



## Content Analysis of Oral and General Health Related Messages Delivered Through Newspapers in Delhi, India

Prerna<sup>1</sup>, Abhinav Bhargava<sup>2\*</sup>, Shourya Tandon<sup>3</sup>, Sanchit Pradhan<sup>4</sup> and Meenakshi Chopra<sup>5</sup>

<sup>1,2,3,5</sup>Department of Public Health Dentistry, SGT Dental College, Hospital and Research Institute  
SGT University, Gurugram, Haryana.

<sup>4</sup>Department of Public Health Dentistry, Subharti Dental College Swami Vivekanand Subharti University,  
Meerut, Uttar Pradesh

Email\*: [abhinav.bhargava@sgtuniversity.org](mailto:abhinav.bhargava@sgtuniversity.org)

### ABSTRACT

*The communication medium has been a valuable source of health information for the masses. Newspapers have the benefit of giving a wide range of material to all age groups. The aim was to measure the quality and quantity of various newspapers advertising across Delhi region with respect to oral and general health. From March 2021 to May 2021, oral health-related content was extracted on the basis of higher readership from four major newspapers: The Times of India, The Hindu, DainikBhaskar, and DainikJagran. For the complete qualitative investigation of all data, the level score index was applied. Newspapers in the two languages were publishing general health information in larger volume as compared to oral health. The widely held oral health information was associated with Dental caries 19(33.93%), followed by periodontal disease 13(23.21%), malocclusion 8(14.29%) and oral cancer 5(8.73%) whereas the left 11(19.64%) were purely advertisements. The articles of General health (72.2%) and oral health (58.9%) were printed more in Hindi compared to the English language. Total qualitative valuation of the collected data done using the Level score Index was 65.11%. The quality of material published is reliable, however the messages related to oral health delivered in local print media are insufficient. As a primary source of health related data for the general population, print media may be better utilised by releasing articles on a regular basis to raise awareness associated with health of the oral cavity.*

**Keywords :** General Health, Mass media, newspaper, oral health coverage

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### INTRODUCTION

The medium of communication has been a valuable source of health related data for the general population. Education related with oral health to the general population via communication media is frequently utilised as a public health action approach to promote and prevent health and disease respectively. Electronic and print media are the two kinds of communication media. The mass media, which is present in both private and public places, is a prominent institution of social relevance in any culture and forms most prominent parts of our daily lives. The media has demonstrated its ability to focus the attention of its audience on specific subjects. Print media has the benefit of giving a huge plethora of knowledge to a diverse target audience of all ages, as well as extensive local coverage of population in both rural and urban dwellings. Newspapers reach the majority of the literate people. The use of well-known regional media such as newspapers to deliver messages related to health to significant populations is successful and efficient since they are easily available and accepted by the intended recipients [1]. The media's capacity to frame and affect the populations ideas and beliefs, when tested through the lens of a preventative health paradigm, mandates that the contents covered within it be accurate [2]. However, there have been few studies or assessments on the qualitative and quantitative aspects of information offered to population in the dental field [3]. Although the media does impact interpretation of oral health amongst its audience, there is lacunae in the understanding of relevance and subject matter of messages related to oral health, which obstructs attempts to promote oral health [4-5]. By covering and reinforcing messages, media associated propagation of health matters may impact public cognizance, knowledge, and in few cases, behaviours [6]. People have become more competent at accessing information (mainly via the Internet) and applying their own filters as they have grown accustomed to greater volumes of it. They make daily decisions based on what they hear or see in the

media[7]As a result, the scientific community can no longer ignore its significance and well worth. The mass media gives a platform for building and pursuing the relationship among technology and the general public, and it's far in this area that most of the people makes moral judgments about technology[8] Newspapers have a large readership around the world because they are available in many languages and are accessible to all communities. There is an extreme shortage of scientific evidence evaluating the reach and subject matter of health-related articles in local newspapers. But inadequate evidence has suggested that the major focus was on general health and nutrition , health communication, oral hygiene and well-being news, etc[9-10]. This study was executed to determine the content of newspapers associated with oral and general health.

