Print Media’s Articles on Nutrients in Foods and Specified Health Related Claimed Foods

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ABSTRACT
The aim was to describe the level of health claims being used in magazine advertisements, the categories of foods carrying health claims and the types of benefits being claimed for particular foods or food ingredients. Data were compared to similar studies of food labels and internet sites to reflect the impact of rule governance of the different media and highlight implications for the current proposed changes in food standards legislation Regulation 1924/2006 on nutrition and health claims on food came into effect on 1st July 2007. It covers all foods including foods for particular nutritional uses natural mineral waters, water intended for human consumption and food supplements. The Regulation applies to nutrition and health claims made in commercial communications (whether in the labeling, presentation or advertising) of the food to be delivered to the final consumer. It includes foods: The Regulation does not apply to claims made in non-commercial communications such as: Dietary guidelines Advice issued by public health authorities and bodies Information in the press and in scientific publications. Print media focusing on variety, moderation, and proportionality in the context of a healthy lifestyle, rather than targeting specific nutrients or foods, can help reduce empowering, and practical messages that emphasize the total diet approach promote positive lifestyle change consumer confusion and prevent unnecessary reliance on supplements. Proactive, print media give the information on nutrient facts and health related claimed foods this type of information more benefits for human healthy.

Key words: Physiological effect, Public health, Lifestyle, Print Media’s

INTRODUCTION
The substances for which a claim is made, must be shown to have beneficial nutritional or physiological effects established by generally accepted scientific principles The beneficial nutrient or substance for which the claim is made, is present in the final product in a significant quantity the nutrient or substance for which the claim is made is in a form that is ‘available for use by the body’ (bioavailable) the claimed beneficial effect has to be provided by a ‘reasonable quantity of the consumer product’.
This means that an adequate amount of the active nutrient or substance has to be present in a reasonable amount of the food product if the claimed beneficial effect is due to the absence or reduction of a nutrient or substance, then the nutrient or substance should be absent or reduced to the extent that produces the nutritional or physiological effect claimed be false or misleading give rise to doubt about the safety and/or nutrition adequacy of other foods encourage or condone excess consumption of a food state, suggest or imply that a properly balanced and varied diet cannot provide adequate quantities of nutrients.

In general, refer to changes in bodily function that could give rise to, or exploit fear in the consumer either textually or through pictorial, graphic or symbolic representation attribute to any foodstuff the property of preventing, treating or curing a human disease, or referring to such properties with more than one ingredient must have an ingredient list on the label. Ingredients are listed in descending order by weight. Those in the largest amounts are listed first. This information is particularly helpful to individuals with food sensitivities, those who wish to avoid pork or shellfish, limit added sugars or people who prefer vegetarian eating.

**MATERIAL AND METHODS**
The steps involved in this part of investigation are narrated under the following headings: Selection of daily newspapers and weekly magazines, Duration of the newspapers covered under the study Analysis of subject matter, Categorization of food and nutrition. Analysis of the data

1 Selection of daily newspapers
There are various Kannada and English dailies and magazines publishing food and nutrition related information either weekly or daily which are useful for public in general. Based on wider circulation & accessibility, two English and two Kannada dailies and magazines were selected for the purpose of research. The English dailies selected were ‘THE HINDU’ and ‘DECCAN HERALD’ whereas the Kannada dailies selected were ‘PRAJAVANI’ and ‘VIJAYA KARNATAKA’.

And two popular local magazines selected were “Health” in English and “Gruha Shobha” in Kannada. All these newspapers publish food and nutrition related information under different headings in one or the other form daily.

3.1.2 Duration of the newspapers covered under the study
The main aim of the study was to examine the coverage of food and nutrition information useful in development of healthy family. Hence all the issues of the four selected dailies during the period July, 2016 to December, 2016 formed the Study duration. All print media articles such as, Areas related to foods & balancing them, Nutrients in Foods, Specified Health related claimed foods, Recipes, Future /prospective information, Scientific support for the food and nutrition information etc. were providing food and nutrition information in varied forms were selected for further study.

3.1.3 Analysis of subject matter
The objective of content analysis was to study coverage of food and nutrition information in the form of space area, page sequence, text, picture / image, text image, printed in the newspaper under different categories on sequence of page of the newspaper and in any part of the paper. Information on allied subjects relevant to food and nutrition such as information on “Areas related to foods & balancing them, Nutrients in Foods; Specified Health related claimed foods; Recipes; Future /prospective information; Scientific support for the food and nutrition information etc. were considered as food and nutrition information published in the dailies as part of content analysis.

