model

H1: There is a significant negative influence of fast-food consumption and lifestyle on mental health among employees in manufacturing companies. The *significance value* of $0.014 \leq 0.05$ and the *t-value* of $-2.507 \leq 1.96$ indicate that fast food consumption and lifestyle simultaneously affect mental health.

H2: There is no significant influence of fast food consumption on mental health among employees in manufacturing companies. The *significance value* of

$0.070 \geq 0.05$ and the *t-value* of $-1.827 \leq 1.96$ indicate that fast food consumption does not have a partial effect on mental health.

H3: There is a significant positive influence of lifestyle on mental health among employees in manufacturing companies. The *significance value* of $0.000 \leq 0.05$ and the *t-value* of $8.109 \geq 1.96$ indicate that lifestyle has a significant partial effect on mental health.

6. Discussion

Fast Food Consumption, Lifestyle and on Employees' Mental Health: Impact Workplace Food Security and Sustainable Food Resilience

The results of the simultaneous analysis indicate that fast-food consumption has a negative association with mental health; however, this relationship is not statistically significant. In contrast, lifestyle a stronger positive and statistically significant relationship with employees' mental health. Nevertheless, the non-significant effect of fast-food consumption does not diminish the combined contribution of both predictors in explaining variations in mental health within the multivariate model. In multiple regression analysis, the primary focus lies in the overall explanatory power of the model rather than the individual contribution of each predictor. The positive influence of a healthy lifestyle may offset the negative tendency associated with fast-food consumption. Therefore, although fast-food consumption does not exhibit a significant partial effect, its interaction with lifestyle factors contributes meaningfully to mental health outcomes among employees in the manufacturing sector.

These findings suggest a dynamic interplay between dietary behaviors, particularly fast-food consumption, and broader lifestyle patterns in shaping psychological well-being. Unhealthy dietary habits do not necessarily lead to immediate psychological deterioration when accompanied by protective behaviors such as regular physical activity, adequate sleep, and effective stress management. Conversely, unhealthy lifestyle patterns may intensify the adverse effects of poor dietary habits. This finding highlights the close interconnection between nutritional intake and health-related behaviors in influencing psychological functioning. Consistent with the findings Vitoasmar, et al., (2024), mental health should be understood as the result of multidimensional interactions among behavioral, social, and dietary factors rather than being determined by a single isolated factor.

Veit & Ware, (1983) mental health comprises two primary dimensions: psychological distress and psychological well-being. The combination of unhealthy lifestyle behaviors and frequent fast-food consumption may increase psychological distress, manifested through anxiety, fatigue, and emotional instability. At the same time, such conditions may reduce psychological well-being through sleep disturbances, lower life satisfaction, and impaired social functioning. Previous studies have demonstrated that diets high in sugar, sodium, and saturated fat can disrupt neurotransmitter balance, affect hormonal regulation, and reduce serotonin and dopamine activity, all of which play critical roles in emotional regulation and cognitive functioning O'Neil et al., (2023); Villegas, et al., (2023); WHO, (2024).

A global review conducted by the Meat & Workforce Nutrition Alliance (GAIN, 2023) revealed that workplace nutrition interventions, including the provision of healthy meals, nutrition education, food fortification, and healthy cafeteria policies, contribute significantly to improved nutritional status, reduced risk of non-communicable diseases, and enhanced employee productivity and engagement. Beyond individual health benefits, these initiatives also generate economic advantages for organizations through reduced absenteeism and improved work performance.

In the present study, fast-food consumption showed a negative but statistically non-significant relationship with mental health, suggesting that it may still function as a potential risk factor. In contrast, lifestyle demonstrated a positive and significant association with mental health. Healthy lifestyle behaviors, including regular physical activity, sufficient sleep, balanced nutrition, mindfulness practices, and effective stress management, serve as protective mechanisms that strengthen emotional resilience and mitigate the negative effects of both nutritional and occupational stressors (Firth et al., 2020); Rebar, et al., (2022).

Florensa et al., (2024) further expanded the understanding of the relationship between dietary patterns and mental health by examining the underlying neurobiological mechanisms. Their findings indicate that diets dominated by ultra-processed foods are associated with increased inflammatory responses, oxidative stress, neurotransmitter dysregulation, and disturbances in the gut-brain axis. Chronic consumption of ultra-processed foods may alter gut microbiota composition and trigger systemic inflammation, ultimately contributing to emotional dysregulation,

cognitive decline, and increased vulnerability to depression. These findings reinforce the growing evidence that dietary patterns influence not only physical health but also brain function and mental well-being.

