Posters as a Tool for disseminating Health related Information in a DevelopingCountry: a pilot experience

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Introduction

Cardiovascular diseases (CVD) are presently occurring or accelerating in most developing countries.1-3 There is therefore an immense need for effective preventive strategies that aim to control this epidemic and address the risk factors for CVD as potential targets for intervention. Hypertension is a known major risk factor for CVD, which is also amenable to treatment. Effective control of blood pressure, in controlled trials, has shown to decrease the risk of CVD.4-7 Therefore efforts at controlling hypertension to reduce the burden of CVD are important.

A comprehensive CVD prevention and control programme should be focused on an integrated approach to all the modifiable CVD risk factors. Within this paradigm, high blood pressure has been identified as the ideal nucleus as it is perceived by the public as well as the providers to be a health care issue meeting a recognized clinical need thereby eliciting stronger motivation, making it a suitable entry programme for CVD control.

To effectively draw the population into a hypertension prevention and control programme, awareness creating is warranted as an initial step, which should aim at stepping up lifestyle modifications and screening for high blood pressure. However in developing countries several issues, such as illiteracy and poverty make awareness creating and behaviour modification a challenge. Therefore there is a need to define information dissemination approaches that are appropriate to the developing world circumstances.

High blood pressure has a prevalence of 17.9% over the age of 15 years and 33% over the age of 45 years in Pakistan.8 The unawareness rate of 70% reported for Pakistan is one of the highest reported and highlights the need to prioritise information dissemination.8 The effectiveness of posters in prompting people to modify behaviour has been demonstrated in many studies.9,10 In many developed countries doctor practices use posters to impart health related information to the public;11,12 however there appears to have been no formal evaluation of their effectiveness in the developing world setting, particularly with regard to awareness relating to high blood pressure. Therefore there was a need to assess whether posters were an acceptable method of information dissemination in the community for health related messages and what impact did this tool have on patients and doctors.

We carried out a pilot study in Pakistan, to investigate the effectiveness of posters as a tool for imparting information related to high blood pressure, with the following research objectives:

Are the posters clearly understood: has the message of high prevalence blood pressure in Pakistan been conveyed clearly to the patient?

Does the creative material attract and or hold the patients attention. Does the target audience perceive the message to be personally relevant and prompt them to have their blood pressure checked?

The Heartfile organization (http://heartfile.org) and a pharmaceutical company jointly conducted this study. Heartfile is a non-profit organization based in Pakistan and it focuses on community awareness creation on one hand and reorientation of health services to respond to the challenge of public health needs on the other. This study would serve as a pilot for an intervention currently being developed by Heartfile which would involve posters as a tool for creating awareness about high blood pressure in the community at a national level and its effectiveness as a tool in prompting people to get their blood

pressure checked.

Patients and Methods

The intervention involved hanging posters in the waiting rooms of health facilities in five major cities of the country. A single illustrated and coloured poster 18 inches by 28 inches was used as a tool of intervention. A total of five graphics, three of them using the Heartfile Mascot (http://heartfile.org) and five messages printed in the local language, were boldly highlighted on the poster. The poster was titled as, "High blood pressure your silent enemy"; two messages highlighted the prevalence of high blood pressure in the community: "18% of the population in Pakistan over the age of 15 years suffers from high blood pressure", "one in 3 Pakistanis over 45 years of age suffer from high blood pressure"; the silent nature of the condition was emphasised as, "70% of people suffering from high blood pressure are unaware of the problem". The last message was prompting people to have their blood pressures checked, "have you had your blood pressure checked?" A logo of the pharmaceutical company, which collaborated in this project, was placed in the lower bottom corner of the poster along with the Heartfile logo and web address. No medicines were advertised on the posters. The colour, font and the graphics of the poster were piloted for clear visibility. Poster was not mounted. The paper of the poster weighed 350grams.

A total of 339 health facilities were selected to participate in the project, in five different cities of the country. The distribution network of the collaborating pharmaceutical company was requested for use of their field force, for the task of distribution of posters; the medical representatives routinely visit these facilities and therefore dissemination of material through them was thought to be more readily acceptable. Only those facilities that are covered by the pharmaceutical distribution network were included in the sampling frame. A facility was only chosen if it had a minimum patient turn over of 75. Facilities selected were: government hospitals, private hospitals and private clinics, basic health units and rural health centres, which met the inclusion criteria of minimum 75 patients per day, were included.

