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Evaluation of a cancer awareness campaign: experience with a selected population in Karachi

Tazeen S. Ali

Aga Khan University, tazeen.ali@aku.edu

Sanah Baig

RESEARCH COMMUNICATION

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Tazeen Saeed Ali, Sanah Baig

Abstract

The incidence and prevalence of cancer is rapidly increasing in both developed and developing countries. The most common cancers reported in Pakistan are breast and cervical cancers in females, and lung and oral cancers in males. Public awareness of cancer can play a vital role in its prevention, early diagnosis and treatment. A pilot survey conducted by the Cancer Support Group (CSG) of Aga Khan University Hospital from 2001 till 2004 to gauge the public awareness of cancer in Pakistan revealed that people were afraid of cancer and had little knowledge about its prevention and early detection. The survey also identified several social, religious and cultural misconceptions which hinder cancer screening and treatment. In order to create awareness amongst the general public, especially the young generation, members of the CSG also organized fifteen health education sessions in schools, colleges, hospitals and communities in Karachi which were attended by more than 1,500 people. With the help of the results generated in the pilot project, education material was designed and developed for these health education sessions. Ten percent of the participants contacted CSG members for some unusual finding after administering a self screening tests taught in these sessions. This indicates the importance of holding cancer awareness sessions and the positive feedback obtained suggests that people would like to have cancer awareness sessions continued.

Key Words: Cancer awareness - evaluation - Karachi, Pakistan

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Introduction

The incidence and prevalence of cancer is rapidly increasing in both developed and developing countries. More than 10 million people are diagnosed with cancer every year. It is estimated that there will be 15 million new cases every year by 2020 (Horton, 2006). Cancer causes 6 million deaths which are 12 % of the total deaths world wide, every year (WHO, 2003). According to the 1998 figures in Pakistan, the age-standardized incidence rate (ASR) of cancer for all sites is 132.4/100,000 for males. Of these, lung cancer was the most frequently recorded malignancy being 10.8% (ASR 17.3), followed by oral cavity 10.5%; (ASR 13.2); and larynx 5.0% (ASR 7.4). The incidence rate according to age for females was 133.0/100,000 for all cancers. Breast cancer is reported as 32.0% with an ASR of 40.7. This cancer has been reported as commonest (Malik et al., 1992; Bhurgri et al. 2000), followed by oral cavity 8.1%; ASR 11.7 and gall bladder 3.6% (Bhurgri, 2002)

A number of studies have identified that modifiable risk factors such as; stopping tobacco use, taking healthy food, avoiding the exposure to carcinogens and regular exercises; could help in the prevention of the cancer (Day et al., 2005; Goedert JJ., 2005; Bhurgri et al., 2004). In addition, the efforts for screening cancer which leads to early identification could permit effective and low cost treatment (WHO 2003; Wilson et al., 2004). Life style modifications are known to cause a positive preventive impact on many diseases and this can be done only if awareness about different health issues is created for the general population. (Yarbro, 2003). Creating health awareness is a preventive measure at the grass root level which has been tried and tested in various settings and geographical situations in varied age group study population. (Pazdur et al., 2000: Nursing standard news, 2001).

Of any kind of health education, cancer health education is one of the public health approaches which aim to reduce causes and consequences of cancer by translating our knowledge into practice (Foster et al., 1988). The most effective way of changing practices is to create awareness and provides effective council skills. Therefore, a cancer awareness group was set up in November 2004 to conduct health education session with individual counselling based on screening.

