

Food purchasing behaviour among urban slum women in East Jakarta: a qualitative study

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ABSTRACT

Introduction: Urbanisation in Indonesia has been associated with a transition in nutrition which has been, in part, marked by an increased purchasing of ready-to-eat, energy-dense, nutrient-poor foods. Women are responsible for purchasing and preparing food for the family. Their purchasing behaviours differ in various environments and population groups. This qualitative study was undertaken to explore the food environmental factors that influenced food purchasing behaviour of women who were the household food gatekeepers. **Methods:** The study was conducted in a slum area in East Jakarta. Eighteen overweight-obese and non-obese women who fulfilled the study's inclusion criteria were recruited for interviews that used a semi-structured questionnaire. Emic observations were conducted in order to identify typical food purchasing activities. The data were coded and categorised using qualitative data analysis and research software (Atlas.ti 7 for Windows). **Results:** Most of the women purchased ready-to-eat foods rather than cook at home, either for the family or their own consumption. Several food environmental factors influenced women's purchasing behaviour, including time and cost efficiency, food availability, family, exposure to ready-to-eat foods and food store marketing strategies. These factors led to the consumption of unhealthy foods that were high in fat, carbohydrate, sugar and salt that some of which may cause obesity. **Conclusion:** Purchasing unhealthy food was observed to be strongly linked with food-related environmental factors. This study provides an understanding of women's food purchasing behaviour and highlight potential ways to foster healthier purchasing behaviour among urban slum dwellers.

Keywords: Food purchasing behaviour, food environment, food stores, urban slum women, Indonesia

INTRODUCTION

Overnutrition results in being overweight and obese. Its related consequences are a major concern worldwide (Center

for Chronic Disease Prevention, 2010; Abraham, Miruts & Shumye, 2015), including Southeast Asia (Ramachandran *et al.*, 2012). The Indonesian basic health surveys of

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2007, 2010, 2013 and 2018 recorded substantial increases in the prevalence of overweight and obesity of 19.1%; 26.9%; 33.0% and 35.4%, respectively, among adult women, especially those living in urban slums (Kemenkes RI, 2008; Kemenkes RI, 2010; Kemenkes RI, 2013a; Kemenkes RI, 2018). Meanwhile, the prevalence of thinness among adult women has decreased from 14.8% to 10.1% between 2007 and 2013 (Kemenkes RI, 2008; Kemenkes RI, 2010; Kemenkes RI, 2013a). The increasing trend of overweight and obesity among adult women is expected to persist as migration from rural to urban areas in Indonesia is projected to rise (United Nations, 2014). The city of Jakarta being the most desired destination of poor migrants (Harahap, 2013), has a higher prevalence of overweight and obesity among women (40.8%) than the national average (33.0%) (Kemenkes RI, 2013b).

Urbanisation is associated with a change of nutritional practices that is marked by an increase in the consumption of energy-dense foods (Kac & Pérez-Escamilla, 2013; Ramachandran *et al.*, 2012). It has been reported that low income inhabitants in urban slums, consume more convenience foods rather than fresh foods (Smil, 2000). This problem may be exacerbated among women who were unable to select healthier foods for their family within their limited budgets, especially in areas where food diversity is restricted (Akter, 2009; Kimani-Murage *et al.*, 2014). In addition, neighbourhood food stores in urban slums offer mainly low-quality foods to match the low purchasing power of these women (Mikkelsen & Chehimi, 2007). Food insecurity and undernutrition in urban slums often arise from lack of access, availability and diversity of healthier foods (Mohiddin, Phelps & Walters, 2012).

