EFFECT OF SOCIAL MARKETING CAMPAIGN ON UTILIZATION OF PRIMARY HEALTH CARE CURATIVE SERVICES IN URBAN SECTOR OF SHARKIA GOVERNORATE

Maha M. Ghobashi*, Mohamed Adel S. Fouda, Ghada M. Khafagy* and Randa M. Said
Community Medicine Department, Faculty of Medicine, Zagazig University and Family Medicine Department*, Kasr El-Elini, Cairo University

ABSTRACT
Background: Primary Health Care (PHC) services underutilization was the main finding all over Egypt including Sharkia Governorate and social marketing campaign was a successful method to promote the utilization of such services. Aim & Objectives: The aim of this work is to maximize the utilization of PHC curative services with the following objectives: (1) to design and implement a tailored social marketing campaign in an urban area in Sharkia Governorate. (2) to assess the effect of this campaign on the rate of utilization of PHC curative services in the same urban area in Sharkia Governorate. Subjects & Methods: An intervention study in the form of six months social marketing campaign that was conducted in El-Ebrihemia City, Sharkia Governorate to promote the utilization of El-Ebrihemia Family Health Center (FHC) curative services. This campaign included internal and external marketing seminars, dissemination of promotional materials with participation of El-Ebrihemia health district, the mosques leaders and the volunteers in its implementation. The evaluation was done through comparing the service output indicators and the households surveys results before and after campaign using Paired t test and McNamar test. Results: The campaign was able to increase the utilization of the studied households of all curative services especially 1st aid service from 0% to 17.6%. This was also accompanied with corresponding increase in the service output indicators during and after the campaign. Conclusion: Social marketing was an effective intervention to promote the utilization of El-Ebrihemia FHC curative services. Based on the results, it is recommended that the use of social marketing activities is an essential step to mobilize the served community to utilize PHC services. Keywords: Social marketing, Utilization, Primary health care curative services, Pareto analysis.

INTRODUCTION
The health communications field has been rapidly changing over the past two decades. It has evolved from a one-dimensional reliance on public service announcements to a more sophisticated approach, which draws from successful techniques used by commercial marketers, termed "Social Marketing." This technique has been used extensively in international health programs. Growing evidence and experience (particularly from countries like Canada, Australia and USA) show that when social marketing is applied effectively, and in the appropriate context, it can be a powerful tool for achieving tangible and measurable impact on behavior (1).

Social marketing was "born" as a discipline in the 1970s, when Philip Kotler and Gerald Zaltman(2) realized that the same marketing principles that were being used to sell products to consumers could be used to "sell" ideas, attitudes and behaviors. Dann, 2010 (3) defined social marketing as: “the adaptation and adoption of commercial marketing activities, institutions and processes as a means to induce behavioral change in a targeted audience on a temporary or permanent basis to achieve a social goal”. The social marketing "product" is not necessarily a physical offering. A continuum of products exists, ranging from tangible, physical products (e.g., condoms), to services (e.g., medical examinations), practices (e.g., breastfeeding, Oral Rehydration Therapy (ORT) or eating a heart-healthy diet) and finally, more intangible ideas (e.g., environmental protection) (4).

As PHC underutilization was the main finding all over Egypt including Sharkia Governorate (5), as social marketing conducted in Egypt to promote the use of ORT and family planning was successful, and as public health systems are so over-burdened that they are limited in the type and nature of motivational campaigns they can undertake so; their services are often not valued by the consumer (6). So, social marketing is needed to promote the use of the public health services.

This study aims to maximize the utilization of PHC curative services with the following objectives: (1) to design and implement a tailored social marketing campaign in an urban area in Sharkia Governorate. (2) to assess the effect of this social marketing campaign on the rate of utilization of PHC curative services in the same urban area in Sharkia Governorate.

SUBJECTS AND METHODS
I. Technical design:
Study setting: The study was conducted in El-Ebrihemia city that was chosen randomly to represent the urban sector in Sharkia Governorate. Its population is served by El-Ebrihemia FHC...
which is the only type of PHC facilities in the city, so the intervention aimed to promote its curative services.

