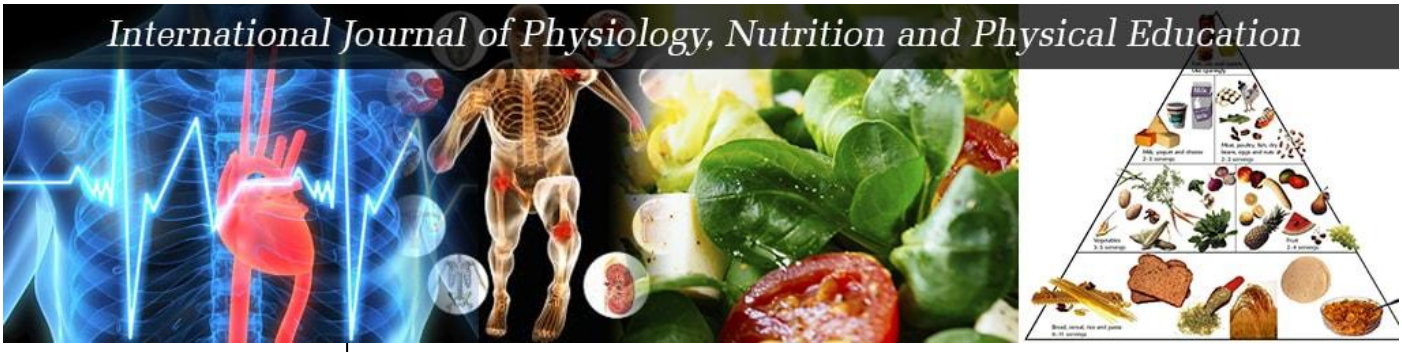

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Nutritional quality analysis of Boondi Raita served at selected restaurants

Dr. Prabhjot Kaur and Dr. Vinti Davar

Abstract
Introduction: Total food quality management has been a hard challenge for all the restaurateurs since long. Consistent quality is critical for hospitality operations. It is a hard reality that the food served at restaurants is generally high in calories, fats and carbohydrates thereby leading to malnutrition and other health related disorders like overweight, obesity, heart diseases etc. on prolonged regular consumption. This food however generally lacks in certain essential nutrients like proteins, vitamins and minerals thus causing greater imbalance.
Objectives: The study was carried out with the following objectives:

- To calculate the proximate composition of Boondi Raita served at selected restaurants
- To evaluate the nutritional adequacy of Boondi Raita served thereto

Methodology: The Boondi Raita samples were procured from private, public and fast food restaurants in a sterile ice box. Development of the standardized recipe and proximate composition analysis were performed to evaluate energy, carbohydrate, protein, fats, fibre, ash and moisture content. The proximate values were calculated in triplicate. The mean scores of the triplicates and standard deviation were calculated using SPSS 16.0 version.
Results and Conclusion: Boondi Raita served at public restaurants (R2) was found to be deficient in all nutrients with reference to the standardized recipe. Boondi Raita of private restaurants (R1) was higher in carbohydrate (20 per cent) content but lower in energy (-7 per cent) and fat (-67 per cent) content whereas that served at fast food restaurants (R3) ranked higher in energy (18 per cent) and fat (52 per cent) content but lower in carbohydrates (-20 per cent) as compared to the standardized recipe. However, a high downfall in protein and fibre content has been observed at case of all the three types of restaurants.

Keywords: Food quality, proximate composition, nutritional adequacy, restaurants

Introduction
Total food quality management has been a hard challenge for all the restaurateurs since long. Consistent quality is critical for hospitality operations (Jones and Dent, 1994; Crandall *et al*., 1996) [7, 3], in particular, restaurant food service operations (Bosselman, 1995). This is because customers of restaurants are more concerned with the consistency of the quality of food offered. However, providing a consistent level of food quality is a major challenging task (Walker, 2008). It is a hard reality that the food served at restaurants is generally high in calories, fats and carbohydrates thereby leading to malnutrition and other health related disorders like overweight, obesity, heart diseases etc. on prolonged regular consumption. This food however generally lacks in certain essential nutrients like proteins, vitamins and minerals thus causing greater imbalance. Also routine customers are not very much aware of the nutritive value parameters which can help them make healthier choices. In addition to this, no nutritional information about the food being served is provided by the restaurants on their menu cards.
Keeping all these factors in mind, the present research entitled "Nutritional Quality Analysis of Boondi Raita served at Selected Restaurants" has studied the primary aspects of overall quality of the food served at private, public and fast food restaurants.

