



## Systematic Review

**The Effectiveness of Traditional Media (Leaflet and Poster) to Promote Health in a Community Setting in the Digital Era: A Systematic Review****Ardila Lailatul Barik, Rizki Agustin Purwaningtyas and Dwi Astuti**

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**ABSTRACT**

**Introduction:** The use of health promotion media in the digital era, such as e-health and m-health, is increasing. However, traditional health promotion media, such as posters and leaflets, are still used. This review aimed to identify the effectiveness of the use of traditional health promotion media (leaflets and posters) in a community setting in the digital era.

**Methods:** The data was gathered using the following steps: (1) determining the topic, (2) determining the keyword chain, (3) looking for the relevant literature in the database and (4) analyzing the article. The search using a predetermined keyword chain in Scopus, Science Direct and Sage Journals produced 208 publications.

**Results:** After applying the inclusion and exclusion criteria, 16 publications were selected for review.

**Conclusion:** Traditional health promotion media such as leaflets and posters are still useful in the current digital era, especially for adult respondents. This form of media will be more effective when combined with other media such as videos, telephone interactions, games and others.

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**INTRODUCTION**

In the face of rapid digitalization, e-health and m-health are increasingly being used. E-health is a health service conducted through the Internet and related technology, while m-health is a health service utilized through a mobile application (Dang, Golden, Cheung, & Roos, 2010 ; Power, 2018). However, traditional health promotion media, such as posters and leaflets, are still frequently used (Nitschke, Krackowizer, Hansen, Bi, & Tucker, 2017; Zhu et al., 2017). Is the use of traditional media still effective in the current era of digitalization? As far as our knowledge goes, a review of the use of traditional health promotion media in the digitalization era has never been discussed previously.

Health promotion includes activities that aim to protect or improve health through improving the physical and social environment (John & Published, 2015). Therefore, the role of health promotion is important. Previous research has shown that promotional tools influence the effectiveness of the promotions carried out (Al Bardaweel & Dashash,

2018; Suswani, Arsunan, Amiruddin, Zulkifli, & Ariyanti, 2018). Thus, choosing the right health promotion media is an important step that influences the success of the promotion.

This study aimed to determine the use of traditional health promotion media (leaflets and posters) in the digital era in the community. Who is effective at using the media, whether they be children, adults, or the elderly? What types of cases are in accordance with the promotional media, whether primary, secondary, or tertiary prevention? Where is the media often used; developed countries, developing countries or lagging countries? How is the media used, is it used alone or is it used with other promotional media?

**MATERIALS AND METHODS**

This study used a systematic review to analyze the use of traditional health promotion media in the era of digitalization in society. The study began with a

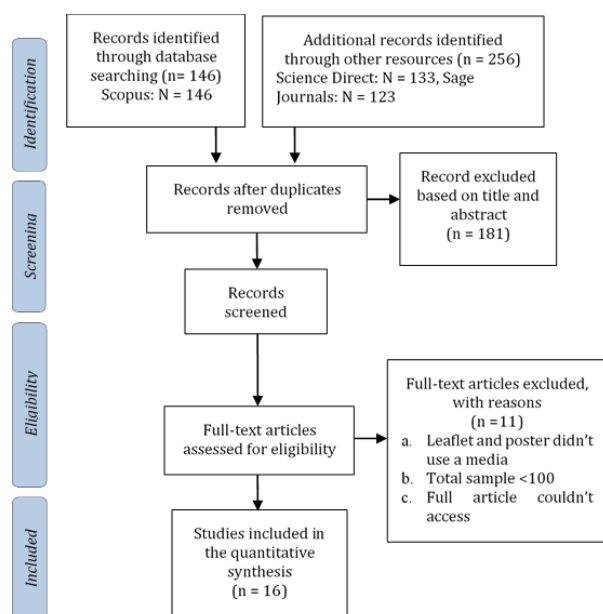


Figure 1. PRISMA study flow diagram

systematic literature search. To determine the chain of the keywords, two components were used as the search terms to identify studies on the use of traditional health promotion media (leaflets and posters) in the era of digitalization in the community: 1) health promotion or health education or health prevention and 2) leaflets or posters. The results of this keyword formulation were then used to find the relevant literature in the Scopus, Science Direct and Sage Journals databases. The keyword chain was as follows: "health promotion" OR "health education" OR "health prevention") AND ("leaflet" or "poster".

The search was limited to articles published between 2016 and 2018. The search results using the keyword chain and limitation criteria obtained 208 articles. The applied criteria for inclusion were publications in English, community-based research, not set in clinics, involving more than 100 samples, and using leaflets and or posters as promotional tools. Articles which only involved a trial and that had no results were excluded.

The first screening was based on a predetermined topic. After obtaining 402 articles that matched the keywords, the reviewers filtered the editorial titles to find out if there were duplicate journals. After deleting the duplicated journals, the reviewer sorted the articles according to the predetermined inclusion and exclusion criteria. The full article was then reviewed in the second screening. At this stage, the publication was considered to be potentially relevant if the title, abstract, and full content had a link to the review topic. Articles that meet the inclusion criteria were selected. The selected articles totaled 16.

## RESULTS

The chain of keywords shown above yielded 208 publications, which were included in the initial screening. The results of the screening have been

presented in Figure 1. In the first screening, 181 publications were excluded after reading the title and abstracts based on the inclusion/exclusion criteria. In total, 27 publications were included for the second screening. For the second screening, the publications were downloaded. Finally, we obtained 16 publications, where 11 publications were excluded after reading the full text. The reasons for the exclusion were (1) leaflets and/or posters not use as intervention media, (2) the sample size not being fulfilled and (3) a combination of the above reasons. Thus, after the second screening, 16 publications were selected for the systematic review. A detailed description of the articles has been presented in the Appendix.

