Death by Bacon:
Mortality Salient Fear Appeals and the Consumption of Processed Meat

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Abstract

In reaction to reports that the consumption of processed meat can cause colorectal cancer, it is anticipated that health interventions will be designed to reduce this potentially harmful behavior. Based on terror management theory and the related terror management health model, this study incorporates the concept of mortality salience into fear appeals in order to reduce positive attitudes and intentions towards consuming processed meat. Additionally, the potential moderating effects of a recommendation component as posited by the extended parallel process model are put to the test in an online experiment using manipulated news reports on processed meat as stimulus material. A 2 (mortality salient fear appeal present / mortality salient fear appeal not present) x 2 (recommendation present / recommendation not present) between-subjects factorial design across 317 participants showed no significant effects for neither reduced attitudes nor intentions towards consuming processed meat. The findings suggest that mortality salient fear appeals might not be effective in influencing the public towards reducing their processed meat consumption. However, the lack of significant results could be contributed to methodological limitations and desensitization to mortality salience and fear appeals.

Keywords: mortality salience, fear appeal, processed meat, recommendation, terror management theory, terror management health model, extended parallel processing model
Introduction

Just as cigarettes cause lung cancer, processed meat causes colorectal cancer, according to the World Health Organization’s (WHO) specialized cancer division, the International Agency for Research on Cancer (IARC). Similar to cigarettes, processed meat has now even been categorized by the IARC (2015) in the highest risk group to human health (Group 1, alongside e.g. alcoholic beverages and diesel fumes). Research showed that each 50-gram portion of processed meat consumed per day increases the risk of colorectal cancer by 18%. The reports on the carcinogenicity of processed meats were released in late 2015 and the news instantly generated an immense amount of global media attention. Processed meat is defined by the IARC (2015, p.2) as “meat that has been transformed through salting, curing, fermentation, smoking, or other processed to enhance flavor or improve preservation”. The complete press release can be viewed in Appendix A.

Colorectal cancer is the fourth most common cause of cancer related deaths worldwide and one of the most common occurring cancers (IARC, 2012). It should also be noted that in Europe, colorectal cancer is even more prevalent, and has the highest mortality rates compared to the rest of the world: 12.2% of the total number of cancer related deaths, making it the second most common cause of cancer related deaths in this area (IARC, 2012). The IARC thus supports current and future public health interventions aimed towards limiting the intake of processed meat. In support of the most effective design of the messages communicated by these future interventions, this study aims to take a closer look at fear appeals as positively influencing factors on reduced processed meat consumption in the Netherlands.
Fear appeals have an extensive reputation as a motivator to engage the public towards healthier lifestyles (e.g., Peters, Ruiter & Kok, 2013; Witte & Allen, 2000). In addition, mortality salience, which is defined as “the cognitive accessibility and process through which an individual considers the inevitability of their own death” by the Psychology Dictionary (“What is Mortality Salience”, n.d., para. 1), has been found to generate moderate to large effects on human attitude and behavior (Burke, Martens & Faucher, 2010). Moreover, mortality salience can be utilized as or within a fear appeal to influence persuasiveness (Shehryar & Hunt, 2005). For this reason, the combination of fear appeals and mortality salience will be further explored in this study. In addition, as Witte (1992) stressed the importance of a recommendation component within a fear appeal in the Extended Parallel Processing Model (EPPM), the potential moderating effects of a recommendation will also be taken into account.

By offering more insight on the effectiveness of mortality salient fear appeals, the findings of this study are aimed towards the creation of persuasive content for future interventions to reduce consumption of processed meat. As the findings could potentially be generalized for other harmful or fatal products, the author hopes to contribute to future interventions towards overall health of our society. From a scientific perspective, the findings of this study aimed to fill the existing research gap on positive effects of mortality salience on health promoting behavior (Arndt, Schimel, & Goldenberg, 2003). Mortality salience has not often been explored as a separate factor within fear appeals (Arndt et al. 2003). In the few instances that this was done, most of the results accounted for a negative impact on the health promoting behavior (e.g., Hansen, Winzeler, & Topolinski, 2010; Jessop & Wade, 2008). This study hopes to go against this trend and find positive results for morality salient fear appeals
(MSFA) towards health promoting behavioral attitudes and intentions. Thus, the research question this study aims to answer is:

To what extent is mortality salience in a fear appeal effective at reducing the positive attitude and intention towards processed meat consumption? And to what extent is this effect influenced by a recommendation?

