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The Relationship between Emotions during Hospitalisation and Patients' Eating Behaviour

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Abstract. This paper explores the emotions elicited, in relation to food consumption and the relationship between emotions and food provision attributes (food attributes, familiarity of food, feeling cared by staff, rights to choose and eating environment). The study took place in 3 Malaysian public hospitals, where a total of 29 patients were interviewed from each class (1st, 2nd and 3rd class) wards. The Critical Incident Technique (CIT) was incorporated with content analysis to analyse the data. A total of 180 incidents were analysed quantitatively, where more negative incidents (n= 102, 56.7%) in comparison to positive incidents (n=78, 43.3%) were identified. Chi-square analysis indicated that there is a relationship between the incidents that elicited positive or negative emotions and food provision factors. The findings provided understanding about elicitation of emotions, and established emotion as a powerful factor on their food consumption.

Keywords: hospital food, emotions, foodservice

1. Introduction

The relationship between eating and emotions differs among different groups of individuals and specific emotional state [1]. Being hospitalised could trigger certain emotions, which could be specific to that individual and have implication for their food consumption as a consequences, which was explored in this study. Besides, patients are known to prefer 'comfort food' [2], but the role of emotions in patients' food consumption remains hidden. It could be justified that eating in hospital could result in changed eating behaviours and subsequently affect their nutritional status. Focus on emotions related to food consumption was considered necessary because of its consequences.

2. Methodology

The study took place in 3 Malaysian public hospitals, where two hospitals were located in rural areas and one in urban area. A total of 29 patients (who felt well enough to provide information about the hospital food) were identified with the help of Head Nurse from each class (1st, 2nd and 3rd class) wards. The class system (different services, especially in terms of food provision) is a unique classification of patients according to their affordability in Malaysian public hospitals, whereby the class is the patients' choice. In general, patients in Malaysian public hospitals were not aware of the menu before serving. Besides, the hospitals are practicing two types of Foodservice, either 'in-house' (foodservice is managed, prepared and served by the hospital itself) or 'outsourced' (Foodservice is tendered to a catering company, where food is prepared and served by the catering staff). Patients with a specific health condition, such as cancer were excluded due to the effect of the disease itself on food consumption and appetite. Besides, only patients on normal diets were included, as patients on therapeutic diets might have their perceptions influenced by the type of meal itself.

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The semi-structured interview method was used to gather information about aspects of the hospital food experience to incorporate themes that emerged in previous study [3], [4]. The themes were 'meaning of food', 'familiarity of food', 'influences of food attributes on eating behaviour', 'right to choose', 'influences of environment on eating behaviour' and 'feeling cared by staff'. Initially, they were asked to share and describe meal times that were memorable as well as unpleasant, before further probing about their experience to understand the impact of emotion on their eating behaviour. The NVivo8 software was used to manage the qualitative data gathered. The Critical Incident Technique (CIT) was incorporated with content analysis to analyse the data. The CIT was particularly used because it treats respondents' stories as reports of facts, therefore the analysis method focuses on the classification of such reports by assigning incidents into descriptive categories to explain the event. A total of 180 incidents were analysed, where more negative incidents (n= 102, 56.7%) in comparison to positive incidents (n=78, 43.3%) were elicited. Although this was a qualitative study, the Chi-Square test was used as an additional analysis to understand the association between emotion and food provisional factors by analysing the incidents.

One of the main consequences of compromised food consumption among hospitalised patients is malnutrition, where up to 60% of hospitalised patients were undernourished upon admission [5]. Although there are no figures for Malaysia in published literature, the figures are expected to be high as the prevalence of malnutrition among elderly patients admitted to a general ward alone was 10.9%, which was considered high [6]. Malnutrition is considered as a huge problem all over the world, as studies have associated malnutrition with increased risk of subsequent mortality and morbidity, resulting in increased length of stay and cost [7], [8]. Previous study [3], [4] provided justification to focus on emotional well-being of patients during meal times. Therefore, this study investigated the influences of eliciting emotions on consumption of food.

3. Findings and Discussion

A total of eighteen males and eleven females were recruited from hospitals, which practised different catering system systems – in-house (n=14) and outsourced (n=15). In terms of age group, the majority were between 35-54 years old (n=12), followed by patients of more than 55 years old (n=10) and 21-34 years old (n=7). They were mostly Malays (n=17), followed by Chinese (n=7) and Indian (n=5). Patients were from three different wards – 1st class (n=6), 2nd class (n=10) and 3rd class (n=13). Most patients stayed for 1-8 days (n=20), followed by 9-16 days (n=7) and 17-20 days (n=2). For most patients, it was either their 1st (n=12) or 2-3rd (n=12) time of being admitted, and a few indicated that they had been admitted approximately 4-6 times.

3.1. Summary of Emotions

A summary of emotions and the aspects eliciting the emotions is presented in ranked order, based on the frequency of mention (Table 1). The information presented was derived from analysis of the incidents, where elicitation of each emotion was discussed in-depth. The emotions experienced by patients were explored in-depth, whereby there were 17 main emotions elicited by various factors within the food provision service.

3.2. Association between Type of Emotions and Food Provision Attributes

The chi-square analysis determined statistically significant associations between the type of emotion - positive or negative (based on incidents that elicited the emotions) and food provision factors (food attributes, familiarity of food, feeling cared by staff, rights to choose and eating environment). Chi-square analysis (test of independence) resulted in X2 (4, N = 180) = 17.626, p = 0.001 (shown in Table 2), indicating that there is a relationship between the incidents that elicited positive or negative emotions and food provision factors. In other words, whether patients experience positive or negative emotions are associated with the food provision factors (food attributes', 'familiarity of food', 'feeling cared by staff', 'rights to choose' and 'eating environment').