## MATERIAL AND METHODS

A study was done to examine the contents of a sample of four main daily newspapers circulated in Delhi, namely The Times of India, The Hindu in English, and Dainik Bhaskar and Dainik Jagran in Hindi. These newspapers were selected based on how many people in the area read them as per the audit bureau of circulation of newspapers in Delhi. Oral health was separated into numerous categories to be evaluated on a specially devised scale in which general health was viewed as a separate entity. Oral health-related information was collected from all four newspapers from March 23, 2021 to May 6, 2021 using key phrases such as dental caries, periodontal disorders, malocclusion, and oral cancer.

The Level Score Index evaluates the quality of each article and assigns a score to each unit ranging from 0 to 2: 0-inaccurate, 1-partially accurate, and 2-accurate, was used. For example, if only an advertisement for an oral health care product is published, it will receive a score of 0; while, if the advertisement also includes information on how to sustain oral health, it will receive a score of 1; But, if the content is completely relevant to any of the oral health conditions reviewed and includes adequate explanations and/or symptoms, or describes the disease's treatment options, it receives a score 2. The overall qualitative analysis for all of the data was then calculated using the LSI formula. LSI= (Score 0 Percentage of Information Unit) + (Score 1 Percentage of Information Unit) + (Score 2 Percentage of Information Unit).

A single author collected data from all of the newspapers during the study period, and a small number of newspapers were re-evaluated at random to ensure that the criteria and score were repeatable.

## RESULTS

Out of 180 newspapers, 172 issues published health related information (94.50%). In these 172 issues, 79 (45.93%) published general health information, 56 (32.56%) oral health information and 37 (21.51%) issues published general health including oral health information. 15.11% of oral health related information was given by the dental professionals while 34.30 % by the authors without a professional identity. [Table 1] [Figure 2]. Most of the information regarding oral health was associated with Dental caries 19(33.73%), periodontal disease 13(23.21%), malocclusion 8(14.29%) & oral cancer 5(8.93%) whereas the rest 11(19.64%) were purely advertisements. [Table 2] [Figure 1]. Distribution of Food groups Advertisements published in newspapers. The majority of the articles published were for dairy products. (48.42%).[Table 3]. General health (72.2%) and oral health topics (58.9%) were printed in larger number in Hindi newspapers as compared to the ones in English [Table 5]. The table indicates that there is a non-significant difference when it comes to the size of the articles published in newspapers of both the languages (P = 0.153). 79(46.0%) published accurate quality of information, whereas 66(38.4%) published partially accurate quality of information and rest 27(15.6%) published inaccurate quality of information. [Table 4]Overall valuation of the data obtained using Level Score Index came out to be 65.11%. ( $0 \times 27 + 1 \times 66 + 2 \times 79 = 224$ ; the maximum possible score is 344)

**Table 1. Distribution of information related to oral on the basis of authors**

Authors	N=172, n (%)
Anonymous	59(34.30)
General health practitioner	31(18.02)
General dentist	17(9.87)
Dental specialist	26(15.11)
Others	39(22.70)

**Table 2. Distribution of oral health related information published in newspapers on the basis of various oral diseases**

Parameters	Frequency, N (%)
Oral health information	37(21.51)
General oral health instructions	79(45.93)
Dental caries	19(33.93)
Periodontal diseases	13(23.21)
Malocclusion	8(14.29)
Oral cancer	5(8.93)
Advertisements	11(19.64)