Review of Literature
Known for menu items containing high amounts of fat, sugar, and salt, fast-food restaurants have contributed to increased risk of diet-related chronic diseases,

like heart disease and diabetes. "Despite qualitative evidence that the fast-food industry is making improvements to the nutritional quality of at least some of their menu items, a quantitative evaluation of trends in the nutritional quality of fast food available in the marketplace was lacking," said lead investigator Mary Hearst, Ph.D., MPH, Associate Professor of Public Health at St. Catherine University in St. Paul, Minnesota. The overall nutritional quality score associated with the eight studied restaurants came out to be 48; quite below 55 of the average American diet in general, which the USDA considers far from optimal.

One in three Americans currently suffers from unhealthy weight, which can lead to conditions such as heart disease, diabetes, and depression. The causes of obesity are not limited to individual behaviors but include environmental factors, such as the availability of healthy food outlets. Understanding the influence of the food environment is especially relevant for college students living away from home, who consume most of their food commercially as they establish new eating habits. This study explored the quality, cost, and distribution of the food available at the University of Florida. Available food items and prices were obtained from Gator Dining Services for each dining location on campus in 2009, and the nutritional quality of the food was assessed using the Nutritional Quality Index (NQI). Food items were also coded based on location in order to determine if differences in nutritional quality existed that depend on the geographic area. Statistical analyses were conducted in order to determine if significant differences exist that are based on price and dining location. The average food item costs $ 4.26 and contains 552 calories. The data suggest that foods high in fat and cholesterol are cheaper and more readily available than healthier foods, and the availability of healthy foods varies by location on campus.

Recent literature indicates that American society tends to offer foods that are higher in calories and fat at a cheaper cost and greater availability than fresh produce and other foods which are high in nutritional quality (Finkelstein, Ruhm, and Kosa, 2005) [4]. Residents living in areas with high concentrations of fast food restaurants are more likely to consume more calories, fat, saturated fat, and cholesterol (Lewis *et al*., 2005) [9]. Moreover, studies have shown that providing nutrient-dense foods at the elementary, middle, and high school level increases students' daily intake of fruits and vegetables, improving their overall nutrition (Kubik, Lytle, Hannan, Perry, and Story, 2003) [8]. These findings are reinforced by Morland, Wing, and Diez Roux's research, which demonstrated that adults were more likely to consume diets high in fruits and vegetables and low in saturated fats when supermarkets containing these foods were in close proximity (2002).

Approximately one-third of main dishes at fast-food restaurant chains and half of main dishes at sit down restaurant chains exceeded the 2010 Dietary Guidelines for Americans recommended levels for sodium, fat, and saturated fat in 2014. Improvements in nutrient content were observed for side dishes. At sit down restaurant chains, added side dishes contained over 50 per cent more calories, fat, saturated fat, and sodium, and were less likely to contain fruits/vegetables. Consumption of diet high in sugar, saturated fat, salt and calorie content in children can lead to early development of obesity, hypertension, dyslipidemia and impaired glucose tolerance. Fast foods have high level of fat and sugars that are not only unhealthy but addictive and that creates a vicious cycle making it hard for children to choose healthy food. High content of trans-fat in commercially available fast foods predispose children to risk of future heart diseases (Asgary S. *et al*., 2009) [1].

Junk foods often contain colors that are inedible, carcinogenic and harmful to the body. Food coloring may result in hyperactivity and lapses of concentration in children. Poor nutritional habits can undermine these pre-requisites of learning, as well as decrease the strength that children need for making friends, interacting with family, participating in sports and games or simply feeling good about them.

Nutritional labeling refers to disclosure of nutritional content (calories, added sugar, total fat, trans-fat, saturated fat, sodium and protein content) in product labels. Nutritional value should be provided in menu, menu boards, food wrappers and containers in fast food restaurant. This might restrict the quantity and choice of food among children of educated parents. In a recent study conducted on parents of children aged 3-6 years, it was observed that parents who were offered the nutritional value menu card ordered food of lesser calorie (Tandon P.S. *et al*., 2010) [11]. However in a study by Yamamota *et al*. (2005) [13], it was observed that provision of nutritional value did not modify the food ordering behavior among the enrolled adolescents. It has been often debated that labeling might result in financial loss to fast food industry, but it has been shown that restaurants which project lower fat menu have a better customer satisfaction (Fitzpatrick M.P. *et al*., 1997) [5].