The characteristics of the included publications have been presented in Table 1. Publications were included if they were within the limitation of 3 years. Most of the studies took place in a developed country (62,5%) such as Australia, the UK, the USA, the Netherlands, New Zealand and Canada. The remaining 37,5% came from a developing country such as Hongkong, India, South Africa, Bangladesh, and Malaysia. Adults made up the most significant percentage of participants, by about 43,9%. The second were the elderly, children and not mentioning a specific age at 18,7% respectively. Over half of the studies combined leaflets, posters and other media (56,3%) such as billboards, flyers, newspapers, booklets, banners, brochures, handouts, slides, games, videos, e-mails, phones and movies; 25% used only leaflets and 18,7% used only posters as the intervention media. Almost all of the leaflets and/or posters in this study were used as the primary health prevention (87,5%); 75% used leaflet, 66,7% used posters and 100% involved a combination of both with other media and they were reported as effective at increasing health status and knowledge.

This systematic literature review aimed to analyze the use of traditional health promotion media (leaflets and posters) in the era of digitization in society. From the results of the review, it was determined that the use of traditional media (leaflets and posters) is effective as a media channel for health promotion, especially among adults. Only a few publications reported studies that focused on groups of parents and children. The submission of messages referred to as props is divided into 11 (eleven) levels which at the same time describes the level of intensity of each of the aids in a cone. Occupying a cone base is the original object which has the highest intensity followed by human-made objects, plays, demonstrations, field trips, exhibitions, television, film, recordings/radio, writing and words.

The submission of material with writing (leaflets and posters) occupies the second cone peak, which can be interpreted as health promotion media with teaching aids in the form of writing being effective at delivering health promotions. The contribution of this form of media is that it channels knowledge into the brain via the eye. Approximately 75-87% of human knowledge is obtained/channeled through the eyes

Table 1. The description of the relevant publications according to the analysis criteria

Classification	Sub Category	Total (%)	Reference index*
Publication year	2018	4 (25)	12, 13, 14, 15
	2017	6 (37,5)	1, 2, 3, 4, 5, 16
	2016	6 (37,5)	6, 7, 8, 9, 10, 11
Respondents	Elderly	3 (18,7)	1,6, 13
	Adult	7 (43,9)	4, 7, 8, 9, 11, 12, 14
	Children	3 (18,7)	2, 5, 15
	Not mention a specific age	3 (18,7)	3, 10, 16
Countries	Developed countries	10 (62,5)	1, 2, 3, 5, 6, 9, 11, 12, 13, 15
	Developing countries	6 (37,5)	4, 7, 8, 10, 14, 16
Media	Leaflet	4 (25)	1, 4, 10, 11
	Poster	3 (18,7)	3, 5, 12
	Combination both leaflet, poster, and other media	9 (56,3)	2, 6, 7, 8, 9, 13, 14, 15, 16
Effect Leaflet	Effective	3 (75)	1, 10, 11
	Not effective	1 (25)	4
Poster	Effective	2 (66,7)	3, 12
	Not effective	1 (33,3)	5
Combination both leaflet, poster, and other media	Effective	9 (100)	2, 6, 7, 8, 9, 13, 14, 15, 16
	Not effective	0 (0)	-
Health prevention	Primary	14 (87,5)	1, 2, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 4, 6
	Secondary	2 (12,5)	-
	Tertiary	0 (0)	-

\*appendix is available on supplementary file

while the other 13-25% is channeled through the other senses (Susilowati, 2016).

Interventions for the use of traditional health promotion media (leaflets and posters) are more often applied as a form of primary or secondary prevention. Primary prevention is used to improve and maintain conditions that produce negative impacts on health (Susilowati, 2016). Even this is in accordance with the results of the review, which explains that media leaflets and posters are used to look for primers.

An analysis of the countries that are still using traditional health promotion media (leaflets and posters) was also carried out in this review. The results of the study indicate that many developed countries still use traditional media as the chosen health education media format in their community. This is because developed countries have a high reading habit. For example, Finland have won the title of a country with high reading interest from "The World's Most Literate Nations (WMLN) From Central Connecticut State University" (McCuskee et al., 2018).

## DISCUSSION

Information dissemination program methods make use of a variety of media to offer information to the public about the risk of a particular lifestyle, choices and personal behavior as well as to advertise the benefits of changing that behavior and improving their quality of life. Promotional media is closely related to attractiveness, where it is intended to be able to attract attention, interest, and influence

people. When linked to health, health promotions must be able to make the patients or individuals or communities of interest read it, pay attention to it and add their own insights. This is expected to be able to encourage prevention as an intervention to improve health status. Media promotion using leaflets and posters means that they cover a large population. They serve as a great medium to spread the health message. Messages on billboards/posters allow the sender to reach the target audience while they are on the move (Hoare & Decker, 2016). The analysis of the articles showed that they will be more effective when combined with other media. The other media in question could be education from the health workers, videos, demonstrations, Focus Group Discussions (FGD) and games (Sheikh, Vadera, Ravey, Lovatt, & Kelly, 2017).

The shortcomings of several articles reviewed have been included. For example, many had no control samples which could cause a bias in the results of the study. Many articles did not mention the age of the sample.

Various aspects that need to be considered for the selection of traditional promotional media (leaflets, posters) in the digitalization era should be taken into consideration when choosing health promotion media. Nurses should use leaflets as the preferred health promotion media, especially for adult patients. Leaflet media can play an important role in increasing knowledge, skills, and in changing the positive behavior in society.

## CONCLUSION

Traditional media used for health promotion, such as leaflets and posters, are still effective in the digital era, especially for adult respondents.

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