**Table 3. Distribution of Food groups Advertisements printed in newspapers**

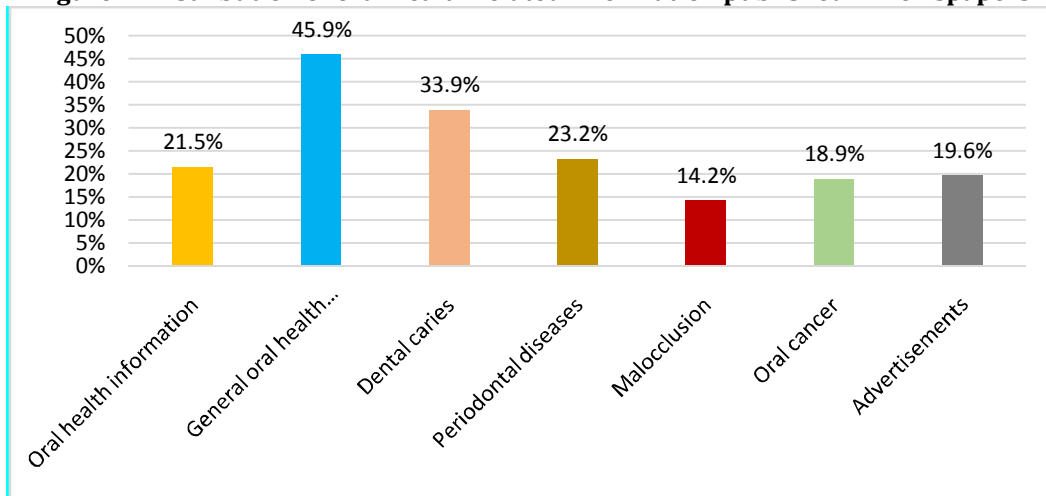
Food groups	N (%)
Milk and Milk products	632(48.4)
Fruits	57(4.4)
Vegetables	110(8.4)
Fats and oils	121(9.3)
Sugar and jaggery	76(5.82)
Condiments and spices	22(1.68)
Miscellaneous (Coffee, soft drinks, tea etc.)	135(10.34)
Nuts, oilseeds & pulses	104(7.96)
Meat and meat products	16(1.22)
Chocolates	31(2.4)
Sugar free cookies	1(0.07)
Total	1305

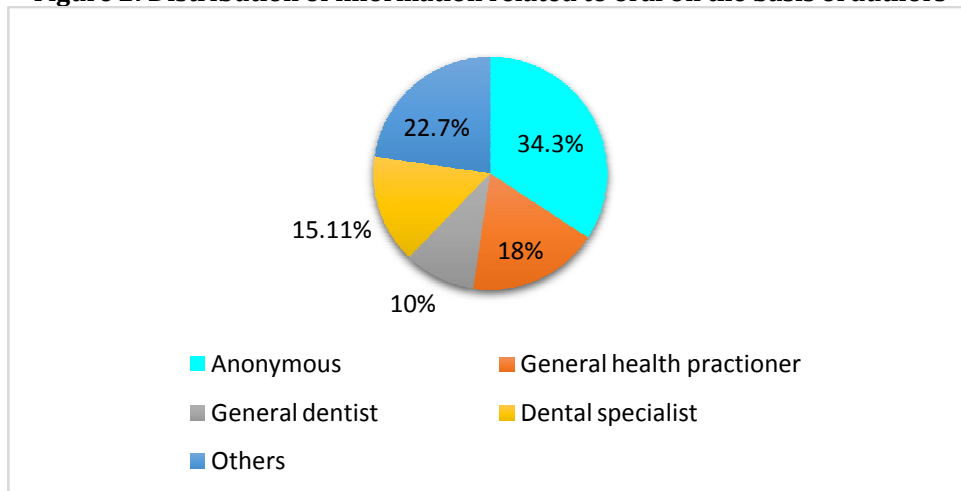
**Table 4. Qualitative assessment of the content of information items**

Codes	N=172, N (%)
0(Inaccurate)	27(15.6%)
1(Partially accurate)	66(38.4%)
2(Accurate)	79(46.0%)

**Table 5: Association of newspaper and category of Articles published on the basis of language**

Category of Article	Hindi N (%)	English N (%)	Total
Oral Health	33(58.9)	23(41.1)	56
General Health	57(72.2)	22(27.8)	79
Oral and General Health	21(56.8)	16(43.2)	37
Total (P value $\leq 0.153$ )	111(64.5)	61(35.5)	172

