



Food Away From Home: The Characteristics of Socio-Demographics Among Office Workers in Jakarta During the Covid-19 Pandemic

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Abstract. Food away from home (FAFH) contains more calories, salt, sugar, and fat, as well as fewer fruits and vegetables than recommended by national nutrition guidelines, and contributes to obesity, hypertension, and non-communicable diseases. In Indonesia, there is currently limited research regarding the socio-demographic characteristics and the consumption frequency of FAFH during the Covid-19 pandemic, especially among office workers. The purpose of this study is to identify socio-demographic factors associated with the frequency of consuming FAFH among office workers. Descriptive cross-sectional data were collected from 322 white-collar office workers, aged 19–57 in Jakarta, Indonesia. Self-reported socio-demographic characteristics including age, gender, level of education, level of income, living status, marital status, and consumption frequency of food away from home using a structured online questionnaire. The bivariate analyses were assessed using Person Chi-Square and Fisher's Exact Test. The multivariate analysis used in this study is a binary logistic regression. The consumption frequency of food away from home among office workers is mainly in the category of the high frequency of consuming food away from home (61.2%). Consumption of food away from home more frequently was associated with being male ($p = 0.007$) and living alone ($p = 0.022$). In the binary logistic regression result, being male was associated with a higher consumption frequency of food away from home ($\beta = 0.724$; OR = 2.062; $p = 0.09$). Consuming food away from home more frequently was associated with living alone ($\beta = 0.671$; OR = 1.955; $p = 0.021$). The study results can be used to target health promotion strategies and programs to enhance healthful dietary and nutrition health among people who consume food away from home frequently, such as males and those who live alone.

Keywords: covid-19 · food away from home · office workers · socio-demographic characteristics

The original version of this chapter was revised: Values in table 1 have been updated. The correction to this chapter is available at https://doi.org/10.2991/978-94-6463-184-5_48

1 Introduction

Food away from home food (FAFH) is food prepared and purchased away from home including meals, single ready-to-eat products, takeaway meals, and beverages purchased at restaurants, freshly prepared meal sections at stores, institutional food service industry environments, as well as other stores. Food away from home refers to food prepared outside the home and includes food that is eaten out, ordered in, and/or delivered [1]. Food away from home increases daily calorie intake and reduces the quality of a person's diet. Food away from home contains more calories, salt, sugar, and fat, as well as fewer fruits and vegetables than recommended by national nutrition guidelines. As a result, the consumption of food away from home frequently contributes to obesity, hypertension, and non-communicable diseases such as diabetes, heart disease, and cancer [2].

In early 2020, the Covid-19 pandemic triggered an unprecedented global health and socioeconomic crisis [3]. Jakarta is one of the worst-affected cities, accounting for 23.4% of the national total [4]. Since March 2020, the Indonesian government has enforced a policy of Large-Scale Social Restriction, which has forced people to spend more time at home and avoid crowds. Following the implementation of a mapping of their location, some office workers are beginning to return to work from home [5]. Early in the Covid-19 pandemic in Indonesia, people with middle-upper incomes are eating more fruits and vegetables, whereas people with low incomes are changing their food consumption patterns to meet their staple food needs by lowering the quality of food composition by consuming fewer protein and vitamin sources, which are relatively expensive [6]. The Covid-19 pandemic also influenced food distribution [7]. During the Covid-19 pandemic, 41% of Indonesians ordered more food through food delivery apps [8]. Getting food online is easier and safer because it avoids crowds [9]. People can quickly select and purchase food, increasing the frequency with which they eat [10]. During the pandemic, several demographic groups, such as young and educated adults, used the internet more frequently and engaged in activities such as online food store purchasing and food delivery [11].

Many factors influence the consumption frequency of food away from home, including socioeconomic factors, taste preferences, time, cost, and even education level [12, 13]. Working long hours, keeping a strict work schedule, or working multiple jobs can all increase the likelihood of eating food away from home [12]. Eating out much more often has been linked to being younger and coming from a higher-income family [14]. In Indonesia, there is currently limited research regarding the sociodemographic characteristics and the consumption frequency of food away from home during the Covid-19 pandemic, especially among office workers in Jakarta. Therefore, this study aims to identify sociodemographic characteristics associated with the frequency of consuming food away from home among office workers during the Covid-19 pandemic.

2 Methods

The purpose of this cross-sectional study was to identify sociodemographic characteristics associated with the frequency of consuming food away from home (FAFH) among office workers. From April 17 to July 07, 2022, white-collar office workers in Jakarta were invited to participate in the study via an announcement in the form of a flyer published on social media platforms such as Instagram and WhatsApp. Google forms was used to create and administer the structured online questionnaire. Age, gender, education level, income level, marital status, living status, and the number of FAFH consumption frequency (takeaway meals and eating out) were self-reported demographics. The specific time participants spent filling out this questionnaire was around 5 min using google forms. Food away from home is defined in this study as meals, single ready-to-eat products, takeaway meals, and beverages purchased at restaurants, freshly prepared meal sections at stores, institutional food service industry environments, and other stores [1, 15, 16]. In this study, the consumption frequency of food away from home was divided into two categories: high and low frequency. If the subject answers 5 or more times per week, they consume food away from home on a regular basis. If the subject answers less than 5 times per week, there is a low frequency of consuming food away from home [15].