The food purchasing behaviour of women are influenced by household and

environmental factors, such as family income, food price, food availability and practicality (Kimani-Murage *et al.*, 2014; Antin & Hunt, 2012). A study among low income Spanish families revealed that food purchasing without proper nutrition knowledge and skill led them purchased calorie-dense, low fibre, and high in fat and carbohydrate foods. (Cortés *et al.*, 2013). This is reasonable, since energy density and energy cost are inversely linked, and “obesity-promoting” foods offer more dietary energy at reduced cost (Drewnowski & Specter, 2004). Foods high in fats and carbohydrates are rendered more palatable as they provide more sensory enjoyment and delay satiety (Johnson & Wardle, 2014). Unfortunately, these are the types of foods that low income families can afford.

Living in an environment where affordable, ready-to-eat foods are available, and where the time for food preparation is limited, women tend to seek alternatives to cook at home (Vabø & Hansen, 2014; Worsley *et al.*, 2014). In view of a paucity of studies investigating the factors that influence food purchasing behaviour in Indonesia, the present qualitative study is aimed at investigating the association between the food environment in an urban slum setting and women’s food purchasing behaviour.

MATERIALS AND METHODS

Study setting

East Jakarta is the most desired destination for Indonesians who migrate from rural to urban areas (Hasudungan, Antokida & Dewi, 2018). The Jakarta District (DKI Jakarta, “Special Capital District”) had the third highest adult overweight and obese prevalence among the provinces in Indonesia (Kemenkes RI, 2013b). *Kampung Melayu* was purposively selected among the villages

in the area, since it had the highest social vulnerability index in the district, indicating that *Kampung Melayu* was at high risk of poverty, health, social and economic problems (Badan Pusat Statistik Provinsi DKI Jakarta, 2014).

Study participants and recruitment

Eligible participants were women aged 19–60 years, residing in *Kampung Melayu*, in apparently good health and who were not pregnant or disabled. The recruitment of participants was based on the following criteria: level of education (elementary/junior/senior high school/diploma), working status (yes/no), self-reported body mass index (BMI) categories (non-obese/overweight-obese) and whether they had children (<5 years old/older). Differences in the BMI status were noted in order to investigate different weight manifestations within the same food environment. A female community health volunteer (FCHV) who was actively involved in communal activities was approached to help recruit the targeted participants. Recruitment was stopped when thematic saturation was achieved, that is, when no new insights emerged from the interviews. A total of 18 women, 12 non-obese and six overweight/obese, were recruited and all of them completed the study.

Ethical considerations

The research proposal was fully

approved by the Health Research Ethics Committee of the Faculty of Medicine, Universitas Indonesia (approval number 143/UN2.FI/ETIK/2015). Written informed consent was obtained from each participant prior to data collection.

Data collection

Data were collected using in-depth interviews of the participants. All interviews were conducted in the Indonesian language (*Bahasa Indonesia*). A semi-structured questionnaire was developed by the first author, in consultation with the second and third authors. The questionnaire was pilot tested in another nearby village to ensure the reliability and consistency of the questions. Table 1 shows the semi-structured questionnaire that was used in the interviews.

The first author spent one month, from November to December, 2015, staying in *Kampung Melayu* village for data collection. Data collection commenced with a transect walk to map out the physical setting of the area, as well as engaging with key persons, such as the FCHV and the community leader. In-depth interviews were conducted face-to-face with the selected 18 women. Participants were individually interviewed for approximately one hour. All interviews were audio-taped with the permission of the participants, and field notes were taken by a research assistant

Table 1. Semi-structured question guide used in in-depth interview of the participants (n=18)

Item	Question
1.	Based on your experience as food gatekeeper, what do you do to prepare food at home for breakfast/lunch/dinner?
2.	How often do you buy outside food to provide food at home? What kind of food do you usually buy and why?
3.	What are the factors that influence you to buy food rather than to cook at home?
4.	What do you purchase when your household have or does not have enough money?
5.	Based on the figure scale, which figure represents your body?

to capture unspoken information such as actions. Interviews took place at the residence of either the participants or FCHV. No interview was repeated.