**Figure 1: Distribution of oral health related information published in newspapers**

**Figure 2: Distribution of information related to oral on the basis of authors**

## DISCUSSION

Health promotion which is oral health centric has the potential to adopt a common risk factor approach and endorse matters pertaining to oral health in a more tactical and informed framework, resulting in the delivery of social support and enhanced literacy associated with oral health. Effective behaviour related to health and promotion initiatives require definite health information. limited, inconsistent, or uncertain health messaging might also have an adverse impact on the recipient on matters of health. Health communication has been proven to be an effective tool for promoting and improving an individual's health. People are aware as a result of mass media campaigns targeted at urging individuals to modify their behaviour. People assume that the main cause of disparities in health is a lack of educational material owing to communication inequities, according to a large corpus of health communication literature[12-13] People seek health information from a variety of sources, including intrapersonal, interpersonal, and mass media. The mass media has a significant influence on changing people's health-related thoughts, attitudes, and behaviours, as well as increasing knowledge.

It is vital that newspapers and print media offer actual facts backed up by way of proof so that the public can examine what's right & what facilitates promotes correct and appropriate oral health activities. Newspapers were known for their large readership, nationwide coverage, and home delivery (Abe The media also provides a significant amount of information to policymakers. According to Bryant and Thompson, coverage of issues pertaining to health by the news has good capacity to impact perceptions of ordinary citizens as well as strong policymakers[14] Coverage by the news "tends to credit the authority to manage individual's health to specialists having knowledge of medicine using sophisticated technology

The findings of this study suggested that oral health information provided through newspapers was limited, which was in accordance with Leelavathi *et al.* [15] who looked at Tamil Nadu's regional print media. Majority of the articles published accurate quality of information (46.0%), whereas 66(38.4%) published partially accurate quality of information. Majority of the general health articles 57(72.2%) were published more in Hindi newspapers[16], which is similar with the research work carried out by Gupta *et al*[17]. It may be because of the fact that most of the health experts and column writers are comfortable writing in Hindi rather than English. National oral health coverage guidelines suggest that, in addition to preventive and curative care, educational oral health packages be integrated into the prevailing machine to raise public attention about the significance of oral health and improve service utilisation, in the end leading to better oral care.[18]. Although there are benefits and drawbacks to conducting a content analysis, it is a straightforward analytical procedure that can be reproduced [19]. The current study's drawback was that it only used data from the region's main newspapers, so there's a chance that data from other sources was overlooked. The variation in observations with the prevailing data may be due to the reason of Hindi national newspapers Most of the information associated with oral health in this present study was linked with Dental caries 19 (33.93%), followed by periodontal disease 13(23.21%) respectively which is similar to the study conducted by Noguerol *et al* [20]. This study was in contrast to a study done by Bandiwadekar [1] in which the majority of the oral health information pointed towards oral cancer (40.6%), trailed by diseases of periodontal origin (27.8%). The Level Score Index found was 305. (Representative of 57.33% of the maximum possible score of 532) as equated to a score of 224 in this research (65.11% of the maximum possible score).The present

research work bore a total of 1305 food and beverage commercials. Advertisements for dairy products are in majority (48.42%), whereas Fruits and vegetables products advertisement was 4.37% and 8.42% respectively. There was a reduction in the number of advertisements related to condiments. (1.70%) which is similar to study done by Barker *et al.*[21] . This research also emphasizes the relevance of growing the quality of oral health facts provided through print media as a feasible approach of increasing health education and advertising. Interviews, written open questions and images are all used to generate qualitative records.

## CONCLUSION

General health related content was found to be more as compared to oral health in regional newspapers. As a result, the current study underlines the importance of increasing the qualitative and quantitative aspects of oral health information supplied via print media as a viable strategy of increasing health education and promotion.

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