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The influence of exemplars in fear appeals on the perception of self-efficacy and message acceptance

Fear appeals are frequently used in health communication to persuade people to adopt a new type of behavior (e.g., practicing safe sex) because their current behavior (e.g., having unsafe sex) is likely to result in harmful consequences. A fear appeal's persuasiveness depends on the extent to which the consequences are perceived as undesirable and realistic and on the extent to which the proposed alternative behavior is considered effective and feasible. In an experiment, the perceived threat and self-efficacy were manipulated by means of an exemplar in which a person either succeeded in performing the propagated behavior (and, consequently, did not suffer the harmful consequences) or in which the person did not succeed in performing the propagated behavior (and, consequently, did suffer the harmful consequences). A total of 149 participants read one of the versions and indicated their intention to perform the propagated behavior, their perception of its feasibility, and their inclination to minimize the message. The results showed that the version in which the person succeeded in performing the behavior yielded a more positive self-efficacy perception and stronger acceptance of the message claim. The version in which the person failed to perform the behavior yielded a more negative self-efficacy perception and more negative intention to perform the behavior propagated. Further statistical analysis showed that the effects on intention were mediated by the message minimization.

Introduction[1]

The following section is taken from a Dutch brochure designed to persuade people not to mix drinking and driving:

> Niels knows all about the dangerous mix of alcohol and driving. It happened on a Saturday night. He was going to go out that evening with his girl friend and two other friends. Before they left, they had already had a couple of beers. (…) But my girlfriend was less lucky. She sat on the passenger seat. Yes, she is still alive. But she is paralyzed from the waist down and she'll spend the rest of her life in a wheelchair.

This section contains a fear appeal: to attain the goal of preventing people from driving after they have been drinking alcohol, the potential harmful consequences of this behavior are underscored. Fear appeals are used frequently in health communication. For instance, one often refers to the probability of contracting lung cancer as a result of smoking, serious car accidents as a result of speeding, and contracting a sexually transmitted disease as a result of unsafe sex. The undesirable consequences should instil so much fear in its target groups that they no longer smoke, drive too fast, or practise unsafe sex.

Appealing to fear appears a logical and effective means to persuade people to change their behavior. How fear appeals can attain this goal and which conditions have to be met for fear appeals to be effective is discussed in the next section as the Extended Parallel Processing Model (Witte, 1992, 1998) is described. Next, the empirical research on fear appeals is briefly discussed. From this discussion, it is concluded that two factors are important: the extent to which a fear appeal is capable of evoking actual fear, and the extent to which the alternative behavior that is propagated is considered feasible and effective in preventing the undesirable outcomes to occur.

Next, the potential effects of using exemplars are discussed. The story of what happened to Niels and his girl friend in the section quoted above is an example of an exemplar. Using such exemplars can influence the extent to which a message instils fear in its readers. It provides a vivid description of the undesirable consequences. However, under certain circumstances, the exemplar might influence the extent to which the propagated behavior is considered feasible. More specifically, if the person in the exemplar succeeds to perform the propagated behavior, it may increase the extent to which readers believe that they themselves will be able to perform that behavior (self-efficacy) while at the same time reducing evoked fear because the negative consequences do not occur. If, on the other hand, the person in the exemplar fails to perform the propagated behavior and therefore suffers the harmful consequences, more fear may be evoked but at the cost of the readers' self-efficacy perception. Whether these effects actually do arise and what the implications are for the acceptance of the message's claim is studied in the experiment.