SPSS Version 22 was used for all statistical analyses in this study. The bivariate analyses were assessed using Person Chi-Square and Fisher's Exact Test. The multivariate analysis used in this study is a binary logistic regression model. All study procedures were reviewed and approved with No. Protocol 22-04-0360 dated 04 April 2022 by Universitas Indonesia Faculty of Medicine's Ethic Commission, No. Ethical Approval: KET.322/UN2.F1/ETIK/PPM.00.02/2022.

3 Results and Discussions

The office workers of this study were aged 19–57 years worked in Jakarta and lived in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi). Although a total of 338 subjects responded to the announcement by entering the link, subjects who were eligible for inclusion criteria were 322 subjects. The exclusion criteria were subjects who were currently on a weight-control diet and on certain medications during the past year (such as tumors, cancer, stroke, etc.). General characteristics of the study population are summarized in Table 1 which the majority of subjects were 26–34 years (57.8%) and had up to diploma and undergraduate education (70.2%). Gender among subjects was mostly females (72.4%). Similarly, a study by Moyeda-Carabaza A et al. with 73.3% of the respondents are females [15]. This is because females tend to be more interested in health surveys. They tend to be more aware of maintaining their health, including food and nutrition [17].

The majority of office workers had income ranging from >4.800.001 IDR to 7.200.000 IDR (38.8%) and >7.200.000 IDR (34.2%). The result showed that the income of these study participants was higher than the average monthly salary of formal workers in DKI Jakarta in 2020 was around 4.224.720 IDR [18]. Living status among office workers were mostly living with family (76.1%) and the majority of them were married

(59.3%). In this study, the consumption frequency of FAFH among office workers was mostly high frequency (61.2%). This result is similar to the previous study by A.F. Moyeda-Carabaza et al. where the percentage of high-frequency consumption of food away from home (67.1%) is higher than low-frequency consumption of food away from home among faculty and staff [15].

Based on bivariate analysis (Table 2), except for gender and living status, there was no significant association between socio-demographic characteristics and consumption frequency category of FAFH. As shown in Table 2, higher odds of the high frequency of consumption of FAFH ($\geq 5 \times$ /weeks) were associated with being male (OR = 2.072, 95% CI = 1.214–3.539). According to a study, the frequency of eating out 5 times per week in males increased by 3.2–4.4 times more than in females. According to Dahye Kim's research, males are more affected by the consumption of food away from home than females [17]. This is due to the fact that females are more concerned with maintaining their health, including food and nutrition [19]. Other studies have found similar results [20–23] which could be explained by the fact that females are more health-conscious than males, and they may be more concerned about the quality of their foods, as well as having different job roles or shorter working hours, which may allow female workers to have more control over dietary choices [21, 24, 25].

While higher odds of the high frequency of consumption of FAFH ($\geq 5 \times$ /weeks) were also associated with those living alone (OR = 1.967, 95% CI = 1.121–3.450). This finding was consistent with another study that found that living alone was associated with a higher frequency of eating food away from home [26]. Another study found that living alone was associated with less time and a tendency to rely on ready-made meals or eat out frequently [19]. Because of the cultural and social roles of food and cooking, living alone may be a barrier to healthy eating. A loss of motivation and enjoyment in cooking and/or eating alone often manifested as the preparation of simple meals or the use of ready-made meals [27].

Multivariate analysis was performed using binary logistic regression, with the step-wise method and the result is shown in Table 3. Gender and living status was significantly associated with the consumption frequency of food away from home. These two significant variables can be predictors for the occurrence of frequent consumption of FAFH by 5.4% and are able to accurately predict the relationship between gender and living status to the frequency of consuming food away from home by 61.2%. This model predicts that the consumption frequency among office workers increases by 0.724 when the gender is male and it increased by 0.671 when the living status is living alone. This regression model explained that the odds ratio on gender was 2.062, this means that males had an odds for frequent consumption of FAFH by 2.062 times compared to males. This result is in line with a study by Liu et al. showed that result of logistic regression analysis was food away from home may increase the risk among males by 12.0% [28]. While office workers who live alone had odds for frequent consumption of FAFH by 1.955 times compared to office workers who live with family.