Methodology

Permission was sought from the restaurants and only 32 restaurants showed willingness to participate. Out of these, only 6 restaurants i.e. two private restaurants (R1), two public restaurants (R2) and two fast food restaurants (R3) were selected for nutritional quality analysis owing to the feasibility of sample collection. The boondi raita samples were procured from private, public and fast food restaurants in a sterile ice box. The same were then dried in hot air oven to remove moisture and ground to fine powder. This powder was then used for proximate composition analysis to calculate the major nutrients energy, carbohydrate, protein, fats along with fibre. The standardized recipes were also formulated for each of the six recipes in consultation with the chefs of different restaurants and prepared by the researcher in hygienic settings. Proximate composition analysis was also performed to evaluate energy, carbohydrate, protein, fats, fibre, ash and moisture content in the laboratory. The proximate values were calculated in triplicate and thereafter the mean values of two restaurants of each type were calculated for usage in further discussions. The mean scores of the triplicates and standard deviation were calculated using SPSS 16.0 version.

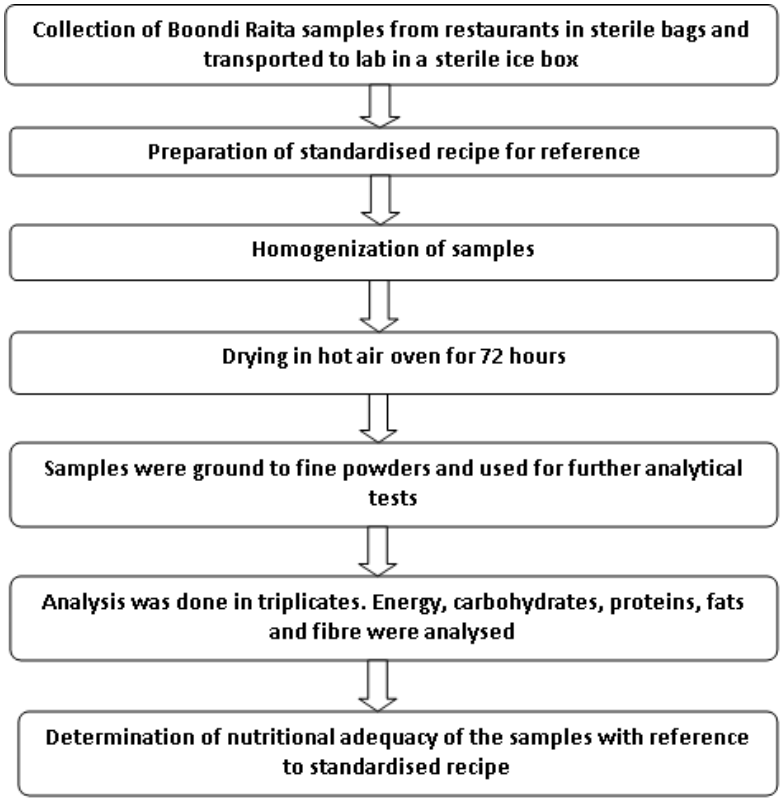

Fig 1: Methodology for Evaluating the Nutritional Adequacy of Boondi Raita Samples at a Glance.

Fig. 1 represents the steps of methodology for evaluating the nutritional adequacy of boondi raita samples at a glance. The details of the steps are presented and discussed in the subsequent sections.

Results and Discussion

A. Evaluation of Nutritional Quality of Boondi Raita

The present data involves six studied restaurants i.e. two private restaurants (R1), two public restaurants (R2) and two fast food restaurants (R3). The mean of the values of both the restaurants of one type have been used in further discussions. To test whether the three types of restaurants differ over the major nutrients viz. carbohydrate, protein, fats along with Fibre in Boondi Raita being served at these establishments and the standardised recipe, one-way analysis of variance (ANOVA) was employed. The results of ANOVA for these four nutrients appear in Table 2. An evident variation was observed at all four nutrients amongst these establishments and also significant difference was found in standardized recipe with each organization studied. It may be noted that the degrees of freedom (d.f.) being 2 and 6, the tabulated F-value is 5.14 and 10.92 at 0.05 and 0.01 probability levels, respectively. In majority of the cases, the calculated F-value for the components was found to be highly significant at both the probability levels. It clearly indicated that all the six organizations varied in nutritive value.

