

Awareness of consumers towards the nutritional labelling and health claims disclosed on food label

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Two hundred consumers from four different professions such as doctor, lawyer, businessman and professor, 50 in each group were selected by purposive random sampling technique. All respondents were interviewed personally to obtain the relevant information. Results showed that all the selected lawyers and doctors and 96 per cent businessmen and professors were vigilant about date of manufacturing and expiry date of the products. Statistical analysis indicated that significantly more per cent of doctors had awareness about MRP, standard marks and list of ingredients than that of businessmen. Also awareness in regard to MRP and standard marks were more in professors as compared to businessmen. Results showed that 84 per cent doctors, 80 per cent businessmen and 70 per cent lawyers and professors used nutrition information given on food label of pre-packaged food while buying the food product. Results inferred that while purchasing the food product more number of businessmen read the content of calories, protein, fat, sugar, vitamins and minerals written on food label. On the other hand, carbohydrate, fibre and sodium content was seen by more per cent of professors. Content of cholesterol was read by more number of doctors compared to other consumers. Results in regard to various health claims written on food label indicated that more number of lawyers had awareness about product suitability for people with diabetes mellitus, cholesterol and heart problem which was significant statistically. On the contrary significantly less per cent of lawyers were aware about the product recommended for balanced diet than that of other consumers.

Key Words : Food label, Consumers awareness, Buying behaviour, Nutrients content, Health claims

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INTRODUCTION

Food label is an instrument which is used to inform consumer about food safety and nutrients best for his/her health (Bassarir and Sherif, 2012). According to the food safety and regularity authority of India (2011) the

nutritional information is necessary on food label along with name, expiry date, manufacturing date and ingredients. The objective of this modification in food regulation is to protect consumer health and maintain consumer dietary quality in India.

Food labels information assists consumers to better understand the nutritional value of food and enables them to compare the nutritional value of similar food products and to make healthy informed food choices based on the relevant nutrition information (AL Tamimi and Company, 2004). An effective food label play multidimensional role like, providing nutritional information (Grunert and wills, 2007 and Mackison *et al.*, 2010), control food related allergies (Voordous *et al.*, 2009) and expiry date provide

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food safety (Sanlier and Karakus, 2010).

METHODOLOGY

A cross sectional study was conducted in Parbhani city of Maharashtra state. The study population included two hundred consumers from four different professions such as doctor, lawyer, businessman and professor 50 in each group. They were selected by purposive random sampling technique. All respondents were interviewed personally to obtain the relevant information such as buying behaviour of consumers, consumer's awareness about nutrition information and health claims disclosed on food label using structured questionnaire. The collected data was consolidated, tabulated and analysed statistically and expressed as per centage and mean \pm standard deviation (SD) and variables were compared using 't' - test (Panse and Sukhatme, 1985).

OBSERVATIONS AND ASSESSMENT

Consumer's awareness towards food label is given in Table 1. It was noticed that lawyers and doctors (100% each) were vigilant about date of manufacturing and expiry date written on food label while buying the food products. Even 96 per cent of businessmen and professors were aware about date of manufacturing and date of expiry of food products before buying. It was found that significantly more number of doctors was reading MRP written on food label while buying food products as compared to businessman consumers. More than 70 per cent lawyers, doctors and professors had awareness regarding standard marks. Whereas less than 40 per cent businessmen were aware about standard marks. Statistical analysis also indicated that significantly less per cent of businessmen had awareness regarding

standard mark than that of lawyers, professors and doctors. Similarly less per cent of businessmen were aware about list of ingredient (42) and weight of product (56) than that of lawyers, doctors and professors. However significant difference was noticed in lawyers and businessmen also in doctors and businessmen in regard to awareness of list of ingredients. It was also reported that all the consumers from doctors, businessmen and professors categories were aware about brand of the product. On the whole results clearly indicated that among the selected consumers a relatively very high per cent of consumers were vigilant about brand, date of manufacturing and expiry date of the product. Results of the present study are found to be in agreement with those reported by Priyadarshini (2014); Subbarao *et al.* (2014) and Kaur *et al.* (2016). It was reported that date of manufacturing or expiry or best before date were mostly seen by customers of various cities while purchasing food products. Even a study conducted by Washi (2012) revealed that, 58.8 per cent consumers from United Arab Emirates keen about reading all the information such as manufacturing, expiry dates, validity dates and nutritive value of food.