**Study design:** An intervention study in the form of social marketing campaign. The intervention planning was done using the marketing mix which includes “8Ps” that were used to formulate the content of the intervention and demonstrated in (table 1). The intervention passed practically through the following three phases: formative research phase, implementation of social marketing campaign phase and evaluation phase.

**Study subjects:** In the formative research phase: 242 households in El-Ebrahemia city were chosen through multistage random sampling technique to be included in the survey conducted before campaign. In the implementation phase, all households living in El-Ebrahemia city were targeted by the campaign. In the evaluation phase, the same households chosen in the phase of formative research were targeted during evaluation of the campaign.

The sample size was calculated by using computer software Epi-info version 6 using power of test 80%, Confidence Interval (CI) 95%, hypothesized improvement in utilization rate from 15% to 25% (7.8). The sample size was 450 subjects. This sample size was multiplied by two to avoid the error of cluster sampling. So, the final sample size reached 1080 subjects. The average number of family members is 4.1 members (9), so the sample size from households was 1080/4= 220 households. Taking into consideration the non-response rate 10%, so the final sample size from households was 224 households.

**Inclusion criteria:** Households with more than three months residency in El- Ebrahemia city were only included in the study.

**Tools of data collection:**
- Health services output indicators from the documented service statistics belonging to El-Ebrahemia FHC before, during and after the implementation of the social marketing campaign. These indicators included percent utilization of outpatient clinic by under five (U5) children, percent utilization of outpatient clinic by general population, and percent utilization of dental clinic by general population
- The household interview questionnaire form used before and after the campaign. It was closed ended, structured and precoded. It was prepared in slag Arabic Language to ensure that all the participants will understand the questions and be stimulated exactly in the same way. It was proved to be reliable via Alpha Cronbach test with value 0.73. It intended to assess the rates of utilization of El- Ebrahemia FHC curative services including outpatient service, 1st aid service, chronic diseases care service, and dental care service.
- The Household non-users questionnaire form intended to collect data about the causes of underutilization of El- Ebrahemia FHC services. It was consisted of closed ended questions answered by either "yes" or "no" covering the following issues; knowledge with presence of service, culture and believes, work and family obligations, cost of services, place inaccessibility, time inaccessibility, and lack of satisfaction about service due to factors related to infrastructure, factors related to process of health care delivery, and factor related to doctor’s performance.

II. Operational design:

A- Preparatory phase: It took two months (during October and November 2011) for preparation of the questionnaires, the promotional materials, and taking the needed permissions.

B- Pilot study: It was conducted during December 2011. Its aim was to test the questionnaires as regards clarity, understanding, consistency and the time needed to fill out them. It was conducted on 20 households in El-Ebrahimia city. They were excluded from the main study sample.

C- Fieldwork: It took 12 months (from January 2012 to December 2012) and divided into three phases:

1st phase: Formative research: It took three months and included the following:
- Reviewing El- Ebrahimia FHC records to calculate the service output indicators of the three months before campaign.
- Conducting households’ survey to fill the questionnaires.

2nd phase: Implementation of social marketing campaign: It took 6 months and included the following activities:
- El-Ebrahimia Health District was a partner in the implementation of the campaign, through the followings: evaluation of the promotional materials, explaining to El-Ebrahimia FHC health care providers that increasing health services utilization and achieving consumer satisfaction represent an integral part of the monthly evaluation of any PHC center upon which the incentives are determine, sending official letters to different directorships in El-Ebrahimia city, Cultural palace, City Council, schools, nurseries, social clubs asking their
managers to arrange for seminars to promote the use of El-Ebrahemia FHC services, and finally, making recommendations to the employee concerned with the media and health education in the district to facilitate the task of the researcher and to help in preparing a plan with places, dates and time of seminars for marketing of El-Ebrahemia FHC services.