Further, independent samples t-test was carried out on private versus public restaurants, private versus fast food restaurants and public versus fast food restaurants to test the significance of difference between these restaurants. The results of t-test have been presented in Tables 3 to Table 5. It may be noted that the degree of freedom being 4, the tabulated value of t is 2.132 and 3.747 at 0.05 and 0.01 probability levels respectively. The calculated values of t for the comparisons are highly significant at both the probability levels in majority of the cases. This further authenticates that the private, public and fast food restaurants differ significantly from each other in nutritive value of the selected recipes. The results of the evaluation of the nutritional quality are presented as under:

a) Proximate Composition Analysis of Boondi Raita Samples

Proximate composition analysis for energy, carbohydrate, protein, fats and fibre content was done using Socsplus, Kelplus and Fibraplus series. The values were calculated in triplicate and thereafter the mean values were calculated for usage in further discussions. There is a wide range of listings in the menus of the different types of studied restaurants and there is an increased trend of consumption of snacks especially by the adolescents at fast food restaurants. In order to maintain the uniformity for comparative analysis for all the three types of restaurants, the focus was to select the same recipes from all the studied restaurants. This recipe was selected in consultation with restaurant managers of different restaurants as well as from the respondents as this was most commonly ordered by the guests while dining out in all the three types of restaurants. The standardized recipe was also developed in consultation with the chefs of different restaurants and thereafter prepared by the researcher in laboratory under hygienic settings. The details of the ingredients and method of preparation of the standardized recipe has been discussed in Annexure 1.

b) Evaluation of Nutritional Quality of Boondi Raita

The various samples of Boondi Raita collected from the studied private, public and fast food restaurants was subjected to the standard proximate composition analysis procedures for the evaluation of the nutritional quality and the results so obtained are exhibited in Table 1 as means and standard deviation.

The energy mean scores for Boondi Raita are 163.8 ± 16.82 kcal, 123.3 ± 3.64 kcal and 207.7 ± 5.44 kcal respectively for samples obtained from private, public and fast food restaurants. Thus, it is clear that both private and public

restaurants serve Boondi Raita with fewer calories as compared to mean energy value of 174.4 ± 0.00 kcal for the standardized recipe. The mean value for carbohydrate in Boondi Raita is the highest in case of private restaurants (19.10 ± 0.10 g) as against 14.92 ± 0.00 g of standardized recipe. However, a sharp decline has been observed at amount of protein with a mean value of 2.73 ± 0.21 g in the samples of private restaurants in comparison to 7.90 ± 0.00 g of the standardized recipe. The fast food restaurants are found to provide Boondi Raita with similar protein content as the standardized recipe but there has been a hike in fat content of the Boondi Raita for the same outlets. Public restaurants have served Boondi Raita with lowest mean value of 4.47 ± 0.19 g.

Table 1: Comparison of Proximate Values of Boondi Raita (BR) served at Private, Public and Fast Food Restaurants

BR	Energy (kcal)		Carbohydrate (g)		Protein (g)		Fats (g)		Fibre (g)	
	Mean	S.D.*	Mean	S.D.*	Mean	S.D.*	Mean	S.D.*	Mean	S.D.*
R1	163.8	16.82	19.10	0.10	2.73	0.21	8.50	1.78	0.11	0.00
R2	123.3	3.64	14.67	0.03	6.07	0.53	4.47	0.19	0.09	0.00
R3	207.7	5.44	12.38	0.01	7.90	0.64	14.27	0.49	0.13	0.01
SR**	174.4	0.00	14.92	0.00	7.90	0.00	9.28	0.00	0.18	0.00

* Standard Deviation
** Standardised Recipe

Table 1 indicates that the Boondi Raita served at all the three types of restaurants is lower than the standardised recipe values in protein, fat and fibre content. However, a hike has been observed at case of energy, carbohydrate and fats values with the highest mean of 207.7 ± 5.44 kcal, 19.10 ± 0.10 g and 14.27 ± 0.49 g respectively. The Fibre content of Boondi Raita served at private, public and fast restaurants have mean values of 0.11 ± 0.00 g, 0.09 ± 0.00 g and 0.13 ± 0.01 g respectively. However, the standardized recipe has a mean value of 0.18 ± 0.00 g for the fibre.