Medical representatives were trained to carry out the whole process of poster distribution in a standardised way. There was a standard disclosure statement and procedure to introduce the tool. Each medical representative was given 24 posters, for which he hand picked 10 facilities in his territory. Every second facility was selected to deliver the poster. The medical representatives were trained to hang the posters in the waiting area themselves unless they were discouraged to do so by the facility, in which case they left the poster with the relevant person at the facility.

The impact of this intervention was assessed after 30 days of hanging the posters through a survey designed with assessment components encompassing, the medical representative that hung the poster, the doctor at the facility where the poster was hung and the target audience.

Survey of medical representatives and the health care providers at the facility

All the medical representatives who had distributed the posters were to fill a questionnaire per facility where they had distributed the poster. In this questionnaire the medical representatives gave their own comments on the poster, the related activity and also took the comments of the health care provider of the facility. Specific questions to the medical representatives were related to how they delivered the posters, whether the posters were there at the next visit and their overall opinion.

Survey of the target audience

Medical representatives were required to revisit the health facility a month after their initial visit to check if the posters were in place and to survey the people attending the facility. All facilities where posters were distributed were included except for those where the posters were found to be hanging in the doctor's office instead of the waiting area. Individuals in the waiting areas of these health facilities were the survey population.

Statistical methods

SPSS version 7.5 was used to carry out the statistical analysis. Basic frequencies were tabulated for general description of the data. Independent sample t-test was done to compare means of the population for those who noticed the poster to those who did not notice the poster. Chi square test statistic was conducted for comparison of various categories of discreet variables.

Results

The health facilities from five major cities were included in the study in all four provinces of Pakistan. The results are shown in Table 1. Private clinics (48.7%) followed by government hospitals (30.1%) and private hospitals (16.5%), represented the main facilities where posters were distributed.

Table 1 Number of health facilities in different cities of the country

City	Frequency (%)
Islamabad	58 (17.2)
Pesgawar	68 (20.1
Lahore	96 (28.4)
Karachi	93 (27.5)
Hyderabad	23 (6.8)

In 88.6% (n=295) of the facilities posters were hung in the facility by the medical representatives and in only 11.4% (n=38) they were given out to the staff. In 87.9% of the facilities posters were still found hanging on the next surprise visit of the interviewer, which was a month after the initial distribution. Whether the posters were handed or hung at the facility had no effect on the persistence of the poster at a later visit (89.5% and 87.4% respectively, p=1.00). In 98.2% of the facilities they were hung in the waiting lounge for the patients and 1.8% were hung in other places. 89.2% of the posters that were hung in the waiting rooms persisted at the next visit compared to a 40% if they were hung in any place other than the waiting room (p= 0.012).

Assessment of the poster

To assess the impact of the poster 1017 people were interviewed at the facilities, mean age of the surveyed population was 40.4 (SD 11.06), 79% were males and 21% were females. The posters were noticed by 816 (80.2%) respondents. Of those who noticed, 83% were males and 17% were females (p<0.001). Mean age of those who noticed the poster was 40 (SD 10.86) years. The different age group in relation to noticing of the poster is given in Table 2.

Further analysis was only carried out on people who noticed the poster of whom 83.9% were males compared to

Table 2. Age group of people who noticed the poster.

Age Group	Frequency (%)
18-29	139 (17
30-39	254 (31.1)
40-49	254 (34.1)
50-59	117 (14.3)
60-69	46 (5.6)
70-79	6 (0.7)

66.4% females. This difference between genders was significant (p<0.001)

Of those who noticed the poster 78.7% said that they were not previously aware of the information given on the poster. There was no difference in the previous knowledge about the information given on the poster, between the males and the females (22% males were aware of the information given compared to a 17.3% of females p= 0.233).

General opinion about the poster

The poster was considered good by 84.5% people. When asked about what was it that they particularly liked about the poster, 38.8% liked the information given on the poster, 29.8% liked the cartoons on the poster; whereas 28.1% did not mention anything in particular that they liked about the poster. When questioned specifically about the graphics of the poster, 77.2% commented that they were good and drew attention to the poster. However, 19.9% were not impressed with the graphics and suggested that they be improved.