Source of acquiring nutrition information written on food label by the selected consumers is given in Table 2. Results showed that T.V., radio, newspaper, magazines, internet, sales representatives and family / friends were the sources for acquiring nutrition information among selected consumers. Majority of the selected consumers found to be acquired nutrition information given on food label through T.V., newspaper and internet. More number of businessmen acquired nutrition information through T.V., newspaper, sales representatives and family / friends. On the other hand, radio, newspaper and magazines were the sources for gaining nutrition

Table 1 : Consumer's awareness towards food label

Particulars	Lawyers (%) a	Doctors (%) b	Businessmen (%) c	Professors (%) d	't' value					
					a vs b	a vs c	a vs d	b vs c	b vs d	c vs d
MRP	64 (32)	86 (43)	46 (23)	78 (39)	1.278 ^{NS}	1.224 ^{NS}	0.836 ^{NS}	2.480*	0.444 ^{NS}	2.048*
Date of manufacturing and date of expiry	100 (50)	100 (50)	96 (48)	96 (48)	NS	0.203 ^{NS}	0.203 ^{NS}	0.203 ^{NS}	0.203 ^{NS}	NS
Standard marks	78 (39)	84 (42)	36 (18)	72 (36)	2.406*	1.061 ^{NS}	1.697 ^{NS}	3.124**	0.683 ^{NS}	2.472*
List of ingredients	90 (45)	76 (38)	42 (21)	62 (31)	0.773 ^{NS}	2.976**	1.616 ^{NS}	2.232*	0.848 ^{NS}	1.400 ^{NS}
Weight of products	86 (43)	82 (41)	56 (28)	72 (36)	0.219 ^{NS}	1.954 ^{NS}	0.792 ^{NS}	1.725 ^{NS}	0.573 ^{NS}	1.110 ^{NS}
Brand	96 (48)	100 (50)	100 (50)	100 (50)	0.203 ^{NS}	0.203 ^{NS}	0.203 ^{NS}	NS	NS	NS

Figures in parenthesis indicate number

* and ** indicate significance of values at P=0.05 and 0.01, respectively

NS=Non-significant

information among the doctors. On the whole majority of the selected consumers were using T.V., internet and newspaper for acquiring nutrition information written on food label. Similarly a study conducted by Darkwa (2014) revealed that, 13.7 per cent consumers obtained nutrition information from family members and friends, while 11.3 per cent acquired nutrition facts from the media.

Commonly read nutrient information given on food label by the selected consumers is given in Table 3. Results indicated that more per cent of doctors were reading information given on food label in regard to all nutrient content than that of lawyers. However, significant difference was noticed only in case of fibre content. Among the selected consumers more per cent of businessmen found to be read the nutrient content of product such as total calories, protein, fat, sugar, vitamin and minerals. On the other hand, more per cent of professors were reading the content of carbohydrate, protein and sodium. Cholesterol content of the product was read by significantly more number of doctors than that of other selected consumers. Statistical analysis

showed that, significantly high per cent of lawyers were reading the nutrient content such as carbohydrates, sugar, vitamins, minerals and cholesterol written on food label as compared to businessmen. Results of present study are in line with findings of study conducted by Vemula *et al.* (2013) and Subbarao *et al.* (2016). They found that girls, women and elderly consumers from north and south India who were concerned about intake of fat, sugar, salt and cholesterol were checking the nutrition facts written on food label.

Use of nutrition information provided on pre-packaged foods is given in Table 4.

Results showed that 84 per cent of doctors were utilizing nutrition information in all circumstances followed by businessmen (80%), lawyers and professors (70% each). A relatively more per cent of businessmen were using the nutrition information given on pre-packaged food while buying a new product as compared to lawyers (58), doctors (68) and professors (70). It was not significant statistically. Statistical analysis indicated that, significantly more per cent of businessmen (74%) were using nutrition

Table 2 : Source of acquiring nutrition information written on food label by the selected consumers