Chi-Square analysis also indicated that incidents that elicited positive emotions were evoked mostly by food attributes (n=35, 19.4%), followed by feeling cared by staff (n=20, 11.1%), familiarity of food (n=13, 7.2%), rights to choose (n= 7, 3.9%) and eating environment (n=3, 1.7%). It can be concluded that food attributes were mainly associated in eliciting positive emotions. On the other hand, environmental factors

(such as sound, smell and a communal dining area) elicited least number of incidences related to positive emotions.

Table 1. Summary of Emotions

	Summary
Frustration	Patients associated frustration with bland taste, cold food (noodles, curry), lack of opportunity to choose portion size, cultural food habits and vegetarian options, and lack of assistance
Interest	Interested was associated with cleanliness of trays and cutlery, freshness (vegetables, meat) and staffs' empathy (advice and encouragement)
Enjoyment	Patients enjoyed puddings (red bean), enjoyed eating foods that elicited pleasant memories (rice porridge) and when there was a lack of disinfectant smell
Hostility	Hostility was elicited after single incidents. Factors influencing this are freshness, taste, eating on bed, unpleasant sounds and smells and lack of provision of assistance
Shame	This emotion was provoked when kitchen staff did not greet, nurses scolded or ignored patients' requests for a particular food or portion sizes
Boredom	Patients were bored when the fish and chicken was served every day and when patients had to eat alone
Sadness	Sadness were associated with texture (use of thickener), taste, comfort food, eating alone, and lacking the ability to offer higher quality service in 3rd class wards
Anger	Patients expressed anger after they were disappointed repeatedly by factors such as cold food and drinks, poor food preparation (spices, salt) and taste
Surprise	Patients were surprised when special dishes were served (tomato rice, chicken Korma), when they were allowed to choose the dishes and when there were no unpleasant (medicine) smell
Satisfaction	This is an emotion expressed after food consumption, when 6 meals a day were served, assistance was provided on time and a variety of dishes were served
Disgust	Disgust was expressed when poor consistency dishes were served, food was spilled on the tray and less attention was given to neatness in food presentation
Happiness	Patients were happy when staff were friendly and acknowledged them, food was tasty and familiar, and healthy dishes were served
Lack of Interest	Patients expressed this emotion when unfamiliar food was served, lack of focus on cultural food habits, there was a lack of opportunity to choose, and fish and chicken were served every day
Guilt	Patients were guilty because they wasted hospital food
Comfort	Patients felt 'comfort' when delicious and familiar dishes were served
Relief	Relief was expressed when patients encountered positive experiences, as their initial expectations were low in terms of food and service
Loneliness	Patients felt lonely when they had to eat alone, especially on the bed

Similar to positive emotions, food attributes (n=47, 26.1%) were also highly associated with incidents that elicited negative emotions. This was followed by factors like rights to choose (n=25, 13.9%), eating environment (n=11, 6.1%), feeling cared by staff (n=10, 5.6%) and familiarity of food (n=9, 5.0%). Results indicated that elicitation of negative emotions was related to factors identified, and food attributes elicited most of the negative emotions and familiarity of food elicited the least number of incidents which elicited negative emotions.

Factors emerging have previously been associated with compromised food consumption [9]-[13]. However, in this study, it was possible to associate the factors with particular emotions that patients experience. It was also possible to understand how emotions experienced were direct contributors towards patients' food consumption. Previous studies have indicated factors mentioned in Table 2 as factors that influenced patients' food consumption. However, the main reason for not eating was the emotions elicited by the factors previously researched. The findings of this study provided a more in-depth understanding of

patients' food consumption, adding the crucial role of emotions to patients' food consumption models or theories.

Table 2. Relationship between Incidents that Elicited (Positive or Negative) and Food Provision Factors

	Incidents Eliciting Positive Emotions		Incidents Eliciting Negative Emotions		Total		Chi Square
	N	%	N	%	N	%	
Food Provision Factors							Pearson Chi-Square value = 17.626 df = 4 p = 0.001
Food Attributes	35	19.4	47	26.1	82	45.6	
Familiarity of Food	13	7.2	9	5.0	22	12.2	
Feeling Cared by Staff	20	11.1	10	5.6	30	16.7	
Rights to Choose	7	3.9	25	13.9	32	17.8	
Eating Environment	3	1.7	11	6.1	14	7.8	
Total	78	43.3	102	56.7	180	100	

4. Conclusion

Emotional experiences of patients are crucial, contributing to an understanding of the psychological processes that underlie food consumption judgement [14]. As such, the findings of this study indicated two main things;

- A number of factors were associated with elicitation of particular emotions
- There was evidence that emotions (both positive and negative) were associated with factors such as food attributes, food choice, familiarity with food, the role of staff and eating environment.

Both positive and negative emotions have been recognised as vital in any food consumption situation [15], [1], and this was also found among patients (in the current study). Previous studies have classified factors (such as sensory attributes, experienced consequences, anticipated consequences, personal/cultural meanings and actions of associated agents) that elicited positive or negative emotions [16], based on healthy individuals. Similar factors were encapsulated in this study, but the importance differed in this various eating situation. Regardless of similarity and differences between the factors mentioned by healthy individuals, patients' motivation to eat was not directly associated with the nutritive value of the food. Their main motive was to experience 'comfort eating' and at times a 'pleasurable' eating experience. The role of emotions was evident, and it was possible to understand the sources of the emotions in their eating experiences. The sources were regarded as eliciting factors. In conclusion, the findings also provided understanding about elicited emotions, and established emotion as a powerful factor on patients' food consumption.

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