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Original Article

Practice of Skipping Breakfast and Associated Factors among Nursing Officers in A Selected Hospital in Colombo District

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Abstract

Background: Breakfast is the most vital meal of the day, which helps to start metabolism by providing the energy and nutrients required by the body. Skipping breakfast by nursing officers can negatively affect their health and also patient care. Hence, the study aimed to assess the practice of skipping breakfast and its associated factors among nursing officers.

Methods: A descriptive cross-sectional study was conducted using a randomly selected sample of 384 nursing officers of the Colombo South Teaching Hospital, Kalubowila. A self-administered questionnaire and validated measuring scales were used to collect data. Data were analyzed using descriptive statistics and Chi-square test using IBM SPSS version 25.

Results: Among the nursing officers, 53% were in the normal BMI category, while 36% were reported as overweight or obese and 10% were underweight. Of the participants, 12% (n=47) skips their breakfast as a practice while 48.2% (n=185) skipped sometimes. During the 14 days prior to data collection, 42.7% (n=164) and 40.0% (n=154) of nursing officers had skipped their breakfast 1-3 times and > 4 times, respectively. The main reason for skipping breakfast was lack of time (31%, n=119) (48%, n=174). Age (p=0.042) and marital status (p=0.007) were significantly associated with the practice of skipping breakfast.

Conclusion: The study revealed that most nursing officers skip breakfast as a practice. Age and marital status were the significant predictors for skipping breakfast. Appropriate interventions are needed to improve the good practices related to breakfast and extensive assessments are required to evaluate the consequences of skipping breakfast.

Keywords: Skipping Breakfast, Nursing officers

Introduction

Breakfast is the most important meal of the day, which assists to start the metabolism and provides the energy and the nutrients required by the body. It is the first meal of the day, which is predicted to be taken after 7-8 hours of sleep (Darshini, Hasanain & Maged, 2017).

A healthy breakfast consists of a variety of foods that supply an adequate amount of essential nutrients (Rampersaud et al., 2005). It should provide an adequate amount of calories to meet the required energy level to maintain an optimal level of body activities and processes (Marangoni, et al., 2009). Furthermore, according to the "Eat Well Guide, UK" a healthier diet consists of fruit and vegetables, starchy foods as potatoes, bread, rice, pasta, and other starchy carbohydrates. Also, it includes protein-rich non-dairy products as beans, pulses, fish, eggs, meat, and other proteins, dairy and alternatives, and oil and spreads (Buttriss, 2016). It is documented that including food from each of these categories makes a healthy diet and further infrequent and small amounts of saturated fats, salt, and carbohydrates help to maintain good health (WHO, 2019).

People are more likely to skip breakfast with their busy life schedules (Tharindu, 2014). Previously before the 18th-century, people had a simple lifestyle, engaged with nature, however this changed drastically with industrial revolution and mass production from about 1784 onwards (Carrera-Bastos, et al., 2011). This change in lifestyle led to increased workload and lack of time for personal attention (Clayton et al., 2015). The trend of skipping breakfast among adults is markedly higher in Western and even in developing countries (Munmun, Saiful & Shatabdi, 2014).

Skipping breakfast is a major issue among nursing officers as (Wong et al., 2010), almost every nursing officer is working in a busy schedule which requires providing 24 hours continuous care for the patient.

Meal skipping at work has been associated with a high workload (Amy et al., 2018), further nursing officers need to be ready for any emergency situation as they are responsible and accountable for patients' lives. This in turn leads to less time available for fulfillment of their own requirements, especially the diet. Further, barriers to healthy eating are found to be related to adverse work schedules, individual barriers, aspects of the physical workplace environment, and social eating practices at work (Christine et al., 2017). Research has revealed that skipping breakfast is also associated with unhealthy behaviors, poorer diets, and lower physical activity (Ruxton & Kirk, 1997).

It has been reported that skipping of breakfast is associated with higher metabolic risk, higher body mass index (BMI), larger waist circumference (Timlin et al., 2008), higher fasting insulin, and increased cholesterol and LDL levels which lead to a higher risk of diabetes type 2 (Mekary et al., 2012) and cardiovascular diseases (Uzhova et al., 2017). The health of the nurses and health care professionals is significantly associated with patient care. Therefore, nurses need to maintain their health in order to become efficient at work and provide effective nursing care to patients (Mojoyinola, 2008). Appropriate interventions are needed to improve the good practices related to breakfast and extensive assessments are required to evaluate the current state of skipping breakfast. Hence, the study aimed to assess the practice of skipping breakfast and its' associated factors among nursing officers.