**Theoretical Background**

**Fear Appeals**

In general, fear is an emotion that arouses during situations that are perceived as out of one’s control and threatening to one’s physical or physiological self (Nabi, 2002). Furthermore, fear is negatively valenced and induces high levels of arousal due to perceived threat (Witte & Allen, 2000). Because of the natural desire to protect one’s self, the action fear provokes is escaping from the perceived threat, which can in turn lead to avoidance behavior (Nabi, 2002). Consequently, fear is thus often utilized as an emotional appeal in persuasive messages aiming to motivate attitude and behavior change such as promoting healthy lifestyles, among others (Peters et al., 2013; Witte & Allen, 2000).

The extended parallel processing model (EPPM; Witte, 1992) posits that a fear appeal consists of a threat appraisal and an efficacy appraisal. According to the EPPM, exposure to a fear appeal first initiates a threat appraisal wherein one’s susceptibility to the threat and the severity of the threat are assessed. If the perceived susceptibility to the threat or perceived severity of the threat is low, fear has not been aroused and the message is disregarded. However, if both perceived susceptibility to the threat and perceived severity of the threat are high, the efficacy appraisal follows, wherein one’s perceived self-efficacy to perform the recommended
behavior and the perceived effectiveness of the recommended behavior (response efficacy) are assessed. If self-efficacy or response efficacy is low, the individual will engage in fear control, meaning they will reject the message and the recommended behavior. On the contrary, if both self-efficacy and response efficacy are high, the individual will engage in danger control, meaning that the recommendation will be carefully considered, and the recommended behavior will be adopted as a means to control the danger. When this happens, the message is accepted and the objective of the fear appeal has been reached. A more thorough discussion of the EPPM and how it will be utilized in the current study will follow in the last section of the theoretical background.

According to meta-analysis, fear seems to “have a relatively weak but reliable effect on attitudes, intentions and behaviors” (Witte & Allen, 2000, p. 602). For this reason, in order to motivate and persuade individuals towards a healthier diet, the current study also utilizes fear appeals by highlighting the carcinogenic threat of excessive processed meat consumption. The high mortality rates of colorectal cancer mean that it is one of the most deadly types of cancer (IARC, 2012), and with the fear of death being deep-rooted in human nature (Goldenberg & Arndt, 2008) it makes sense to use this mortality salience in the fear appeal.

Mortality Salience

The concept of mortality salience is derived from the Terror Management Theory (TMT; e.g., Greenberg, Pyszczynski, & Solomon, 1986). Inspired by the writings of Ernest Becker, the TMT was developed over two decades ago (Burke et al., 2010). The TMT posits that emotions of terror and anxiety can be brought on by the awareness of one’s own impending death (mortality), and that future anticipation and self-reflection precede this awareness. The mortality salience
hypothesis in TMT states that reminders of one’s mortality will activate terror management mechanisms and increase the need for cultural worldview validation and self-esteem enhancement (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). In research examining the TMT, the mortality salience hypothesis has frequently been operationalized on various aspects of human behavior, such as in relation to our health (Burke et al., 2010; Goldenberg & Arndt, 2008).