- Internal seminars were held weekly in El-Ebrahemia FHC either during the immunization sessions for infants or during tetanus toxoid immunization sessions for pregnant females.
- External seminars were held weekly with the employees of the following places, different directorships in El-Ebrahemia city, Cultural Palace, City Council, 23 schools, five nurseries, El-Ebrahimia youth center and El-Ebrahimia sport club.
- During these seminars, El-Ebrahemia FHC services were marketed by talking about the available curative services delivered by El-Ebrahemia FHC, their importance and their advantages over other types of health services. The means of marketing was through face-to-face communication, PowerPoint presentation, and distributing brochures among the attendants who were asked to disseminate the message among relatives, friends and neighbors.
- The mosques leaders and a team of volunteers were also partners in the implementation of the campaign through disseminating the message and distributing the promotional materials. Posters were also placed in clear places throughout El-Ebrahemia city.

3rd phase: Evaluation of social marketing campaign: It took three months and included:

- Conducting another household survey by visiting the same households chosen in the phase of formative research and filling the same questionnaires used before campaign.
- Records reviewing to calculate the curative services output indicators for the three months after campaign to compare their means with their counterparts of the three months before the campaign. Also, these indicators were calculated monthly during implementation of the campaign.

IV. Data management:

Pareto chart was drawn to represent El-Ebrahemia FHC underutilization causes. The frequency of each cause of underutilization was counted. After descending ranking of the different causes, the cumulative percentage was calculated. Pareto chart was drawn according to the frequency of each ranked cause showing the level of 80% cumulative percentage as the cutoff point that identifies the corresponding factors related to underutilization.

SPSS program version 20.0 was used to measure the statistical difference between the pre and post intervention service output indicators and household surveys. Paired t test was used to compare the means of service output indicators of the three months before the campaign with their counterparts of the three months after the campaign. McNemar test was used to compare utilization of different health services in El-Ebrahemia FHC by the studied households before and after campaign. they were considered statistically significant at P-value < 0.05.
Table (1): The marketing mix “8Ps”

1. **Product**
   The intervention should illustrate the advantages of El-Ebrahemia FHC curative services which include that these services are accessible, affordable, acceptable, available on daily basis, and more than one service can be obtained during a single visit to the facility. Additionally, follow up services/continuity of care is considered. They include outpatient service, 1st aid service, chronic diseases care service, and dental care service.

2. **Price**
   The intervention should illustrate that these services save money, time and effort as the consumer can obtain more than one service from one place during a single visit. To treat the sense of embarrassment, the intervention should illustrate for example that female doctors are available to do gynecologic examination or that there is complete privacy during provision of services. To treat the sense of lost pride and dignity associated with utilization of governmental service, the intervention should be directed to health care providers to increase their awareness about the importance of showing respect and interest to the consumers.

3. **Publics**
   The primary target audiences are all family members of all ages and of both sexes. The secondary target audiences include mosque leaders, managers of schools, nurseries and social clubs, and El-Ebrahemia FHC health care providers including doctors, nurses, and community out-reach workers who can encourage message dissemination to primary target group within their spheres of influence.

4. **Place**
   The researcher should go to where the target audience is, so the primary target audiences will be interviewed in their houses, in the streets, and in the market. The secondary target audiences will be interviewed in their work places.

5. **Promotion**
   The communication channels will include face-to-face communication and printed materials like brochures, fliers, posters, and PHC services guide booklet, which provide full information for those who are interested. The communication channels with secondary target audiences will include official letters, face to face communication to explain the idea of the social marketing campaign to them, to persuade them to help the researcher in disseminating the message, to provide them with PHC services guide booklets and samples of brochures, and to ask them to evaluate what they are asked to distribute.

6. **Positioning**
   The intervention should highlight the benefits of PHC services over the alternative services e.g. why you pay a lot of money for private health services, if you could pay nothing for PHC services.

7. **Partnership**
   El-Ebrahemia Health District could be a partner.

8. **Purse string**
   The researcher will be the source of fund needed for making the promotional materials that will be used in the campaign.

