

DISASTER AND HOSPITAL DIET PREFERENCES AS EVALUATED BY DIFFERENT CATEGORIES OF CONSUMERS

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Abstract – Individuals evaluated six different parameters of a diet. Two surveys were conducted, the first involved individuals who had not received prior humanitarian aid and the second involved individuals who had received prior humanitarian aid. In the first survey, both nutrition and cost were found to be most important factors. In the second survey, nutrition was found to be the most important factor; however cost was the least important factor.

I. INTRODUCTION

The best way to find out what consumers think is to ask them. Survey information data can make the difference between smart decisions and misguided, inefficient ones. The objective of these surveys was to evaluate the desirability of product nutrition, palatability, texture,

tenderness, flavor and cost by individuals from three areas (India, Tibet & outback Australia). Individuals who had not received humanitarian aid were compared to individuals who had experienced a disaster and had received humanitarian aid. The first survey sampled medical personnel, patients and general population. The second survey concentrated on medical personal and a few patients. Two evaluations (ranking and rating) were utilized to compare the two scoring systems and to test the individuals' understanding of the two evaluation procedures.

II. MATERIALS AND METHODS

Experimental design is shown in **Figure 1**. Informed consent and confidentiality was maintained.

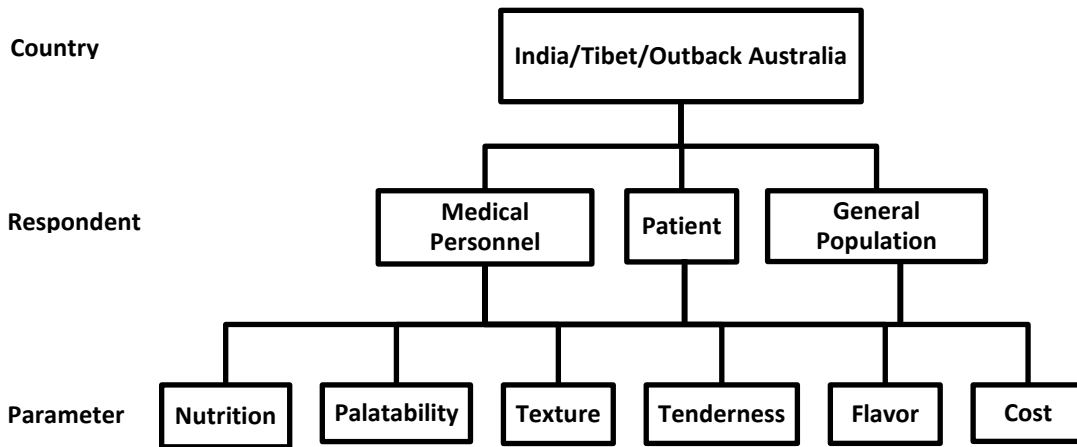


Figure 1. Flow Chart of Survey 1 Information Collected - both Rank and Rating

III. RESULTS AND DISCUSSION

Survey 1

Results from the surveys for ‘Rating’ are shown in **Figure 2** and for ‘Rank’ in **Figure 3**.