Each informant was requested to choose a rating scale of photographic figures (Figure 1) that she perceived was closest to her own body weight (Mutale et al., 2016). Each response was then cross-checked with her self-reported body weight and height, and physical appearance.

In addition to the interviews, the first author was involved in gaining an emic perspective of the residents' norms, beliefs and way of life, including how they interacted with each other and with their surroundings. Specifically, by staying within the community, the researcher gained access to the food purchasing activities of the residents, which took place around the clock every day, enabling the researcher to assess the extent to which the food environment provided the needs of the community.

Data analysis

The verbatim transcripts from the interviews served as raw data. They were analysed using a thematic analysis that allowed the identification of categories

or themes within the qualitative data (Maguire & Delahunt, 2017). Observation notes, videos and pictures were used to complement the transcription. The entire process was summarised into five steps. The first step transcribed the recorded interview to produce a ready-to-import-file for input into the software. In the second step, the authors read repeatedly the transcripts in order to be familiar with the data. The third step attached labels to the data to identify codes and categories using Atlas.ti 7 for Windows. Similar codes and categories were grouped to identify themes for the fourth step. Gathering the codes led to a comprehensive view of information. In the last step the authors repeatedly reviewed the data to identify the flow for final analysis.

RESULTS

The 18 participants were aged 28-51 years. Most were senior high school graduates, not working and had under five children (Table 2). Among the participants, 12 were non-obese and six were overweight/obese based on self-reported body weight and height estimations. Purchasing food from nearby

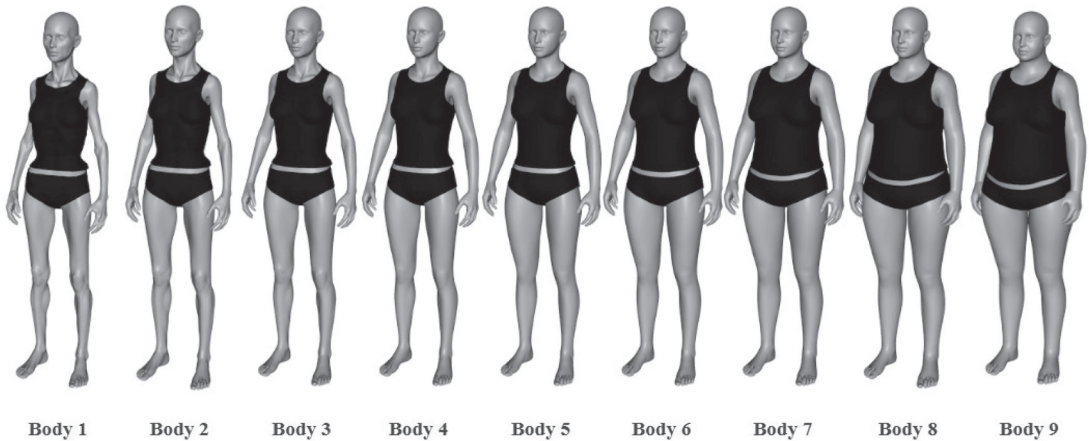


Figure 1. Photographic figure rating scale: bodies 1-3 are underweight, bodies 4-6 are in the normal BMI and bodies 7-9 are overweight/obese (Mutale et al., 2016)[†]

[†]Notes: In this study bodies 1-6 were classified as non-obese

food stores was carried out daily by most of the women in *Kampung Melayu*, either for providing food for their families or for their own consumption. This behaviour was repeated every meal time by both obese and non-obese women, regardless of the working status. The reasons for this were time and cost savings, food availability, family influences, the high exposure of ready-to-eat foods and food-store marketing strategies.

Saving time and cost

Working women preferred to purchase food in the morning in order to save time and cost. They needed to leave early to avoid traffic congestion, and so some of them preferred to buy breakfast in the office canteen. However, a few working women still managed to have breakfast at home, since their mother cooked for the family.