**RESULTS**

*Figure (1)* shows Pareto chart that was drawn to represent causes of underutilization of EL-Ebrahemia FHC. According to the Pareto rule, the first 8 items of the causes (almost half (50%) of the studied factors) ranked by order were identified as the most important factors causing about 80% of underutilization of EL-Ebrahemia FHC. The identified factors were lack of different specialties, lack of doctor efficiency, lack of drugs, lack of Lab investigations and other equipments, services are not available all over the day, examination is confined to site of complaint, doctor unavailability and lack of regular maintenance to equipments.
Figure (2) shows that there was progressive increase in the percent utilization of outpatient clinic by U5 children during and after campaign.

Figure (3) shows that there was an increase in the percent utilization of outpatient clinic by general population during and after campaign. The figure shows also that there was a drop in the level of this indicator in August.

Figure (4) shows that there was a sharp rise in the percent utilization of dental clinic by general population at the beginning of the campaign followed by gradual increase during and after campaign.
Table (2): Evaluation of effect of social marketing campaign through the results of service output indicators.

<table>
<thead>
<tr>
<th>Service output indicators</th>
<th>X ±SD</th>
<th>Paired t P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before campaign</td>
<td>After campaign</td>
<td></td>
</tr>
<tr>
<td>14-Percent utilization of outpatient clinic by U5 children</td>
<td>1.7667±0.4042</td>
<td>6.000± 0.2646</td>
</tr>
<tr>
<td>15-Percent utilization of outpatient clinic by general population</td>
<td>2.6000± 0.1000</td>
<td>6.0000± 0.2646</td>
</tr>
<tr>
<td>16-Percent utilization of dental clinic</td>
<td>0.1133± 0.0153</td>
<td>0.2100± 0.0100</td>
</tr>
</tbody>
</table>

(*) Statistically significant at p<0.05

Table (2) shows that the means of the service output indicators of the three months after campaign had improved and become more than their counterparts of the three months before campaign and this could be applied to the three curative service output indicators. These differences were statistically significant.

Figure (5) shows that after the campaign, the percent proportion of the households visits to El- Ebrahimia FHC for curative purposes had increased in comparison to that before the campaign; for outpatient visits increased from 8.9% to 23.0%, for chronic diseases visits increased from 16.3% to 22.4%, for 1st aid visits increased from 0% to 17.6%, and for dental clinic visits increased from 15.6 to 39.1%.
Table (3): Evaluation of effect of social marketing campaign on utilization of El-Ebrahemia FHC curative services through the results of household surveys.

<table>
<thead>
<tr>
<th>Services</th>
<th>After campaign</th>
<th>McNemar Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Utilizer</td>
<td>Non Utilizer</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td><strong>Outpatient clinic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before campaign</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilizer</td>
<td>50</td>
<td>R=76.9</td>
</tr>
<tr>
<td></td>
<td>C=29.4</td>
<td></td>
</tr>
<tr>
<td>Non Utilizer</td>
<td>120</td>
<td>R=13.4</td>
</tr>
<tr>
<td></td>
<td>C=70.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>17.7</td>
</tr>
</tbody>
</table>

| Chronic disease care      |          |              |        |              |       |              |
| Before campaign           |          |              |        |              |       |              |
| Utilizer                  | 16       | R=100        | 0      | R=0.0        | 16    | 16.3         |
|                          | C=72.7   |              | C=0.0  |              |       |              |
| Non Utilizer              | 6        | R=7.3        | 76     | R=92.7       | 82    | 83.7         |
|                          | C=27.3   |              | C=100  |              |       |              |
| Total                     | 22       | 22.4         | 76     | 77.6         | 98    | 100.0        |

| 1st aid                   |          |              |        |              |       |              |
| Before campaign           |          |              |        |              |       |              |
| Utilizer                  | 0        | R=0.0        | 0      | R=0.0        | 0     | 0.0          |
|                          | C=0.0    |              | C=0.0  |              |       |              |
| Non Utilizer              | 6        | R=0.6        | 954    | R=99.4       | 960   | 100          |
|                          | C=100    |              | C=100  |              |       |              |
| Total                     | 6        | 0.6          | 954    | 99.4         | 960   | 100.0        |