The Extended Parallel Processing Model

Witte (1992, 1998) has developed the Extended Parallel Processing Model (EPPM) to explain why and when fear appeals are effective. Fear appeals are messages that are designed to evoke fear in the recipients of the message. Witte distinguishes between two appraisal processes during the processing of the message. The first appraisal consists of an assessment of the seriousness of the threat (e.g., how serious is skin cancer?) as well as of the probability that the threat will occur (e.g., how probable is it that I will get skin cancer?). The first factor is called 'perceived severity', the second one is called 'perceived susceptibility'. The result of this appraisal process is the perceived threat. If one believes that the consequences are not severe (e.g., there is an easy cure for skin cancer) and/or one believes that one is not at risk (e.g., I never get a sunburn) then the perceived threat is considered low. In that case, readers will ignore the message because they perceive the evoked threat as irrelevant to themselves. If, on the other hand, they perceive the depicted consequences as severe and they regard themselves at risk, then the perceived threat is high. In that case, readers will conduct the second appraisal.

In the second appraisal process, people evaluate the efficacy of the recommended response. This perceived response efficacy depends on two factors. First, the assessment is made whether the recommended behavior will be effective in preventing the occurrence of the undesirable consequences (e.g., will using sunscreen with a high sun protection factor ensure that I will not get skin cancer?), Second, the assessment is made whether performing the recommended behavior is easy and feasible (e.g., will I be able to use sunscreen each time that I go sunbathing?). The first assessment yields a perceived response efficacy, the second assessment yields a perceived self efficacy. The combination of these two assessments leads to the perceived efficacy – that is, the perception of whether the recommended behavior is effective and feasible.

The EPPM presents the following picture of how readers process fear appeals. First, they assess the extent to which there is a real threat. This assessment is based

on the undesirability of the consequences that may result from their current behavior and on the probability that these consequences will occur as a result of this behavior. If the depicted consequences are considered as relatively harmless (low perceived severity) or as unlikely to occur (low perceived susceptibility), then no threat is perceived and no fear is evoked. According to the EPPM, readers will ignore the message and stick to their current behavior. If, on the other hand, the consequences are considered highly probable and highly undesirable, a relevant threat is perceived and fear is evoked. In that case, readers try to assess the efficacy of the recommended response. If the recommended behavior is perceived as effective in blocking the undesirable consequences and one feels capable of performing the recommended behavior then one is inclined to accept the message's claim and adapt the recommended behavior. This response is called danger control: one tries to avert the danger by adopting the recommended behavior. However, if the recommended behavior is regarded as ineffective or impractical, readers will change into a fear control mode. That is, they will deny that they are at risk and label the depiction of the undesirable consequences as exaggerated. These defensive reactions stem from the fact that people experience fear without the prospect of a method to avert the danger.

In summary: According to the EPPM, a health communication message in which a fear appeal is employed can evoke one of three responses:

The message can be ignored because it evokes not enough fear.

The message can be accepted because it evokes enough fear AND it presents an effective and feasible solution.

The message can be rejected and minimized because it evokes enough fear BUT does not present an effective or feasible solution.

Which response is evoked, depends on the perceived threat and the perceived efficacy of the recommended behavior.

A lot of empirical research has been done on the topic of effective fear appeals. Witte (1998) reviews 20 (partly unpublished) studies in which the predictions made by the EPPM are tested. In these studies, different types of behavior are targeted and the messages are presented to participants from different populations. The majority of the results are in accordance with the predictions made by the EPPM, that is, a message that evokes more fear is only more persuasive if the recommended behavior is considered effective and feasible.

Witte (1998) provides us with a narrative review of the empirical studies on fear appeals. A more rigorous method of reviewing a number of empirical studies on the same issue is the meta-analysis. In a meta-analysis the results of different studies are compiled statistically thereby enabling a more reliable picture of the effects certain characteristics may have (Hamilton & Hunter, 1998; O'Keefe, 2002, p. 177). Mongeau (1998) presents a meta-analysis of 45 studies in which the persuasiveness of fear appeals is studied. In 41 of these studies, the message could be characterized as a type of health communication. He concludes his review with the claims that 'fear appeals should highlight the threat and the recommended means of avoiding the threat' (Mongeau, 1998, p. 66). Witte and Allen (2000) reach the same conclusion in their meta-analysis of fear appeal studies.

