

1999

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Publication details

Bonevski, B & Newell, S 1999, 'Development of written health education materials: a review', Hunter Centre for Health Advancement Research Seminar, Newcastle, NSW.

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Development of Written Health Education Materials – A Review

Billie Bonevski & Sallie Newell, Cancer Education Research Project, 1999

Background

Written health education materials (WHEMs), such as pamphlets, are widely used in the field of health education in terms of both the wide variety of topics they cover and the large number produced. The New South Wales Cancer Council distributes more than one million print items annually, a large proportion of which are pamphlets¹. The development and distribution of pamphlets involves considerable costs. For example, in the US, \$14.3 million was spent on the one-off distribution of an AIDS brochure in a nation-wide education campaign². A survey of pamphlets produced in NSW found development costs ranged from \$120 to \$8000, with a mean cost of \$3797³.

Current CERP Research

CERP has conducted a series of reviews and studies examining issues surrounding the development of WHEMs. This research, summarised below, includes: a literature review of the effectiveness of print material⁴, development of a checklist for pamphlet design³, a review of current pamphlet development practices⁵, a randomised, controlled trial of the cost-effectiveness of three strategies of printed materials' development⁶ and a trial of the relative effectiveness of different strategies for distributing WHEMs⁷.

1. A Review of the Effectiveness of Printed Materials.

A review of the literature published between 1985 and 1992 was conducted to explore the effectiveness of WHEMs as tools for changing health-related knowledge, attitudes and behaviour. The computer databases Medline and Healthplan were searched. The authors extracted five published literature reviews and 43 independent studies which met their methodological inclusion criteria. The review found that the effectiveness of pamphlets varied according to three aspects of how pamphlets were used:

- Pamphlets were more likely to be effective when used for patient education than public education.
- Effects on behaviour varied according to whether a pamphlet was used alone or as an addition to another form of intervention.
- Pamphlets appeared more consistent in changing knowledge and attitudes than behaviour.

2. Development of a Checklist of Content and Design Characteristics for Printed Health Education Materials.

Due to an apparent paucity of practical information to aid those developing pamphlets, the next study aimed to develop a checklist of content and design characteristics of effective WHEMs. The checklist was developed based on the information gleaned from the literature review. In addition, the concurrent validity of the checklist was examined. To do this, a series of pamphlets was developed to demonstrate the checklist in an applied form. The pamphlets were rated by 48 media or health education professionals (experts) and 30 women (target group), and the checklist was rated by the experts. The experts and target group were asked to rate the checklist and pamphlet according to the important characteristics of pamphlets and the likelihood of effectiveness. The study found experts rated 97% of the checklist items as important. Similarly both experts and the target group rated the pamphlets potential effectiveness according to their characteristics. It appears that the checklist may be a useful tool for those involved in the development and review of WHEMs, such as pamphlets. A copy of the checklist is attached.

3. A Review of Current Pamphlet Development Practices.

A networking procedure was used to identify a representative sample of current NSW health education pamphlets targeting the public. Consenting agencies were asked to supply a list and samples of their pamphlets and participate in an interview. Each pamphlet was rated against a checklist of content and design characteristics and a checklist of behavioural strategies. In addition, data on the development costs of each pamphlet were collected. Interviews were conducted on 183 pamphlets from 21 agencies.

Development costs ranged from \$120 to \$8,000 per pamphlet. Other results found that 66% of pamphlets used all content and design characteristics and 96% used at least half. Only 21% used six or more out of 12 behavioural strategies. For 70% of the pamphlets in the sample, no form of evaluation had been used.

4. A Randomised, Controlled Trial of the Cost-Effectiveness of Three Strategies of Printed Materials Development.

Three major approaches are apparent in the literature for pamphlet design – content and design characteristics, behavioural strategies and social marketing strategies. However, little attention has been directed towards the cost-effectiveness of such approaches. This study developed three pamphlets, using successive addition of each strategy: content and design (C pamphlet), behavioural strategies (C+B pamphlet) and social marketing strategies (C+B+S pamphlet). Each pamphlet encouraged women to join a Pap Test Reminder Service (PTRS). Each pamphlet was mailed to a randomly selected sample of 2,700 women aged 50-69 years. Registrations with the PTRS were monitored and 420 women in each pamphlet group were surveyed by telephone. The results showed that:

- The C+B and C+B+S pamphlets were significantly more effective than the C pamphlet. There was no difference in recruitment effectiveness between C+B or C+B+S.
- The C+B pamphlet was the most cost-effective, at \$21.33 per woman joining the PTRS. The C+B+S pamphlet cost \$22.78 and the C pamphlet \$34.55 per woman joined.