Sources	Lawyers (%) a	Doctors (%) b	Businessmen (%) c	Professors (%) d	‘t’ value					
					a vs b	a vs c	a vs d	b vs c	b vs d	c vs d
T.V.	90 (45)	70 (35)	92 (46)	72 (36)	1.125 ^{NS}	0.105 ^{NS}	1.006 ^{NS}	1.229 ^{NS}	0.119 ^{NS}	1.111 ^{NS}
Radio	9 (18)	40 (20)	30 (15)	36 (18)	2.078*	1.251 ^{NS}	1.765 ^{NS}	0.857 ^{NS}	0.328 ^{NS}	0.530 ^{NS}
Newspaper	86 (43)	98 (49)	100 (50)	88 (44)	0.628 ^{NS}	0.729 ^{NS}	0.107 ^{NS}	0.101 ^{NS}	0.521 ^{NS}	0.622 ^{NS}
Magazine	64 (32)	78 (39)	62 (31)	56 (28)	0.836 ^{NS}	0.127 ^{NS}	0.520 ^{NS}	0.963 ^{NS}	1.354 ^{NS}	0.393 ^{NS}
Internet	94 (47)	98 (49)	92 (46)	90 (45)	0.205 ^{NS}	0.104 ^{NS}	0.209 ^{NS}	0.309 ^{NS}	0.414 ^{NS}	0.105 ^{NS}
Sales representatives	56 (28)	78 (39)	88 (44)	60 (30)	1.354 ^{NS}	1.898 ^{NS}	0.264 ^{NS}	0.552 ^{NS}	1.091 ^{NS}	1.638 ^{NS}
Family / friends	58 (29)	46 (23)	80 (40)	62 (31)	0.840 ^{NS}	1.333 ^{NS}	0.260 ^{NS}	2.159*	1.098 ^{NS}	1.075 ^{NS}

Figures in parenthesis indicate number

* and ** indicate significance of values at P=0.05 and 0.01, respectively

NS=Non-significant

Table 3 : Commonly read nutrient information given on food label by the selected consumers

Nutrients	Lawyers (%) a	Doctors (%) b	Businessmen (%) c	Professors (%) d	‘t’ value					
					a vs b	a vs c	a vs d	b vs c	b vs d	c vs d
Total calories / energy	96 (48)	96 (48)	100 (50)	90 (45)	NS	0.203 ^{NS}	0.312 ^{NS}	0.203 ^{NS}	0.312 ^{NS}	0.515 ^{NS}
Carbohydrates	38 (19)	48 (24)	10 (5)	62 (31)	0.771 ^{NS}	2.919**	1.714 ^{NS}	3.590**	0.952 ^{NS}	4.394**
Protein	58 (29)	68 (34)	82 (41)	82 (41)	0.635 ^{NS}	1.444 ^{NS}	1.444 ^{NS}	0.813 ^{NS}	0.813 ^{NS}	NS
Fat	72 (36)	94 (47)	98 (49)	82 (41)	1.214 ^{NS}	1.418 ^{NS}	0.573 ^{NS}	0.205 ^{NS}	0.643 ^{NS}	0.847 ^{NS}
Sugar	46 (23)	74 (37)	88 (44)	64 (32)	1.822 ^{NS}	2.584*	1.224 ^{NS}	0.782 ^{NS}	0.606 ^{NS}	1.385 ^{NS}
Vitamins and Minerals	54 (27)	80 (40)	90 (45)	76 (38)	1.600 ^{NS}	2.136*	1.375 ^{NS}	0.545 ^{NS}	0.227 ^{NS}	0.773 ^{NS}
Cholesterol	56 (28)	70 (35)	28 (14)	66 (33)	0.889 ^{NS}	2.186*	0.645 ^{NS}	3.031**	0.244 ^{NS}	2.801**
Fibre	14 (7)	38 (19)	28 (14)	48 (24)	2.4*	1.565	3.103**	0.883 ^{NS}	0.771 ^{NS}	1.643 ^{NS}
Sodium	14 (7)	32 (16)	12 (6)	34 (17)	1.918 ^{NS}	0.288	2.085*	2.182*	0.176 ^{NS}	2.345*

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Table 4 : Use of nutrition information provided on pre-packaged foods by the selected consumers

Particulars	Lawyers	Doctors	Businessmen	Professors	't' value					
	(%) a	(%) b	(%) c	(%) d	a vs b	a vs c	a vs d	b vs c	b vs d	c vs d
All circumstances	70 (35)	84 (42)	80 (40)	70 (35)	0.802 ^{NS}	0.581 ^{NS}	NS	0.222 ^{NS}	0.802 ^{NS}	0.581 ^{NS}
When buying a new product	58 (29)	68 (34)	80 (40)	70 (35)	0.635 ^{NS}	1.333 ^{NS}	0.755 ^{NS}	0.702 ^{NS}	0.121 ^{NS}	0.581 ^{NS}
When buying a new version of existing product	20 (10)	48 (24)	74 (37)	56 (23)	2.437*	3.980**	2.745**	1.678 ^{NS}	0.529 ^{NS}	1.075 ^{NS}

