

Framing of health information messages

Review question:

Does framing of health information messages affect people's understanding, perception and health behaviours?

How can health information messages be framed?

Health information can be framed in different ways. This review considered two types of framing relevant to public health and clinical settings, attribute framing and goal framing. Attribute framing is the framing of a specific attribute of a single state in a positive or negative way. Goal framing is the description of the consequences of performing or not performing an act in a positive or negative way (see Background, p3).

Key findings?

Based on the results of 35 studies, involving 16,324 participants, the authors found:

Attribute framing

- Negative- versus positive-framed attribute messages made little to no difference to behaviour
- A negatively-framed attribute message led to consumers understanding the message better
- A positively-framed attribute message may have led to consumers having a more positive perception of effectiveness
- There was little or no difference in persuasion between negatively- and positively-framed attribute messages

Gain framing

- Loss- versus gain-framed messages had little or no effect on behaviour
- Loss-framed messages led to more positive perception of effectiveness for screening messages
- Loss-framed messages may be more persuasive for treatment messages

Full citation for this review:

Akl EA, Oxman AD, Herrin J, Vist GE, Terrenato I, Sperati F, Costiniuk C, Blank D, Schünemann H. [Framing of health information messages](#). Cochrane Database of Systematic Reviews 2011, Issue 12. Art. No.: CD006777.

This summary is relevant for:

This evidence bulletin can be used by decision makers and clinicians (e.g. general practitioners, nurses) involved in discussing health information with patients.

This summary includes:

- Key findings from research based on a systematic review (p 1)
- Considerations about the relevance of this research to policy makers and clinicians (p 2)
- A more detailed description of the research (p 3)

Not included:

- Additional evidence
- Detailed descriptions of framing of health information or how to implement the intervention in practice
- Recommendations

What is a systematic review?

A systematic review aims to locate, appraise and synthesise all of the available evidence related to a specific research question. Authors adopt rigorous methods to minimise bias as a way of producing reliable findings with the ultimate goal of making the evidence more useful for practice. See [navigatingeffectivetreatments.org.au](#) for more information.

Relevance to the health care context in Victoria, Australia

<p>The broader policy and clinical context</p>	<p>The effectiveness of health information messages is strongly linked to a consumer's ability to make an informed decision. Victorian health professionals have a responsibility to incorporate shared decision-making and informed decision-making into practice. This responsibility is highlighted in a number of policy documents including the National Safety and Quality Health Service Standards, Australian Commission for Safety and Quality in Health Care and Health Priorities Framework 2012-2022.</p>
<p>The populations and settings in which this relevant</p>	<p>It is difficult to determine if the results of this review are relevant to the Australian health care context, as the authors did not specify in which country the included studies were conducted.</p> <p>It is important to note that in most studies the decisions participants were making were hypothetical. They mainly involved decisions about cancer screening (14/35), HIV prevention (4/35) and exercise (3/35). Caution is required when applying these results to other clinical areas and to real decisions.</p> <p>Only a small number of studies (2/35) specified that they included participants with low health literacy or from disadvantaged backgrounds. As a result it is unclear how applicable the findings are to people with low health literacy and those from culturally and linguistically diverse communities or disadvantaged backgrounds.</p> <p>There was no information on the health status (chronic diseases, multi-morbidity) of participants; therefore it is unclear how applicable the findings of this review are to people with multi-morbidity or complex health conditions.</p>
<p>Implications for decision makers</p>	<p>Overall, this review found low to moderate quality evidence that both attribute and goal framing may have little, if any, consistent effect of consumers' behaviour. As such, decision makers could consider providing balanced health information messages in any policy documents or health information materials.</p>
<p>Implications for clinicians</p>	<p>Overall, this review found low to moderate quality evidence that both attribute and goal framing may have little, if any, consistent effect of consumers' behaviour. As such, health professionals could consider providing a balanced presentation of health information messages. It is recommended that clinicians keep up to date with new research into health information framing.</p>

Related Resources

Examples of health information framing

- Positively framed attribute: [Survival](#), Breast Cancer Care WA.
- Negatively framed attribute: [Health risk of smoking](#), Quit Victoria
- Gain-framed goal framing: [Benefits of Breast Screening](#), BreastScreen Victoria
- Loss-framed goal framing: [Exercise](#), Australian Institute of Health and Welfare

Systematic reviews

- AKI et al (2011) [Using alternative statistical formats](#)

[for presenting risk and risk reductions](#)

- Stacey et al (2011) [Decision aids for people facing health treatment or screening options](#)
- Edwards et al (2013) [Personalised risk communication for informed decision making about taking screening tests](#)

Evidence bulletins

- Using alternative statistical formats for presenting risks and risk reductions
- Decision aids for people facing health treatment or screening options
- Personalised risk communication for informed decision making about taking screening tests