When questioned about if there was anything specific that they disliked about the poster, 76.7% of the people said there was none; however a small number (2.7%) did not like the fact that the there was no female representation on the posters.

Of those who noticed the poster, 40.5% understood the message as, "blood pressure being dangerous and that one should get it checked," whereas 23.2% understood the message as blood pressure being a common disease. Any other response given was considered to be an inadequate understanding of the overall message of the poster. There was no significant difference between the genders for overall understanding of the poster, 63.2% of the males understood compared to a 66.2% of the females (p value 0.493).

Impact of the poster

To get a real effect of the poster, we assessed whether looking at the poster and understanding what it was asking to do was associated with behaviour change, i.e. getting blood pressure checked.

The people were simply asked what they thought the poster was asking them to do? On questioning, 96.7% (n=789) of the people thought that the poster was asking them to do something; Of these 85.9% (n=501) got their blood pressure checked. Of the 3.3% (n=27) who did not think that the poster was asking them to do something, 60.9% (n=14) got their blood pressure checked; this difference between the two groups, those who thought the poster was asking them to do something and those who did not think the poster was asking to do anything was significant (p= 0.004).

However, on further interrogation, of those who said that the poster was asking them to do something, as to what was it specifically that the poster was asking them to do there were varied responses. If the response was that they should have their blood pressure checked, it was taken as adequate understanding of the last message in the poster, "Have you got your blood pressure checked?" By this measure of understanding, 66.1% (n=539) of the people who noticed the poster actually understood the message.

By this measure of understanding there was no

significant difference in the behaviour of those who understood the message compared to those who did not understand, 87.3% of those who understood that the poster was asking them to get their blood pressure checked, actually got their blood pressure checked compared to 83.7% of those who did not understand this message (p= 0.241).

No significant gender differences were found for getting blood pressure checked (84.2% of males got their blood pressure checked compared to 88.8% females, p=0.225).

Doctor's comments

Response to the questionnaire was had from 93.2% (n=316) of the doctors, of whom 64.9% commented that it was a useful activity. Improvement in the quality of posters by mounting and lamenting it was suggested by 20.9% doctors. It was also advised to have the poster in the regional language and to strengthen the message by telling the harmful effects of high blood pressure; 2.8% suggested an increase involvement of the pharmaceutical companies in the task and 0.9% suggested broadening the focus of the activity to include other health education dimensions.

More posters for different reasons were requested by 22.9% doctors (Table 3); the predominant reason was, to put these posters in their private clinics.

Comments from the medical representatives

From a total of 339 medical representatives, 216 commented on the exercise and the poster whereas 47.2% remarked that it was a useful activity, 47.7% suggested several improvements in the poster such as: to mount the

Table 3. Reasons for asking for more posters by the doctors.

Reasons for asking for more posters	Frequency (%)
To put oin the private clinic	40 (473.6)
Liked the poster	2 (2.4)
displaying in other wards	10 (11.9)
For Friends	5 (6.0)
For patients	1 (1.2)
Previous was lost	2 (2.4)
To create awareness	9 (10.7)
As a supplement	3 (3.6)
Miscellaneous	12 (14.3)

Discussion

This study presents a qualitative assessment of a pilot project for the use of posters as a tool for disseminating information related to blood pressure significance. The study assesses the impact the poster has on the knowledge and attitude of the people. Whilst a mainly qualitative approach was taken for this assessment, one must emphasis two major limitations of our study design: lack of a comparison group and no pre intervention baseline information on knowledge about blood pressure significance in the study population. To draw any valid conclusions about the effectiveness of posters as a tool one has to assess whether looking at the poster and understanding it is associated with behavioural differences. A larger study including a valid comparison group would be needed to have an estimate of the effectiveness of posters as a tool in the community.

Acknowledging the shortcomings, the qualitative data presented here needs to be looked in the light of the overall scope of the study:

Are the posters clearly understood: has the message of high prevalence blood pressure in Pakistan been conveyed clearly to the patient?

Does the creative material attract and or hold the patients attention. Does the target audience perceive the message to be personally relevant?