Based on the results of these meta-analyses, it can be claimed that two factors determine the persuasiveness of a fear appeal: The extent to which a message is capable of evoking fear and the extent to which the message presents an effective and feasible response. In the next section, it will be discussed how a specific message characteristic, the exemplar, can influence the perceived threat as well as the perceived efficacy.

Exemplars in messages using fear appeals

An exemplar is a relatively short story in which the experiences of a (real or fictitious) person are described and that is used to illustrate a more general phenomenon. Exemplars are frequently used in all types of messages, such as advertisements or newspaper articles (Brosius, 2001; Zillmann & Brosius, 2000). It is common practice to illustrate general trends such as depression among adolescents or the active life lived by the elderly using a couple of stories of suicidal adolescents or grannies playing golf.

Exemplars can be used in health communication as well. In the case of a fear appeal, an exemplar may be used to illustrate the dangers of the target group's current behavior. The exemplar quoted in the introduction is a good example of this practice. The story of Niels and his girlfriend who got into a car accident as a result of drunk driving can have two effects. First, it may influence the perceived severity of the consequences (Hoeken, 2001b). The fact that Niels' girlfriend has to spend the rest of her life in a wheelchair may underscore the undesirability of the consequences of this behavior. Second, the exemplar may influence the perceived susceptibility of the consequences (Hoeken, 2001a; Hoeken & Hustinx, 2003a). The case of Niels and his girlfriend can be regarded as (anecdotal) evidence that drunk driving can have serious consequences. Given that the perceived threat is important for the persuasiveness of a fear appeal, an exemplar may be a powerful means to evoke fear.

Apart from influencing the perceived threat, exemplars may also be capable of influencing the perceived efficacy. Typically, the exemplar is used to illustrate the undesirable consequences of the target group's behavior. However, an exemplar may also be used to present someone who succeeded in performing the recommended behavior and therefore avoided the undesirable consequences. O'Keefe (2002, p.

118) claims that such an exemplar can influence the perceived self efficacy of the target group as a result of 'receivers reasoning that "if they can do it, I can do it"'. In several studies, it has been shown that readers are inclined to regard persons in exemplars to be representative for the whole group (Hoeken, 1999; Hoeken & Hustinx, 2003b; Hustinx & Hoeken, 2000). This effect is particularly strong when the person in the exemplar is regarded by the readers as 'one of them'. Reading an exemplar in which someone succeeds in performing the recommended behavior may therefore increase the readers' perception that they are themselves capable of performing that behavior.

Perceived efficacy and perceived threat are important determinants of the persuasiveness of a fear appeal. Exemplars can influence each determinants. However, one and the same exemplar cannot achieve both goals. Even worse, increasing the perceived threat by telling the story of a person who suffered the consequences may, at the same time, decrease the perceived efficacy, because this person evidently was not capable of performing the recommended behavior. Likewise, increasing the perceived efficacy by telling the story of a person who was capable of performing the recommended behavior, may decrease the perceived threat because the negative consequences did not occur. If the perceived *severity* is too low, readers may consider the negative consequences as insignificant and ignore the recommendation. If the perceived *efficacy* is too low, readers may try to control their fear by minimizing the message and rejecting its claim. It is an interesting question whether the increase in perceived severity compensates the decrease of perceived efficacy if the person in the exemplar fails to perform the recommended behavior and whether the increase in perceived efficacy compensates the decrease in perceived severity if the person in the exemplar succeeds in performing the recommended behavior.

Research questions

Exemplars in fear appeals can be of two types: the person in the exemplar may fail to perform the recommended behavior and therefore suffers the consequences, or the person may succeed in performing the recommended behavior and therefore saves himself or herself from these consequences. One hypothesis and two research questions are formulated with respect to the effects of this difference.

Hypothesis: Reading a message containing an exemplar in which a person fails to perform the recommended behavior leads to higher severity and susceptibility perceptions and to a lower self-efficacy perception, compared to reading a message containing an exemplar in which a person succeeds in performing the recommended behavior.