3.1.4 Categorization of food and nutrition information
All the information published in dailies on food and nutrition was categorized under different headings as mentioned below: i) The categories selected are comprehensive. ii) The categories are distinct and relevant to the study. iii) Each item was put under a particular category depending upon the main content of
the item. Selected categories or subcategories comprised broad variety of issues such as health and hygiene, safety, contamination, infection, chemicals, Food Adulteration, etc. But, only those print media articles which were related to food and nutrition subject were included in the respective categories

3) Nutrients in Foods:

a) Fresh foods. b) Processed foods: Primary process/Secondary process/final processed by different methods. c) Ready to eat foods. d) Packaged foods. e) Ready to cook foods.

4) Specified Health related claimed foods:

a) Foods. b) Nutrients/claims. c) Informative messages /label. d) Food Process technologies: Post Harvest Technology to final meal on plate, all applicable at home Level to industry/ food service/marketing/export/storage/package/labeling/etc.

RESULTS AND DISCUSSION

Table 1: Articles on nutrients in foods in print media

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Nutrients in foods</th>
<th>English</th>
<th>Kannada</th>
<th>Magazine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Hindu</td>
<td>Deccan Herald</td>
<td>Total</td>
<td>Prajvani</td>
</tr>
<tr>
<td>1</td>
<td>Fresh foods</td>
<td>16 (12.60)</td>
<td>24 (16.78)</td>
<td>40 (14.81)</td>
</tr>
<tr>
<td>2</td>
<td>Processed foods</td>
<td>21 (16.54)</td>
<td>22 (15.38)</td>
<td>43 (15.93)</td>
</tr>
<tr>
<td>3</td>
<td>RTE</td>
<td>17 (13.39)</td>
<td>23 (16.08)</td>
<td>40 (14.81)</td>
</tr>
<tr>
<td>4</td>
<td>Packaged foods</td>
<td>28 (22.05)</td>
<td>34 (27.38)</td>
<td>62 (22.96)</td>
</tr>
<tr>
<td>5</td>
<td>RTC foods</td>
<td>15 (11.81)</td>
<td>19 (13.29)</td>
<td>34 (12.59)</td>
</tr>
<tr>
<td>6</td>
<td>Hotel/Restaurant foods</td>
<td>30 (23.62)</td>
<td>21 (14.69)</td>
<td>51 (18.81)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>127 (100)</td>
<td>143 (100)</td>
<td>270 (100)</td>
</tr>
</tbody>
</table>

Chi-square test: 0.5169**

Note: Figures in parentheses indicate percentage *-Significant at 5 % level **-Significant at 1% level

Table 2: Specified health related claimed foods:

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Specified Health related claimed foods</th>
<th>English</th>
<th>Kannada</th>
<th>Magazine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Hindu</td>
<td>Deccan Herald</td>
<td>Total</td>
<td>Prajvani</td>
</tr>
<tr>
<td>1</td>
<td>Foods</td>
<td>16 (20.00)</td>
<td>31 (36.90)</td>
<td>47 (28.66)</td>
</tr>
<tr>
<td>2</td>
<td>Nutrients/claims</td>
<td>11 (13.75)</td>
<td>16 (19.05)</td>
<td>27 (16.46)</td>
</tr>
<tr>
<td>3</td>
<td>Informative messages/label</td>
<td>12 (15.00)</td>
<td>9 (10.71)</td>
<td>21 (12.80)</td>
</tr>
<tr>
<td>4</td>
<td>Food process technologies</td>
<td>41 (51.25)</td>
<td>28 (33.33)</td>
<td>69 (42.07)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>80 (100%)</td>
<td>84 (100%)</td>
<td>164 (100%)</td>
</tr>
</tbody>
</table>

Chi-square test: 0.0060(NS) 0.1200(NS) 0.0055*

*- Significant at 5 % level  **-Significant at 1% level  Figures in parenthesis indicates percentages, NS- Non-significant.

