

Fear-based information campaigns

Summary

Fear-based information, also called fear appeals, confronts people with the negative consequences of risky behaviour by capitalizing on their fears. The confrontational character of this type of information evokes interest and keeps the attention. Fear motivates people to adjust their behaviour. However, this adjustment is not always a safer alternative.

In general, fear is considered a strong motivator of human behaviour. International studies show that fear appeals can have positive effects on attitude and intended behaviour provided that, besides creating fear, there is also a clear (campaign) message about the personal vulnerability to a risk and about feasible and convincing behaviour alternatives. However, a number of studies show an unintended negative effect in which participants deny, trivialize, or ridicule the message.

In general, television spots about road safety are much more frightening in other countries than those in the Netherlands. The Dutch television spots use humour as a central element. Some researchers are of the opinion that information based on positive emotions can be just as effective. Recent studies have shown that in males and in young people frightening road safety information has less positive effects than information which uses positive emotions like humour and sets positive behavioural examples.

Background

Fear appeals confront people in a rather hard and often shocking way with the negative consequences of risky behaviour and also show how to change undesirable behaviour.

In general, foreign road safety television spots are much more frightening than those in the Netherlands. Countries such as Australia, New Zealand, the United States, and Great Britain often show pictures of crashes, casualties, injuries and blood, and the related emotions of pain, sorrow and grief of traffic victims and relatives. Other fear-based television spots imply that a crash can easily happen, without actually showing pictures of it. Examples of fear appeals can be found on the website of [Think Road Safety](#) (Great Britain), of Queensland Transport about for instance [speeding](#) and [alcohol](#) (Australia), and that of the [Road Safety Task Force](#) (Tasmania).

In the Dutch television spots the emphasis is on humour rather than fear. Hastings et al. (2004) indicate cultural differences as being the root cause of different styles of communication. In addition to the Netherlands, Canada also prefers milder communication styles for road safety information.

This fact sheet discusses the effects of fear appeals on traffic attitudes and behaviour and will mainly focus on information which is spread through folders, advertisements, and radio and television spots. Other information programmes that use a fear-based approach in direct interaction between educator and audience, such as 'Traffic Informers', will not be dealt with here (for a discussion on these types see the English summary entitled 'Literature study on confronting education' in Van Vlierden, 2006). A SWOV fact sheet is available about the general topic of public road safety information: [Public information about road safety](#).

What are fear appeals?

'Fear appeals' are persuasive information messages that are meant to frighten people by describing the negative or painful consequences that will occur if they don't obey the message (Witte, 1992; Knobbout & Van Wel, 1996). A fear appeal frequently uses personal words combined with tough or painful pictures. In addition, the message usually contains clear and applicable recommendations to avoid the negative consequences. In international literature 'fear appeals' are also called 'threat appeals', 'shock tactics', or 'emotive campaigns'.

A fear appeal is a type of *persuasive* message in which evoking fear or concern is meant to motivate people to pay attention to the message and to then adopt the recommendations in the message. Besides persuasive communication, Van Woerkum & Kuiper (1995) distinguish two more types of communication: *informative* and *educational* communication. The messenger, often the government,

uses informative communication to provide fast and useful answers to as many questions as possible. Educational communication is mainly intended to enable the population to make a particular decision in a sensible way.

The boundaries between fear appeals and other types of information are not always sharp. Two of the Dutch Traffic Safety Association's television spots in the 1980s, 'The Kite' and 'The Photo Album' refer indirectly to the death of a child in traffic; this was done by showing a kite let go of and a black page in a photo album. Even though these two spots cannot really be labelled fear appeals, they do have similarities because they can evoke fear and anxiety.

Why are fear appeals used a lot?

Fear appeals are a popular method for drawing attention to themes such as road safety, smoking, and safe sex for a number of reasons. Seeing 'exciting' events makes people curious. A fear-based message captures and holds peoples' attention and thus meets one of the requirements of successful information dissemination. People who see a fear-based spot for the first time are, as it were, emotionally drawn into the story about risky driving behaviour and the disastrous consequences it can have for the victim and his/her family.

A fear-based message is sometimes the only way of drawing the attention and of creating the involvement of target groups that have very little interest in a subject. For instance, in the United States and Australia there are alternative sanction programmes for young drivers who have been caught drink-driving, in which they have to visit a mortuary to see the corpses of those killed in (alcohol-related) crashes.

How do fear appeals work?

There are various scientific opinions about how fear appeals exactly work. However, researchers agree that a fear-based message starts two simultaneous, opposing mechanisms (Rogers, 1975; Witte & Allen, 2000; Ruiter et al., 2001). On the one hand there is the mechanism to reduce evoked fear by means of psychological defence mechanisms that oppose the message. Such defence mechanisms can take various forms: denial ('it's not true'), ridiculing ('absurd film'), neutralizing ('it won't happen to me'), or minimizing ('it's all terribly exaggerated'). This mechanism results in the fear diminishing and the message not being taken seriously. On the other hand, there is a tendency to cope with the message by actually adopting its recommendation.

