

# **Customer satisfaction as benchmark for contract catering performance within the Army Basic Recruit Training Centre (PUSASDA)**

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## **ABSTRACT**

Customer satisfaction has been given much attention in the measurement of business performance of the institutional foodservices for the food and services. This study examines the army recruits' satisfaction with Acute Care Hospital Foodservice Patient Satisfaction Questionnaire (ACHFPSQ). This survey was part of the menu intervention study and implemented in three dining halls in the Army Basic Recruit Training Centre with involvement of fifty male army recruits. Customer satisfaction was assessed after six months of staying within the training centre. Main outcome measured were the scores of foodservice dimensions and overall satisfaction. Relationship between foodservice dimensions with overall satisfaction was assessed with Multiple Linear Regression Analysis. Findings revealed that the army recruits rated the highest score for meal service quality (score 2.81) while the lowest score was for physical environment (score 2.58). Overall score of foodservice satisfaction was 2.48, indicated that the army recruits had poor satisfaction level of the catering. The regression analyses revealed that staff and service issues was the only significant predictor positively related to the army recruits' overall foodservice satisfaction. Further approach to improve the army recruits' satisfaction with the food and services are warranted.

Key words: Customer satisfaction, army recruits, contract catering, Malaysian Armed Forces foodservices

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## Introduction:

In situational eating such as military catering, satisfaction level can be used to determine the food consumption of the institutional food. Satisfaction level can also be the benchmark of the food services quality and findings prompt analytical comparison in determining the food acceptance and to increase food intake. Several study of satisfaction with the institutional food (Tranter et al., 2009; Sahin et al., 2006). Rosita and peers (2010) indicated that food is the major reason of satisfaction level, rather than the staff or service issues. The food taste and appearance are the determinants of satisfaction within the institutional foodservice. In Malaysian Armed Forces foodservice context, customer satisfaction is one of the factors that influence the energy and nutrient intake of army recruits during basic recruit training. The Armed Forces has outsourced the foodservice operation to a contract catering to focus on the prime activities. Limited studies have examined the army recruits' satisfaction as the benchmark of the contract catering performance in the Army Basic Recruit Training Centre (PUSASDA). As the contract catering strives to achieve the highest level of services for the soldiers, the contract catering would like to evaluate their foodservice performance, and see if the army recruits are satisfied with their services. In addition, measurement of customer satisfaction may help in menu planning for basic recruit training in order to increase the food consumption (Zahid, KPD Catering Advisor, personal communication, July 13, 2010; de Graaf et al., 2005; Hirsch et al., 2005). Acute Care Hospital Foodservice Patient Satisfaction Questionnaire (ACHFPSQ) offers a standardized tool to evaluate the customer satisfaction with the food and service, which has been widely used not just in the hospital settings but also in the other food institution, such as geriatrics, rehabilitation and aged care (Fallon et al., 2008). This study addresses the feedbacks of satisfaction on the contract catering operation in Army Basic Recruit Training Centre (PUSASDA). The objective of this study is to determine the army recruits' foodservice satisfaction with the contract catering in the Army Basic Recruit Training Centre (PUSASDA), with specific objectives to determine the scores for individual foodservice statements and foodservice dimensions and to examine the relationship between foodservice dimensions with overall satisfaction.

## Methodology:

This study involved fifty male army recruits who joined basic recruit training in Army Basic Recruit Training Centre (PUSASDA), Port Dickson, Malaysia. Inclusion criteria were male army recruits to avoid gender bias. Minimum sample size was 33 respondents calculated from Lemeshow et al. (1990). This satisfaction survey was a part of a large menu intervention study and hence, it employs small sample size of respondents. The study had approval from the ethics committee from the Medical Research Ethics Committee of the Putra University of Malaysia and permission to conduct this study was granted from the Malaysian Armed Forces. The army recruits had stayed in PUSASDA for 6 months before the survey was conducted. The army recruits were briefed about the study requirements and risk upon participation in the study. 50 army recruits had given consented to join the study. This study used a valid and reliable Acute Care Hospital Foodservice Patient Satisfaction Questionnaire (ACHFPSQ) instrument that contains 18 statements, 16 of which are grouped into four dimensions of foodservice satisfaction: food quality, meal service quality, staff/service issues and the physical environment. The two additional statements, relating to temperature of the hot foods and the ability to choose different sized meals, are treated independently (Capra et al., 2005). The ACHFPSQ has been widely used not just in the hospital settings but also in

the other food institution to determine the customer satisfaction with the food and service (Fallon et al., 2008). Reliability of this questionnaire was high with Cronbach's alpha of 0.974. Army recruits rated an overall rating of foodservice from 'very good' to 'very poor' and rated each statement on a scale from 'never' to 'always' with a five-point likert scale. An average of the responses to statements comprising each dimension was calculated to obtain a factor score. One-day survey of satisfaction was conducted among the army recruits. The questionnaires given were pre-tested among a sample of ten young soldiers to clarify wording discrepancies and problems to answer the questionnaires. Data were analysed for the scores of foodservice dimensions and overall satisfaction. Relationship between foodservice dimensions with overall satisfaction was assessed with Multiple Linear Regression Analysis.