| Dental clinic             |          |              |        |              |       |              |
| Before campaign           |          |              |        |              |       |              |
| Utilizer                  | 10       | R=83.3       | 2      | R=16.7       | 12    | 1.3          |
|                          | C=37.0   |              | C=0.2  |              |       |              |
| Non Utilizer              | 17       | R=1.8        | 931    | R=98.2       | 948   | 98.7         |
|                          | C=63.0   |              | C=99.8 |              |       |              |
| Total                     | 27       | 2.8          | 933    | 97.2         | 960   | 100.0        |

(*) Statistically significant at p<0.05  
R= % before campaign  
C= % after campaign

Table (3) shows that the utilization of all curative services provided by El-Ebrahemia FHC had increased after campaign and this increase was statistically significant for all the services.

DISCUSSION

The present study was conducted to evaluate the effect of social marketing campaign on utilization of PHC curative services. After performing all the stages of the study from formative research to implementation and evaluation of the campaign, it was proved that the social marketing campaign can increase the utilization of PHC services significantly.

One of social marketing benchmark criteria is consumer orientation which means that the target audience should be put at the center of every taken decision. Another criterion is insight in which a focus is placed on gaining deeper understanding of what moves and motivates the target group. Social marketers conduct formative process, and evaluative research to discover barriers to behavioral change and develop approaches that address them. That is the reason behind doing Pareto analysis in the formative research phase of the campaign to explore the main causes of underutilization of EL-Ebrahemia FHC to try to correct them if possible before starting implementation of the social marketing activities, as removal of the barriers to certain behavior (causes of underutilization) is a part of the social marketing intervention aiming for change of the behavior (increasing utilization).

The current study identified almost 50% of the factors studied to assess causes of El-Ebrahemia FHC underutilization were responsible for about 80% of underutilization problem, these are too many factors, it is more than 80/20 rule illustrated...
by Pareto. Most of these factors were related to infrastructure and doctors’ performance which are out of control of researcher and here came the role of El-Ebrahemia Health District which was a partner in the campaign through solving some of these problems like improvement of some week points in doctors’ performance like unavailability all the times, not keeping appointments, not performing detailed medical examination and following the regular maintenance of the center equipments through all the period of implementation of the campaign.

Lack of knowledge with the presence of service was one of causes of underutilization but it was not among the most important causes as identified by Pareto analysis so part of the campaign success was based on increasing the awareness of the served community with the presence of the curative services in the center especially 1st aid service, which was not used by any one of the studied subjects before campaign. Major part of the campaign success based on the interventions done by El-Ebrahemia Health District and this is in agreement with Ling et al, 1992 (11) who found that social marketing needs to be part of a broader strategy that includes linkages with service delivery, skills learning, and community education.

The results of the study revealed the decreased utilization of El-Ebrahemia FHC for curative purposes before campaign. This was in agreement with many studies conducted in Egypt and proved the decreased utilization of PHC facilities for curative purposes like El-Zanaty, 2005 (12); Mohamed 2007 (13) and Hakim, 2009 (14). This finding was explained in the previous studies by the fact that their study subjects perceived the curative care to be important and warranted a visit to a more effective health facility rather than the PHC facilities or other governmental health facilities. As well, reflected their worry that going to governmental health facilities may present a risk, because they might not be properly staffed and/or equipped.

Regarding to the evaluation of the intervention, it was noticed that there were a significant differences in utilization of all curative services after the intervention including outpatient service, 1st aid service, chronic disease service, and dental care service as revealed from the results of household survey and service output indicators. This proved the effectiveness of the intervention and shows the importance of its application as a strategy to improve PHC services utilization in general.

This result got in agreement with many other studies that revealed that social marketing had been successful to improve use of a variety of products, including birth control pills and condoms, bednets to prevent transmission of malaria, oral rehydration salts, breast-feeding, the consumption of foods such as iodized salt and red palm oil to improve vitamin A status, and the consumption of multivitamin and mineral supplements (15).