From the perspective of workplace food security, the present findings emphasize the importance of ensuring employees' access to nutritious, safe, and affordable food options. Food and Agriculture Organization (FAO, 2022) food security exists when individuals consistently have access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life. Within manufacturing settings, time constraints and limited availability of healthy food choices often encourage workers to rely on fast food as a convenient alternative. However, such dietary practices may have detrimental long-term consequences for both physical and mental health. Therefore, organizations play a strategic role in strengthening workplace food security through the provision of healthier food alternatives, implementation of healthy cafeteria policies, and delivery of nutrition education programs for employees.

Overall, the simultaneous influence of fast-food consumption and lifestyle on mental health should not be interpreted as a simple linear relationship but rather as the outcome of complex interactions among dietary behaviors, lifestyle practices, and food access conditions within the workplace. Mental health is shaped not only by individual choices but also by organizational and environmental factors that influence workplace food systems. Consequently, strengthening workplace food security through integrated nutrition policies, healthy lifestyle promotion programs, and health-supportive organizational practices represents a comprehensive strategy for sustaining employees' physical and psychological well-being over the long term.

Influence Fast Food Consumption on Employees Mental Health Implications Workplace Food Security

The findings of this study indicate fast-food consumption has a negative association with mental health; however, the relationship is not statistically significant. Nevertheless, the direction of the association suggests that higher frequencies of fast-food consumption tend to be associated with lower levels of mental health among employees in the manufacturing sector. (Veit & Ware, 1983), mental health reflects a dynamic balance between psychological distress,

characterized by anxiety, depressive symptoms, and emotional instability, and adaptive psychological functioning. Dietary patterns dominated by fast-food consumption are generally low in essential micronutrients such as fiber, vitamins, and minerals, which may compromise the biological systems responsible for emotional regulation and cognitive functioning. Over time, such dietary habits may contribute to increased psychological distress, manifested through irritability, fatigue, and reduced motivation, particularly when nutritional imbalances persist for prolonged periods.

Florensa et al., (2024); Brooks et al., (2024) who emphasize that unhealthy dietary patterns can disrupt hormonal and neurobiological processes involved in mood regulation, stress resilience, and sleep quality. Diets high in trans fats, refined sugars, and sodium have been shown to trigger systemic inflammation, which adversely affects central nervous system functioning and psychological well-being. Furthermore, deficiencies in essential nutrients, including omega-3 fatty acids, magnesium, and B-complex vitamins, have been associated with impaired neurotransmitter synthesis, which plays a critical role in maintaining emotional stability and cognitive performance (Hyzy et al., 2023); (WHO, 2020). When these nutritional deficiencies persist over time, individuals may become increasingly vulnerable to psychological fatigue, low mood, and decreased work productivity, even when such effects do not consistently reach statistical significance in empirical models.

Although the present study did not identify a statistically significant effect of fast-food consumption on mental health, the negative regression coefficient suggests that this variable may still function as a potential risk factor, particularly within work environments characterized by high psychosocial demands. Employees facing long working hours, limited access to healthy food options, and substantial workloads may rely on fast food as a convenient and accessible dietary choice. In this context, workplace food security emerges as an important determinant of both physical and psychological well-being. The Global Alliance for Improved Nutrition (GAIN, 2023) highlights that workplace nutrition programs can improve employee health, morale, and productivity by ensuring access to nutritious and balanced meals.

The present findings are further supported by the systematic review and meta-analysis conducted Ejtahed et al., (2024), which examined the association between

junk food consumption and mental health problems among adults. Synthesizing evidence from multiple observational studies, the authors reported a significant positive association between high consumption of energy-dense and nutrient-poor foods, including fast food, processed foods, and foods rich in sugar and saturated fat, and an increased risk of depression, anxiety, and psychological distress. Individuals with higher levels of junk food consumption were found to be more likely to experience depressive and anxiety symptoms than those adhering to healthier dietary patterns. These findings reinforce the view that diet quality constitutes an important determinant of mental health and support the implementation of nutrition-based preventive strategies within public health and occupational health policies.

