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RESEARCH ARTICLE

EVALUATING QUANTITY AND QUALITY OF OUTDOOR ADVERTISING MEDIA FOR HEALTH INFORMATION IN A NORTHERN CITY OF INDIA

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ABSTRACT

Introduction: Outdoor advertising media (OAM) like billboards/hoardings, posters is a social marketing method which has currently been largely used by healthcare industry. The information provided on OAM catches public attention and creates a memorable impression very quickly. Strategically developed and positioned billboards can deliver health information to thousands of people every day.

Objective: To evaluate the quality and quantity of OAM for health information in a Northern city of India.

Methods: This cross sectional study was carried out in Chandigarh in November, 2013. A total of 30 sites (bus stands, railway station, roundabouts, dispensaries, petrol pumps, bus stops) were visited and all the OAM for health information were assessed for quality. The quality was assessed using a pre-structured observational checklist. The checklist covered domains of language, content, format and reliability. Data was entered and analyzed descriptively by using SPSS-16.

Results: Ninety six OAM were found. More than half (51%) of them were in English. Most of these health information materials were strategically located, coloured and provided by government agencies. OAM covered all sort of topics ranging from general health, water sanitation and hygiene, Communicable and Non Communicable Diseases. The mean scores of language, content, format and reliability were 4.6, 3.1, 5.9 and 0.7 respectively. Majority (77%) scored average and only 22.9% materials scored high on quality.

Conclusion & Recommendations: The quality of outdoor advertising media for health information was found to be average. Careful planning in designing and placing OAM at strategic locations can maximize their potential in raising health awareness among general masses.

INTRODUCTION

Health literacy is defined as the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions.[1] Health literacy is a critical factor in accessing health information and empowering people to take charge of their health. [2] It has been documented that general populations have limited health literacy both in developing and developed nations. [3, 4] In addition to this, people in developing world are passive information seekers i.e. they accidently receive information from sources like watching or listening to TV and radio advertisements, without any intention to act on the information given.[5] Social marketing is a time tested technique to raise health awareness among general public[6]. Social marketing is the application of proven concepts and techniques drawn from the commercial sector to promote changes in diverse socially important behaviors such as drug use, smoking, sexual behavior. This marketing approach has an immense potential to affect major social problems.[7] Social marketing is a way of communicating with audiences in quicker and more creative ways. Social marketing is widely used to influence health behaviour. It uses health communication strategies based on mass media like radio, TV, internet, outdoor advertising, newsletters, newspapers and magazines.[8] They can play an importany role in disseminating information to general public in shorter duration of time. Freimut *et al*. (1984) have shown that many people rely on the mass media channels for their health-related information.[9] A systematic review by Grilli *et al*., (2002) supported the view that mass media campaigns have a positive influence on health services utilization.[10] Various studies have shown that individuals who learn health information from mass media

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channels are more health oriented than individuals who do not learn health information from it. [11, 12]

Outdoor advertising media (OAM) like billboards/ hoardings, posters is a social marketing method which has currently been largely used by healthcare industry.[13] Outdoor advertising communicates information to public when they are on the go, in transit (during travelling) and waiting (like sitting in a medical clinic).[14] The information provided on billboards, hoardings and posters catches public attention and creates a memorable impression very quickly. Billboards also influence choice and play a significant reminder and reinforces message.[15] Outdoor advertising campaign presents messages, 24 hours per day, seven days per week.[16] Strategically developed and positioned billboards can deliver health messages to thousands of people every day. According to Outdoor Advertising Association of America (OAAA), the cost of reaching 1,000 members of a targeted population through OAM is lowest for billboards.[16, 17] Studies have shown that that billboard advertisements are noticed , favorably viewed by patients and are highly effective across the sequence of steps that consumers travel from initial awareness toward making a decision.[15, 18] It also reinforces health information messages of TV and radio when people are away from their homes.[16]

Many studies have been conducted regarding the quality of health information on mass media channels like television, newspaper, leaflets, websites.[19-220] However, quantity and quality of OAM like billboard/hoardings and posters in health promotion are least studied.[23, 24] In the present study we intend to evaluate the quality and quantity of OAM for health information in a Northern city of India.