Methodology

A descriptive cross-sectional study was conducted to identify the prevalence of skipping breakfast and its associated factors among nursing officers in Colombo South Teaching Hospital (CSTH) Sri Lanka. Ethical approval was obtained from the KIU ethics review committee (KIU/ERC/018/29) and the CSTH ethics review committee (Application No 703). According to sample size calculation, 384 nursing officers who worked in the CSTH during the data collection time period

were included in the study and were selected using the systematic random sampling method. Data was collected using a self-administered questionnaire which was developed by researchers using published literature and translated into Sinhala and Tamil languages. Validated height and weight measurement scales were used in the measurement of height and weight of the participants as body mass index (BMI) was calculated by standard BMI calculation formula. World Health Organizations South Asian cut-off values were used as the reference values for the BMI categorization (Lim et al., 2017). Before the data collection, the questionnaire was pretested by 30 nursing officers who were not included in the main study sample, and minor language modifications were made in accordance with the feedback. Data collection was conducted during a three-month time period in 2018 from August to November. Questionnaires were distributed as paper copies after providing all relevant information and written informed consent was obtained by ensuring the anonymity of the participants. Survey questionnaires were provided to participants, in their preferred language.

The participants were recognized only from the identification number given by the researchers and privacy and confidentiality were fully enforced during the data collection process. Height and weight measurements were obtained at the same convenient place for all the participants by two allocated research team members.

The primary outcome of the study was the prevalence of breakfast skipped during the last two weeks time period prior to the data collection date. It also included the frequency of breakfast skipped, methods of taking breakfast, and practices related to the breakfast.

Data were reported as frequencies, percentages, means, standard deviation (SD) as appropriate. Pearson chi-square test was performed to find out the associated factors for breakfast skipping. Data were analyzed using Microsoft Excel 2016 and IBM SPSS (version 25).

Results

Among the 816 nursing officers who are working at CSTH, 388 were selected by systematic random sampling method. Data collection commenced after confirming the eligibility criteria of the selected participants.

The study consisted of 384 nursing officers who are working at CSTH – Kalubowila. Nearly fifty percent (n = 172) of them belonged to the age group of 23 – 30 years. The majority (97%, n = 369) of them were female nursing officers. Fifty-seven percent of them were married. The majority of them were Sinhala; (99.2%, n = 381) Buddhist; (98.2%, n = 377) (Table 1).

Table 1: Participant characteristics (n=384)

Demographic Characteristics	Percentage
Age group	
23 – 30	44.8%
31 – 40	38.0%
41 – 50	12.5%
51 – 60	4.7%
Gender	
Male	3.9%
Female	96.1%
Marital status	
Married	57.0%
Unmarried	43.0%
Race	
Sinhala	99.2%
Tamil	0.8%
Religion	
Buddhist	98.2%
Hindu	1.3%
Islam	0.3%
Christian	0.3%

Considering the education level of the participants, it was observed that 71% (n = 273) of the nursing officers had a nursing diploma and only 8% (n = 30) of participants had a Nursing Bachelor's degree. Most of the participants (60%, n = 229) were Grade III nursing officers. More than half (n = 185) of nursing officers had a monthly income between LKR 40,000 – 50,000. Forty-six percent (n = 175) of them were living in

their own residence and 22.9% (n = 88) of them were residing in nurse's hostel.

It was found that 39% (n = 150) of nurses had a bodyweight between 56 - 65 Kg and more than a half (64%, n = 221) of them had a height between 151 – 160 cm. Only 53% (n = 205) of nurses belonged to the category of normal BMI (Figure 1).

