

Preparation and evaluation of information leaflet for tobacco users

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ABSTRACT

Background: There is general lack of knowledge concerning the signs, symptoms, and risk factors of oral cancer in the general population, particularly among tobacco users. A challenging measure for the health care professions is to improve patients' knowledge about the causes and signs of oral cancer and, more importantly, to modify their health behaviors. The most frequent approach used to achieve this is production of leaflet. The aim of this study was to outline and carry out the steps involved in the production of information leaflet for tobacco users and its evaluation. **Materials and Methods:** The existing materials on tobacco and its ill effects were reviewed. Leaflets were prepared based on the European Commission Guidelines for patient information leaflet and information packages. Subject experts reviewed the content of leaflet. Content validity was checked using Lawshe method. Reliability was checked using Flesch formula. **Results:** Content Validity Ratio (CVR) value was 0.99, which was acceptable. The reliability of the final wording of the leaflet was 80, which was classified as "fairly ease." **Conclusion:** The leaflet could be used as a health education aid to motivate tobacco users to quit tobacco use.

Key words: Health education, ill effects of tobacco, leaflet, tobacco users

INTRODUCTION

Tobacco use is one of the most important risk factors for oral diseases including oral cancer, oral mucosal lesions, periodontal disease, and cleft lip and palate. An estimated 263,900 new cases and 128,000 deaths from oral cavity cancer (including lip cancer) occurred in 2008 worldwide. In India, the age-standardized incidence rate of oral cancer

is reported at 12.6 per 100,000 population.^[1] Control of oral cancer is best achieved through prevention.^[2] Two measures have been suggested to reduce this rising trend: Population screening for oral cancer and primary prevention using health education.^[3] A study has, however, examined evidence for and against population-based screening and concluded that there is insufficient evidence to recommend population screening for oral cancer. Measures aimed at primary prevention using health education may, therefore, be a more feasible method of disease control for the present time.^[3] Studies have demonstrated that there is a general lack of knowledge concerning the signs, symptoms, and risk factors of oral cancer.^[4] There is general lack of knowledge concerning the signs, symptoms, and risk factors of oral cancer in the general population, particularly among tobacco users, which demonstrates the need for vigorous health education and health promotion. Large reduction in incidence can, therefore, be achieved by cessation of tobacco use and restricting alcohol consumption to safe limits.^[5]

A challenging measure for the health care professions will be to improve patients' knowledge of the causes and signs

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of oral cancer and, more importantly, to modify their health behaviors.^[6] One approach is the provision of effective communication to the patients about oral cancer. The content and delivery of such communication requires preparation and effort on the part of clinicians. There is strong evidence that patients' overall satisfaction with the clinician is increased if they are supplied with, and comprehend, information and clinical advice.^[6] Furthermore, studies confirm that providing clear information improves not only satisfaction but also retention of the imparted information and leads to increased compliance.^[6] However, oral communications often fail because they are misunderstood and/or forgotten. Therefore, information leaflets could be considered as a way of supplementing health education. Imparting information through leaflets has a number of advantages;^[7] they could contain a broad range of important points and they are available to the patients for further reference.^[7] Many studies have shown that patients prefer written information, and one study, in particular, found that patients who received this form of information were more satisfied with their treatment as a whole.^[6] The most frequent approach used to achieve this is production of leaflet. Unfortunately, evidence suggests that the design of health information leaflet is poor. Leaflet must be easily understood and well presented to have any effect on patients' knowledge. The aim of this study was to outline and carry out the steps involved in the production of information leaflet for tobacco users and its evaluation.

MATERIALS AND METHODS

Preparation of leaflet was planned over a 1½-month period after completing the following steps. First, the existing materials on tobacco and its ill effects were reviewed, particularly etiology, signs, symptoms, and preventive methods of oral cancer, and other ill effects of tobacco on oral cavity and on body. Since most of the subjects' education level was low and most of them were illiterates, information in the leaflet was more pictorial and with few quotes in words. Second, leaflets were prepared based on the European Commission Guidelines for patient information leaflet and information packages.^[8]

Steps involved in leaflet preparation

- *Type, size, and font:* Bigger font size was chosen for ease of reading. Stylized fonts were avoided to reduce difficult reading
- *Design and layout of the information:* Contrast between the text and the background was kept clear. Related information was kept together, so that the text flowed easily from one column to the next. Landscape layout was considered
- *Headings:* Bold typeface for the headings with different colors were used to make the information stand out
- *Print color:* Dark text printed on a light background
- *Syntax:* Simple words of few syllables were used as patients using these leaflets were with poor health literacy
- *Style:* Active style was used
- *Paper:* Uncoated paper that was sufficiently thick was considered

- *Use of symbols and pictograms:* Symbols and pictograms were used considering the health literacy level of the patients.

