

Eating behaviour of young female workers with low socioeconomic status in Malang City, East Java: a qualitative study

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ABSTRACT

Introduction: Eating behaviour is one of the important factors affecting nutritional status that has been widely investigated. However, there are few studies on the eating behaviour of young female workers in Indonesia. This study aimed at investigating the factors affecting eating behaviour of young female workers of low socioeconomic status in Malang, East Java province, Indonesia. **Methods:** Participants were recruited using purposive sampling from low-income families living in Malang City. The eligibility criteria were based on demographic information, including monthly household income and expenses. The participants recruited comprised 21 women aged 18-22 years who were employed outside their homes, unmarried and living with their parents. A qualitative methodology was used to understand the meaning and context of the eating behaviour of these women. In-depth interviews and focus group discussions were used as the primary data collection methods. **Results:** Two primary themes emerged as the main influences of the participants' eating behaviour: individual attributes (food preferences, healthy eating knowledge and self-efficacy), and socio-environmental factors (peer influence, mother's role and food availability). In general, the participants had some knowledge about healthy eating behaviour; however, they lacked self-efficacy to practise such behaviour. **Conclusion:** Individual motivations and socio-environmental factors were found to mediate the eating behaviour of young working women from poor households. These factors should be considered when designing nutrition programmes for achieving healthier eating behaviour among young working women.

Keywords: Young female workers, eating behaviour, qualitative study, low socioeconomic status, Indonesia

INTRODUCTION

The literature review by Andreyeva *et al.* (2012) emphasised the importance of healthy eating among women of reproductive age, especially those who worked outside the home. Healthy eating

among working women can become a challenge owing to several socioeconomic and environmental factors, including lack of access to healthy foods and time constraints due to long working hours. Unhealthy eating leads to nutrient

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deficiencies. Women of reproductive age are particularly vulnerable to iron deficiency (Pala & Dundar, 2008). Underweight hinders productivity at work. In Asia, an estimated 20-40 per cent of women are underweight (WHO, 2010). Malnutrition in women leads to economic losses for not only the family but also the country.

Malnutrition among women is one of the major public health problems in Indonesia. Based on the Indonesian National Basic Health Research (*Riset Kesehatan Dasar* or *Riskesdas*), the prevalence rate of chronic energy deficiency in non-pregnant women of reproductive age was 13.6% in 2007 and 20.8% in 2013 (MOH RI 2007; MOH RI 2013). Riskesdas data in 2010 indicated that 40.7% and 37.4% of women of reproductive age (19-55 years) had energy and protein consumptions that were below the minimum requirements (MOH RI 2010). The prevalence rate of anaemia was 14.8% in 2007 and rose to 21.7% in 2013. According to World Health Organization (WHO) classification, this means that Indonesia is a country where anaemia is a moderate public health problem (WHO, 2011).

In order to develop effective strategies for the improvement of eating habits, it is important to identify the factors that influence eating behaviour. Various theories have been put forward to understand eating behaviour. The social-cognitive theory of Bandura is commonly used to support intervention programmes that promote healthy eating. The theory emphasises the interaction of three main factors that operate at the personal, behavioural and social levels, that can explain the health behaviours of people, including their eating habits (Bandura, 1989; Rinderknecht & Smith, 2004). The physical environment in which individuals interact in different settings is a critical force that may restrict or increase the motivation

of people towards making healthy eating decisions (Belon *et al.*, 2016). Investigation of eating behaviour and its determinants may give us a better understanding of how and why eating behaviour can be influenced. Based on these factors, prevention strategies and interventions can be established to improve eating habits, particularly among vulnerable individuals, such as young female workers. The present study was aimed at determining the social and environmental factors that affect the eating behaviour of working women.

MATERIALS AND METHODS

Participants were recruited using purposive sampling from low-income families living in Malang City. The eligibility criteria were based on demographic information: women aged 18-22 years who were working outside the home, unmarried, and living with their parents. During the screening, the researchers inquired about monthly household income and expenses, in order to confirm that the household belonged to the low economic status category (Nielsen, 2010). A total of 21 working women, aged 18-22 years, was recruited. The purpose of the study was explained to the participants, all of whom signed the informed consent form. They were requested to minimise changes in their eating behaviour during the study period.

A qualitative study design was used to collect information on the eating behaviour and associated beliefs of the informants. Focus group discussions (FGDs) followed by in-depth interviews were both utilized sequentially. Two FGD sessions involving six different participants in each discussion session were conducted (Figure 1). The purpose of the FGDs was to gather information on their daily living routine and typical eating habits.