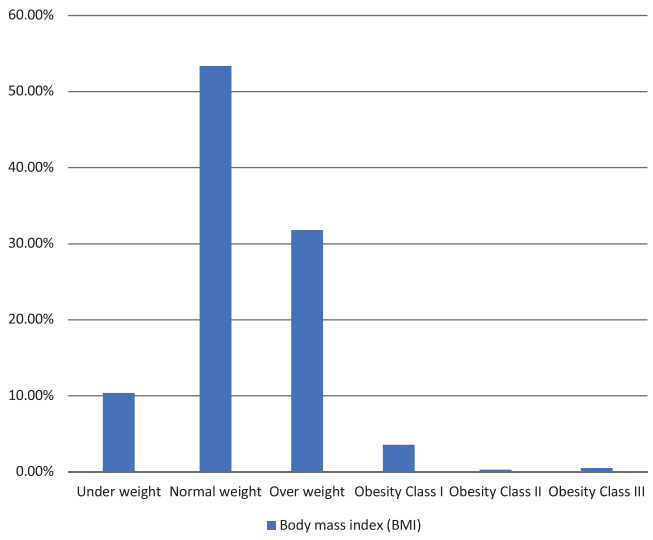

Figure 1: Distribution of BMI

In the assessment of the practice of preparing breakfast, half (51%, n = 197) of nursing officers consumed self-prepared breakfast and 33.1% (n = 127) of nursing offers consumed breakfast prepared by another person at the residence. Only 14% of the participants consumed their breakfast which was purchased from outside vendors and shops. The present study also describes the details on the practice of skipping breakfast and the frequency of skipping breakfast during the previous two weeks from the date of data collection. Of the participants, 12% (n=47) skips their breakfast as a practice while 48.2% (n=185) skipped sometimes (Table 2).

Table 2: Practice of Breakfast Skipping

Practice of Breakfast Skipping	Percentage (%)
Daily	12.2
Sometimes	48.2
Occasional	21.4
Never	18.2

Considering the previous two weeks from the data collection date, the highest frequency of participants who missed their breakfast 1-3 times was 42.7% (n = 164) while 26% (n = 100) of the participants missed their breakfast 4-6 times. Only, 17.3% (n = 66) of the participant had never skipped their breakfast.

The major cause for skipping breakfast was "lack of time" and as a percentage, it was 77.3% (n =119). Another 18% (n = 31) of participants skipped breakfast due to other causes such as the unavailability of food outlets, lack of tasty meals, and having accommodation facilities without food. Further, nurses mentioned that the necessity of traveling far to reach food outlets, negligence, and prolonged sleep after long hours of shift duties also affected the intake of breakfast (Figure 2).

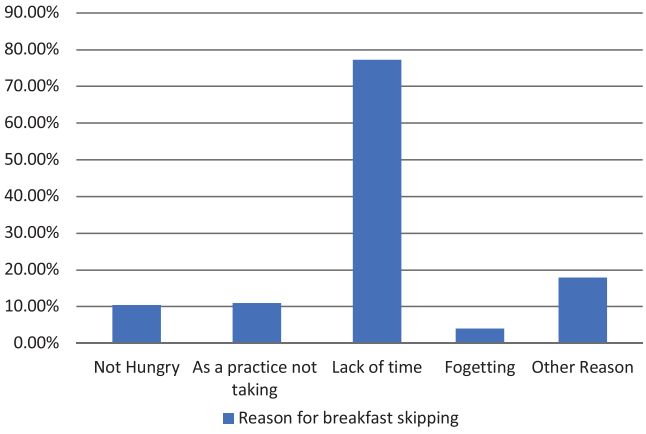

Figure 2: Reasons for breakfast skipping

Nurses were also questioned on the next meal after having missed breakfast. Thirty-seven percent (n =141) of the participants had a habit of having a snack and 48% (n = 174) reported having brunch instead of breakfast.

When associated factors like demographic factors for breakfast skipping were considered, it was observed that age (p=0.021), marital status (p=0.042), and type of accommodation (p=0.037) of the participants were significantly associated with the practice of skipping breakfast. Further increased age (p=0.042), marriage (p=0.007) were significantly associated with the increasing

frequency of skipping breakfast. There was no significant association between the practice of skipping breakfast and BMI.