Results:

### ***Characteristics***

Subject characteristics are presented in Table 1. Majority of the army recruits were Malay (94.0%), single (96.0%) and age range from 19 to 23 years old.

**Table 1 Overall characteristics of male army recruits (n=50)**

<b>Characteristics</b>	<b>Frequencies,n (%)</b>	<b>Mean±SD (Range)</b>
<b>Age (years)</b>		20.72 ± 1.38 (19 - 23)
<b>Ethnicity</b>		
<i>Malay</i>	47(94.0)	
<i>Bajau</i>	1 (2.0)	
<i>Bugisdusun</i>	1 (2.0)	
<i>Murut</i>	1 (2.0)	
<b>Marital status</b>		
<i>Single</i>	48 (96.0)	
<i>Married</i>	2 (4.0)	
<i>Divorced</i>	-	

***To determine the army recruits' foodservice satisfaction level with the contract catering***

### **Specific 1 To determine the scores for individual foodservice statements and foodservice dimensions**

Table 2 summarizes the scores of individual statements and factor scores of four foodservice dimensions, with the two independent statements of the soldiers. The army recruits rated meal service quality the highest (score 2.81) while the lowest score was for physical environment (score 2.58). The two independent statements were rated as rarely satisfied for 'I like to be able to choose different-sized meals (score 2.72) and 'The hot foods are just the right temperature' (score 2.76). Most of the scores of four foodservice dimensions received ratings of rarely satisfied with the foodservice. Overall score of foodservice satisfaction was 2.48, indicated that the army recruits had poor satisfaction level of the catering. More than 30% of army recruits rated the foodservice as very poor (33.0%) but none of the army recruits rated the foodservice as very good.

**Table 2 Foodservice satisfaction of the male army recruits (n=50)**

<b>Foodservice dimension/Statements</b>	<b>Mean score</b>	<b>Factor score</b>
<b><i>Food quality</i></b>		<b>2.65±1.09</b>
i. The food in dining hall has been good as I expected	2.82±1.30	
ii. I like the way the vegetables are cooked	2.44±1.24	
iii. The meals taste nice	2.80±1.26	
iv. The menu has enough variety for me to choose meals that I want to eat	2.68±1.42	
v. The meals have excellent and distinct flavors	2.56±1.37	
vi. The meat is tough and dry	2.62±1.29	
<b><i>Meal service quality</i></b>		<b>2.81±1.21</b>
i. The cutlery look good	2.74±1.52	
ii. The cold drinks are just the right temperature	3.00±1.42	
iii. The hot drinks are just the right temperature	2.98±1.43	
iv. Items such as serviettes, cutlery etc. are not enough in the container	2.82±1.46	
v. The cold foods are just the right temperature	2.88±1.45	
vi. The meal tray looks attractive when I receive it	2.46±1.41	
<b><i>Staff/service issues</i></b>		<b>2.61±1.21</b>
i. The staff who deliver my meals are neat and clean	2.78±1.47	
ii. I am able to choose a meal in the dining hall	2.68±1.37	
iii. The staff who clean finished tray meal are friendly and polite	2.50±1.31	
iv. The staff who deliver my menus are helpful	2.50±1.37	
<b><i>Physical environment</i></b>		<b>2.58±1.14</b>
i. The cutlery are chipped and stained	2.68±1.40	
ii. The dining hall smells stop me from enjoying my meals	2.52±1.21	
iii. I am disturbed by the noise of finished meal trays being removed	2.56±1.29	
<b><i>Independent statements</i></b>		
I like to be able to choose different-sized meals	2.72±1.47	
The hot foods are just the right temperature	2.76±1.36	

<b>Overall foodservice satisfaction</b>	
Very good (%)	-
Good (%)	14.0
Okay (%)	31.0
Poor (%)	22.0
Very poor (%)	33.0
<b>Overall score</b>	<b>2.48±1.14</b>

***Specific 2 To examine the relationship between foodservice dimensions with overall satisfaction***

The relationship between the four foodservice dimensions and the army recruits’ overall foodservice satisfaction was determined with multiple linear regression analysis (Table 3). The regression analyses revealed that staff and service issues was the only significant predictor positively related to the army recruits’ overall foodservice satisfaction ( $\beta=0.507$ ,  $p=0.005$ ). The model explained 68.2% of the total variation in overall foodservice satisfaction ( $R^2= 0.682$ ).