From the perspective of workplace food security, ensuring consistent access to safe, nutritious, and affordable food has direct implications for strengthening employees' psychological resilience. Workplace nutrition initiatives, such as healthy cafeteria policies, adequate meal breaks, and nutrition education programs, may reduce the negative psychological consequences associated with dependence on fast food. Barton et al., (2022) further demonstrated that improvements in diet quality are positively associated with enhanced mental well-being among employees. Ni Mhurchu et al, (2010) reported that workplace health promotion programs incorporating nutrition education significantly improve employees' dietary quality and encourage healthier eating behaviors. Nutrition education helps employees understand the nutritional content of foods, the risks associated with excessive consumption of sugar, fat, and sodium, and the importance of maintaining a balanced diet for both physical and psychological health. As nutritional literacy improves, individuals become more capable of making informed dietary decisions, thereby mitigating the potential negative effects of fast-food consumption.

In addition, Dhillon & Ortenzi, (2023) explain that workforce nutrition programs encompassing nutrition education, dietary counseling, healthy food provision, and healthy cafeteria policies contribute significantly to employee health and well-being. Such programs not only improve dietary quality but also enhance productivity, employee engagement, and overall quality of life. Within the context of the present study, employees' access to health-related information and their awareness of healthy lifestyle practices may partly

explain why fast-food consumption did not exhibit a statistically significant effect on mental health.

Furthermore, mental health is influenced by complex interactions among biological, psychological, social, and behavioral factors. Consequently, the impact of fast-food consumption on mental health may become less pronounced when individuals maintain an overall healthy lifestyle. Regular physical activity, adequate sleep quality, strong social support, and effective stress-management strategies have consistently been shown to exert stronger influences on mental health than any single dietary behavior alone (Firth et al.,2020). This explanation is consistent with the findings of the present study, which demonstrate that lifestyle has a significant effect on mental health, whereas fast-food consumption does not. Therefore, integrating nutrition-based policies into workplace health promotion strategies is essential not only for supporting physical health but also for enhancing psychological stability, sustaining productivity, and promoting long-term organizational resilience.

Influence of Lifestyle on Employees Mental Health Implications Workplace Food Security

The findings of this study demonstrate that lifestyle exerts a positive and statistically significant influence on employees' mental health, highlighting the critical role of lifestyle quality in maintaining and enhancing psychological well-being, particularly within high demand occupational environments that require sustained adaptability and resilience. These results suggest that mental health is not solely determined by isolated factors but is strongly shaped by everyday behavioral patterns and value orientations that structure individuals' daily lives.

In the present study, lifestyle is conceptualized through three primary dimensions activities, interests, and opinions (Sitepu, 2022). Individuals who actively engage in productive daily activities, cultivate meaningful interests, and maintain constructive perspectives toward themselves and their social environment tend to exhibit greater emotional stability and adaptive psychological functioning. Lifestyle, therefore, extends beyond habitual routines and reflects a broader cognitive, affective, and behavioral orientation toward life.

This interpretation Veit & Ware, (1983) conceptualize mental health as comprising psychological distress and psychological well-being. A healthy lifestyle contributes to the reduction of

psychological distress such as anxiety, stress, and depressive symptoms while simultaneously enhancing positive functioning. Balanced patterns of living, including adequate rest, regular physical activity, effective stress management, and clear boundaries between professional and personal life, promote emotional regulation and psychological equilibrium. Jahoda, (1958) identifies self actualization as a central criterion of optimal mental health, referring to an individual's capacity to realize personal potential. A structured and health oriented lifestyle supports this process by harmonizing physical, emotional, and social needs, whereas lifestyle imbalance may generate psychological strain due to discrepancies between expectations and lived experience.

Latipun, (2019) further emphasizes that lifestyle constitutes one of the most decisive determinants of mental health. A positive lifestyle characterized by balanced nutrition, sufficient sleep, stress regulation, and meaningful social engagement fosters psychological resilience and reduces vulnerability to stress related disorders. Empirical studies support this perspective. (Kim et al., 2023); (Callea et al, 2022) report that employees who maintain active and health oriented lifestyles demonstrate higher levels of subjective well-being, lower stress, and reduced burnout within organizational contexts.

Kim, Lee & Park (2023), examined the association between healthy lifestyle behaviors and mental well-being among working adults, highlighting the mediating roles of stress and resilience. Their findings indicate that individuals adopt balanced dietary habits, engage in regular physical activity, obtain adequate sleep, and manage unhealthy behaviors report significantly higher levels of mental well-being. Mediation analysis revealed that this relationship is partially explained by reduced stress levels and enhanced psychological resilience. Thus, healthy lifestyle practices not only exert a direct positive effect on psychological well-being but also operate indirectly through stress reduction and resilience enhancement mechanisms.