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Table 5 : Awareness of the selected consumers regarding health claims disclosed on various food products

Health claims on food labels	Lawyers	Doctors	Businessmen	Professors	't' value					
	(%) a	(%) b	(%) c	(%) d	a vs b	a vs c	a vs d	b vs c	b vs d	c vs d
Suitable for people with diabetes mellitus, cholesterol	20 (10)	10 (5)	6 (3)	40 (20)	1.336 ^{NS}	2.020*	1.856 ^{NS}	0.755 ^{NS}	3.061**	3.624**
Product is intended to improve health	76 (38)	76 (38)	94 (47)	64 (32)	NS	0.981 ^{NS}	0.722 ^{NS}	0.981 ^{NS}	0.722 ^{NS}	1.698 ^{NS}
Product is particularly good for people with heart problem	20 (10)	8 (4)	4 (2)	32 (16)	1.664 ^{NS}	2.412*	1.2 ^{NS}	0.894 ^{NS}	2.752**	3.395**
Product is recommended as part of balanced diet	28 (14)	64 (32)	56 (28)	94 (47)	2.683**	2.186*	4.260**	0.520 ^{NS}	1.698 ^{NS}	2.208*
Guarantee that the product is not harmful to health	66 (33)	56 (28)	78 (39)	52 (26)	0.645 ^{NS}	0.712 ^{NS}	0.919 ^{NS}	1.354 ^{NS}	0.274 ^{NS}	1.625 ^{NS}
Guarantee of quality	76 (38)	76 (38)	86 (43)	50 (25)	NS	0.559 ^{NS}	1.651 ^{NS}	0.559 ^{NS}	1.651 ^{NS}	2.199
Suitable for people with specific allergies	36 (18)	32 (16)	60 (30)	40 (20)	0.348 ^{NS}	1.750 ^{NS}	0.328 ^{NS}	2.086*	0.676 ^{NS}	1.428 ^{NS}
Purely for advertising purposes	24 (12)	6 (3)	-	10 (5)	2.405*	NS	1.75 ^{NS}	NS	0.755 ^{NS}	NS

Figures in parenthesis indicate number

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information while buying a new version of existing product than that of the selected consumers from lawyer, professor and doctor professions.

Awareness of the selected consumers regarding health claims disclosed on various food products is given in Table 5. It was found that more per cent of professors had awareness in regard to health claims disclosed on food label such as suitable for people with diabetes mellitus and cholesterol (40), heart problem (32) and recommended as part of balanced diet (94) as compared to other selected consumers. The difference was significant statistically. On the other hand, higher per cent of businessmen were vigilant regarding the health claims such as product is intended to improve the health (94), guarantee that it is not harmful to health (78), guarantee of quality (86), and suitable for people with specific allergies (60) than that of lawyers, doctors, and professors. However, significant difference was not noticed. Similar findings were also reported by Oghojafor

et al. (2012). They found that, 80.8 per cent consumers of Nigeria read nutrition claim. Even Themba and Tanjo (2013) reported that, majority (88%) consumers of Botswana city use nutrition claim information before buying. The values are higher than that of reported in present study. Similarly Jain *et al.* (2013) reported that nutritional claims like less calories, less saturated fat, low cholesterol, low sodium and high fibre were most popular and had major impact on the food purchasing behaviour of the customers of Ajmer city of Rajasthan.

Conclusion :

In conclusion it was found that, the importance for the quality of product was given by all the selected consumers while buying the products. More per cent of doctors were aware about MRP, standard marks, manufacturing and expiry date. Results showed that T.V., internet and newspaper were the sources for acquiring knowledge about nutrition information in the selected

consumers. Results showed that less than 50 per cent selected consumers were aware about nutrient content of the product. Nutrient content such as calories, protein, fat, vitamin and minerals were mostly read by businessmen while carbohydrate, protein and sodium content by professors. Significantly more per cent of doctors found to be reading cholesterol content of product. Less than 20 per cent selected consumers irrespective to their professions had awareness regarding health claims such as suitability of product for diabetes mellitus, high cholesterol and heart problem.

In nut shell it can be said that there is a need to educate consumers in regard to information of nutrient content and health claims written on food label. Consumers should be made aware of relation between healthy diet and its implication on health and disease. The nutrition label should be made more consumers friendly. So that it will be helpful for the consumers in making rational food choices.

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