According to Arndt et al. (2003), mortality salience increased fitness intentions by functioning as both a direct and indirect terror management defense against one’s mortality concerns. The researchers went on to state that theirs was the first to prove that mortality salience can lead to health promoting behavioral intentions. The idea behind this is that health-enhancing behavior can delay impending death as it is aimed at maintaining and prolonging a healthy life (terror management defense). Building on this idea, the Terror Management Health Model was introduced (TMHM; Goldenberg & Arndt, 2008), which expanded the TMT by highlighting the fact that mortality is an inherent influencer on the subliminal motivations of one’s health-enhancing decision. Vail et al. also further explored these positive trajectories of mortality salience in 2012, by going through the conceptual foundations of TMT. In accordance with TMHM, the authors found that while mortality salience can sometimes inspire health-damaging behavior, it can also inspire health-enhancing behavior. An example of the TMHM in action is a recent study related to food consumption, wherein individuals exposed to a mortality reminder before food shopping, purchased healthier foods than in the control condition where they were exposed to a pain reminder (McCabe et al., 2015). From a critical perspective, it is unclear however why the authors chose a pain reminder as control condition. A suggestion would be to
use a reminder in the control condition that is further away from death, i.e. joy. Still, the study by McCabe et al. (2015) is an interesting integration of the TMHM.

However, even though the focal point of the current study is the utilization of mortality salience as a means towards reducing unhealthy behavior, most empirical evidence paints an opposite picture (Arndt et al., 2003). In certain studies, mortality salience has even been found to ironically increase unhealthy and risky behavior, for example reckless driving (Taubman-Ben-Ari, 2000) and excessive food consumption (Ferraro, Shiv, & Bettman, 2005; Mandel & Smeesters, 2008). It should be critically noted however that the findings in these three studies occurred in cases where methodologically, mortality salience was not operationalized within a fear appeal (no MSFA in relation to the unwanted behavior). Rather, mortality salience was induced separately according to the process model of mortality salient effects through non-conscious death thought activation by Arndt, Greenberg and Cook (2002), wherein at the beginning of the experiment, participants are asked to think about death related subjects (such as writing down their thoughts on the last moment they had a near-death experience) and after a delay, continuing with the experiment.

The current research aims to produce different results by using an MSFA in relation to the unwanted behavior, and not separately inducing thoughts on mortality salience such as the above methodology describes. While the TMHM primarily suggests that subtle reminders of death (non-conscious death thought activation) can be used as a terror management defense mechanism, Jessop and Wade (2008) found that exposure to information about the deadly risks of an unwanted health-related behavior (such an MSFA) can also make mortality salient. On the contrary, there is also empirical evidence that even in the case of an MSFA being used in relation
to the unwanted behavior, it still resulted in the ironic finding that the MSFA actually increased the unwanted behavior that was targeted. These inadvertent results were found for MSFA on cigarette packs (Hansen et al., 2010) and in regard to binge drinking (Jessop & Wade, 2008).

The primary explanation for this oppositional behavior is that unhealthy behavior is engaged as a coping strategy for the unwanted thoughts of one’s looming death (invoking the idea that it all does not matter as ‘you only live once’). However, the critical note here is that these results were mostly found in cases where the individuals derived some of their self-esteem from the unhealthy behavior, such as when they felt more confident when consuming alcohol or smoking cigarettes (Hanzen et al., 2010; Jessop & Wade, 2008; Shehryar & Hunt, 2005). For this reason, it is not expected that the MSFA will lead to an increase in the unhealthy behavior of consuming more processed meat, as it is not assumed that individuals derive their self-esteem from eating processed meat.

Moreover, the current study will build on the implications of the empirical evidence supporting the notion that mortality salience can also be used to promote health-enhancing behavior (e.g., Goldenberg & Arndt, 2008, McCabe et al., 2015; Morris, Cooper, Goldenberg, Arndt, & Gibbons, 2014). Additionally, Shehryar and Hunt (2005) concluded that fear appeals combined with mortality salience can also account for positive behavioral responses. Building on these implications, the current study will imbed mortality salience into a fear appeal by communicating the carcinogenicity of processed meat consumption as well as the mortality rate of colorectal cancer. This way processed meat is presented as a mortal health threat, and reduced processed meat consumption as the health-enhancing behavior. With the underlying assumption
that the health-enhancing behavior will be used as a terror management defense towards the mortal health threat, the following is hypothesized:

H1: Messages promoting reduced processed meat intake that include a mortality salient fear appeal have a greater positive effect on the attitudes and intentions towards reduced processed meat intake, compared to messages without a mortality salient fear appeal.