In modern workplaces, a healthy lifestyle contributes not only to individual psychological stability but also to improved productivity, job satisfaction, and interpersonal harmony. However, sustaining such a lifestyle requires structural and organizational support, particularly in relation to workplace food security as consistent access to safe, nutritious, and affordable food options within the work environment. The Global Alliance for Improved Nutrition (GAIN, 2023) reports

that ensuring access to nutritious meals at work enhances employee focus, morale, and overall psychological well-being. Hyzy et al., (2023) emphasize that access to healthy food during working hours positively influences dietary behavior and reduces psychological fatigue.

Therefore, the implications of these findings extend beyond individual responsibility to organizational policy and practice. Employers should prioritize comprehensive workplace wellness programs that integrate nutritional access, physical activity promotion, and mental health support. Establishing workplace canteens that provide balanced meals, allocating sufficient meal breaks, and promoting food literacy initiatives can strengthen workplace food security while reinforcing employees' mental resilience. Brooks, et al., (2024); Barton et al., (2022), improvements in diet quality within occupational settings are directly associated with reduced stress and enhanced emotional stability among employees. Collectively, these findings underscore that lifestyle improvement, when supported by organizational structures, constitutes a strategic pathway toward sustainable mental health and organizational performance.

7. Conclusion

This study concludes lifestyle a decisive and positive role in determining employees mental health. A healthy lifestyle characterized by active engagement, positive interests, balanced routines, and constructive perspectives contributes significantly to psychological well being and resilience in demanding work environments. The findings validate classical and contemporary theories, psychological well being ideal mental health framework, by demonstrating that self regulation, emotional balance, and self actualization are deeply rooted in one's daily lifestyle patterns.

The research also confirms that lifestyle is not merely a set of habits but an integrated behavioral system that reflects cognitive, emotional, and social adaptation. Employees who maintain positive lifestyles exhibit greater emotional stability, higher work motivation, and lower susceptibility to psychological distress such as anxiety and burnout.

Beyond individual factors, this study underscores importance of environmental and structural support particularly workplace food security in maintaining mental well being. Access to safe, nutritious, and affordable food options within the workplace significantly enhances employees' mood, concentration,

and emotional regulation. Thus, promoting healthy food environments and organizational wellness policies should be viewed as integral strategies for improving not only employee health but also organizational productivity and sustainability.

Synergistic relationship exists between lifestyle, mental health, and workplace food security. A balanced and health oriented lifestyle, supported by nutritious workplace environments, creates a sustainable foundation for psychological resilience, employee satisfaction, and long term well being. Therefore, both individuals and organizations share mutual responsibility in cultivating conditions that nurture mental health through lifestyle enhancement and food security initiatives.

Declarations

Author Contributions

The author's contribution is the author's role in research activities. Conception and design research (Tri Panca Titis Arbiansyah), data collection (Emha Zainul Mukminin), data analysis and interpretation (Tri Natalia Palupi), manuscript draft (Erwin Simson Marojahan Simanjuntak), critical review of the manuscript (Tri Panca Titis Arbiansyah), The author has read and approved the final version of the manuscript. (Tri Panca Titis Arbiansyah, Tri Nathalia Palupi, Erwin Simson Marojahan Simanjuntak, Emha Zainul Mukminin).

Data Availability Statement

Data available on request due to restrictions, e.g., privacy or ethical: The data presented in this study are available on request from the corresponding author.

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Institutional Review Board Statement

This study did not involve clinical trials or medical interventions involving human participants; therefore, approval from an Institutional Review Board (IRB) or Research Ethics Committee was not required. The research was conducted in accordance with established ethical principles, including respect for participants' rights, data confidentiality, respondent anonymity, and

the use of data solely for academic and research purposes. All respondents participated voluntarily after receiving adequate information regarding the objectives and procedures of the study and provided informed consent prior to their participation.

This manuscript does not contain any personal data, individual identifiers, or sensitive information that could be used to identify participants. Therefore, separate Consent to Publish was not required. All reported data are presented in aggregated form to ensure the confidentiality and privacy of the respondents.

Informed Consent Statement

All respondents participated voluntarily after receiving a clear explanation of the study's objectives and providing informed consent. The study did not include any personally identifiable information of the participants; therefore, separate consent for publication was not required.

Conflicts of Interest

This study did not require approval from an ethics committee as it did not involve any medical interventions, biological experiments, or violations of participants' privacy and confidentiality. Nevertheless, the principles of research ethics were upheld through informed and voluntary consent from all participants. The author hereby declares that this research is free from conflicts of interest with any party.

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