Publication on “Nutrients in foods” Covering six sub areas, is represented 4.1.3 & figure 4 in namely, “Fresh foods” Processed foods; Primary process/Secondary process/final processing; Packaged foods; RTE; RTC foods; Hotel /Restaurant foods; street foods; Junk foods. There were totally 872 newspaper information related to Nutrients in Foods. Maximum frequency was of the information related to packaged food (21.79%) followed by Hotel /Restaurant foods (18.35 %) and Processed foods (16.06 %). The newspaper and magazines items under the category. Ready to Eat were least covered (13.76%).
The National English newspapers covered most of the issues regarding packaged foods (22.96 %), followed by Hotel /Restaurant foods (18.81 %). The newspaper articles under the “Ready to Cook” category were least covered (12.59%).

Among total 297 published newspaper articles by regional Kannada dailies, most of the information were upon packaged foods (20.88%) followed by fresh food foods (17.17%) and articles under RTC category were least covered (14.48%). The popular local magazines extended first priority (20.60%) for information on hotel/restaurant foods and packaged foods followed by RTC foods (17.61%), the least covered information is Ready to Eat (11.63%) foods. The individual national daily prioritized for information on Hotel /Restaurant foods followed by packaged foods with 23.62 and 22.05 per cent respectively. Whereas Deccan herald gave first priority to packaged foods and followed by “Fresh Foods” with 23.78 and 16.78 per cent respectively. In case of regional Kannada dailies, Prajavani gave priority in the order of first, second and third priority to the issues related packaged food (20.27%), Hotel /Restaurant foods (18.92%) and Both RTC and processed foods Concerns (17.57%) respectively. Vijay Karnataka covered the issues on packaged foods 21.48 per cent and fresh foods 20.13 per cent with first and second preference respectively. The topics RTE were given third preference with 18.79 per cent each by Vijay Karnataka In case of popular local “Health magazines” gave preference was in the order of first, second and third priority to the issues related processed foods 20.83 per cent, Hotel /Restaurant foods 20.14 per cent and packaged foods 18.75 per cent respectively. Gruha Shobha covered the issues on packaged food 22.29 per cent, Hotel /Restaurant foods 21.02 per cent, ready to cook foods 18.47 per cent respectively The chi-square test showed a significant difference between English newspapers and magazines at one per cent level whereas Kannada newspapers showed significant results at five per cent related to nutrients in foods in print media. Among total food related issues majority of the information were concerned with packaged foods (21.79%) followed by hotel/restaurant foods (18.35%) The packing of foods in general provides protection, resistance, and special physical, chemical, or biological and maintenance of said foods after packing for identified duration. Every consumer is conscious about packaging adopted for different food products and purpose such as, information on “Nutrition facts on label”, storage condition requirements, use before/expiry dates, manufacturer to whom it is intended for usage , and price offered for sale etc. It may be the probable reason for covering the information most frequently on ‘packaged foods’ ranking first in publication through print media.

Changing life style & time scarcity to process three to four meals duly acceptable to all age group at family level is drawing attraction towards commercial food services. This has lead to hotel/restaurant food today to emerge as an alternative & also gaining impetus to be an important career, because of which information related issues, might have received second preference in print media publications. Regional dailies recorded most of the items on packaged foods (20.88%). followed by hotel/restaurant foods (15.82%). Here, the category packaged foods included various new ideas about packaged foods, Material substitution, Smart labels, Sustainability of the packaging. It is immensely useful for many of the industries, especially those who also extend packaging of fresh & shelf life foods. This might have contributed to adequate coverage of ‘packaging’ category with second rank preferential on demand publications in print media. The popular local magazines recorded most of the issues on hotel/restaurant foods and packaged (20.60%) foods most protective and also on hazardous packed foods, receiving the second position in documenting information in the popular local magazines. significant difference between English newspapers and magazines at one per cent level whereas Kannada newspapers showed
significant results at five per cent related to nutrients in foods in print media Banakar reported the similar findings.

Specified health related claimed foods:

Distribution of print media articles according to four sub areas of “Specified Health related claimed” foods Which includes Foods; Nutrients/claims; Informative messages /label; Food Process Technologies. Overall only 443 print media articles appeared on this topic in all the four selected newspapers and popular magazines. Total number of “Specified Health Related Claimed Foods” related newspaper information reported by national English and regional Kannada newspapers were 164 and 137 respectively. Out of the total 443 “Specified Health Related Claimed Foods” related information, majority of the information were concerned with “Food Process technologies” (33.18%) followed by “Food Aspects” (29.35%) and “Nutrients/claims” (20.32%). The least covered topic was “Informative messages /label” (17.16%).