**Recommendation**

This study will also take a closer look at the EPPM (Witte, 1992), which was previously introduced in this theoretical background. There is an abundance of empirical support found for the EPPM, according to several meta-analyses (Peters et al., 2013; Witte and Allen 2002). More recently, there was even evidence found that the EPPM is also effective for other emotional appeals other than fear (Lewis, Watson & White, 2013). However, studies utilizing the EPPM operationalized it by using fear appeals that adhere to the assumption of a threat appraisal and efficacy appraisal. While there is now a clear threat in the current study in order to induce the threat appraisal (the MSFA), the same cannot be stated in regard to the efficacy appraisal.

As both dimensions of the efficacy appraisal (perceived self-efficacy and response efficacy) are aimed at one’s beliefs about the recommended response (Witte & Allen, 2000), the assumption can be made that the fear appeal message must also consist of a recommended response. As previously stated, this recommendation component is believed to increase message acceptance through the efficacy appraisal that follows the threat appraisal (Witte & Allen, 200). Recent meta-analyses by Peters et al. (2013) confirmed this assumption by showing significant interaction effects for the threat and efficacy appraisal, such that the threat only has an effect when efficacy is high, and efficacy only has an effect when the threat is high.
To this end, the current study will also introduce a recommendation component in the form of a recommended amount of processed meat to be consumed daily, in order to induce the efficacy appraisal. It is expected that this recommendation will increase the positive effects of the MSFA on the attitude and intention of consuming less processed meat. This leads us to hypothesize the following:

H2: The recommendation will moderate the effect of mortality salient fear appeals on the intentions and attitudes towards reduced processed meat intake, such that the positive effect of mortality salient fear appeals promoting reduced processed meat intake on the attitude and intention of reduced processed meat intake will be stronger when the recommendation is present compared to when it is not present.

**Conceptual Model**

![Conceptual Model](image)

*Figure 1. Conceptual model of the causal relationship between mortality salient fear appeals (MSFA) and the intention and attitude towards consuming less processed meat, with the variable ‘recommendation’ acting as a moderator.*
Method

Design

This experimental study had a 2 (MSFA present / MSFA not present) x 2 (recommendation present / recommendation not present) between-subjects factorial design. Both factors will serve as between-subject variables, so that each of the four experimental conditions will contain a unique set of participants. By doing this, the internal validity is increased, as the participants will only receive a single stimulus material so that they are not influenced by previous stimuli within the experiment.

Participants

The number of people that participated in the study is 608. However, only the participants that finished the questionnaire, and those who digitally consented that their data be used for research purposes were taken into account. The target group for this study consisted of adults above the age of 18, who currently reside in the Netherlands. Participants that do not consume meat (vegans and vegetarians) were filtered out and not considered in the main analyses, as they are not part of the target population that is at risk of developing cancer caused by (processed) meat consumption. A sample size of 317 participants remained ($N = 317$).

Taking a look at the characteristics of our sample, we see that in terms of sex, the majority of participants (71.7%) are female ($N = 228$), leaving only 90 male participants. The average age was 35 ($M = 35.42, SD = 11.788$) with an age range between 18 and 75. The current or completed education level of the participants varied between 13.2% on VMBO/MBO level ($N = 42$), 6.6% on HAVO/VWO level ($N = 21$), 77.9 % on HBO/WO level ($N = 42$) and 2.2% on an uncategorized level ‘Other’ ($N = 7$). In the Netherlands, the HBO/WO level is the highest
ranking in education level and it can therefore be concluded that the majority of the participants is highly educated. Out of this sample, 55.2% of the participants are of Dutch heritage ($N = 175$), and 44.8% of other or mixed descent ($N = 142$). Within the latter group, more than half consisted of Surinamese participants ($N = 90$) and remaining participants’ descent ranged from all over the world.