In both cases fear is the motivating factor, but this motivation can be either negative or positive for the acceptance of the message.

According to recent theories, a 'mild' amount of fear can be functional provided the message and behaviour recommendation are good, recognizable, realistic, and convincing (Das, 2001, Ruiter, 2000). These theories state that the appeal to an emotion is only a link in a larger, coherent message and is not automatically the most important component. If one of the components of a fear appeal has not been worked out well, the inducement of fear will more likely have an opposite effect, for example caused by the psychological defence mechanism described earlier.

Dutch information experts emphasize that the extent of the evoked fear is of lesser influence on the effect than other variables. Experts from the University of Maastricht are of the opinion that it is not the strength of the evoked fear that ultimately determines the behaviour effect, but the practicability and the effectiveness of the behaviour recommendation (Ruiter et al., 2001).

The 'personal efficacy' has to do with the perception of the appropriateness of the behaviour recommendation e.g. 'am I able to withstand the temptation to drive too fast on that section?' The 'response efficacy' has to do with the extent to which someone believes that the new behaviour really does protect against danger: 'does driving slower really reduce my risk of having a crash?'

Scientists at Utrecht University agree that the evoked fear is not the most important factor which determines the effectiveness of a message (De Hoog, 2005; De Hoog et al., 2005) Other than Ruiter et al. (2001), they find neither the feasibility nor the effectiveness of the behaviour recommendation to be the determining factor. They do, however, think this is the case for the extent to which a person thinks he is vulnerable to a certain (health) risk. Fear-based information has the largest effect on behavioural intentions and behaviour when a person thinks he is vulnerable to a specific risk. When a person believes that he is not vulnerable to a risk, his behaviour will not be affected by information about the serious consequences and the recommendations for effective behaviour.

What is known about the effectiveness of fear appeals?

The most complete research of the effects of fear appeals is an American meta-analysis of 98 studies about this subject (Witte & Allen, 2000). The studies dealt with different kinds of behaviour such as drink-driving, smoking, and safe sex. The results confirm the hypothesis that messages which lead to the strongest reduction of risky behaviour are those that simultaneously evoke a lot of fear and at the same time recommend feasible and effective behaviour. Messages, on the other hand, which do induce fear, but whose behaviour recommendations are insufficiently feasible and effective, have the strongest opposite effects in terms of rejection of and resistance to the message.

With regard to *road safety*, fear-based information campaigns have had both positive and negative results. Especially researchers in Australia (Cameron et al., 1993, 2003; Newstead et al., 1995, 1998) and New Zealand (Tay, 1999, 2002) have proved that this type of campaign can lead to a reduction in unsafe traffic behaviour. The campaigns are also supposed to have caused a reduction in the number of road crashes. The Australian researchers have estimated the reduction in casualty crashes as a result of a fear-based information campaign to be 5-7% a year. Tay studied the effects of information about drink-driving on New Zealand students. The campaign which showed shocking pictures of crashes increased their risk perception of drink-driving. The subjects were also less inclined to get into the car after having drunk.

It is important to point out that the Australian and New Zealand fear-based mass media campaigns were always combined with quite intensive traffic enforcement. The positive effects of these campaigns can, therefore, not be separated from this enforcement context. Without the supportive presence of enforcement, the effects of fear appeals would probably have been smaller. At the same time, the reverse effect is that enforcement is probably strengthened by information. As these effects are found in the particular cultural context of Australia and New Zealand, it is not clear whether these research results can automatically be translated to the Dutch situation.

What are the undesirable effects of fear appeals?

Fear appeals can also have unintended, negative road safety effects. For example, American students thought more positively about drink-driving *after* a campaign (Kohn et al., 1982). In a driving simulator experiment young men drove faster after having seen a frightening film about road safety than the group that had seen a neutral film (Taubman Ben-Ari et al., 2000). This effect was particularly strong among young men who mainly derived their self-respect from good and safe driving.

A study in the Netherlands also showed that a television spot with confrontational pictures of a crash had the opposite effect (Goldenbeld et al., 2008). After having seen the television spot, the male subjects judged driving fast to be less dangerous, were less prepared to keep to the speed limit, and they trivialized the message 'driving fast is dangerous' and the behaviour recommendation 'don't drive fast, keep to the limit'.

Belgian information campaigns show that fear appeals may have a short-lived effect on attitudes and opinions, but that the public quickly gets used to the element of fear. That is why the effects ebb away quicker than the effects of campaigns playing on positive emotions (Prigogine, 2004; Godart & Prigogine, 2001).

No systematic research has been done of the effectiveness of fear appeals when the message is repeated (Hastings et al., 2004).

Are there good alternatives for fear appeals?