Energy

An assessment of the energy means from Table 1 revealed that fast food restaurants (R3) have the highest mean value of 207.7 ± 5.44 kcal and public restaurants (R2) have the lowest mean values of 123.3 ± 3.64 kcal for energy and the difference among private, public and fast food restaurants is clearly visible. The calculated F-value of 49.328 (Table 2) is greater than the tabulated value which establishes the significant difference among them.

To further confirm this, results of t-test were evaluated. The calculated value of t is higher in case of private versus public restaurants while lower than the respective tabulated values in the other two comparisons i.e. between private versus fast food restaurants and public versus fast food restaurants. In contrast to this, the p-values at 95 per cent confidence level are quite significant in all the three comparisons (Tables 3 to 5). A highly significant difference prevailed between public versus fast food restaurants with a p-value of 0.000 at 99 per cent confidence level whereas the difference is significant in case of private versus public and private versus fast food restaurants. Hence, ANOVA outcomes are complied with.

Table 2: Analysis of Variance (ANOVA) among Nutritive Value of Boondi Raita served at Private, Public and Fast Food Restaurants

		Sum of Squares	DF	Mean Square	F	Sig.
Energy	Between Groups	10712.484	2	5356.242	49.328	.000**
	Within Groups	651.505	6	108.584		
	Total	11363.989	8			
Carbohydrate	Between Groups	70.013	2	35.007	9518.405	.000**
	Within Groups	.022	6	.004		
	Total	70.035	8			
Protein	Between Groups	35.338	2	17.669	73.704	.000**
	Within Groups	1.438	6	.240		
	Total	36.777	8			
Fats	Between Groups	145.378	2	72.689	63.414	.000**
	Within Groups	6.878	6	1.146		
	Total	152.255	8			
Fibre	Between Groups	.030	2	.015	332.297	.000**
	Within Groups	.000	6	.000		
	Total	.030	8			

** Significant at $p \leq 0.001$

Carbohydrate

Carbohydrate means from Table 1 depicted that private restaurants (R1) have the highest mean value of 19.10 ± 0.10 g and fast food restaurants (R3) have the lowest mean value of 12.38 ± 0.01 g for carbohydrates and the difference among all the three types of restaurants is clearly visible. The calculated F-value of 9815.405 (Table 2) is highly greater than the tabulated value which means that the carbohydrate content of Boondi Raita served at all the three types of restaurants varied a lot from each other.

Results of t-test were examined to prove this. The calculated values of t were also higher than the respective tabulated values and the p-value of 0.000 in all the three comparisons at 99 per cent confidence level (Tables 3 to 5). This highlights the highly significant difference in Boondi Raita served among the selected units. These are again in accordance with ANOVA conclusions.

Protein

While appraising protein means from Table 1 of the selected restaurants, it was noted that fast food restaurants (R3) have the maximum mean value of 7.90 ± 0.64 g and private restaurants (R1) have the minimum mean value of 2.73 ± 0.21 g for protein and the difference amongst the studied

organisations is small except with the private restaurants. The calculated F-value of 73.704 (Table 1) is greater than the tabulated value which clearly revealed the significant difference among these restaurants.

Outcomes of t-test were evaluated to confirm this. The calculated values of t were lower than the respective tabulated values in all the three comparisons (Tables 3 to 5) but the p-values of 0.000, 0.000 and 0.044 respectively at 99, 99 and 95 per cent confidence level indicate that there exists a highly significant difference between private versus public restaurants and private versus fast food restaurants however the public versus fast food restaurants are only significantly different. Thus ANOVA results are sustained.

Table 3: Comparison of Nutritive value of Boondi Raita served at Private and Public Restaurants

		t	df	Sig. (2-tailed)
Energy	Equal variances assumed	4.085	4	.015*
	Equal variances not assumed	4.085	2.187	.047*
Carbohydrate	Equal variances assumed	73.327	4	.000**
	Equal variances not assumed	73.327	2.370	.000**
Protein	Equal variances assumed	-10.315	4	.000**
	Equal variances not assumed	-10.315	2.623	.003*
Fats	Equal variances assumed	3.902	4	.018*
	Equal variances not assumed	3.902	2.045	.058
Fibre	Equal variances assumed	33.700	4	.000**
	Equal variances not assumed	33.700	2.000	.001*