**Procedure**

The study was conducted online using digital survey tool Qualtrics and the participants for were mostly gathered via verbal requests with a link to the online survey posted on the social media channels Facebook and LinkedIn. After clicking the link and entering the digital environment to fill out the survey, the participants were informed that the data would be used for this research and they were asked for their consent. After giving consent, they were presented with a set of items about their reading preferences\(^1\), aiming to distract them from the nature of the research. Following these items, the participants were asked to pay close attention to the written news report that was going to follow. They were then presented the stimulus material of one of the four experimental conditions through automatic randomization.

After exposure to the stimulus material, a questionnaire followed containing items measuring their attitude towards processed meat, as well as their attitude and intention towards reducing their consumption of processed meat and frequency of consuming meat in general. Moreover, they were also asked for their opinion on the quality of the stimulus material. Finally, the participants finished the experiment by filling in the following background information: age, age,

\(^1\) These three items on reading preference are not considered in the analyses, as their goal was only to mislead the participants about the main goal of the study.
sex, education level, ethnicity and country of residence, after which they were thanked for their participation. The full questionnaire can be viewed in Appendix B.

**Stimulus Material**

The stimulus material consisted of a written news report in Dutch about the WHO (World Health Organization) research on processed meat, and included an illustration of different types of processed meat. The reports were constructed using actual information from the actual press release of the WHO on the subject as well as from real news reports. The control condition (general information message only: no MSFA and no recommendation) contained a title stating that WHO had analyzed processed meat, an introduction elaborating on this fact (without mentioning the results), a section stating what processed meat actually is and the exemplary illustration of processed meat. The reports were then manipulated by adding either a MSFA and/or a recommendation (independent and moderating variable) on the maximum daily consumption of processed meat. The stimulus materials are presented in Appendix C.

**MSFA.** The MSFA in the stimulus material consisted of a title stating that processed meat causes cancer according to the WHO (implicit mortality salience), and a section named ‘Darmkanker’ (Dutch translation of colorectal cancer) in which the carcinogenicity of processed meat is presented with explicit mortality salience. The MSFA will thus not only mention the causal carcinogenic effects of excessive processed meat consumption, but also the mortality rate of colorectal cancer (explicit mortality salience).

**Recommendation.** The recommendation consisted of a title stating that the WHO had analyzed processed meat (identical to the title of the control condition as described in the previous section), a section in the stimulus material stating that it is advised to reduce processed
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meat consumption to a maximum of 50 grams per day, as each 50 gram portion of processed meat consumed per day increases the risk of colorectal cancer by 18% according to the International Agency For Research on Cancer (IARC, 2015). The 50 grams of processed meat were also converted into a tangible amount (three pieces of ham or two sausages). Moreover, several substitutes to processed meat were presented, as well as tips on how to avoid processed meat when shopping.

**Dependent Variables**

The first dependent variable ‘attitude towards consuming less processed meat’ (hereafter referred to as ‘attitude’) describes the way someone feels about lessening the amount of processed meat they eat and the second dependent variable ‘intention towards consuming less processed meat’ (hereafter referred to as ‘intention’) describes the intention to lessen the amount of processed meat they eat. Both attitude and intention were measured with adapted items from the Dieting Intention Scale (DIS; Cruwys, Platow, Rieger & Byrne, 2013). The original DIS can be viewed in Appendix D.

**Attitude.** The scale was adapted to measure the attitude towards eating processed meat on five 7-point evaluative semantic differential items on the phrase ‘If I eat less processed meat in the next three months, this would be:’ harmful/beneficial, unpleasant/pleasant, useless/useful, foolish/wise and good/bad. The scale proved to be reliable, $\alpha = .901$ (an improvement of .035 was possible, but the improvement was deemed to marginal for any items to be deleted), $M = 5.011$, $SD = 1.306$.