Social marketing was also an effective method in promoting the use of many health services including child immunization, cervical cancer screening, breast cancer screening, smoking cessation service promote, HIV testing among adolescents, and domestic violence counseling service (16).

Obstacles in this study: the objective evaluation was lacking as it depended on comparing the results before and after campaign. While, Bloom (1980) (17) deplored the tendency of projects to use “after only” or “before and after” as studies with no control group, a practice that might identify ineffective programs, but could not show causal relationships between program and outcome.

Also, data of this study did not allow a more detailed analysis of El-Ebrahemia FHC non-users perspectives of underutilization of the center as it depended on the quantitative method of data collection and not the qualitative one which is more informative. Also, social marketing needs heavy investment in time, money, and human resources, so any researcher that will use social marketing intervention should plan for these requirements at first.

Although social marketing was proved to be an effective intervention to change health practices, if the goal is sustained behavior change, and if the change has structural implications, social marketing per se has less impact (14). So, it is expected that if utilization rate is re-estimated on the same people later on (e.g. after 6 months), the same old rates before intervention may be found because the main causes (lacking infrastructure, lacking of drugs, specialists…) are lacking. So this study could be of great value if marketing is done in parallel with improving quality of service and infrastructure.

CONCLUSION AND RECOMMENDATIONS

Based on the results of formative research phase, it is recommended to improve human resource management to support PHC services
through the followings; capacity building/training of the staff to reinforce their clinical skills. Specialists from the district hospital could be motivated to work in different PHC facilities. Motivation like performance based incentive system should be used to ensure continuous availability of physicians and provision of quality health care services in PHC facilities. It is also recommended to improve performance in PHC services through having clear logistic management system for medications and supplies and revising performance in the curative care services to investigate why these services are least sought by the served community.

It was clear from this study that social marketing was an effective intervention to promote the utilization of El-Ebrahemia FHC curative services. So, it is recommended to raise the demands for PHC services through practicing the social marketing principles and activities which on its top, “to mobilize the served community to use certain service, social marketing intervention should begin and end with the target audiences who should be put at the center of every taken decision”.

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تأثير حملة التسويق الاجتماعي على الانتفاع بالخدمات العلاجية للرعاية الصحية الأولية


وقد مرت ثلاث مراحل وهي:

اولًا: مرحلة البحث: استغرقت ثلاث شهور تم خلالها المسح الميداني لعدد 242 أسرة تم اختيارها عشوائيا من سكان الإبراهيمية، وحساب المؤشرات الخاصة بمخرجات الخدمة في مركز صحة الأسرة بالإبراهيمية.

ثانيًا: مرحلة التنفيذ: استغرقت سته شهور تم خلالها عقد ندوات تدريبية، ووزع المواد الترويجية في المنازل، الشوارع، السوق، والموافقة. ولدّ كانت الإدارة الصحية بالإبراهيمية والمشرف المتميّز في هذه المرحلة.

ثالثًا: مرحلة التقييم: استغرقت ثلاث شهور تم خلالها اجراء مسح ميداني لمسؤولي نفس الأسر المختارة في مرحلة البحث. وحساب المؤشرات الخاصة بمخرجات الخدمة. وكانت الأدوات المستخدمة في البحث هي بعض المؤشرات الخاصة بمخرجات الخدمات العلاجية، ومسح الميداني للأسر موضع الدراسة.

النتائج: أن الحملة كانت قادرة على زيادة استخدام الأسر موضع الدراسة لخدمات الطلب بالخارج من 6.9% إلى 23%، وخدمة رعاية الأمراض المزمنة من 19.3% إلى 42.4%، وخدمة الأسنان الأولية من 3.6% إلى 17.2%، وخدمة رعاية الأمراض من 1.5% إلى 39.1%.

الننوصية: العمل على زيادة الطلب على خدمات الرعاية الصحية الأولية من خلال تطبيق أنشطة ومبادرات التسويق الاجتماعي.