Subject experts reviewed the content of leaflet. The expert panel constituted professor in Public Health Dentistry, professor in Community Medicine Department, and professor in Psychology Department. Content validity was checked using Lawshe method.^[9] Over six pilot leaflets were produced after making the modifications suggested by subject experts. A pilot leaflet was drafted and checked for reliability using Flesch Formula; this measures the text difficulty with reference to word and sentence length.^[10] Though it might seem simple, the Flesch Reading Ease Formula has certain ambiguities. For instance, periods, explanation points, colons, and semicolons serve as sentence delimiters; each group of continuous non-blank characters with beginning and ending punctuation removed counts as a word; each vowel in a word is considered one syllable subject to: (a) -es, -ed, and -e (except -le) endings are ignored; (b) words of three letters or shorter count as single syllables; and (c) consecutive vowels count as one syllable.

Twenty tobacco users visiting peripheral dental health centers of MS Ramaiah Dental College and Hospital Bengaluru were enrolled to check the Flesch score. [The reading ease score ranged from zero (very hard) to 100 (very easy).] Criteria for improving leaflet included: Clarity, ease of comprehensibility, and recommendation to engage in a small number of health actions. Difficulties in understanding the leaflets and cultural incompetency were recorded and necessary revisions were made.

RESULTS

Content Validity Ratio (CVR) value was 0.99, which was acceptable. The reliability of the final wording of the leaflet was 80, which was classified as "fairly ease," in that it would be understood by 90% of tobacco users aged over 20 years. The final leaflet was produced on a word processor, and improvements to the layout and presentation were made that consisted of A4 size glossy paper design printed in full color. (Leaflets are available from the corresponding author on request.)

DISCUSSION

In an era of patient-centered care, based on the principle of a fully informed patient actively involved in the decision-making process, provision of effective information is a prerequisite. Health education can be effective with audiovisual aids. They help to simplify unfamiliar concepts, bring about understanding where words fail, reinforce learning by appealing to more than one sense, and provide a dynamic way of avoiding monotony.^[11] One longstanding strategy in health education to improve knowledge has been the use of written patient information leaflets. Once printed and delivered, the leaflet can be retained and readily passed from one person

to another without distortion. A properly developed and designed message can have a deep and lasting effect on the target audience.^[12] Leaflet is one of the commonly used non-audio health educational aids. The leaflet is intended for the patient/user. If the leaflet is well designed and clearly worded, it maximizes the number of people who can use the information, including older children and adolescents, those with poor literacy skills, and those with some degree of sight loss.^[13] Health professionals are encouraged to seek advice from specialists in information design when devising their leaflet to ensure that the design facilitates navigation and access to information.^[14]

Considerable time and effort is required to produce patient information leaflets^[15] and to increase public awareness of diseases such as the ones caused due to ill effects of tobacco. A number of guidelines for producing written information have been produced over the last few years;^[8,16,17] these include advise on planning, writing, and design, but also emphasize the importance of obtaining evidence-based information, and involving both medical personnel and patient groups and members of public. The evaluation of an information leaflet is, however, an essential part of this process and is often neglected or inadequate. The present study has described methods that can be employed to prepare and evaluate leaflet on e ill effects of tobacco on oral cavity and general health of tobacco users with low educational qualifications.

Developing and delivering information leaflet will not end the task. Information leaflets are probably best utilized when they are targeted at specific groups, possibly those at high risk for developing the disease. Older patients who smoke and drink are at a greater risk for developing oral cancer. Material deprivation has been related to the incidence of oral cancer. One of the strengths of this study was that the developed leaflet was targeted at specific group and behavior, particularly those with lower education.

The leaflet recommends certain health behaviors (e.g. giving up tobacco use, improvements in health and quality of life if they quit the habit). Health education material is, however, likely to be ineffective unless it alerts health behaviors. Evidence-based research has concluded that brief advice (about 3 min) to stop smoking, from a health professional, is a highly cost-effective way to reduce the proportion of people smoking, but there is insufficient evidence for the effectiveness of self-help materials (i.e. booklets, pamphlets, manuals).^[18] Information leaflets on the ill effects of tobacco may, therefore, be more effective in changing tobacco use behavior if targeted at high-risk groups and used to reinforce information given by the dentist about the ill effects of tobacco on oral and general health and the preventive advice about tobacco cessation.

High-quality leaflets on the ill effects of tobacco on general health are available at Family and Welfare Department, Information Education Communication (IEC) center of the Government of India. These materials are used as quick guides for ASHA [Accredited Social Health Activist] and

Anganawadi workers to provide health education to the general public. It is important that health care professionals, particularly dental practitioners, should be made aware of the written material available and be encouraged to use it. Information leaflets must contain evidence-based information and be reviewed and updated on a regular basis. The government has set up the IEC center for health education materials and as a clearing house for health professionals and patient information. The IEC department provides information materials on tobacco and its ill effects on health, which will be of assistance in developing good-quality patient information leaflets.

CONCLUSION

There are a number of steps for production of good-quality, evidence-based information for general public health. This study has outlined the steps involved and has described the methods that can be employed to evaluate information leaflet. The leaflet could be used as a health education aid to motivate tobacco users to quit tobacco use.

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