“I buy breakfast in my office canteen, I usually eat rice with egg or rendang (Padangnese beef cuisine). I felt it is impossible for me to cook in the morning since I need to go for work

early to avoid traffic jam, and also I need to take my child to school” (non-obese, 33 years old)

“My parents and I live in different homes. However, when I go to work, my mother takes care for my children and cooks for all of us” (non-obese, 33 years old)

Most non-working women also preferred to purchase food for breakfast since they prioritised time for other tasks such as sending child to school, cleaning the house, washing clothes and taking care of young children, rather than cooking. Due to exhaustion after finishing household chores, some women do not cook for the rest of the day.

“After washing and ironing the clothes, or tidying up the house I feel tired, I will not cook and just buy the foods like chicken wings” (overweight, 38 years old)

There were, however, a few non-working women who cooked at home rather than

Table 2. Characteristics of the study participants (n=18)

Characteristic	n (%)
BMI category based on photographic figure rating scale	
Non obese	12 (66.7)
Overweight-obese	6 (33.3)
Age (years)	
19–30	3 (16.7)
31–50	15 (83.3)
Educational attainment	
Elementary school	1 (5.6)
Junior high school	5 (27.8)
Senior high school	8 (44.4)
Diploma	4 (22.2)
Occupation	
Not working	12 (66.7)
Working	6 (33.3)
Living with children under 5 years old	
Yes	13 (72.2)
No	5 (27.8)

purchase outside food, out of concern for hygiene. By cooking at home, they could ensure the cleanliness of the food that was consumed.

“I don’t like buying ready-to-eat foods. I am sorry but it is sometimes smelly, the chilli smells uncooked or spoilt and isn’t tasty. I don’t mean to be conceited, but the seller also uses too much oil. As such, it is better to cook at home. We know the quality of the ingredients and it is cleaner” (obese, 33 years old)

Cost was another factor mentioned by the participants. Most of the women believed that cooking at home cost them more than purchasing ready-to-eat foods. However, there were a few women who said contrary, that cooking at home was less expensive when considering the number of family members needed to be fed. They had more than two children and felt it would cost them more if they purchased food from outside and therefore preferred to cook at home.

“...I visit the traditional market only once in a while because I rarely cook at home. I spend almost IDR 85000 (USD 6) a day if I cook, but I spend only IDR 50000 (USD 3) if I purchase foods” (obese, 32 years old)

Time and cost factors were linked to each other and to the type of food purchased. Those working women who perceived that spending money for purchasing foods was cost-effective did so as long as they could save more time to attend to other matters.

“Well, I realize that my time is tight. Any means of saving more time is important, including buying ready-to-eat-foods, so that I can do other things” (non-obese, 33 years old)

With a limited food budget, women tried to buy foods that matched their demands for inexpensive, tasty and foods that make them feel full. An example of such food was “*Kerongkonggan*” (fried chicken flank with minimal flesh and marinated with seasonings) that regarded as cheap, tasty, affordable and which could be shared within family. Chicken thighs and breasts that contained less skin were less preferred because they were more expensive and not as tasty as chicken wings and chicken feet. Seafood and beef were less preferred because they were expensive. Beef was only consumed at the annual Muslim celebration of Eid, and they had to save money for a year to be able to afford it.

“The chicken wings only cost IDR 3000 (~ USD 0.23) and IDR 2500 (~ USD 0.19) for chicken’s head, but chicken breast and thigh are more expensive. They also prefer to buy kerongkonggan because it costs only IDR 5000 (~ USD 0.38) for a whole chicken, not pieces, so then they can share it with other family members” (43-year-old FCHV)

Food availability

Most of the women who did not cook, purchased vegetable dishes at neighbourhood food stalls. The preferred vegetables were mostly stir-fried because they were tastier and readily available. Vegetables in the meals were visibly soaked in cooking oil. Clear vegetable soup was less often consumed as it was considered tasteless due to its low fat content, and regarded as a meal for sick people. Those who liked clear soup had little choice as sellers had only one or two types of soups, that sold for IDR 2,000 or ~USD 0.15.