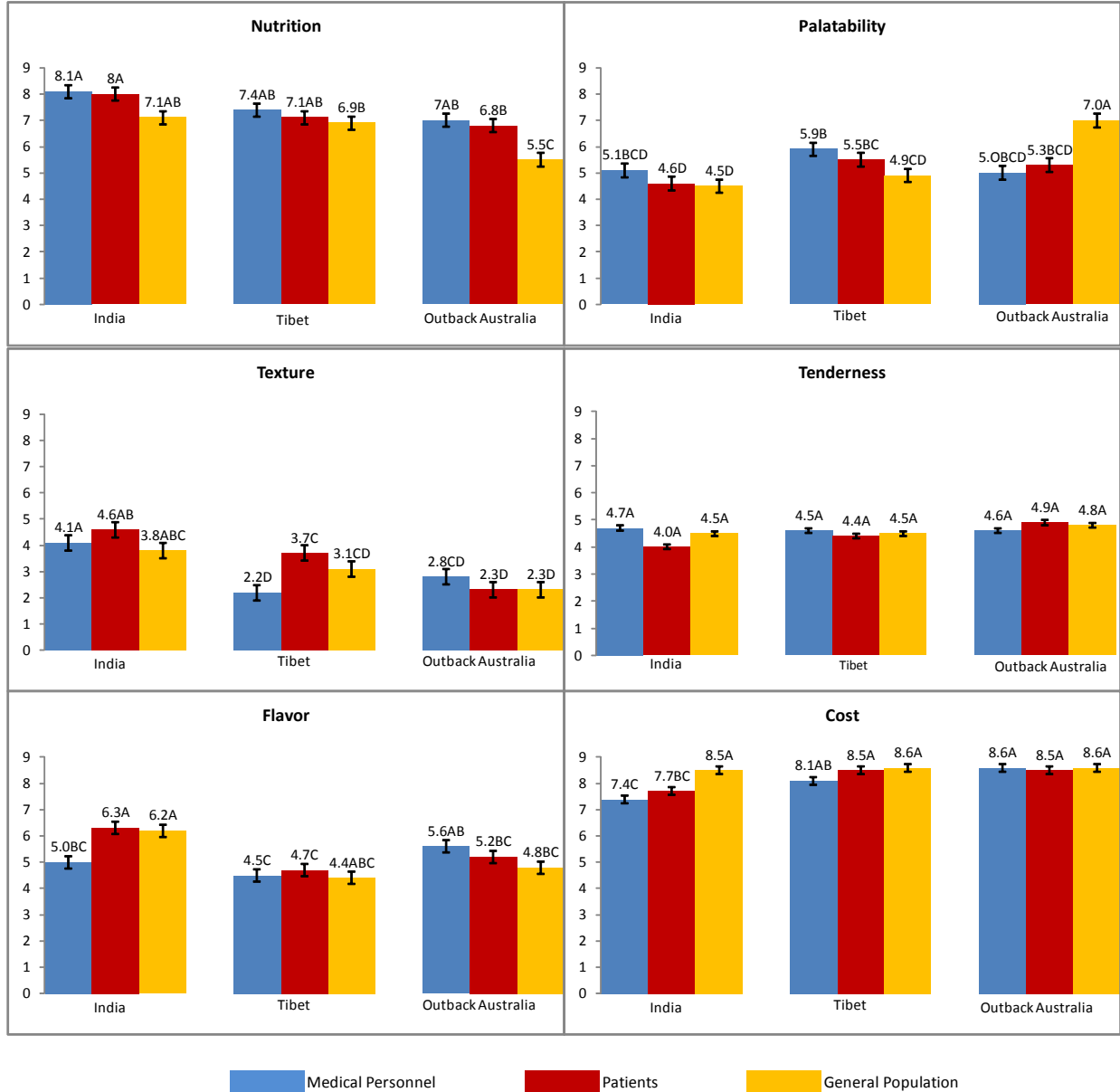


Figure 2. Bar graphs for ‘Rating’ (Higher values indicate more importance) indicating the main effects of each country (vertical lines indicate standard deviation). Letters indicate significance in each of the six parameters evaluated [1].

