

A Narrative Review of Food Culture and Eating Behaviors among Mauritian Muslims during the Fasting Month of Ramadan: The Need for Nutrition Education

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ABSTRACT

Ramadan is the ninth month of the Islamic lunar calendar and is called as *Ramadhan* or *Ramzan*. During this holy month, Muslims around the globe are devoted to the almighty by focusing on fasting, praying, and giving charity to the poor amongst all. As one of the five pillars of Islam, fasting is regarded as an obligatory deed for all able-bodied accountable Muslims. During Ramadan, this category of individuals spend daylight hours observing a complete fast by abstaining from all foods, drinks, medications, as well as smoking. In Mauritius, the duration of fasting varies according to the season coinciding with Ramadan, and ranges from 13 to 15 hours. In general, food intake is reduced during Ramadan. Normally, this should lead to reduced energy intake and weight loss depending on the food consumption pattern of the fasting individual. Nonetheless, eating behaviours are different during Ramadan month and following the daily fasting period, certain individuals indulge in consuming specific types of foods and drinks at breakfast (*Iftaar*). In Mauritius, it has long been a well-anchored culture to have fried cakes and milk beverages besides the recommended dates at '*Iftaar*'. It is, however, alarming to observe that there is a large tendency to replace dinner with '*Iftaar*'. Considering the fact that the metabolism is reduced during the period of fasting, it is essential to maintain the optimal nutritional status and well-being in this holy month. This review focused on the patterns of food consumption and feasts in Ramadan month in Mauritius, and aimed to justify the need for nutrition education to improve food intake.

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Introduction

Mauritius is a small island of volcanic origin, located in the Indian Ocean and covers 2,030 square kilometres of land and 10 square kilometres of water, labelling it as the 183rd biggest nation on the planet (1). While the island had no native inhabitants, it had a long history of colonization by the French and the British in 1715 and 1815, respectively. The sequential phases of immigration comprising of white colonizers, African slaves, Indian indentured labourers, without forgetting traders of Muslim and Chinese ethnicity coming from various continents, is the underlying reason of the island's multi-ethnic configuration (2). The

primary ethnic groups are Hindus (Bhojpuri-speaking group) (41%), Christians (25%) (i.e., creoles of African, mixed African/Indian, and European origin), Muslims (17%), Tamils (7%), Telegus (3%), Marathi (2%), Chinese (3%), and white Franco-Mauritians (2%) (2, 3).

Mauritius has experienced an economic shift following its independence since 1968. This small tropical island converted from an agricultural-based economy to an export-oriented nation. In the sub-Saharan region, Mauritius is renowned for its noteworthy economic history but is notorious for its high incidence of chronic diseases following the

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period of nutrition transition. This nutritional shift was accompanied with an epidemiological transition that can be defined as the shift from an array of high-prevalence infectious diseases related to malnutrition, and episodic famine along meagre environmental hygiene, to a high incidence of prolonged and progressive diseases linked with urban-industrial lifestyles (4).

Muslims of the island are allowed to practice Islam in peace and harmony. Besides accommodating individuals with Islamic faith for their daily prayers, mosques around the island ensure that Muslims are informed of each new moon for each of the months of the lunar calendar. Much emphasis is laid on Ramadan fasting, which is mandatory from dawn to dusk. This obligatory fasting has been acclaimed as a means of providing health benefits among healthy individuals (5). Along the same line, intermittent fasting as well as the reduction in caloric intake is known to increase brain activity, promote cardiovascular health, and reduce numerous risk factors for coronary artery diseases that include reduction in blood pressure and increased insulin sensitivity (6). Considering the fact that metabolism is reduced during the fasting period, it is essential to maintain an optimal nutritional status and well-being during this holy month.

Even though it is known that nutrition educational interventions are time-consuming and costly, educating the Mauritian Muslim community would be an effective stepping stone in reducing the number of complications associated to Ramadan fasting.

Material and methods

Scientific articles published over the last 15 years were obtained for this narrative review from various databases (e.g., Science Direct, PubMed, and Google Scholar) using the keywords “Ramadan”, “nutrition intake”, “fasting”, “nutrition education”, and “Mauritius”. Additionally, relevant information pertaining to Ramadan and fasting were obtained from hadiths available.

Patterns of food consumption during Ramadan

In Mauritius, Muslims engage themselves in supplementary religious activities during this holy month and as such, there is a noticeable

change in terms of meal patterns, meal frequency, food preparation, and food preferences. This change diverges from the usual feeding patterns among Muslims as compared to the other months of the year, when food intake patterns are relatively stable irrespective of the season.

There is a convincing alteration in terms of both food quantity and quality in the diet during this period (7), and the greatest physiological changes noticed in Ramadan are conceivably attributable to decreased meal frequency, food consumption pattern, along with a change in sleep pattern.

The two main blessed meals during Ramadan are *Suhoor* and *Iftaar*. However, *Iftaar* is often followed by dinner in some households on the island. As the meal consumed by Muslims in the early morning before fasting, *Suhoor* is also referred to as the pre-dawn meal. *Iftaar* holds a special spiritual significance in the routine of the fasting individuals and is announced by the call for prayer at *Maghrib* which is the time whereby the sun is setting. In a hadith narrated by Umar bin Al-Khattab, the prophet (peace be upon him) stated that “When evening approaches from this side (east) and the day retreats from this side (west) and the sun has set, the one who is fasting breaks his fast.”