**Table 3 Regression model of foodservice dimensions on overall satisfaction**

<b>Foodservice dimensions</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math></b>	<b>p-value</b>
Food quality	0.446	0.254	0.426	0.086
Meal service quality	-0.084	0.228	-0.089	0.714
Staff/service issues	0.477	0.160	0.507	0.005
Physical environment	0.018	0.137	0.018	0.898

**Discussion:**

Foodservice satisfaction was one of the factors identified that influence the soldiers’ eating in the dining facilities in Army Basic Training Centre, PUSASDA. Four foodservice dimensions evaluated were food quality, meal service quality, staff and service issues and physical environment that contributed to overall satisfaction in a foodservice (Capra et al., 2005). Satisfaction of the soldiers to food and services of the catering revealed that the all four foodservice dimensions of food quality, meal service quality, staff and service issues and physical environment received poor ratings with score of 2.58 to 2.81. The highest rating was meal service quality and the least was physical environment. For meal service quality, the soldiers commented that the temperature of cold drinks is okay but for temperature of hot drinks needed more improvement. Second rating was food quality whereby the soldiers required the food to improve in terms of sensory. Wright and colleagues (2006) suggested that foodservice satisfaction was strongly associated with varieties, flavour, meat texture, temperature, meal taste, and staff. Study of Sahin, Demir, Celik, & Teke (2006) put importance on taste and appearance for determinants of satisfaction with the food served. In contrast, our study found that meal service was the most important factor to the soldiers and food come to second. This can be justified that the soldiers prioritized on the meal service more than the food because they have perception that the food in the military dining facilities was impossible to change to what they expect. They emphasized on meal service due to running out of time to eat during basic recruit training. The least positively rated was physical

environment. Most comments about the dining facilities were the noise and dim environment. The results of foodservice satisfaction among the soldiers needed attention from the catering in order for quality improvement activities focused on the lowest scoring components of the questionnaire. (Fallon, Gurr, Hannan-Jones, & Bauer, 2008).

The regression analysis demonstrated that staff and service issues were the most important that contributes to the overall foodservice satisfaction among the soldiers, which accounts for 68.2% of overall foodservice satisfaction. This finding can be explained by the remarkable comments of the soldiers during assessment of foodservice satisfaction. First, the soldiers were sensitive to the time spent for waiting. The soldiers had to long queue, waiting for the food handlers to serve the food. Since they were rushing for BT activities, they need the catering to serve the food fast. This is in agreement with study of Meiselman & Schutz (2003) that waiting in line was the biggest complaint among the young military population. The soldiers have expectation that the catering would change the layout from traditional dining hall to cafeteria style of dining hall that self-serve the food. The advantages of the cafeteria style are the soldiers may choose the food, portion sizes and combinations of meal. But, the practicality of the cafeteria-style eating facilities in Army Basic Training Centre, PUSASDA is argued for the reason that institutional training served high feeding strength in a short duration and lack of staff for service during mealtimes. Furthermore, lack of respect, added with tiresome, felt by the food handlers when serving the food to the soldiers is of particular interest since such a feeling could certainly influence their attitude toward the soldiers as well as toward their careers, and would suggest that some attention be paid to altering the soldiers' image of the food handlers, as suggested by Symington and Meiselman (1975). The foodservice satisfaction of young soldiers in Army Basic Training Centre, PUSASDA revealed several issues that the catering administration should consider to improve their foodservice performance. By identification of which foodservice dimensions contributed most to the soldiers' overall satisfaction, the catering may implement strategic moves that are likely to increase to good foodservice rating.

## Conclusion

This study evaluated the foodservice satisfaction among male army recruits during 6-month of basic recruit training in Army Basic Recruit Training (PUSASDA). Results demonstrated that the army recruits rated the foodservice satisfaction of the catering as poor. The findings of this study give credence to the idea that service from the catering was a primary factor for the soldiers to consume food from the catering. Results from the study may be used by the contract catering to identify the strengths and weaknesses of the food and services and further actions should be implemented to tackle insufficient food consumed during basic recruit training.

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