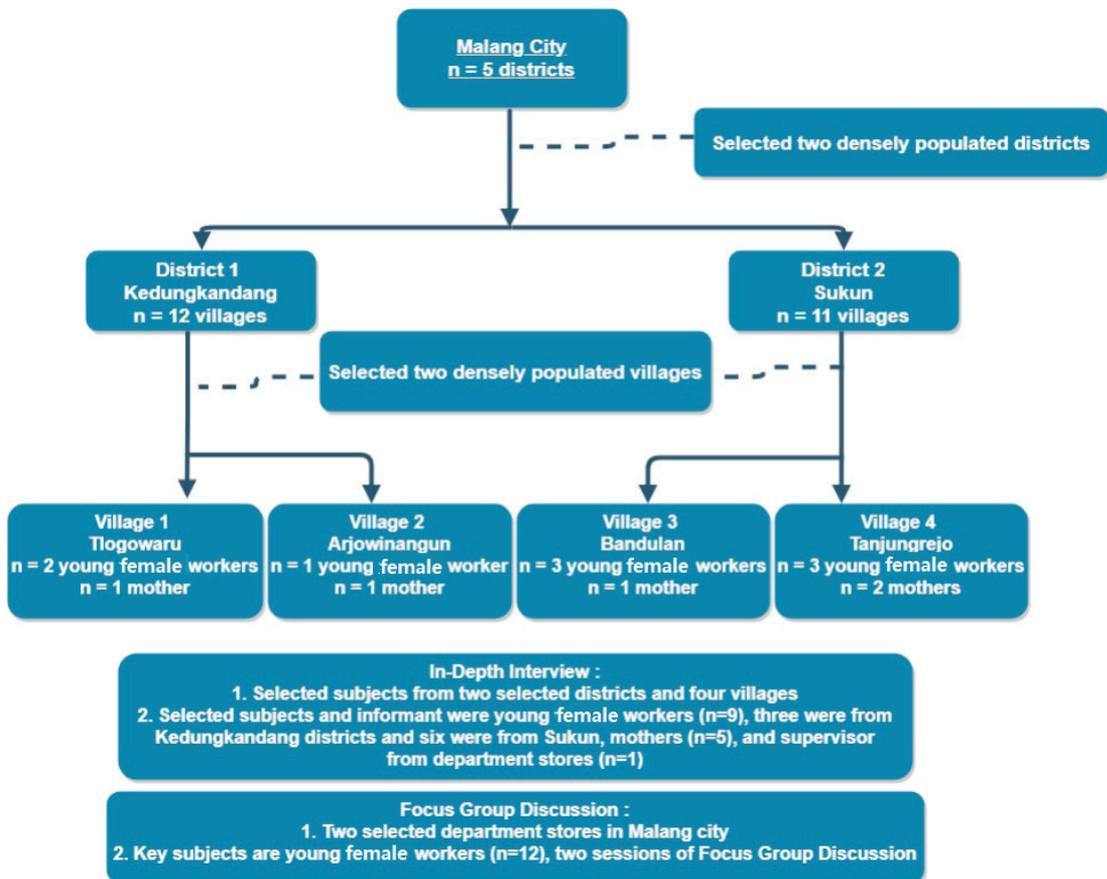


Figure 1. Protocol for the sampling for subjects

The FGDs and interviews were performed according to a prepared semi-structured question format (Table 1). A set of questions was used to guide the researchers during the interview. However, time was also provided for spontaneous questions on relevant topics that were not part of the interview questions. The guidelines for interviewing the female workers included topics related to their current eating behaviours, factors influencing their eating practices, and their perceptions about healthy eating. Meanwhile, the guidelines for the mothers of the female workers included topics related to the role of mothers in determining the eating behaviour of these women and their

perceptions about healthy eating. As for the job supervisors, a semi-structured interview was conducted where they were asked about regulations and employee programmes implemented at the workplace. Each FGD lasted about 40–50 minutes, whereas the in-depth interviews lasted for about 50–70 minutes. The topics serving as guidelines for the FGDs and in-depth interviews are shown in Table 1.

Ethical considerations

The study protocols were approved by the Institute of Research and Community Service, Universitas Katolik Indonesia, Atma Jaya (No. 772/III/LPPM-PM.10.08/15/2014).