As per a hadith narrated by Anas b. Mâik, the prophet (peace be upon him) used to break his fast with fresh dates before going to prayer. If fresh dates were not available, he would break his fast with dried dates, and when dried dates were not available, he would take a few sips of water (8). In theory, Ramadan fasting can be a noble model of health promotion, though the virtues associated with the act of fasting will only be attained with the practice of healthy food intake throughout the holy month (9).

Ramadan feast in Mauritius

The folklore and traditions that have been instilled within the Mauritian Muslims in connection with *Iftaar* were acquired across generations. The preparation of food items that would be eaten to break the fast often starts even prior to the beginning of the holy month. In many families around the island, certain food items are pre-cooked, packaged, and kept frozen to be used ready. Unfortunately, many of these

items are usually deep-fried rather than baked.

During Ramadan, many food vendors operate in the evening after *Zohr* and before *Maghrib* to sell a range of cakes including *samosa*, fritter, and pancake. Additionally, some would be selling *Alooda*, which is a cold beverage composed of full-cream milk, sugar, food colouring, flavours, agar-agar, and basil seeds, and the most audacious ones will add in a scoop of ice-cream, as well. A special food item which is much sought after *Iftaar* or for *Suhoor* in Ramadan is *Farata* bread, which is appreciated not only by people of the Islamic community, but also by non-Muslims. This famous foodstuff is different from the Indian bread, also recognized as the Indian flat bread that is baked in the tandoor oven. The *Farata* bread is a singular braided yeast bread bought by almost every Muslim home throughout Ramadan.

It is upsetting from a spiritual as well as from a health perspective to observe how Mauritian Muslims tend not only to overeat at *Iftaar*, but also to forget the concept of having all, if not most, of the food groups as part of this sacred meal. The quality and quantity of food consumed during Ramadan should not change significantly vis-à-vis a healthy normal diet (9).

The Prophet (peace be upon him) has said that “Enough for a human being to have *luqaymat* (equals from 3 to 9 mouthfuls) that prop up his spine, and if he must have more (in his stomach), then one third of food, one third of water, and one third of air”.

Yet, this practice is seldom adopted by individuals of the Islamic faith despite the high prevalence of metabolic diseases on the island. The *Iftaar* feast in Mauritius is composed of food items and beverages that are calorie- and fat-dense with minimum of fibre composition. Although previous studies have reported positive health outcomes during and following the month of Ramadan, with this trend of local consumption and lifestyle, the situation among certain individuals might be totally the opposite.

There is one salient feature happening in various homes during this month that is called ‘Ramadan Party’. It involves a gathering hosted by one member of the family, whereby many relatives and friends are invited with the objective of gathering everyone under one roof to break the fast. Nonetheless, the amount of

food preparations involved is huge. The categories of food present are quite similar to the ones being consumed by individuals within their own households, but in much larger quantity and variety. Very often, there are over-consumption of food and even wastage in this kind of party that again goes against the sheer purpose of fasting that is restriction and consumption of food in moderation. Additionally, bulky food consumption, especially fatty and fried ones, at the time of breaking the fast (10) might contribute to delayed gastric emptying resulting in gastroesophageal reflux and heartburn (11).

The need for nutrition education for Ramadan fasting

There is an urge to sensitize the Muslim community in terms of healthy eating, not only for the reason that the rationality of the act of fasting is to gain cognizance of the concept of moderation, but also to avoid any disruption in the metabolic parameters which might otherwise be the beginning of metabolic diseases. The World Health Organization (2014) has reported that non-communicable diseases account for 85% of the total burden of diseases in Mauritius (12). In 2015, Mauritius was ranked first in the world in terms of countries with the highest prevalence of diabetes mellitus with a prevalence of 22.3% (13).

Nutrition education is well defined as “any combination of educational strategies along with environmental supports intended to facilitate voluntary adoption of food choices and other food- and nutrition-related behaviors favorable to health and wellbeing” (14). Nutrition education strategies and interventions geared towards healthy food choices and preparation are essential in our obesogenic environment, where the incidence of metabolic diseases is alarming and becoming a steady public health concern. Appropriate and client-focused nutrition interventions should entail a relevant behavioral focus that diminishes the risk factors and encompasses strategies that are developmentally and culturally correct (15). In designing and implementing a nutrition education intervention in connection to Ramadan, barriers to healthy behaviors including motives for food choices should be considered. For instance, lack of nutritional

knowledge in terms of types and proportions of foods might result in indigestion, bloating, and other clinical disorders (10).

Furthermore, basic nutritional information and education tailored for Ramadan fasting should be more inclusive that caters for factors such as food preferences, sensory attributes, food availability, economic status, seasonal aspects, and time management, especially where healthy food preparation is involved.

Conclusion

Unmistakably in Mauritius, the pattern of food consumption among most Muslims during the period of Ramadan spoils the true essence of the sacred month. Hence, there is a pressing need to undertake a study to determine nutritional intake, food consumption patterns, and barriers to healthy diet during this period of the lunar calendar. These essential elements would facilitate nutrition education with the aim of promoting behavioral change, thereby curtailing any disruption in metabolic parameters.

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