The data presented here serves essentially to support the key patterns of perceptions, and assist in highlighting where needs, experiences and processes are adequate and where they need to be improved upon to introduce posters as a disseminating tool in the community. Countries where literacy rates are low, information disseminated through print media has to be assessed for acceptability and the overall impact it would have on the target audience. However, in low resource settings the cost advantage of print media over electronic media also has to be kept in mind. In this particular setting the additional caveat of the appropriate intervention site, a health facility, provides the opportunity for immediate risk modification by prompting people to have their blood pressure checked. This study would serve as a pilot for an intervention, currently being developed by the Heartfile, involving posters as a tool for creating awareness about high blood pressure in the community at a national level and its effectiveness as a tool in prompting people to get their blood pressure checked.

One of the most interesting things that has come out of the study is that people who said, the poster was asking them to do something got their blood pressure checked significantly more, compared to those who did not think that the poster was asking them to do anything. However this difference disappeared when people were asked to elaborate on what was it that the poster was asking them to do. This could be explained by the reasoning that people may have understood the message but when asked to express they may not be able to express it adequately, hence the difference. This highlights the important issue that measures of understanding have to be formulated very carefully. In the same context questions asked have to be simple, clear

and at the level of the understanding of the community.

Male preponderance of people selected for interview may be explained by the fact that there were only 2 female medical representatives administering the questionnaire. Culturally it may be more difficult for male medical representatives to interview females. These results cannot be extrapolated to any gender differences that may be present related to access to health facilities in the community.

The assessment is based on self-reporting of blood pressure checked and this may have been a bias account. Also there was no information gathered regarding the routine practice of blood pressure measurement at the different facilities; we do not know what proportion of people got their blood pressure checked as a routine. There was no distinction made between patients and those accompanying the patients and therefore people who were more inclined to get their blood pressure checked, example those who were hypertensive or other conditions for which they may have been motivated to get their blood pressure checked, were not differentiated.

Given all the limitations, nevertheless the project itself has been a unique learning experience, not only for the target communities but also for the project planners and evaluators. The chosen methodological approach allowed the latter first hand insight into the processes involved in programme implementation and the social and environmental context in which the intervention took place. The qualitative approach taken during the assessment allowed the evaluators the opportunity to observe and record the true feelings of all those involved in the programme (professionals, disseminating task force, target audience)

Conclusion

The poster was liked by most. It was attractive enough to get hold of people's attention. More than half the people understood the overall message of the poster. In others it is difficult to assess whether there was a difficulty in expressing what they had understood. Given the limitations of the study it is difficult to assess the effectiveness of the poster in changing people's behaviour regarding blood pressure check up. However the experience of this study will serve as a pilot for larger prospective studies to assess the effectiveness of posters as a tool for prompting people to get their blood pressure checked in the community.

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Abstract

Objective: To investigate the effectiveness of posters as a tool, for imparting information related to high blood pressure.

Methods: The intervention involved hanging posters conveying information about blood pressure, in the waiting rooms of 339 health facilities. The impact of

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this intervention was assessed after 30 days of hanging the posters with the main assessment component of the survey aimed at the target audience at the facilities. 1017 people attending the facilities were interviewed.

Results: Mean age of this population was 40.4 (SD 11.06) years. There were 79% males and 21% females. 80.2% (n=816) of the respondents had noticed the posters. 84.5% of the people were of the opinion that the poster was good. 63.7% of the people understood the overall message of the poster correctly. Regarding change in behaviour, 96.7% (n=789) of the people thought that the poster was asking them to do something; 85.9% (n=501) of these got their blood pressure checked compared to 60.9% (n=14) of those who did not think the poster was asking them to do anything (p=0.004). Of those who said that the poster was asking them to do something, there were varied responses as to what they thought the poster was asking them to do. If the response was that they should have their blood pressure checked, it was taken as a correct response. 87.3% of those who said that the poster was asking them to get their blood pressure checked, actually got their blood pressure checked compared to 83.7% of those who did not understand this message (p= 0.241).

Conclusion: Given the limitations of the study it is difficult to assess the effectiveness of the poster in changing people's behaviour regarding blood pressure check up. This experience will serve as a pilot for a larger prospective study to assess poster as a tool for prompting people to get their blood pressure checked (JPMA 54:456;2004).