Table 1. Topics for the focus group discussions and in-depth interviews

<i>Focus Group Discussion</i>	<i>In-Depth Interview</i>
Focus group discussions among female workers	In-depth interview of female workers
1. What are your favourite foods? Why do you like them?	1. Please describe your current daily eating patterns?
2. Who are the people who influence your daily eating?	2. What are the factors that influence your daily eating?
3. Where do you usually eat?	3. Do you like to eat out? If so, why?
4. What do you think about healthy eating?	4. What do you think about your own daily eating habits?
	5. What do you know about healthy eating?
	6. Do you think it is difficult to practise healthy eating? If so, why?
	In-depth interview of mothers of female workers
	1. Do you often eat together with your family?
	2. Do you give any information to your family about healthy eating?
	3. Do you think mothers should play an important role in informing their daughters about healthy eating? Could you elaborate on that?
	4. What do you think about your daughter's daily eating behaviour? Is it healthy enough?
	In-depth interview among job supervisors of female workers
	1. Based on your observation, where do the female workers have lunch?
	2. What do the female workers usually eat during lunch or during their break?
	3. Is there any nutrition education in your workplace?
	4. What do you think about the female workers' eating habits? Is it healthy enough?

Data analysis

Thematic content analysis was conducted to identify themes and patterns from the information that was collected. The primary steps were transcription of the audio information, generation of initial coding, search and review for themes (Braun & Clarke, 2006). The audio files of the participants who spoke in the Indonesian language during the interviews and FGDs were transcribed verbatim. The transcripts were examined several times before coding was carried out. Each phrase was provided with a code, and related codes

were categorised. Each category was assigned to one of the following primary themes: eating behaviour and factors associated with eating behaviour. The theme was coded using ATLAS.ti version 7 (Berlin, Germany). A summary of the participant's opinions was provided. The major and contrasting opinions were described and illustrated as quotes from the transcripts.

RESULTS

The socioeconomic characteristics of young female workers and their mothers

Table 2. Socioeconomic characteristics of young female workers and their mothers

<i>Characteristics</i>	<i>n</i>
In-depth interview	
Young female workers	9
Age (years)	
19	5
20	4
Father's education	
Elementary school	6
Junior high school	2
Senior high school	1
Mother's education	
Elementary school	6
Junior high school	2
Senior high school	1
Monthly household income [†]	
Rp 700,000–1,000,000	7
Rp 1,000,000–1,500,000	2
Mothers	5
Age (years)	
35–45	4
46–55	1
Level of education	
Elementary school	3
Junior high school	2
Occupation	
Working	3
Not working	2
Focus group discussion	12
Age (years)	
17.0-17.9	1
18.0-18.9	2
19.0-19.9	5
20.0 and above	4
Father's education	
Elementary school	6
Junior high school	1
Senior high school	5
Mother's education	
Elementary school	6
Junior high school	1
Senior high school	5
Monthly household income [†]	
Rp 700,000–1,000,000	5
Rp 1,000,000–1,500,000	7

[†]Low socioeconomic strata with monthly household expenses ranging from Rp 700.000 to Rp 2.000.000 based on Nielsen's classification (Nielsen, 2010); Rp 14,000 = USD 1

are presented in Table 2. Based on observations, numerous food stalls were available in the living areas of the participants. These street vendors typically sell deep fat fried and calorie-dense foods. These nutrient-poor foods are appealing to the working women, especially when they did not bring home-cooked meals to work, and thus depended on street food. Local dishes were the typical foods that were frequently consumed. These included *bakso* (savoury meatball soup with noodles), fritters and *cilok* (boiled starchy balls) coupled with *sambal* (a spicy condiment made of pounded chilli). A majority of the working women liked spicy foods, and they often added *sambal* to increase the flavour of the food.

Two themes emerged, namely, individual and socio-environmental, were associated with the eating behaviours of the female workers in this study. The individual factors correlated with food sensory attributes, healthy eating awareness, and lack of self-efficacy. The role of mothers, food-related social facilitation, and food environment were the significantly associated socio-environmental factors.

Individual factors

Individual factors may be categorised as (i) food sensory attributes, (ii) healthy eating awareness, and (iii) lack of self-efficacy.

Food sensory attributes

The interviews revealed that sensory features of foods namely the taste and appearance of food, were the most common factors affecting food choices.

“My first consideration in choosing food is taste. Price and appearance of food are secondary considerations. If it tastes bad, why should I eat?” (FGD 1-Young female worker 4)

The tastes of food, such as sweet, salty, and spicy, were frequently mentioned. Most participants preferred spicy foods. A pleasant taste had a powerful influence in the decision-making that is related to food consumption.

“I love bakso very much. Not only because the taste is good, but it is also cheap. Couple bakso and sambal, and it brings an intense flavour that is really delicious” (In-depth interview-Young female worker 2)

Healthy eating awareness

The female workers indicated that they were aware of the benefits and positive health results of healthy eating habits. The term ‘healthy eating’ was constantly associated with ‘vegetables’, ‘fruits’ and ‘family meals’. A majority of the young women discussed the benefits of healthy eating, and their statements included phrases/terms such as ‘strong’, ‘keeping body fit’ and ‘stay slim’.