Background

The way clinicians frame health information messages can impact on the decisions of patients, health professionals and policy makers. This is known as the 'framing effect'. Two types of health information framing examined in this review were:

- 'Attribute framing' framing information with a positive versus negative description, for example 'the chance of survival is 2/3' versus 'the chance of mortality is 1/3' (see Related Resources, p2)
- 'Goal framing' providing information on the consequences of performing or not performing an act as a gain versus a loss, for example 'if you undergo screening, your survival will be prolonged' versus 'if you don't undergo screening, your survival will be shortened' (see Related Resources, p2)

Information about this review

The authors of this systematic review conducted a detailed search of published studies up to October 2007. They used the following inclusion criteria to determine which studies to include:

Types of studies

- Randomised controlled trials
- Quasi-randomised control trials
- Cross-over studies

Participants

- Health professionals, policy makers and consumers

Types of intervention

Two different types of health information framing were used as the intervention in this review:

- Attribute framing (negatively- or positively-framed)
- Goal framing (loss- or gain-framed)

Comparisons

- Attribute Framing: negatively framed messages were compared to positively framed messages; and
- Goal Framing: loss-framed messages were compared to gain framed messages.

Outcomes

The following main outcomes were examined:

- Decision or behaviour
- Understanding
- Perception (of effectiveness of an intervention)
- Persuasiveness (how likely participants are to make a hypothetical decision in favour of an intervention)

Main results

This review included 16,342 consumer participants in 35 studies.

About the studies

There is limited information on the countries in which the included studies were conducted or if any of the studies were conducted in Australia. The messages used in these comparisons were mainly about cancer screening, HIV prevention and exercise (see Relevance table, p2).

Effects of framing of health information messages

Attribute framed messages (negative versus positive)

- Moderate quality evidence from one study showed negative versus positive framing made little to no difference to behaviour (see Results table, line 1).
- Low quality evidence from one study showed that negatively-framed screening messages may lead to better understanding when compared to positively-framed screening messages (see Results table, line 2).
- Low quality evidence from two studies showed that positively framing a screening message led to a more positive perception of intervention effectiveness (see Results table, line 3).
- Low quality evidence from eight studies showed that positively framing a message did not effect persuasiveness when compared to negative-framing (see Results table, line 4).

Goal-framed messages (loss versus gain)

- Low quality evidence from sixteen studies showed that loss-framed versus gain-framed messages had little or no effect on behaviour (see Results table, line 5)
- No studies assessed the effect on understanding
- Low to moderate quality evidence from fourteen studies showed that loss framing did not lead to different perceptions of intervention effectiveness (see Results table, lines 6).
- Low to very low quality evidence from twenty-two studies showed that loss framing did not lead to different persuasiveness (see Results table, lines 7).

Results table: Health information messages

Outcome measured		Effect with positive or gain-framed message*	Number of participants (studies)	Quality of the evidence (GRADE)#
Attribute Framing (negatively –framed versus positively framed messages)				
1	Behaviour	0.09 SDs higher (95% CI 0.14 lower to 0.31 higher)	282 (1 study)	Moderate
2	Understanding	0.58 SDs lower (95% CI 0.94 to 0.22 lower)	124 (1 study)	Low
3	Perception	0.36 SDs higher (95% CI 0.13 lower to 0.85 higher)	226 (2 studies)	Low
4	Persuasiveness	0.07 SDs higher (95% CI 0.23 lower to 0.37 higher)	1068 (8 studies)	Low
Goal Framing (loss-framed versus gain-framed messages)				
5	Behaviour	0.06 SDs lower (95% CI 0.15 lower to 0.03 higher)	11629 (16 studies)	Low
6	Perception			
	Screening message	0.30 SDs lower (95%CI 0.49 to 0.10 lower)	513 (5 studies)	Moderate
	Prevention message	0.11 SDs higher (95% CI 0.12 lower to 0.33 higher)	815 (9 studies)	Low
7	Persuasiveness			
	Screening message	0.06 SDs higher (95% CI 0.23 lower to 0.35 higher)	931 (6 studies)	Low
	Prevention message	0.02 SDs higher (95% CI 0.11 lower to 0.16 higher)	1496 (13 studies)	Low
	Treatment message	0.50 SDs higher (95% CI 1.04 lower to 0.04 higher)	1788 (3 studies)	Very Low

For more information on the GRADE working group's rating of quality of evidence go to www.gradeworkinggroup.org

* Relative effect is measured Standardised Mean Difference (SMD), followed by a confidence interval (95% CI)

This evidence bulletin draws on the format developed for SUPPORT summaries (for more information on SUPPORT summaries see www.supportsummaries.org). It replaces the previous version of this bulletin (September 2007) which is based on the previous version of this Cochrane review.

Health Knowledge Network

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