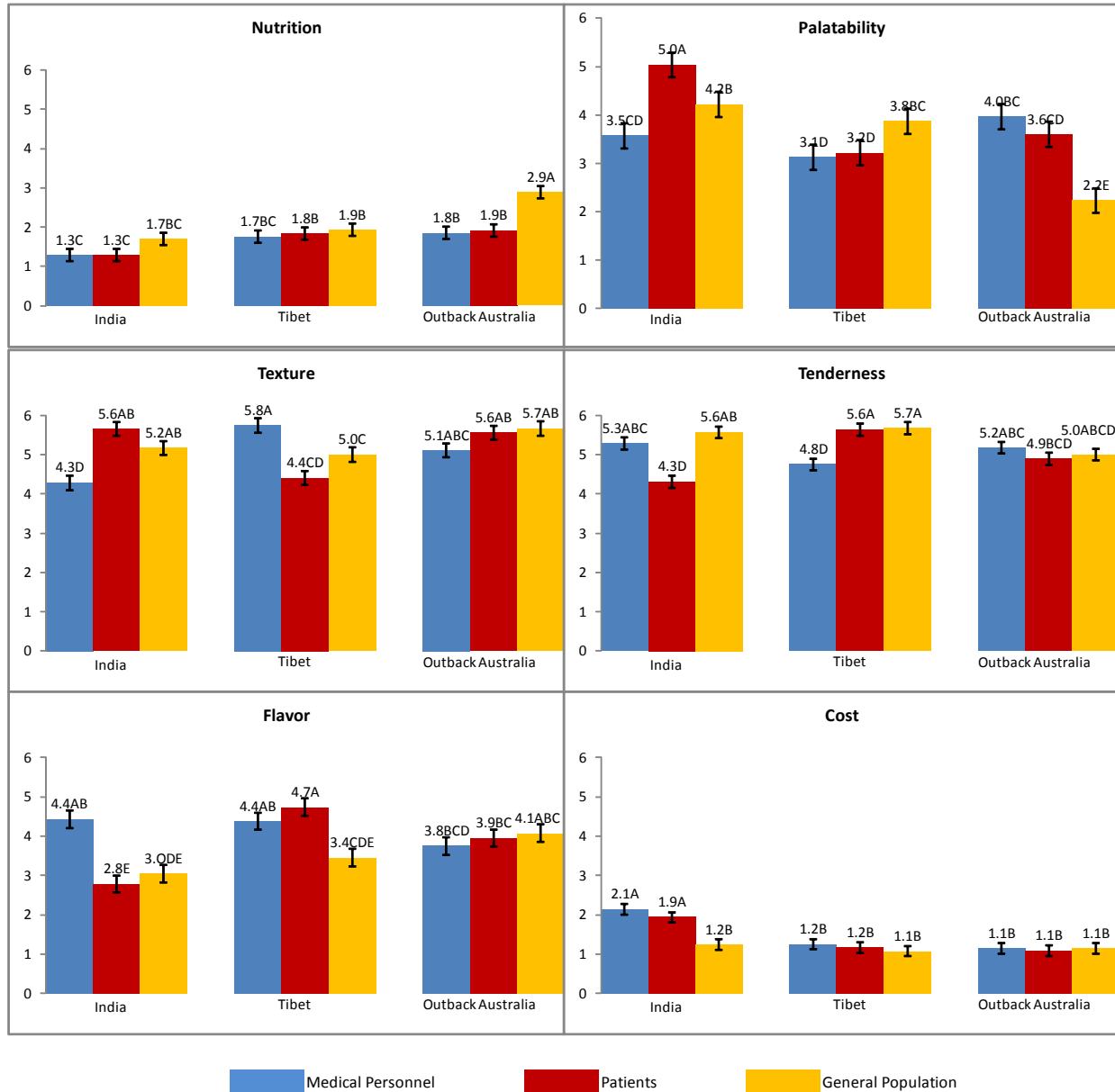


Figure 3. Bar graphs for 'Rank' (lower values more important) indicating the main effects of each country (vertical lines indicate standard deviation). Letters indicate significance in each of the six parameters evaluated [1].

Statistics [1] indicated that two way interactions (Country x Respondent) were significant. This interaction would suggest that the food product needs to be manufactured for each location which is not practical since we do not know where the next disaster will occur.

In spite of the fact that the respondents on the rating questionnaire could repeat the scores, and on the rank survey they could not repeat the

scores, the correlation between rating and rank for nutrition, palatability, texture, tenderness, flavor and cost was negative and highly significant in all cases. The negative correlation was a result of the reversal of desirability scales for each factor.

The rank and rating factors showed essentially the same patterns, When overall rank and rating for all data were used (country,

medical personnel, patients, and general population was absorbed), the correlation was negative and highly significant ($P < 0.01$) for all factors evaluated. This would suggest that the respondents understood the rating systems.

When the data was evaluated by absorbing medical personnel, patients and general population in each country, the correlation between rank and rating was always negative (due to scale orientation) and usually highly significant.

It is evident that nutrition and cost are the most important factors in all situations. It would appear that as long as these two factors are satisfied for emergency use, a generic product could be utilized at least for a short term solution.

The country evaluation indicates that India had the highest score on nutrition followed by Tibet and Outback Australia in that order. For rank cost data, the interaction graph is again a negative mirror image of the rating interaction graph. The general population scored the cost lower than the medical personnel and patients. The country evaluation of cost was similar as nutrition

Survey 2

Second analysis (with much smaller numbers in medical personal and minute numbers in patient category) surveyed people that had received humanitarian food aid after a natural disaster to see if these recipients had a different opinion on which food factors were the most important using the same procedure as the previous analysis. A summary of results are illustrated in Table 1.

Nutrition remains the most important factor, but cost dropped from the top two factors and was considered to be to less important, as would be expected. In the rate evaluation, the cost standard deviation is extremely large suggesting that not all observers agreed on the importance of this factor and I am sure the suppliers would consider it important and the higher the cost most likely the shorter the supply.

Table 1. Results of the second survey (Rank low numbers are desirable and in Rate high numbers are desirable).

Mean± standard deviation	Medical personal (42 observations)		Patients (4 observations)	
	Rank	Rate	Rank	Rate
Nutrition	1.1±0.5	5.8±0.63	1.0±0.0	6.0± 0.0
Palatability	3.7±0.7	2.8±2.4	3.6±1,1	2.3±2.2
Texture	4,7±1.5	2.5±1.9	4.7±1.5	2.3±1.8
Tenderness	5.2±3.1	2.0±2.0	5.2±3.1	0.5±2.1
Flavor	3.1±1.3	5.7±1.7	3.1±1.3	4.7±0.8
Cost	4.1±1.8	1.0±10	4.1±1.8	0.0±12.2

IV. CONCLUSION

In the first survey (had not received aid), the most important factors were nutrition and cost. In the second survey (had received humanitarian aid), nutrition was still found to be the most important factor however cost was no longer important for the participants surveyed.

REFERENCES

1. http://www.sas.com/en_us/software/sas9.html