Methods: This cross sectional study was carried out in Union Territory of Chandigarh in November, 2013. The study area is located in Northern part of India and has a population of around 1.1 million. There are 23 villages (rural) and 26 municipal wards (urban) in Chandigarh. Around 90% of its population resides in urban area.

A total of 30 sites (bus stands, railway station, roundabouts, dispensaries, petrol pumps, bus stops) were visited and all the OAM for health were assessed for quality. For the purpose of study, billboards and hoardings were taken as panels on which health related messages were displayed on public places to raise awareness among general masses. Posters were considered as those where health messages were printed or painted on a sheet of paper. The quality was assessed using a pre-structured observational checklist.[25]The checklist covered domains of language, content, format and reliability. The checklist was modified and pilot tested on five information materials of different category.

The maximum attainable score assigned for an OAM was 21 (Language=6, Content=5, Format=9, Reliability=1). In domain of language, focus was on short and simple words, short sentences, written in active voice and usage of non scientific language. In the content, the information should be relevant to users, appropriate usage of numbers and percentages, limited numbers of messages delivered, and pictures /photographs clearly labeled. The format should be conducive to reading and comprehension with short line length, usage of bullets, fewer words, dark text on light background and large consistent font. Reliability was assessed based upon mentioning of source of information. Prior clearance from Institute Ethics Committee was obtained. Data was entered and analyzed using IBM Statistical Package for Social Science-version- 16 (SPSS-16) and analyzed descriptively (i.e., frequency, mean, standard deviation, range, and percentages).

Results: A total of 30 sites were visited and 96 outdoor advertising media (hoardings/ billboards/posters) were found. The mean number of outdoor advertising media were maximum at bus stand (14.5) followed by dispensaries (5).More than half (51%) of them were in English. Most of these health information materials were strategically located, coloured, with photographs and provided by government agencies (Table-1).These OAM covered all sort of topics ranging from general health, water sanitation and hygiene, Communicable diseases (dengue, malaria, tuberculosis) and Non Communicable Diseases(NCDs). They also covered specific target groups like mothers ((immunization, breast feeding, programmes like Janani Suraksha Yojna (Mother Safety Scheme), Janani Shishu Suraksha Karaykaram (Mother and Child Health Program)), adolescents (no smoking and effects of drug) and adults (HIV/AIDS awareness) (Table 2).

Table 3 shows the mean quality assessment score of OAM for health information. The mean scores of language, content, format and reliability were 4.6, 3.1, 5.9 and 0.7 respectively. Numbers and percentages were not appropriate (e.g., 1 in 10 instead of 10 percent) and technical or scientific words were used in high proportion of OAM. Majority of the materials (77%) scored average and 22.9% materials scored high on quality (Table-4). The mean score of government and private sponsored materials was found to be 14.3 and 13.8 respectively with no significant differences. The figure 1 shows the type of health information OAM assessed in the study.

Table1 Characteristics of outdoor advertising media for health information in the study

Characteristics	n(N=96)	%
Sites(N)		
Bus Stand(Sec17, 43)	29	30.2
Bus stops(7)	6	6.3
Dispensaries(7)	35	36.5
Railway station	4	4.2
Petrol Pumps(7)	16	16.7
Roundabouts(6)	6	6.3
Type		
Hoardings/billboards	71	74.0
Posters	25	26.0
Language		
English	49	51.0
Hindi	43	44.8
Punjabi	4	4.2
Strategic Location		
Yes	65	67.7
No	31	32.3
Visibility		
Yes	73	76.0
No	23	24.0
Colour		
Coloured	89	92.7
Black & White	7	7.3
Photographs		
Yes	72	75.0
No	24	25.0
Provider		
Government	79	82.3
Private	10	10.4
Not mentioned	7	7.3

Table2 Topics covered in outdoor advertising media for health information in the study