*Significant at $p \leq 0.05$
** Significant at $p \leq 0.001$

Table 4: Comparison of Nutritive Value of Boondi Raita served at Private and Fast Food Restaurants

		t	df	Sig. (2-tailed)
Energy	Equal variances assumed	- 4.301	4	.013*
	Equal variances not assumed	- 4.301	2.414	.035*
Carbohydrate	Equal variances assumed	115.816	4	.000**
	Equal variances not assumed	115.816	2.040	.000**
Protein	Equal variances assumed	- 12.215	4	.000**
	Equal variances not assumed	- 12.215	2.424	.003*
Fats	Equal variances assumed	- 5.414	4	.006*
	Equal variances not assumed	- 5.414	2.306	.024*
Fibre	Equal variances assumed	- 2.500	4	.067
	Equal variances not assumed	- 2.500	3.200	.082

*Significant at $p \leq 0.05$
** Significant at $p \leq 0.001$

Table 5: Comparison of Nutritive Value of Boondi Raita served at Public and Fast Food Restaurants

		t	df	Sig. (2-tailed)
Energy	Equal variances assumed	- 22.353	4	.000**
	Equal variances not assumed	- 22.353	3.492	.000**
Carbohydrate	Equal variances assumed	123.568	4	.000**
	Equal variances not assumed	123.568	2.424	.000**
Protein	Equal variances assumed	- 2.907	4	.044*
	Equal variances not assumed	- 2.907	3.850	.046*
Fats	Equal variances assumed	- 32.127	4	.000**
	Equal variances not assumed	- 32.127	2.570	.000**
Fibre	Equal variances assumed	- 22.343	4	.000**
	Equal variances not assumed	- 22.343	2.000	.002*

*Significant at $p \leq 0.05$
** Significant at $p \leq 0.001$

Fats

The means of fat component from Table 1 of the selected units exhibited that fast food restaurants (R3) have the maximum mean value of 14.27 ± 0.49 g and public restaurants (R2) have the minimum mean value of 4.47 ± 0.19 g for fat and there is a clear cut difference among private, public and fast food restaurants. The calculated F-value of 63.414 (Table 2) is greater than the tabulated value which advocated the significant difference in private, public and fast food eateries.

To further establish this, t-test was conducted. The calculated values of t were a bit higher in private versus public restaurants but lower than the respective tabulated values in the other two comparisons (Tables 3 to 5). However, the significant difference between private versus public restaurants and private versus fast food restaurants is authenticated by satisfactory p-values of respectively 0.018 and 0.006 at 95 per cent confidence level. A p-value of 0.000 at 99 per cent confidence level between public versus fast food restaurants signified the highly significant difference between these two types thus complying with the ANOVA conclusions.

Fibre

An evaluation of the fibre means from Table 1 demonstrated that fast food restaurants (R3) have the highest mean value of

0.13 ± 0.01 g and public restaurants (R2) have the lowest mean value of 0.09 ± 0.00 g for fibre and none of them has been able to meet the values of the standardised recipe. The calculated F-value of 332.297 (Table 2) is highly greater than the tabulated value which holds that the three types of restaurants vary significantly in terms of fibre.

The results of t-test were scrutinized to check this. The calculated values of t were found to be greater in private versus public but lower than the respective tabulated values in the other two comparisons (Tables 3 to 5). The satisfactory p-value of 0.000 at 99 per cent confidence level has been observed at private versus public restaurants and public versus fast food restaurants thus authenticating the highly significant difference in both private versus public restaurants and public versus fast food restaurants. However, the difference between private and fast food restaurants is insignificant with a p-value of 0.067 at the same level of confidence. This is in agreement with ANOVA table.