Subjects and Methods

Based on the WHO thematic interest in controlling and

The Aga Khan University, School of Nursing and Department of Community Health Sciences, Stadium Road, P.O. Box 3500, Karachi, Pakistan 74800. Email: tazeen.ali@aku.edu

Table 1. Description of the Sessions Conducted by the Cancer Awareness Group , December 2003 till December 2004

Venue of sessions	Total # sessions	Participants attending full session	Total
Schools	4	Students and teachers	250
Colleges	4	Students and teachers	690
Religious communities	4	Christian and Ismaili community members	240
Hospitals	2	Nurses, lady health visitors, midwives and technicians	100
General population	1	Community males and females (teenagers and above)	100
Total	15		1380

preventing cancer, the Cancer Awareness Group formulated this project in December 2003. Cancer awareness evaluation and implementation was divided into three phases. Phase – 1 or the pilot phase of the project which was based on assessing the need for educating health professionals and students at secondary school level about cancer. Phase -2 was mainly focused on comparing pre and post test results; whereas Phase – 3 consisted of follow-up sessions.

Phase – 1

Phase – 1 was conducted from December 2003 – December 2004. The main emphasis of this pilot study was to develop teaching material for cancer awareness education and for this reason a descriptive study was undertaken with working females at different working environments, and students of secondary schools. The project participants were selected through convenient sampling. Out of the total 50 participants, 30 were females and 20 were males. Data was collected through non-structured, explorative interviews of a maximum of 10 minutes each. The interviews were conducted by the principle investigator assisted by the team based on following themes:-

- o Are they afraid of cancer, Do they have cancer phobia?
- o Is cancer contagious?
- o Are they ready to hear about cancer?

Phase – 2

Phase -2 was focused mainly on conducting sessions based on the educational material formulated from the baseline results received in Phase – 1. Teaching material formed included PowerPoint presentations, flip charts, transparencies, models e.g. breast models. In addition, pamphlets were developed by the Marketing Department, Aga Khan University, Karachi, on breast, colon, and intestinal cancer. Sessions (Table – 1) were arranged by the group who conducted the session with support of marketing department, AKU. A team of Nurses (faculty, staff, and students), doctor, and grade 11 students conducted the sessions. Open ended, structured, pre and post test was developed on the basis of the pilot project results and face validated by Cancer Support Group of AKUH. The questionnaire was filled in by the participants individually. The data were then coded, entered and evaluated for any discrepancies before analysis on SPSS version 10.

Phase – 3

After conducting the educational sessions Phase – 3 of the project was initiated. This part of the project was based on follow-up sessions. The participants of the educational sessions in Phase – 2 were given contact numbers for proper referral in case they identified any lump or any other sign of cancer. Referrals were made for suspected cases to the private and government hospitals as per the need and convenience of the participants. Some follow-up sessions were followed by clinical breast examination and/or counselling sessions.

Analysis

Descriptive analysis was performed to compare proportions with significance differences in the proportions having knowledge assessed by the chi square test.

Results

The questionnaire (Appendix – 1) was open-ended, giving participants the opportunity to make answers of their own choice (Table 2). The questions were asked according to the themes identified through the Phase – 1 pilot study results.

General information about cancer:

In the pre-test, 65 participants (23.1%) out of 281 answered that they perceived cancer to be a dangerous disease; whereas, in the post-test this response rate was reduced to almost half i.e., 34 (12.1%). A mere 18 participants (6.4%) knew that cancer is abnormal over growth of cells in the pre-test; this response increased to a significant value of 81 (28.8%) in the post-test after the sessions. Another significant difference was made in the response of misuse of life style which only 4 participants (1.4%) identified in pre-test while in post-test, 40 participants (14.2%) identified this as a risk factor. No change in the rate of response was noticed in participants (in pre and post-test results) who thought that cancer occur from13 years and onwards. (Table – 2) When asked about perceptions of how one gets cancer, in the pre-test, 39 participants responded that they perceived cancer as an infectious disease, 50 thought cancer is caused by some “germs”, and 80 believed that it spreads through contaminated blood. After the sessions in post-test, only 11 still perceived cancer as an infectious disease, 23 thought that some bacterial agents or virus can cause cancer, and 50 thought that cancer is a blood-borne disease.