Sites(n=30)	Topics
Bus Stands(2)	No smoking signage, Drugs are injurious to health, Awareness about HIV/AIDS, DOTS and Tuberculosis
Bus stops(7)	Save the girl child , No smoking signages, Water sanitation and hygiene
Dispensaries(7)	Stagnant water breeding ground for mosquitoes ,Awareness about HIV/AIDS, female foeticide, ICTC counseling, DOTS and Tuberculosis, NCDs, Breast feeding, Immunization, *Janani Suraksha Yojna*, Ambulance Services, balanced diet, general health awareness, *Janani Shishu Swasthya karaykaram*, awareness of Malaria and Dengue
Railway station(1)	No smoking signage, Save the girl child, Awareness about HIV/AIDS,
Petrol Pumps(7)	No smoking signage, First aid, DOTS and Tuberculosis, Water sanitation and hygiene
Roundabouts(6)	Stagnant water breeding ground for mosquitoes, Awareness about HIV/AIDS,

Table3 Mean Quality assessment Score of outdoor advertising media for health information

Domains of QAS(maximum score)	Mean Scores(SD)	Range
Language (6)	4.6(0.8)	3-6
Content (5)	3.1(0.8)	2-5
Format (9)	5.9(1.5)	3-8
Reliability(1)	0.7(0.4)	0-1
Total Score(21)	14.3(1.8)	10-17

Table4 Quality assessment Score of outdoor advertising media for health information

Quality assessment Score	n(N=96)
Average(8-14)	74(77.1%)
High(15-21)	22(22.9%)

* no health information material was in 'low score' category.

Figure 1 Photographs of billboards assessed in the study

Billboard providing information about mosquito borne diseases

DISCUSSION

Outdoor advertising is the oldest form of advertising. The physical, visual nature of an outdoor holding enables permanent visual presence between bursts of other media. This makes outdoor advertising an ideal medium to use in conjunction with other media to maximize effect.[26] This power of outdoor advertising media (OAM) has been used lately by healthcare media professionals for health promotion. Outdoor advertising has been documented to be used quite often in promoting health-negating messages and products such as alcohol consumption and smoking cessation.[27,28] A study by Fortenberry *et al*. (2010) has showed that 70% of the respondents were in favour of billboards for marketing healthcare services.[15] On the other side, outdoor advertising can also cause undesirable effects such as degradation of environment (thousands of trees are cut to place and improve view of billboards), aesthetic damage (by roadside clutter) and endangering health and safety (distraction of drivers leading to accidents). [29, 30] Literature on OAM for health information is of great importance for health and media professionals so as to make judicious decisions regarding their use.

The present study found that the quality of most of these OAM was of medium quality. The findings cannot be compared with other studies as this is the first one to examine the quality of OAM for health information. However, many studies have been conducted on the quality of health information on other mass media channels wherein, they have showed that the quality of most of the patient written and audio-visual information materials was incomplete, inaccurate, out of date , technical and are not suitable for shared decision-making by patients.[31] Wilson *et al*., 2009 showed that the overall quality of medical reporting by current affairs television programs was of poor quality.[32] A similar study by Iaboli *et al*.(2010) found that the quality of the health information on newspaper and magazines was poor.[33]

The study found that numbers and percentages were not presented appropriately and technical/scientific words were used in high proportion of OAM. The mean quality score was not found to be significantly associated with the type of health care provider (government or private). Similar results were found in a study wherein, the health information materials scored reasonably well on clarity of structure, layout and information on the date of publication. The mean range of scores was similar for all provider types (public, commercial and voluntary) with no significant differences. However, a high proportion of materials failed to disclose their evidence sources.[34]A study by Patil *et al*., 2001 suggested that medical terms were used in majority of the leaflets provided with the medicines.[35]

This study provides pilot data on quantity and quality of this media and more studies with a larger sample size are needed to further evaluate quality of OAM for health. Other strengths to this study are the usage of standardized measures to assess the outcomes. However, an important limitation of the study is that the materials chosen for review was selected from a city, therefore the results cannot be generalized.

Conclusion & Recommendations

The study concluded that quality of outdoor advertising media for health information was found to be average based on a standardized scoring sheet. Numbers and percentages were not appropriate and technical words were used in high proportion of OAM. This is the first study of its kind and further research on OAM is needed in other healthcare service contexts. With careful planning in designing and placing them at strategic locations, health and media professionals can maximize their potential in raising health awareness among general masses.

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