“I prefer stir-fried vegetable rather than clear vegetable soup like spinach soup, because it tastier. For instance,

I like long beans stir-fried mixed with sprouts” (non-obese, 30 years old)

“I feel that stir-fried vegetables are tastier and more flavourful. Clear soup just makes me feel like a sick person (laughing). It is cold and tasteless” (obese, 28 years old)

One obese woman admitted that she never consumed vegetables as it made her feel bloated. Only two overweight women reported daily consumption of vegetables. However, their vegetable consumption was driven by the wishes of their mothers during lactation and a feeling of guilt about discarding leftovers.

“I don’t eat vegetables. I don’t like it, but my children do. I don’t feel satisfied eating vegetables; my tummy feels bloated” (obese, 32 years old)

“I started to eat vegetables after giving birth. Before that, I only liked stir-fried side dishes, such as prawns. After giving birth, my mother suggested to me to eat vegetables like spinach soup, so that I could produce more breastmilk” (overweight, 29 years old)

“Actually, I like to eat dried meals (without vegetables). In other words, I cook vegetable dishes only for my children because they like it. If there is any left-over after my children have eaten, then I will finish it as I just don’t want to throw away edible foods” (overweight, 48 years old)

Fruit consumption was infrequent among the women because they considered it expensive. Few women consumed fruits daily. One overweight woman consumed fruits only when she had enough money and bought low-quality fruits at cheaper prices. She was used to buy *buah busuk*

(BS), which is half-rotten fruits sold cheaper than fresh fruits. BS is usually sold by sellers who bought sorted-out and poor-quality fruits, such as mangos, melons and oranges, at cheap prices from the market.

“My husband usually buys BS four times a week because the children like to eat fruits. Yesterday, he paid IDR 7000 (~ USD 0.52) for eight big-sized mango” (overweight, 32 years old)

Family influence

Family played a significant role in the purchasing behaviour of many of the women. As mothers, most of the women tried to satisfy their children. The children usually longed for different foods at every meal time and disliked frequently having to consume the same dishes. However, the mothers could not afford to cook different dishes for every meal. If the mother was forced to cook and serve the same menu for a whole day, the children would not eat it and in the end the food would be discarded.

“I rarely cook, because having many children made cooking at home complicated as they want different dishes. One child wants to eat fish while another one wants to eat chicken, and so on. So, I just cook rice and buy the side dishes” (overweight, 29 years old)

The eating habits of husbands also influenced women’s purchasing behaviour. Women whose husbands went to work very early, such as before 5 am, buy food from *warung subuh* (food stores that open at 3-7 am). This helps the working wives to prepare food in the early morning. Meanwhile, husbands who returned from work late in the evening, purchased foods for supper

Table 3. Food shops / stores in *Kampung Melayu*

Type	Products sold	Customers	Operating hours	Price range	Mode of payment	Marketing technique
Food stalls	Cooked meals (rice, vegetables side dishes)	Women	Open at 11 a.m., some open for 24 h	IDR 1,000–8,000 (approximately USD 0.07–0.59)	Cash and credit	Word of mouth
Grocery stores owned by locals	Day-to-day foods, snacks, other non-food items, smaller products or more economical sizes or sachets	Women, men, children	6 a.m.–10 p.m.	IDR 1,000–30,000 (approximately USD 0.07–2.23)	Cash and credit	Reward system in holiday seasons
Mobile food stalls	Sweetened beverages, homemade fritters, other snacks, local meatball soup (<i>bakso</i>), other local dishes such as <i>soto</i> (chicken soup with vermicelli)	Women, children	8 a.m. until past midnight	IDR 1,000–10,000 (approximately USD 0.07–0.74)	Cash	Noise signal
Market	Raw foods (vegetables, fruits, meat), manufactured items, non-food items	Women	5 a.m.–1 p.m.	Starts at IDR 1,000	Cash and credit	Initiate contact
Convenience store located on main roads	Manufactured foods, snacks, drinks and day-to-day foods, selected fruits, non-food items	Women, men, children	7 a.m.–10 p.m.	Starts at IDR 2,500 (approximately USD 0.19)	Cash	Discount, bundling of goods, free items and door-to-door promotion