In a study conducted by Lavelle et al., female participants reported higher levels of cooking and food skills confidence when compared to male participants. Participants who scored higher on diet quality were more confident in their cooking and food skills, and they ate less takeout [29]. This is consistent with previous research that compares

Table 1. Socio-Demographic Characteristics of Subjects (N = 322)

Socio-demographic Variables	Median (Q1-Q3)	n (%)
Age	29 (26–34)	
19–25 years old		61 (18.9)
26–34 years old		186 (57.8)
35–45 years old		56 (17.4)
46–57 years old		19 (5.9)
Gender	-	
Female		233 (72.4)
Male		89 (27.6)
Level of Education	-	
≤12 years (high school)		45 (14.0)
13–16 years (diploma and undergraduate)		226 (70.2)
≥17 years (postgraduate)		51 (15.8)
Level of Income	-	
≤1.800.000 IDR		15 (4.7)
>1.800.001 IDR – 3.000.000 IDR		20 (6.2)
>3.000.001 IDR – 4.800.000 IDR		52 (16.1)
>4.800.001 IDR – 7.200.000 IDR		125 (38.8)
>7.200.000 IDR		110 (34.2)
Living Status	-	
Living with family		245 (76.1)
Living alone		77 (23.9)
Marital Status	-	
Married		191 (59.3)
Not yet married/Divorce		131 (40.7)

IDR: Indonesian Rupiah.

FAFH consumption by gender and finds that males consume more FAFH [30–33]. The result of another study showed that males had greater odds of purchasing food away from home more frequently and cooking at home less than females [1]. Then, an insufficiency of home cooking also can increase the difficulty of cooking food when living alone, which is especially dangerous for bereaved or divorced individuals who were dependent on their peers for food preparation [34]. In some cases, the issue might be difficult to adjust to preparing food for only one person [27]. Insufficiency of support in buying or acquiring meals could also add to the difficulty of meal preparation, which is especially problematic if lifting and distributing food is difficult [34, 35].

Table 2. Association Between Socio-Demographics and Consumption Frequency Category of FAFH (N = 322)

Socio-demographic Variables	n	Consumption Frequency Category of FAFH		OR (95% CI)	p-value
		Low-frequency (<5x/weeks) (n=125) n (%)	High-frequency (≥5x/weeks) (n=197) n (%)		
Age					0.291*
19–25 years old	61	22 (36.1%)	39 (63.9%)	-	
26–34 years old	186	76 (40.9%)	110 (59.1%)	-	
35–45 years old	56	17 (30.4%)	39 (69.6%)	-	
46–57 years old	19	10 (52.6%)	9 (47.4%)	-	
Gender					0.007**
Female	233	101 (43.3%)	132 (56.7%)	2.072	
Male	89	24 (27.0%)	65 (73.0%)	(1.214–3.539)	
Level of Education					0.468*
≤12 years (high school)	45	14 (31.1%)	31 (68.9%)	-	
13–16 years (diploma & undergraduate)	226	92 (40.7%)	134 (59.3%)	-	
≥17 years (postgraduate)	51	19 (37.3%)	32 (62.7%)	-	
Level of Income					0.421*
≤1.800.000 IDR	15	5 (33.3%)	10 (66.7%)	-	
>1.800.001 IDR – 3.000.000 IDR	20	11 (55.0%)	9 (45.0%)	-	
>3.000.001 IDR – 4.800.000 IDR	52	16 (30.8%)	36 (69.2%)	-	
>4.800.001 IDR – 7.200.000 IDR	125	50 (40.0%)	75 (60.0%)	-	
>7.200.000 IDR	110	43 (39.1%)	67 (60.9%)	-	
Living Status					0.022**
Living with family	245	104 (42.4%)	141 (57.6%)	1.967	
Living alone	77	21 (27.3%)	56 (72.7%)	(1.121–3.450)	
Marital Status					0.561**
Married	191	77 (40.3%)	114 (59.7%)	1.168	
Not yet married/Divorce	131	48 (36.6%)	83 (63.4%)	(0.739–1.847)	

* Person Chi-Square

** Fisher's Exact Test

Table 3. Binary Logistic Regression Result on Consumption Frequency Category of FAFH (N = 322)

Socio-demographic Variable	B	SE	OR (CI 95%)	Wald	p-value
Gender	0.724	0.275	2.062 (1.203–3.536)	6.922	0.09
Living Status	0.671	0.289	1.955 (1.109–3.449)	5.366	0.021
Constant	0.120	0.146	1.127	0.671	0.413

Nagelkerke $R^2 = 0.054$.

Overall percentage = 61.2%

4 Conclusions

There was an association between gender and living status in the consumption frequency of food away from home among office workers. A high frequency of food away from home consumption was associated with being male and those who live alone. These findings may be used to target health promotion strategies and programs to enhance healthful dietary and nutrition health among people who consume food away from home frequently, such as males and those who live alone. Further research is added on other variables, such as food away from home sources, food preference, food buying, and consumption behavior, home and community food environment, and other variables.

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Conflict of Interest. All authors declare they have no conflicts of interest.

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