Fear of cancer:

In pre-test, majority of the participants reported that they were afraid of cancer, while in post-test, only 60 participants

Table 2. Phase II - Pre and Post Test Findings (n=281)

Characteristics	Pre (n)	%	Post (n)	%
What do you understand by cancer?				
Dangerous	65	23.1	34*	12.1
Over growth of cells	18	6.4	81*	28.8
Misuse of life style	4	1.4	40*	14.2
Cancer is treatable	7	2.5	17	6.0
Age 13 onwards	4	1.4	4	1.4
Virus causes it	8	2.8	8	2.8
Afraid of cancer? Yes	113	40.2	60*	21.4
Can you save yourself from cancer?				
Yes	105	37.4	121*	43.1
If yes, how?				
Personal hygiene	17	6.0	28	10.0
Avoid tobacco	4	1.4	82*	29.2
General prevention	35	12.5	104*	37.0
Do you think identification in early stage makes cancer more treatable? Yes	51	18.1	93*	33.1
What are the sign and symptoms of cancer?				
Nagging cough	3	1.1	4	1.4
Bleeding	5	1.8	5	1.8
Weight loss	3	1.1	8	2.8
Any unusual changes in bowel and urinary system	7	2.5	32	11.4
Pain or lump	2	0.7	16	5.7
Pimple/unhealed wound	1	0.4	21	7.5
Hoarseness of voice	1	0.4	7	2.5
What are you going to do if you find any signs and symptoms of cancer?				
Consult a doctor	91	32.4	97	34.5
Consult a nurse	0	0.0	3	1.1
Consult other health professor	0	0.0	1	0.4
Can cancer spread from one person to another?				
Yes	39	13.9	11*	3.9
How does one get cancer?				
Germs or virus	50	17.8	23	8.2
Blood transfer	80	28.5	50	17.8
How can you be treated for cancer?				
Stop bad habits like tobacco	1	0.4	7	2.5
Get operation/treatment/chemotherapy/radiotherapy	21	7.5	27	9.6
Sessions added any knowledge?				
Yes	3	1.1	60	21.4
Have learned on self? Yes	2	0.7	20	7.1
What preventive measures you will take after session?				
Change abnormal habits	0	0.0	2	0.7
Breast feeding/cancer	0	0.0	3	1.1
Take balance nutrition	0	0.0	1	0.4
Avoid factors causing constipation	0	0.0	1	0.4
Have checkups from doctors or nurses for skin cancer	0	0.0	20	7.1

(21.4%) persisted on their fear for cancer.

Prevention against cancer:

In pre- test, 105 participants (37.4%) reported that they could save themselves from cancer and this response increased to 121 (43.1%) in post-test. Overall, participants believed that by maintaining personal hygiene (pr-test: 17 & post-test: 28), avoiding tobacco (pre-test: 4 & post-test: 82), and by taking general preventive measures (pre-test: 35 & post-test: 104), they can save themselves from cancer. Another significant finding in this project was that in pre-test only 51 participants (18.1%) asserted that if identified early, cancer is treatable whereas, this response rate increased to a significant value of 93 participants (33.1%) in the post-test which by itself highlights the importance of educational sessions. Both pre and post-test showed not much significant difference in the response rate in most of the life style modifications related questions; however, avoiding tobacco, pan (Betel nut leaf with tobacco) and supari (Betel nut) as a preventive measure was asserted by participants but, not in a statistically significant value (Table 2). At the end of the educational sessions, 20 participants confirmed that regular check-ups can help prevent cancer.

In case of finding abnormal signs and symptoms:

In pre-test, 91 participants responded that they would consult a doctor for a consultation on finding some abnormal signs and symptoms. After the sessions, this rate did not show much change as the rate increased to 97 (34.5%) in post-test. Only 2.9% responded in the post-test that they will consult a nurse before going to a doctor.

Signs and symptoms of cancer:

Most of the results of questions asked pertaining to signs and symptoms of cancer remained somewhat similar in both pre and post-test. However, 2 perceived a lump (painless or with pain) as a sign of cancer in pre-test; this rate changed to 16 as respondents were able to correctly identify a lump (with or without pain) as a sign of cancer in post-test. Other statistically significant findings noted in the pre and post-test were; alteration in bowel and/or urinary habits (pre-test: 7 & post-test; 32), and persistent unhealed pimple or wound (pre-test: 1 & post-test: 21).