the area, and Table 3 shows further information of each store. The map figure shows that food stores were densely located at street intersections. The major type of food store was the food stall that provided cooked food, which sold for prices that ranged from IDR 1000-8000 (USD 0.07-0.59). Another major type were the grocery stores that provided snacks, other foods and non-food products. Non-working women tend to gather to chit-chat over snacks such as fritters and sweetened beverages.

“...when I am alone I may just drink 1 cup of ice tea, but when I gathered with other women I would buy another portion again when my last portion was finished. I just feel comfortable with the togetherness...” (non-obese, 34 years old)

The nearest traditional market was situated 10 minutes away from the residential area. It provided more varieties of both fresh and cooked foods. The market was mainly visited by food sellers and those who cooked at home. Those who did not cook regularly went to the market only when they wanted to purchase items that were not available in food stores nearby their residence.

“I used to visit traditional market after taking my child to school, only for purchasing kue pancong (Jakarta traditional cake)” (non-obese, 33 years old)

Food store marketing strategies

The food stores used several promotion strategies in *Kampung Melayu*, to encourage consumer loyalty. Convenience stores often sold commonly consumed foods such as cooking oil, sugar, biscuits and other foods that were bundled together at reduced prices or with free gifts. Women were often interested in purchasing items that were

being promoted that met the needs of their families such as milk and diapers. Grocery stores also used rewards in the form of clothing and food gifts given during Muslim celebrations. Food stalls also offered credit to retain the women as regular customers for their daily food purchases. The repayment of the credit was done on a monthly basis after receiving money from their husbands.

“I have been buying items for my daily needs for 2 years from that grocery store. Usually, I buy rice and pay later. The seller allows me to pay on credit. He also gives me biscuits or cookies and syrup near Muslim celebration” (non-obese, 32 years old)

DISCUSSION

This qualitative study provides some insights into the food purchasing behaviour of women in an urban slum setting. To the best of our knowledge, this study topic was one of the few that had been conducted in Indonesia using an ethnographic approach. Previous studies had reported that various factors such as family income, food price, food availability and practicality influenced the food purchasing behaviour of women in urban slums (Antin & Hunt, 2012; Kimani-Murage *et al.*, 2014). However, our study also highlighted the importance of understanding other factors that influenced the food purchasing behaviour of women in urban slums, such as time constraints faced by working women, nuclear versus extended family members and the presence of neighbourhood food stores.

The low-income urban residents in this study mostly relied on purchasing ready-to-eat foods from neighbourhood food stalls. Therefore, the daily food consumption for breakfast and the rest of the day, was driven by the availability of food that was sold in the vicinity.

Many working and non-working women purchased ready-to-eat foods due to time constraints. This was consistent with the results of a study in India where women reported that their business and work demands, discouraged them from preparing food at home, and lead them to purchase ready-to-eat foods (Salomi & Revathy, 2014). Cooking at home takes time and a study in Australia estimated an average of 66 minutes was required for preparing a meal for the family; working women could not afford such time on working days (Worsley *et al.*, 2014).

The cost of food was an important factor that influenced the food purchasing decisions of women. Women with ≥ 2 children considered purchasing foods was costlier than cooking at home. For women with fewer family members, they reported that purchasing food was less costly since the food offered by nearby stores could be shared. However, with limited budgets, they tended to purchase outside foods that were high in energy (e.g. fried foods) and had poor nutrient content (e.g. fewer fruits and vegetables) (Drewnowski & Specter, 2004). As a result, women and their families were exposed to consuming obesogenic foods (Bray & Popkin, 1998). The situation in the Jakarta slum highlights the need for women to be provided with the knowledge and skills to select healthy foods within their meagre budgets.