Research questions: Does reading a message containing an exemplar in which a person fails to perform the recommended behavior lead to rejection of the message claim because of message minimization?

Does reading a message containing an exemplar in which a person succeeds in performing the recommended behavior lead to rejection of the message because the harmful consequences are considered inconsequential?

The hypothesis and the research questions were addressed in an experiment in which participants read a health communication message on the dangers of Internet addiction.

Method

Material

The experimental materials consisted of a health communication message on the dangers of Internet addiction, also known as cyber addiction. All participants were students who are familiar with the attractions of the Internet. Therefore, they were all, at least potentially, at risk. Cyber addiction was chosen also because it constitutes a relatively new type of addiction. Compared to alcohol, gambling, or heroin addictions, participants may have not yet formed stable attitudes on this issue. The implications of this choice for the generalizability of the results to other topics are discussed in the discussion.

The health communication message consisted of two pages. On the first page, general information on cyber addiction was provided. This page was the same for the two versions of the message. Under the heading of 'Cyber addiction… a new risk?', three paragraphs provided information on the nature of this addiction, its similarity to other types of addiction, and the claim that students are particularly at risk. This paragraph ended with the sentence 'Just like Noor'.

The second page contained the exemplar of the (fictitious) female student of communication science: Noortje Gerritsen. It contained a picture of a female student. Quotation marks were used to give the impression that the information was provided by this student in her own words. The first four paragraphs were the same in each of the versions. In the first paragraph, Noortje describes how she got acquainted with the Internet as a result of study-related assignments. Next, she tells about the increasing number of times that she spends endless hours on the Internet at the cost of social activities. In the third paragraph she mentions the first physical complaints, the warning of her family doctor that she should reduce her use of the Internet, and her inability to follow this advice. The family doctor warned her explicitly about the physical consequences her behavior may have. The fourth paragraph is about her failing to keep up with her study and the warning of the university's counselor that she would have to leave the university. The only difference between the two versions is found in the last two paragraphs. In Table 1, the differences are presented.

Table 1. The two different versions of the message

Fails to perform recommended behavior	Succeeds to perform recommended behaviour
Of course, I was shocked. I realized that I had neglected myself, my friends, and my study severely and that I would get into serious trouble if something did not change quite soon. And still: despite this understanding, I proved again not to be able to change my behavior substantially. After some time, the warnings faded away and I took up my old routine. The attractions of the Internet proved once again irresistible to me; with all its consequences.	Of course, I was shocked and realized the severity of the situation only at that moment. I realized that I had neglected myself, my friends, and my study severely and that I would get into serious trouble if something did not change quite soon. The warning of the university's counselor really shook me awake and forced me to acknowledge that my own use of the internet was dangerous and resulted in many disadvantages. Only after this admission, I found enough strength to change my behavior drastically. From that time on, I reduced the hours that I spent online drastically.
Meanwhile, I left the university. I was so far behind that it is no longer realistic to think that I could graduate. Above that, my neck and shoulders are hurting so much that writing and studying seems impossible. What am I going to do? Actually, I have no idea. My future is insecure; my life is in a shambles.	Nowadays, I use the Internet only sparingly; like you should. I'm doing okay: I have no physical complaints and I have almost finished my study. Thank God I stopped in time.

The main difference between the two versions is not the description of the negative consequences, but the fact that in one of the versions the consequences did occur whereas in the other they did not.

Participants

A total of 149 participants took part in the experiment. The number of women (124) was considerably higher than the number of men (25). The age of the participants differed between 18 and 32 years (mean: 20,5 years). All participants were undergraduate students of the Faculty of Arts at the University of Nijmegen.

Instrumentation

After reading the health communication message, participants filled out a questionnaire. The most important dependent variables were (1) the acceptance of the message, (2) perceived severity, (3) perceived susceptibility, (4) self-efficacy, and (5) message minimiza-

tion. Apart from these variables, a number of control questions were asked. The selection and wording was inspired by the questionnaire developed by McMahan, Meyer and Witte (1998).