Discussion

The results revealed that there was a significant difference about understanding what cancer is, different apprehensions for cancer, prevention and treatment of cancer, adopting healthy life styles, good treatment outcome if cancer is identified at an early stage, and improvement in knowledge that cancer can not be spread from one person to another. This study over all suggests that, people with less or no knowledge are more afraid of cancer. As was seen in the pre-test , 23% subjects reported that they were afraid of cancer, and that decreased to 12% in the post test. During health education session, when participants were asked the reasons of being afraid, they reported that they perceived that all kind of cancers are viral, which will always spread from one person to another and there is no treatment available for it. Moreover, the available treatment is too expensive and might not be effective. Participants were also not aware that there are different stages of cancers and cancer at initial stage is less harmful and quite curable. Our findings have

been supported by another study conducted in United States of America in 2005, in which participants had a lot of misconceptions regarding cancer and its spread. (Gansler et al., 2005).

Our study further revealed that subjects believed cancer to be a dangerous disease which could happen to only those who drink, smoke, etc. Although, Varmus (2006) elaborated that socio-cultural factors, age, ethnicity, reoccurrence of injuries could be the indirect causes of cancer. (Varmus, 2006). A good hope in our study subjects was that 37% in pre-test and 43% in post test reported that they could save themselves from cancers by avoiding tobacco use, and taking general preventive activities like; exercise, appropriate diet, which is similar as reported by Holmes, (2006) in his review paper (Holmes, 2006). The highlighting point of this project was that, we were able to create some awareness about misconceptions of cancers. This misconception can be removed only through awareness sessions as conducted in Phase – 2 of this project. Socially, cancer patients are taken as those who will die in any case. Since cancer was perceived as an infectious disease, this explains the social stigma attached to cancer patients to isolate them from the normal surroundings; which itself adds up to causing depression in cancer patients.

As cancer is gradually increasing globally, its rise in incidence is seen in Pakistan too. It is important to prevent and cure cancer at all levels to be able to reduce the prevalence. One of the primary cancer prevention measures is providing awareness about cancer of the public especially the youth group so that necessary precautions are taken by themselves to prevent the occurrence of cancer in the first place. The awareness could be created on tobacco control, the relationship between diet, physical activity and cancer. Health education programs alone might not be enough to achieve the desired awareness level in general population, it is necessary to conduct them with other health promotional activities like; sports day, etc. This will give more sustainability in the approaches and more generated interest among youngsters. According to a survey conducted by Tingen et al on 1024 parents about health education their children received at schools by nurses showed, that health education programs are effective in the reduction of risk behaviors like tobacco consumption. (Tingen et al., 2006.).

One more interesting point noticed through the results is the fact that only 1.1% of respondents answered in the post-test that in case of noticing some abnormal s/s they will consult a nurse, even when cancer awareness campaign was conducted by the team including two nurses. This highlights another important aspect that patients in developing countries have a strong dependence on doctors for getting proper guidance for health related issues. However, female patients feel more confident to discuss their fears and apprehension with female nurses and health personnel.

The main limitation in our analysis was that we did a generalised knowledge change analysis and could not analyse the change of knowledge at individual level. Although, our subjects were a group of young adults from schools, colleges, religious places, etc, we could not get the exact demographic from each participant. Participants did not mention their age, gender and education level in self filled questionnaires.

In conclusion, cancer is a silently increasing ailment with breast cancer being the most common cancer in women worldwide. Therefore, it's necessary to create awareness among younger adults in schools and colleges through health professionals like doctors, nurses, sociologist etc. This will create a better impact in preventing cancer and also have an impact on early detection of cancer, treatment, and symptom management, and they serve as advocates for women with the disease.

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