Hastings et al. (2004) find the question of whether fear-based information is effective less important than the question of whether this type of information works better than other types. They are of the opinion that information that is based on positive emotions such as humour, excitement, love, and sexuality can be just as effective. Knobbout & Van Wel (1996) confirm this position. They asked 800 youngsters with an average age of 16 years to judge ten information spots about road safety, safe sex, and smoking. They compared four fear-based spots that visualized the danger in a frightening way with six spots that did this in a humorous, erotic, or informative way. The results showed that most youngsters took the message seriously in all spots and that fear-based spots were no more effective than the other spots. From a meta-analysis of previous studies, De Hoog (2005) also found that confronting 'frightening' images were not more effective than presenting the negative consequences in a restrained manner.

For some groups, fear appeals about road safety were found to be less effective than other types of information. Lewis et al. (2008), for example, found that attitude improvement due to fear appeals can only be seen in women and not in men. However, the attitude improvement in women was measured immediately after they had seen the spot, and had already become less at a measurement some weeks later. The positive emotion spots, on the other hand, resulted in an attitude change in both women and men. Especially in men this improvement became stronger with each measurement: an initial improvement immediately after having seen the spot, and further improvement some weeks later. In brief, longer term measurements indicate that fear appeals are less effective than public information which uses positive emotions. This is especially the case for men. The conclusion that fear appeals are less effective with men is also supported by other research on public information about road safety (Lewis et al., 2007; Goldenbeld et al., 2008).

A comparison between the effects of fear appeals and of information with a positive angle on young people was also made recently (Sibley & Harré, 2009). In that study the fear appeals consisted of spots showing how people who drive under the influence are killed in traffic. Positive information was in the form of spots showing people making safe choices after having consumed alcohol, like taking a taxi or arranging a designated sober driver. After the young subjects (average age of 19 years) had seen the spots, they were asked to assess their own driving skills in relation with that of other drivers. This made clear that young drivers generally tend to overestimate their skills in relation to those of others (the so-called 'self-enhancement bias'). The fear appeals had no effect on this tendency of overestimating their own abilities. The positive spots resulted in a smaller degree of overestimation.

What should you allow for in fear appeals?

In fear appeals it is important to take into account that:

- Fear appeals can sometimes have the opposite effect. Therefore a thorough pre-test should be carried out to see if the actual effects are also the intended effects.
- A pretest using focus groups, i.e. group interviews about visual examples, can provide valuable insight in the clarity and attractiveness of the information. However, this approach is insufficient to exclude undesirable effects because people cannot always properly estimate how information will affect themselves and others (Oh, 2006; Hastings et al., 2004).
- The effects of fear appeals should be tested in an experimental setting in which a control group is used. The test should compare the fear appeals with milder forms of information and test for negative as well as positive effects. Differences in effects between males and females should also be examined (Lewis et al., 2007; Goldenbeld et al., 2008).
- It is also important to investigate in the pre-test whether the information about feasible and effective behavioural recommendations is optimally effective, and whether the information increases someone's perception of personal vulnerability, if it is low. The extent of fear or threat is less important.

Information in general, and therefore also fear-based information, is more effective when combined with other possibilities to influence, such as reward or punishment. That is why Oh (2006) advises to embed the use of fear appeals aimed at the young in a broader programme that accentuates various strategies for changing behaviour, viz.:

- improvement of decision making skills, coping skills, and assertive skills in situations of temptation or social pressure;
- strengthening of the self-respect of the young and their willingness and capability to follow recommendations;
- stimulating conversation and discussion groups about the subject;
- introduction of credible messengers whom the young can identify with.

Experts warn that an unclear message or recommendation in fear appeals reduces the effectiveness. Tay (2002) uses the anti-alcohol slogan used in New Zealand as an example: "If you drink then drive, you are a bloody idiot". This message is not clear about what you can do to prevent a danger. In contrast to this is the Designated Driver campaign in the Netherlands and Belgium which focuses on providing the target group with a concrete solution for drink-driving.

Final remarks

From a scientific and social point of view, using fear appeals is controversial. The scientific studies on this topic differ widely in chosen subject, in research method used, and in results. In addition, there has been hardly any research into the effects of using fear appeals repeatedly.

International research of the effects of fear appeals shows positive as well as negative effects on attitude and self-reported behaviour. Particularly among people who are not really motivated to change their behaviour defensive reactions such as denial, trivializing, and ridiculing the message can occur. Recent studies of road safety information shows that fear appeals have less positive effects in males and young people than information with positive emotions or a positive style.

Seeing as fear appeals can also have unwanted effects, we recommend early pretesting of the effects on the target group, preferably in an experimental setting. It is particularly important to give information which causes people to feel personally vulnerable and to then include feasible and effective recommendations in the information message which are considered credible and fit the interests, self-respect, and ideas of the target group.

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(SWOV reports in Dutch have an English summary)

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