1. Message acceptance

Message acceptance was operationalized as the intention to perform the behavior recommended in the message. Three five-point Likert-items were constructed. The three items were preceded by the clause 'After reading the text, I intend to:' and read 'use the Internet less', 'stay a shorter time online', and 'use the Internet only for functional aims'. The reliability of the scale was adequate (Cronbach's α = .79).

2. Perceived severity

Perceived severity was measured using three five-point semantic differentials preceded by the clause 'The consequences of using the Internet excessively are'. The items were 'terrifying – not terrifying' and 'severe – not severe'. The items did not form a reliable scale

(Cronbach's α = .57). Therefore, the items are analyzed separately.

3.   Perceived susceptibility: general and personal

The extent to which the consequences of excessive Internet use are considered probable (in general) was measured using three five-point scales ranging from 'probable' to 'improbable". The three items were 'Cyber addiction can lead to social isolation', 'cyber addiction can cause physical complaints', and 'cyber addiction can endanger your study progress'. The reliability of the resulting scale was adequate (Cronbach's α = .79).

The extent to which participants considered the consequences personally relevant was measured using one item: 'The consequences of using the Internet excessively are' relevant – not relevant.

4.   Self-efficacy

The extent to which participants thought themselves to be capable of defeating cyber addiction was measured using two items. One of the items addressed the question whether participants thought themselves capable of reducing their use of the Internet, whereas the other item asked whether in general it would be easy to reduce the use of the Internet. The two items did not yield a reliable scale (Cronbach's α = .54), and will therefore be reported separately.

5.   Message minimization

The extent to which participants minimized the message was measured using four fivepoint semantic differentials. One of the items read 'The dangers of excessive Internet use as described in the message are exaggerated – not exaggerated'. The other three items were preceded by the clause 'I regard this message as', and read 'manipulative – not manipulative', 'misleading – not misleading', and 'annoying – not annoying'. The items formed a reliable scale (Cronbach's α = .79).

Finally, questions were asked on the extent to which the participants themselves used the internet, the extent to which they regarded their use of the Internet as worrying, and the extent to which other people worried about the participants' use of the Internet.

Procedure

The experiment was conducted during two lectures. The experimenter introduced the study as a study on how students use the Internet. The two versions of the experimental booklet were distributed randomly. An experimental session lasted about 8 minutes. Afterwards, the experimenter provided information on the goal of the experiment and answered any remaining questions.

Results

Table 2 contains the means for the main dependent variables as a function of the manipulation of the exemplar.

The hypothesis predicted that reading the message containing an exemplar in which a person fails to perform the recommended behavior, would lead to higher severity and susceptibility perceptions. This proved not to be the case. For the two severity items, no significant differences between the two versions were obtained. For the two susceptibility variables, significant effects were found but in the opposite direction. Reading the version in which the person succeeded in cutting down her use of the Internet led to higher ratings of the negative consequence's relevance as well as of its probability. Reading this version also yielded higher scores for both measures of self-efficacy.

The two research questions addressed the effect of message manipulation on the acceptance of the message claim. The result on message acceptance show that reading the version in which the person in the exemplar succeeds in performing the recommended behavior

Table 2. The means and standard deviations for perceived severity, perceived susceptibility, self-efficacy, message acceptance, and message minimization as a function of whether the person in the exemplar proved capable of performing the recommended behavior or not (and the results of the Mann-Whitney U test)