B. Checking Nutritional Adequacy of Boondi Raita

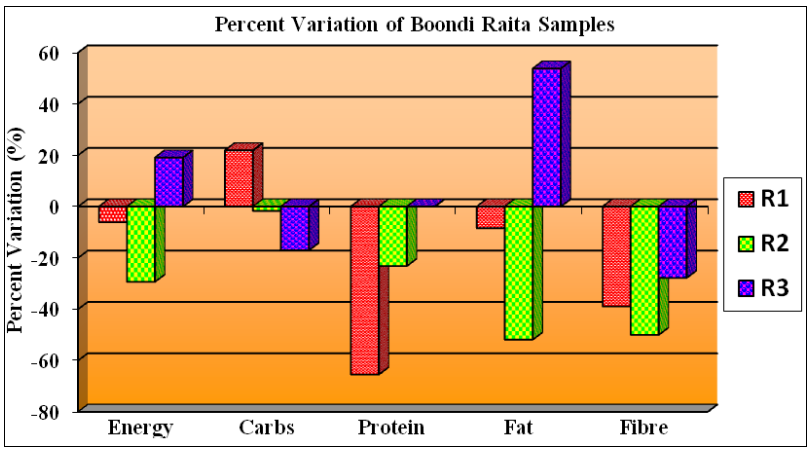

Fig 2: Percent Variation in Nutritional Adequacy of Boondi Raita served at Private, Public and Fast Food Restaurants.

Figure 2 highlights the percent variation in the nutritive value of Boondi Raita served at various studied establishments with the standardized recipe values. The bar graph depicts that Boondi Raita served at public restaurants (R2) was found to be deficient in all the nutrients with reference to the standardized recipe. The Boondi Raita of private restaurants (R1) is higher in carbohydrate (20 per cent) content but lower in energy (-7 per cent) and fat (-67 per cent) content whereas that served at fast food restaurants (R3) ranked higher in energy (18 per cent) and fat (52 per cent) content but lower in carbohydrates (-20 per cent) as compared to the standardized recipe. However, a high downfall in protein and fibre content has been observed at case of all the three types of restaurants.

References

1. Asgary S, Nazari B, Sarrafzadegan N, Parkhideh S, Saberi S, Esmaillzadeh A, *et al*. Evaluation of fatty acid content of some Iranian fast foods with emphasis on trans- fatty acids. Asia Pac. J Clin. Nutr. 2009; 18:187-92.
2. Bosselman RH. Current perceptions of hospitality accreditation. FIU Hospitality Review. 1996; 14(2):77-84.
3. Crandall R, Vozikis GS, Sparks DL. Differentiating restaurant startups: A conceptual framework. Academy of Entrepreneurship Journal. 1996; 1(2):33-42. doi: 10.1146/annurev.publhealth.26.021304.144628
4. Finkelstein EA, Ruhm CJ, Kosa KM. Economic causes and consequences of obesity. Annual Review of Public Health. 2005; 26:239-257.
5. Fitzpatrick MP, Chapman GE, Barr SI. Lower-fat menu items in restaurants satisfy customers. J Am Diet Assoc. 1997; 97:510-514.
6. Hearst Mary O, Harnack Lisa, Bauer Katherine W, Earnest Alicia A, French Simone, Oakes Michael J. Nutritional Quality of Menu Offerings at Eight U.S. Fast-Food Chains: 14-Year Trends. American Journal of Preventive Medicine, 2013, 44(6). http://dx.doi.org/10.1016/j.amepre.2013.01.028
7. Jones Peter, Dent Michael. Improving Service: Managing Response Time in Hospitality Operations. International Journal of Operations and Production Management. 1994; 14(5):52-58.
8. Kubik MY, Lytle LA, Hannan PJ, Perry CL, Story M. The association between the School Environment with dietary behaviors of young adolescents. Research and Practice. 2003; 93(7):1168-1173.
9. Lewis LB, Sloane DC, Nascimento LM, Diamant AL, Guinyard JJ, Yancey AK, *et al*. African Americans' access to healthy food options in south Los Angeles restaurants. American Journal of Public Health. 2005; 95(4):668-73. doi: 10.2105/AJPH.2004.050260
10. Morland K, Wing S, Diez-Roux A. The contextual effect of the local food environment on resident's diets: the atherosclerosis risk in communities study. American Journal of Public Health. 2002; 92:1761-1767.
11. Tandon PS, Wright J, Zhou C, Rogers CB, Christakis DA. Nutrition menu labeling may lead to lower-calorie restaurant meal choices for children. Pediatrics. 2010; 125:244-8; 21.
12. Walker E, Pritchard C, Forsythe S. Hazard analysis critical control point and prerequisite programme implementation in small and medium size food businesses. Food Control. 2002; 14(3):169-179.
13. Yamamoto JA, Yamamoto JB, Yamamoto BE, Yamamoto LG. Adolescent fast food and restaurant ordering behavior with and without calorie and fat content menu information. J Adolesc. Health. 2005; 37:397-402.