In respect of national dailies, equal percentage of articles appeared on “Food Process technologies” (42.07%), followed by “Foods (28.66%) and Nutrients/claims” (16.46%). Least published information was related to “Informative messages /label (12.80%)”. Regional Kannada dailies recorded most of the articles on foods (32.85%) followed by Food Process technologies (26.28%). and “Informative messages / label” (19.71%) respectively. The popular local magazines prioritized articles on Food Process technologies (29.58%), followed by foods (26.76%), least published items were related to “Food Informative Messages /label (19.72%)” respectively. When individual daily newspapers, are taken in to consideration, The Hindu covered 50 per cent of issues on different concepts of foods, followed by Food Process technologies (51.25%). In Deccan Herald the first, second and third Position was allotted to foods (36.90%), Food Process technologies (33.33%) and Nutrients/claims (19.05%) respectively. In case of regional Kannada dailies, information related to “Foods” was covered with highest percentage (33.85%) in Prajavani and Vijay Karnataka and second rank to “Nutrients/claims” (26.39%) in Prajavani and “Food Process technologies” (26.15%) in Vijay Karnataka. In case of popular local magazines, highest priority was extended to issues related to “Food Process technologies” (29.58%), while Health Magazines and “Gruha Shobha” local magazines had shown importance to Nutrients/claims (30.30%) followed by foods (27.63%), and Informative messages /label 27.27%). Least published,
items were related “Informative messages /label” (13.16%) in Health magazine and “Food Process technologies” (16.67%) in “Gruha Shobha” Overall, it can be concluded that national dailies were leading in publishing “Food Process Technologies” and “Foods” when compared to regional dailies. Whereas, regional dailies were ahead of prioritizing issues on foods when compared to “National daily’s” in popular local magazines gave importance to the publicity on Food Process technologies.

Statistical test showed a significant difference between magazines at five per cent level whereas English newspapers and Kannada newspapers how ed non-significant results with regard to areas related to Specified Health related claimed foods.

It is clear from the study that among all the specified health related claimed food topics covered by all four daily newspapers, majority of the issues were concerned with food process technologies during the period of study i.e.; July to December 2016. The issues on food process technologies (33.18%) measures/methods have been given maximum coverage during the study period. Food/nutrients/claims (20.30%) have become mandatory & thereby popular everywhere nowadays. They are mostly aimed at sustained successful empowerment and income generating activities. Hence the topic was given second important place with number of publications in Hindu, Deccan Herald, Prajavani &. in Vijay Karnataka daily print media. Development, especially food processing technologies is a priority issue in the national newspapers because food processing (42.07%), preservation, nutrition enhancement is termed food processing technologies. Nutrition concern having gained importance at stages of life, related information dissemination on packed foods is under essential services. Hence printed publicity & education information on nutrients & claims covered was about16.46% of total number of articles published& were in third important place for publication in all six dailies. Regional dailies published food processing technologies (26.28%) related issues equal to national dailies. The probable reason may be that foods are mainly concerned with health & entrepreneurship promotion which is gaining impetus with support of national programs. The popular local magazines also gave first level of importance for publishing information on food processing technologies (29.58%), followed by foods (26.76%) and third level priority was on news related to nutrient/claims (23.94%) as like regional dailies. significant difference between magazines at five per cent level whereas English newspapers and Kannada newspaper showed non-significant results with regard to areas related to Specified Health related claimed foods. The findings are in contrast to the findings of study carried out by Soratur respectively.
CONCLUSION

Health claims are being used widely in the print advertising of food products in India. Moreover, the presence of high-level and therapeutic claims in this media bears significant implications for the implementation of rules governing health claims on foods across the different media for improvement for newspapers of both the languages regarding number of health related articles publication (especially medical topics and public health articles), section of publication, type and size of health articles. The findings could be useful to influence the press persons/reporters as well as the health executives to consider newspaper as a medium in promoting and maintaining health status of the community. No attempt was made to interview journalists and editorial staff of any depth to assess health reporting from their perspective. Food is essential to health, yet health claims on food are seen to require consumer protection, and in Australia new regulations of such claims will soon cover both food labels and all forms of product advertising. Magazines represent a common form of print media that contain these materials. This study found that health claims are being used widely in the print advertising of 6 food products in Australia. Moreover, their presence bears significant implications for the implementation of rules governing health claims on foods across the different media.

REFERENCES