	Person in exemplar capable of performing recommended behavior			
	No	Yes	z-score	p-value
Perceived severity:				
Consequences terrifying	3.36 (1.10)	3.34 (1.03)	0.59	.60
Consequences severe	4.01 (0.79)	4.19 (0.56)	1.19	.23
Perceived susceptibility: general	3.94 (0.87)	4.55 (0.54)	4.84	< .001
Perceived susceptibility: personal	3.49 (1.05)	3.97 (0.90)	3.15	< .01
Self-efficacy				
Personal	3.27 (1.26)	3.69 (1.29)	2.17	< .05
General	2.84 (1.03)	3.52 (0.98)	4.01	< .001
Intention to reduce use of Internet	1.91 (0.79)	2.20 (0.91)	2.01	< .05
Message minimization	3.16 (0.81)	2.25 (0.67)	6.53	< .001

(1 = not severe, improbable, low efficacy, low agreement, low message minimization; 5 = severe, probable, high efficacy, high agreement, high message minimization)

yielded a more positive intention to reduce the use of the internet. The results also show that reading this version led to far less message minimization than reading the version in which the person in the exemplar fails to perform the recommended behavior. As noted in the previous paragraph, reading the version in which the negative consequences of excessive Internet use did occur resulted nevertheless in a lower perceived susceptibility. This pattern of results suggest that the fact that the version in which the person fails to perform the recommended behavior is caused by message minimization.

To assess whether message minimization is responsible for the lower persuasiveness of the message in which the person fails to perform the recommended behavior, a mediation analysis was run. First, the correlations between the relevant dependent variables were computed, i.e., message minimization, general susceptibility, personal susceptibility, intention, and both measures of self-efficacy. The results showed that message minimization was negatively correlated with general susceptibility ($r = -.46$, $p < .001$), personal susceptibility ($r = -.59$, $p < .001$), intention ($r = -.28$, $p < .01$), general self-efficacy ($r = -.20$, $p < .05$), but not with personal self-efficacy ($r = -.09$, $p = .28$). A one-way (message version) MANOVA with these same dependent variables was conducted. A significant main effect was found (Wilks' $\lambda = .33$, $F (6, 142) = 11.87$, $p < .001$, $\eta^2 = .33$). Subsequent univariate analyses showed that this effect was significant for each of the dependent variables.[2]

Next, the same MANOVA was conducted, but now the message minimization variable was entered as a covariate. If the effect of the manipulation on the general and personal susceptibility and on intention is mediated by message minimization, the co-variate should be significant and the effects of the manipulation should become non-significant. This is exactly what happened.

Message minimization proved a significant co-variate (Wilks' $\lambda = .70$, F (5, 142) = 11.96, p < .001, $\eta^2 = .30$) whereas the effects of the manipulation for the general susceptibility (F (1, 146) = 2.33, p = .13), personal susceptibility (F (1, 146) < 1), and intention (F (1, 146) < 1) became non-significant. Even if message minimization was entered as a co-variate, there was still a significant effect of the manipulation on the personal self-efficacy (F (1, 146) = 10.81, p < .01) and a trend toward an effect on the general self-efficacy (F (1, 146) = 2.86, p = .09). These analyses provide strong evidence that message minimization played the role predicted by the EPPM.

Discussion

The EPPM of fear appeals (Witte, 1992, 1998) predicts that two conditions have to be met for a fear appeal to be persuasive. First, the negative consequences of the target group's current behavior must be sufficiently obnoxious and probable to generate a real threat. Second, the target groups must have the impression that the recommended behavior is effective in averting the danger and that it is feasible. Exemplars can influence both the perceived threat and the perceived efficacy, but underscoring one can only be done at the expense of the other. An exemplar in which a person suffers the consequences may increase the perceived threat, but at the same time reduce the perceived efficacy. An exemplar in which the person performs the recommended behavior can increase the perceived efficacy but at the same time reduce the perceived threat. In this article, we presented an experiment in which the relative persuasiveness of these two options were compared.