“...eating healthily makes us stronger and reduces the chance of getting sick” (In-depth interview-Young female worker 5)

Some of these young women also suggested that healthy eating practices should be based on ‘4 sehat 5 sempurna’, which means ‘four basic five excellent’ in English. This is an Indonesian nutrition slogan that was promoted from 1955 to 1999. The campaign on this slogan promoted four food groups based on the essential nutrients they contained; these were staple foods, side dishes (plant- and animal-based protein source foods), vegetables and fruits as well as milk for enhancement. Therefore, the consumption of all the four food groups with milk as the fifth were considered to be the perfect diet.

“4 sehat 5 sempurna is truly the best definition of healthy eating, because you will get food full of nutrients” (FGD 2-Young female worker 5)

Lack of self-efficacy

A gap was observed between nutrition awareness and the difficulties experienced in putting this knowledge into daily practice. Despite their awareness about healthy eating habits, there appeared a lack of self-control when it came to choosing food for consumption. The taste of the food strongly determined their preferences and selections.

“I can’t resist eating spicy food. It feel tasteless if I don’t eat spicy foods” (FGD 2-Young female worker 6)

In a few cases, although the female workers became ill owing to a poor choice of food, it did not prevent them from changing their eating behaviour. The lack of self-control appeared to lead to poor food eating habits.

“I know that I have a gastric problem. My mother has always warned me before about it, but I just can’t resist the food” (In-depth interview-Young female worker 3)

Socio-environmental factors

Socio-environmental factors may be categorised as (i) role of mothers, (ii) food-related social facilitation, and (iii) food environment.

Role of mothers

The mothers were important in influencing the eating behaviour of young female workers. According to the workers, the influence of parents was more significant than that of their workmates.

“I feel that our parents determine our eating habits more than our friends do. They know much more about their children because they have been living with their children since the children were born” (In-depth interview-Young female worker 9)

Some mothers also confirmed that they were confident of their role and influence in their families, particularly when it came to planning the family meal, which was important. Mothers identified family meals as an important influence on young women when selecting foods.

“I feel that my role as a mother to provide food has shaped my daughter’s food behaviour and I am sure I am giving the best meal to my family as well” (In-depth interview-Mother 3)

Mothers influenced the eating behaviour of their children by teaching them about healthy food consumption. In particular, they tried to prohibit the female workers from eating spicy foods and encourage them to have breakfast before going to work.

“My mother does not allow me to go to work if I do not have my breakfast. She also does not want me to eat spicy food” (In-depth interview-Young female worker 2)

Food-related social facilitation

The participants claimed that besides their parents, their peers at the workplace had a significant influence on their eating habits. For example, eating with their peers tended to lead to increased food intake, and they mentioned feeling comfortable eating with peers.

“I like eating out with my workmates because it is much more fun compared to eating alone. We can eat and

talk about a lot of things” (In-depth interview-Young female worker 9)

In most events where food-related social facilitation was practised, there tended to be higher consumption of less healthy foods.

“I saw my friends eat spicy food and they wanted me to eat it as well. At first, I did not really like it, but they kept telling me to do so. Now I prefer to eat spicy foods” (FGD 2-Young female worker 1)

Food environment

A significant factor in influencing the food consumption behaviour of the participants was the availability of less healthy foods in the workplace and social settings where they lived. Increased access to money and the freedom they enjoyed influenced their food shopping behaviours.

“...today I will eat that sweet snacks on the first floor of our department store, and tomorrow probably I am going to eat the spicy snacks on the third floor...” (FGD 2-Young female worker 6)

A small number of the participants preferred to bring their lunch from home.

“I always bring my lunchbox from home. Because when it comes to break or lunch time, there are no food stalls nearby. So, I prefer to bring my own lunchbox here” (In-depth interview-Young female worker 6)

DISCUSSION

According to the socio-cognitive theory of Bandura (1989), personal and socio-environmental factors, such as social support, can directly and indirectly influence behaviour, including self-

efficacy, which is “an individual’s belief in their own ability to perform a particular behaviour and is considered a determinant of certain behaviours”. Specifically, “dietary self-efficacy refers to the extent of an individual’s ability to perform dietary behaviours and consider how people personally respond to barriers”. A lack of dietary self-efficacy would result in unhealthy eating behaviours. A study of young individuals showed that higher dietary self-efficacy correlated with higher intakes of fruits and vegetables (Bere & Klepp, 2004) and lower intakes of fatty foods (Frenn, Malin & Bansal, 2003).