Discussion

This study mainly assessed the practice of skipping breakfast and its associated factors among nursing officers at Colombo South Teaching Hospital – Kalubowila, Sri Lanka. Nearly 50% of the nursing officers have skipped breakfast in considerable frequency and the main reasons for skipping breakfast were lack of time, oversleeping due to the prolonged shift duty hours, negligence, and lack of tasty food. Giftkins et al. support the finding in the current study and have reported that prolonged duty hours may lead to excessive fatigue and long sleeping hours which in turn strongly influence the time, quality, and quantity of the food consumed (Gifkins et al., 2018). Further, it has been reported that people who work in shifts have a high risk of developing obesity, high triglycerides, low concentrations of HDL cholesterol, and metabolic syndrome (Karlsson et al., 2001). In the current study, it was found that nearly half of the participants had a snack or brunch meal when they skipped their breakfast. Nurses are more prone to have a snack in between the meal times when they are busy with work. Irregular patterns in taking main meals have also lead to overweight and abnormal body parameters (Nicholls et al., 2017). Further supporting the current study it was observed that unhealthy snacking behaviors in between meals lead to bad dietary habits and subsequent eating of large amounts of food may result in developing metabolic disorders (Esposito et al., 2014).

According to the observations of the present study, it was found that nearly 40% of the participants had skipped breakfast 1-3 times in the previous two weeks. Similarly, in another study, a 51% prevalence of skipping breakfast among nursing students was reported from Mangaluru (Benny et al., 2019). Another study conducted in Korea among young adults also reported the same percentage of skipping breakfast (Yun et al., 2010). If the practice of skipping breakfast is continued, as a practice among the young adult population, it will lead to the development of metabolic disorders such as diabetes mellitus, hyperlipidemia, and ischemic heart disease (Perera & Samarawickrama, 2017). Further, in the present study, the main reason for skipping breakfast was stated as not having enough time for taking food and preparing food. Similarly, a Korean study conducted amonge adults also revealed that the main reason for skipping breakfast is the lack of time for food preparation and consumption. In yet another study on nursing students at Mangarulu revealed that having breakfast early in the morning, use of other snacks or supplements, early timing of breakfast, and lack of variety of food as reasons for skipping breakfast (Benny et al., 2019). The finding in the current study can be related with these findings as nursing officers are also a group, who work on shifts and further the high percentage of participants are individuals in the young age group. Benny et al. further concluded that lack of nutrition education among nursing students as the main reason for the skipping of breakfast (Benny et al., 2019). Therefore, it is important to add nutritional knowledge and dietary education as a part of higher education for Sri Lanka nursing professionals as Sri Lankan nurses have a good attitude towards continuous education (Jayamaha et al., 2021).

Nearly half of the nursing officers were within the normal range of BMI, but a considerable percentage of overweight category was also present and researchers could not find any significant association between the practice of skipping breakfast and the BMI of the nurses. Similar results were found in a study conducted among nurses in New York and have concluded low or moderate physical activity level and imbalanced dietary behaviors which leads to the overweightness, were seen among the nurses (Ku et al., 2019). As a solution for this condition, it will be important to monitor and make necessary changes in physical activity level among nurses parallelly to the maintaining of a healthy diet.

Interestingly the current study revealed a relationship between the practice of skipping breakfast and young age, marital status, and type

of accommodation. Also, the frequency of breakfast skipping had relationships with age and marital status. A study conducted in China on a group of medical students has revealed that breakfast consumption was associated with many factors, most importantly monthly expenses and hours of sleeping (Sun et al., 2013). In a study by Keski among adults, skipping breakfast was observed to be significantly associated with the higher BMI, male gender, level of education, and low exercise which is different to the findings of the current study (Keski-Rahkonen et al., 2003). In this study majority of the participants were female, therefore a greater frequency in the breakfast skipping practice may have been observed among them in this study . In order to observe the difference between the gender groups further studies need to be planned and conducted. However it was observed that married nurses were significantly associated with skipping breakfast. This might be due to their tight schedules which result from balancing work-family obligations. Research in the area of skipping breakfast among nurses are sparse, and are much needed with a view to implementing remedial measure in correcting the dietary practices of nurses. These findings will be instrumental to facilitate future health policy planning and further research in this avenue.

Conclusion

Skipping of breakfast can be considered as a problem among the nursing officers mainly due to the lack of time and heavy workload. Marital status was significantly associated with the practice of skipping breakfast. The findings of this study can be used to encourage nurses to make behavioral changes in having breakfast and improve accommodation facilities with food access.

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