The results showed that the message containing an exemplar in which the person succeeded in performing the recommended behavior was more persuasive than the message containing an exemplar in which the person failed to do so. When the person succeeded in

performing the behavior, participants regarded it as more likely that they would be able to perform that behavior (as predicted by O'Keefe, 2002). When the person failed to perform the recommended behavior, participants regarded the message as manipulative and exaggerating. That is, they minimized the message, as is predicted by the EPPM. Furthermore, a subsequent analysis showed that the negative effect on intention was mediated through message minimization. Therefore, the conclusion seems warranted that exemplars providing support for the feasibility of the recommended behavior are more persuasive than exemplars underscoring the susceptibility and severity of the consequences. However, there are several restrictions in the set up of the experiment which prohibit drawing such a general conclusion.

First, the message was aimed at changing addictive behavior. The solution for such a problem is clear: quit performing that behavior. The effectiveness of the recommended behavior is clear and undisputed. However, the problem with addictive behavior is that not being able to quit performing the behavior is the root of the problem. Therefore, the perceived self-efficacy is in the case of an addiction probably very low. Message features that increase the perceived self-efficacy are therefore especially appropriate to increase acceptance of the recommended behavior. Such a persuasive effect is probably much smaller or non-existent if the target group does not doubt its own capacity to perform the recommended behavior but harbors doubts about its necessity. It would be interesting to replicate this study using a message in which people are urged to apply sunscreen each time they go into the sun. In that case, an exemplar in which a person gets skin cancer as a result of not performing the recommended behavior may be more persuasive compared to an exemplar in which a person succeeds in doing so.

Second, it is possible that the results obtained in this experiment are applicable only to new or unknown

types of addictive behavior. Cyber addiction is a relative newcomer on the list of addictions. Only 5.4% of our participants indicated that they regarded their own Internet use as worrisome. The large majority regards their own Internet use as harmless. They therefore have no direct experience in how hard it may be to get rid of cyber addiction. This lack of direct experience may have increased the impact of the exemplar. Imagine using an exemplar in which a person successfully quits smoking. This exemplar may have less or no impact at all on the perceived self-efficacy of a compulsive smoker who has already failed to quit smoking numerous times.

Third, all our participants were undergraduates. They are not representative for the Dutch population as a whole because they are younger, better educated, and have experience in reading longer stretches of text. One would like to replicate this study using a more heterogeneous sample. Still, this selection of participants does not have drawbacks only. Students do use computers and the Internet frequently, for personal use as well as for their study assignments. They are therefore at risk of becoming cyber addicts. The relevance of the topic is therefore probably higher for them than for the average Dutch person. Furthermore, there was a strong resemblance between the person in the exemplar and our participants, which may have increased the effectiveness of the exemplar.

A final shortcoming of this study is that not all elements of the EPPM were included in the questionnaire. For instance, the perceived response efficacy was not measured. That may be a relatively minor omission given that most people will perceive quitting the behavior as an effective response in case of an addiction. More problematic is the lack of measuring the extent to which the message evokes a threat. Perceived threat is believed to be determined by the susceptibility and severity of the consequences. These latter factors have been measured in the study. Still, it would have improved our knowledge of the effects of the different exemplars. For instance, we

would know whether the version in which the person succeeded in performing the recommended behavior increased the perceived threat.

Despite the limitations noted above, we do believe that this experiment provides interesting results on the relation between self-efficacy and message minimization. Furthermore, it sheds some light on the role that exemplars can play in the persuasiveness of a fear appeal. The limitations noted above provide us also with a research agenda to further explore the relation between exemplars, fear appeals, and persuasiveness.

Notes

1. We would like to thank two anonymous referees for their insightful and constructive comments on an earlier version of this paper.

2. The results of these univariate analyses were: message minimization $F(1, 147) = 56.13$, $p < .001$; general susceptibility: $F(1, 147) = 27.01$, $p < .001$; personal susceptibility: $F(1, 147) = 9.24$, $p < .01$; intention $F(1, 147) = 4.35$, $p < .05$; general self-efficacy: $F(1, 147) = 17.13$, $p < .001$; personal self-efficacy: $F(1, 147) = 4.07$, $p < .05$).

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