5. A Trial of the Relative Effectiveness of Different Strategies for Distributing WHEMs

The two most commonly-used methods of distributing pamphlets are mailing them out or having health care professionals give them to patients. As little evidence of the relative effectiveness of these distribution strategies could be found, a trial was conducted involving the distribution of over 500 WHEMs. This study explored the impact of distribution strategy on the recall of receipt, retention, utilisation and acceptability of the WHEMs. The results showed that:

- Distribution by health care professional resulted in higher proportions of people recalling receiving the materials. This difference is likely to be largely due to the fairly high rate of inaccuracies in most of the databases used for mailing materials.
- Distribution by health care professional resulted in higher proportions of people reporting having kept the materials.
- Distribution by mail resulted in a higher likelihood of recipients reading the WHEMs.
- Distribution method had little impact on the perceived acceptability of the materials.

Therefore, in many cases, getting health care professionals to distribute pamphlets is likely to result in higher rates of receipt and readership. However, it is usually a much slower method of distribution than mailing the pamphlets: only about 70% of the Australian population visit a general practitioner, the most-visited health care professional, within a 12 month period. Therefore, such issues need to be weighed up when considering how to distribute your WHEMs. The target group should also be taken into consideration, along with whether there are any other convenient methods of distributing the WHEMs to them. For example, schools could be asked to distribute WHEMs aimed at children.

Major Recommendations Resulting from the Research

To increase the likelihood of the effectiveness of pamphlets:

1. Target select, high-risk groups rather than the general population.
2. Use pamphlets to target knowledge and attitude change as a step toward behaviour change.
3. To change behaviour, use pamphlets in addition to other interventions.
4. Incorporate behavioural strategies (see below) in pamphlet design.
5. Evaluate the effectiveness of the pamphlet.

Behavioural Strategies

As with any other attempt at behaviour change, the standard behaviour change models can be applied to written education materials. Two of the most commonly-used models are discussed below.

Health Belief Model⁸

The Health Belief Model states that an individual's preparedness to engage in a desired health behaviour is related to the perceived severity of the related disease (or other consequence of not doing so), their perception of personal susceptibility to the disease (or other consequence) and the perceived trade-off between the costs and benefits associated with engaging in the behaviour. Therefore, WHEMs should include information addressing each of these issues. Common ways of doing this are to say how many, or what proportion of people develop the disease (severity); the types of people who are more likely to develop the disease (susceptibility); emphasising the benefits that can be expected from engaging in the desired behaviour (benefits); and minimising the costs (money, time, side effects, etc) associated with engaging in the desired behaviour (costs).

PRECEDE-PROCEED Model⁹

The PRECEDE-PROCEED model of health promotion suggests that three types of factors influence the uptake and maintenance of any health behaviour. These are predisposing factors, which increase or decrease the individual's motivation to change; enabling factors, which help or hinder the individual's attempts at behavioural change and reinforcing factors, which increase or decrease the likelihood of a behavioural change being maintained. Therefore, WHEMs should include information addressing each of these issues. Common ways of doing this are to highlight the potential benefits of engaging in the desired behaviour (motivating); telling people where, when and/or how they can engage in the desired behaviour (enabling); and telling people of the longer term benefits of maintaining the behaviour (reinforcing).

References

1. NSW Cancer Council. *Annual report 1991-1992*. Sydney: NSW Cancer Council, 1992.
2. Dull B. Behind the AIDS mailer. *American Journal of Preventive Medicine* 1988;4:239-40.
3. Paul CL, Redman S, Sanson-Fisher RW. Print material as a public health education tool. *Australian and New Zealand Journal of Public Health* 1998;22(1):146-148.
4. Paul CL, Redman S. A review of the effectiveness of print material in changing health-related knowledge, attitudes and behaviour. *Health Promotion Journal of Australia* 1997;7(2):91-99.
5. Paul CL, Redman S, Sanson-Fisher RW. The development of a checklist of content and design characteristics for printed health education materials. *Health Promotion Journal of Australia* 1997;7(3):153-159.

6. Paul CL. *The Development of Printed Health Education Messages*. Doctor of Philosophy Thesis, University of Newcastle, Newcastle, Australia, 1994.
7. Newell S, Girgis A & Sanson-Fisher RW. Recall, retention, utilisation and acceptability of written health education materials: a pilot study to compare two distribution strategies. *Australian Journal of Public Health*, 1995;19(4):368-74.
8. Rosenstock IM. The health belief model and preventive behaviour. *Health Education Monographs*, 1974;2:27-59.
9. Green LW, Kreuter MW. *Health Promotion Planning: An Educational and Environmental Approach*. Mountain View: Mayfield Publishing Company, 1991.