The present study identified several issues pertaining to the eating behaviours of a sample of young female workers of low economic status in Malang City. The most pertinent finding that emerged from the FGDs and in-depth interviews was that while they may have been aware about healthy eating, they felt that they lacked self-efficacy to practise it owing to several challenges in their living and work environments. The majority of the female workers were unable to resist the temptations of eating unhealthy foods that were easily available and affordable.

The majority of the working participants stated that they considered the taste of food as a priority, rather than the nutrient content, when making food choices. The sensory properties of a food played a most important determinant in food choices in the absence of economic and availability constraints (IFIC, 2014). Affordability and accessibility of food items have been well documented as important drivers of food choice (Kourouniotis *et al.*, 2016). It has been postulated that the influence of taste on decision-making is more compatible with factors such as cost and convenience, but less compatible with factors like nutrition. A knowledge of nutrition is necessary but is not

sufficient for encouraging changes in food choice behaviours and hence may not be the primary motivation for food choice (Worsley, 2002). A systematic literature review by Vaitkeviciute, Ball & Harris (2014) suggested the term 'food literacy', to indicate not only the individual's understanding of basic information about food and nutrition, but also his/her ability to practise this knowledge in daily life.

This study found that peers, such as friends or workmates, strongly influenced the eating behaviour of the female workers primarily because of the significant amount of time they spent together. The participants claimed that their peers had a more significant influence on their eating behaviour than their parents. Several studies have shown that peers affect food intake through social facilitation. Social facilitation increased food intake when eating occurred in the presence of others, as compared to when they eat alone (Herman, 2014). The presence of others directly increased the amount of food that was consumed and indirectly extended the duration of the meal (Herman, Roth & Polivy, 2003). Herman (2017) also opined that individuals preferred to experience the joy of eating in the company of friends, even to the extent of indulging in calorie-rich foods. In this study, the young workers were more likely to eat out during non-working days and tended to indulge in eating snacks and spicy foods while in the company of their peers.

The results from the in-depth interviews with the mothers of participants highlighted the importance of the roles of the mothers at home which were the procurement and preparation of food. The mothers showed their food preferences and played an important role in making food choices for their families. The mothers said they

influenced their daughter's food choices, firstly, by determining the types of food available at home, and, secondly, by providing general information about food and health. The mothers typically chose to provide vegetables, tofu and *tempeh* (fermented soy bean) on a daily basis. They explained how they selected and purchased nutritious foods and this gave them confidence as mothers. Our findings support those of other researchers that mothers considered feeding responsibilities, such as providing family meals, as part of their identity as mothers (Chapman & Ogden, 2009). In addition, mothers in this study often warned their daughters that spicy foods were unhealthy. In general, our study did not find the mothers encouraging their daughters to make positive changes in their dietary behaviour. This may be related to their limited knowledge on the importance of food and health. Previous research has suggested that mothers with higher levels of health and nutrition knowledge provide healthier food to their daughters, compared to those who have lower levels of nutrition knowledge (Johnson *et al.*, 2011).

Previous studies have also shown that the physical environment has important effects on consumers making food choices (Sallis & Glanz, 2009; Contento, 2008). Based on observations and statements of the participants, the living and working neighborhoods of the working participants may be described as being "obesogenic food environments". An obesogenic environment refers to the influences of physical environments, opportunities and any conditions that may promote obesity in an individual or in populations (Lake & Townshend, 2006). The easy access to affordable foods available in various locations, including street vendors and mobile trucks, is an important influence of eating behaviour.

The ease of availability, reasonable prices and good taste were the reasons why the young women preferred to consume foods from street vendors.

Limitations of study

The sample size of this study was relatively small and the results are hence not generalizable. In addition, it did not include quantitative measurements of potentially important characteristics, such as body mass index and quantitative of food consumed.

CONCLUSION

Individual and environmental factors influenced the eating habits of young female workers from poor households in Malang City, East Java. These factors should be taken into consideration when designing nutrition intervention programmes to improve eating behaviour among the young women working outside the home. Nutrition education in the work area combined with changes to produce a healthier food environment maybe beneficial in changing their eating behaviour there.

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Authors' contributions

IYH, involved in the recruitment of participants, field work planning, data collection and writing of the first draft of the manuscript; IB, contributed to data interpretation; JF, contributed to data analysis. All authors participated in the conceptualisation and design of the study, critical revision of the draft and final version of the manuscript.

Conflict of interest

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

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