



Acceptability factors for a traditional african bissap juice in european context

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ONE of most important challenges in food consumption behaviour studies is to identify the most important choice factors for consumer acceptance to predict the marketability of a new food concept.

The purpose of this study was to evaluate consumers' acceptability factors for a traditional African drink made of Bissap flower (*Hibiscus sabdariffa* L.). Bissap is an important source of vitamins, minerals and bioactive compounds. Additionally, some pharmacological studies have been carried out with *Hibiscus* flowers, and relevant healthy effects to humans were identified.

To gather information on consumers' perceptions and attitude towards a Bissap drink, a qualitative study was first performed by means of three focus groups and the data was after used as an input to a survey. Conjoint Analysis was the methodology applied once it has been widely used in food research and its efficacy and usefulness is clearly proved in order to achieve consumer's preferences, allowing i) the measurement of relative importance of specific attributes given by the consumers to the Bissap drink and ii) find possible different and relevant market segments for this product in Portugal.

The consumption of this drink is widespread in Africa and Asia, and as far as we know little information have been published about European consumers' acceptance, once the drink is quite unknown in Europe. In order to achieve product acceptance followed by successful market introduction, it is prime importance to gain insight in the factors determining consumers' food choice. These results overall provide a useful guidance to actual or new Bissap based product development aiming at granting at start high market acceptance after product launch.

Referéncia
Kotler, Philip (1994). Marketing Management (8ª. Ed.). Prentice Hall, Englewood Cliffs, Nova Torque

Material and methods

To highlight differences in the flow diagrams, physico-chemical and microbiological characteristics of Akpan types and to map samples Akpan in relation with the sensory attributes.

Focus Groups (FG)

N=22: FG1 age 18-25 | FG2 age 26-55 | FG3 age + 55
Gender = 54% female, 46% male | Education = 55 % higher degree | 45% secondary degree
Socio-Economical Status (ESOMAR guidelines)
A = 14%, B = 36%, C1 = 23%, C2 = 23%, E2 = 5%
Juice Consumer = 100%
Sensory Evaluation of 4 blind Bissap samples:

- Sample A – Flowers (cold extraction)
- Sample B – Instantaneous
- Sample C – Flowers (hot extraction)
- Sample D – Syrup

↓ Content Analysis (Nvivo software)

Focus Groups Aims

- To find out the main attributes valued in fruit juice and in functional Foods choices;
- To characterize conditions of consumption of this type of drink;
- To assess the willingness to pay for this products;
- To understand the implications and the influence that African origin can have to consumption perception and choices.

Conjoint Survey

37 Full-profile for Bissap drink generated (SPSS v.19)
Evaluation of each profile with Likelihood Scale 5 points; included also socio-demographic information:
Convenience sample of consumers: n = 98 (from 120)
Age: 19 - 58; Gender = 56% female, 44% male
Average family size = 3 | Education = 73% higher degree | 27% secondary degree (or less) | Professional situation = students 12%, employed 80%, unemployed 12% | Juice Consumption: 41% daily to 4 times/week, 38% once to twice/week; 21% 1 to 2 times/month

↓ Conjoint Analysis (SPSS software)

Conjoint Analysis Aims

- Calculate the relative importance of product attributes
- Segmentation of consumers on attributes valuation

Cluster Analysis and Consumer preference segmentation

1. Hierarquical analysis by Ward method: dendogram, coefficient agglomeration
2. Non-hierarquical analysis (K-means)
3. Validation and profile characterization of each cluster
4. Check for socio-demographic differences between consumers

Conclusion

Portuguese Consumers would prefer a Bissap drink with this characteristics 0,99€ / L; Less than 18 Kcal /100 mL – Light Beverage; Tetra-pack package; Antioxidant information package; Bissap information package; Red light drink; African Origin information package – apparently did not affect the consumers.

Four Clusters were identified

Cluster 1: Healthy concerns (24%); Cluster 2: Innovators (16%); Cluster 3: Appearance valorization (15%); Cluster 4: Body alarm (44%). The dimensions that are more important to distinct clusters are: material package, antioxidants information and African Origin.

No significant socio-demographic differences were found between preference segments => segments not relevant Marketing wise (Kotler, 1994).

Results

Focus Groups main results

Attitude to Buy - Almost half participants (46%) showed interest to buy the Bissap drink between 2/3 times a week.

Occasion and Local for consumption - Breakfast (50%) and middle afternoon (64%) at home (95%) or outside: cafés (50%).

Motives for consumption - Healthy (35%) and Novelty (19%) are the main reasons.

Willingness to pay - 60% of participants imagine themselves buying 1 L packages in supermarkets. Moreover, the others 40% imagine themselves buying small packages of 0,33 cL in one of these specific locals: supermarkets or cafés/bars, and price ranging between 0,35–0,50€.

Locals to Buy - Supermarkets (82%), also cafés (27%), bars (23%) and restaurants (9%) were mentioned.

Other possible applications - Topping/Dressing (50%) and jelly (41%)

Influence of the origin - The inclusion of the juice origin in labelling can influence the consumers choice. Nevertheless, for these participants it is clear that they would not be influenced by that information on their choices.

Importance Values of Attributes (Conjoint Modeling).

Attributes	Importance Values of Coinjoint Analysis	Average of clusters variables				F	Sig.
		Cluster 1 (n=24)	Cluster 2 (n=16)	Cluster 3 (n=15)	Cluster 4 (n=43)		
Price	26.19	18.53	43.03	42.72	-41.25	5.2156	0.0022
Calories	25.67	-23.22	-50.98	-57.69	52.05	9.2425	0.0000
Material package	23.98	-13.53	0.51	171.69	-52.53	43.7463	0.0000
Antioxidants information	6.73	119.17	17.90	-63.04	-51.18	35.9465	0.0000
Bissap information	6.46	-11.04	133.11	-7.22	-40.85	18.4042	0.0000
Color	5.88	40.21	27.77	-28.95	-22.68	3.0415	0.0327
African Origin	5.09	-36.95	1.3854	-50.09	-13.45	20.6453	0.0000

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