The results of the present study were consistent with previous research (Inglis, Ball & Crawford, 2005; Lupton, 2000), which suggested that for many women, their food preferences came second after their husband or children. Children influenced their mothers by expressing their preferences, negotiating, persuading, making demands and refusing to eat the foods that their mothers served (Alm, Olsen & Honkanen,

2014). Clearly, family support for healthy consumption is an important influence on women's purchasing behaviour.

Late night eating by obese women, reflected impulsive buying. Although the reason for having a late supper initially came from the husband, a previous study has shown that sensory cues like good smell of food, attractive food displays and appealing sounds from food preparation done by food sellers were a positive stimuli for impulsive food purchasing (Choi, 2016).

The purchasing behaviour of the women was found to be influenced by the availability of the foods in the local stores. Food purchasing behaviour could be formed by repeated exposure towards ready-to-eat foods. Economists suggest that either supply or demand factors or both could cause variations in what and where food stores are available (Ploeg, 2010). The neighbourhood may lack fresh food if the demand is low. Abundance of food stores leads to competition to attract customers. Marketing strategies, particularly in grocery and convenience stores, were aimed at retaining customers. In this study, several stores gave gifts during the Eid al-Fitr (a Muslim celebration) and allowed purchasing on credit. A US study conducted among thousands of household heads revealed the reasons for patronage. These included free gifts and special deals that were offered, preference for the payment method and proximity to the homes of customers (Moschis, Curasi & Bellenger, 2004). Financial benefits in the form of rewards or special discounts to loyal buyers was a common form of attracting customers. This finding was consistent with that of Ashman (2000) who studied American loyalty reward programmes. The strategy required customers to spend a fixed amount of money over a period of time

in order to receive a free gift, such as a Thanksgiving turkey or an Easter ham, when they reach a required spending threshold.

Health promotion programmes that target healthy food purchasing behaviour should aim to motivate and educate individuals to choose healthier foods that match their budgets. This is one of the few qualitative studies that has applied an ethnographic approach to investigate the environmental influences on the food purchasing behaviour of women in an urban slum setting of Indonesia.

Overall, this study raises important implications for the government and the private sector. It highlights the need to increase the awareness of healthy food purchasing. It also underlines the importance of empowering women as the household food gatekeepers in preparing meals at home and in introducing affordable food pricing and diversity policies into government's agenda. Appropriate collaborative interventions that address urban slum food environmental influences should be undertaken. It should be aimed at modifying the skills and motivation of both food sellers and women to provide and purchase healthier foods, respectively. In the longer term, the effort may help to reduce the prevalence of obesity and malnutrition.

CONCLUSION

The present study provides a contextual understanding of the factors involved in the food purchasing behaviour of women in the urban slum of *Kampung Melayu*, East Jakarta. The factors that were identified included time and cost efficiency, family influences, food availability, high exposure of ready-to-eat foods, and proximity and marketing strategies of food stores. At the micro-level, qualitative data and information

that is generated should be useful for the government, the health services and the private sector organisations who will need to collaborate on policy matters such as pricing strategies to promote the purchase of healthier foods.

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Authors' contributions

DS, contributed to the conception and design of the work, conducted data collection and data analysis, compiled the first draft of the manuscript; JF, contributed to the conception and design of the work, conducted data collection and data analysis, revised and approved the final draft; SB, contributed to the conception and design of the work, revised and approved the final draft; HK, contributed to the conception and design of the work, revised and approved the final draft; EE, contributed to the conception and design of the work, revised and approved the final draft; PHR, contributed to the conception and design of the work, revised and approved the final draft; AW, contributed to the conception and design of the work, revised and approved the final draft.

Conflict of interest

All authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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