**Intention.** Intention was measured by using a single adapted item from the DIS (Cruwys et. al, 2013) which included the statement ‘It is my intention to eat less processed meat in the
next three months’ with answers on a 7-point Likert scale ranging from completely disagree to completely agree ($M = 3.994, SD = 1.918$).

**Control Variables**

**Attitude towards consuming processed meat.** Attitude towards consuming processed meat (hereafter referred to as ‘processed meat attitude’) describes the way one currently feels about consuming processed meat and was measured using an existing direct measure by White, Terry, Troup, Rempel and Norman (2010) indicating attitudes towards consuming certain foods. The scale will be adapted to measure the current attitude towards eating processed meat on four 7-point evaluative semantic differential items on the phrase: ‘I find eating processed meat such as sausages, ham, cured meat, paté etc.:’ unpleasant/pleasant, good/bad, negative/positive and favourable/unfavourable. The scale proved to be reliable, $\alpha = .904$ (an improvement of .028 was possible, but the improvement was deemed to marginal for any items to be deleted), $M = 3.670, SD = 1.352$.

**Attitude towards stimulus material.** The perceived quality of the stimulus material (hereafter referred to as ‘processed meat attitude’) was measured with an original scale consisting of eight items on a 5-point Likert scale. The first seven items included the phrase ‘I found the news report to be:’ informative, well written, not believable, fake, clear, confusing and enjoyable to read. The last item was an evaluative semantic differential item on the phrase ‘I found the graphic design of the news report to be:’ outstanding/horrible. The items in different directions were recoded, and because of the difference between the first seven- and the last item, the variables were all standardized. The scale proved to be reliable, $\alpha = .833, M = -.0002, SD =$
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.679 (an improvement of .005 was possible in the reliability of the scale, but the improvement was deemed to marginal for any items to be deleted).

**Background variables.** Finally some background details of the participants were asked such as their meat consumption frequency, age, gender, education level and ethnicity².

**Results**

**Randomization**

The participants (N = 318) were randomly assigned by online survey tool Qualtrics to one of the four experimental conditions. The percentage of participants exposed to a MSFA in the stimulus material was 29.2% (N = 93); 26.4% were exposed to only a recommendation (N = 84); 19.5% were exposed to both a MSFA and recommendation (N = 62), and 24.8% received a neutral message (N = 79). A randomization check was conducted for each of control variables to determine if the distribution of the variables was equal across the manipulation conditions, and from the results it can be derived that the distribution of participants was more-or-less even among all the control variables: Sex, Ethnicity, Education, Meat Consumption Frequency, Stimulus Attitude, Age and Processed Meat Attitude.

For the variables Sex, Ethnicity, Education and Meat Consumption Frequency, Chi-square tests showed were conducted. The variable Sex was not significant with both experimental condition MSFA, $\chi^2 (1) = .322, p = .570$ and Recommendation, $\chi^2 (1) = .043, p = .835$. Ethnicity also showed no significance for dependent variables MSFA, $\chi^2 (1) = 1.269, p = .260$ and Recommendation, $\chi^2 (1) = .477, p = .490$. In addition, Education showed no significance for dependent variables MSFA, $\chi^2 (3) = 5.605, p = .132$ and Recommendation, $\chi^2 (3)$

² Ethnicity was transformed into a dichotomous variable (Dutch/Non-Dutch).
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= 2.552, *p* = .466. And finally, Meat Consumption Frequency also showed no significance for dependent variables MSFA, \( \chi^2 (2) = 1.587, p = .452 \), and Recommendation, \( \chi^2 (2) = 1.656, p = .437 \).

The remaining control variables Age, Stimulus Attitude and Processed Meat Attitude were each tested for equal distribution by conducting two-way ANOVA’s with the control variables as dependent variables and each of the conditions as the fixed factors. The results showed that none of the variables were significant with both experimental conditions MSFA and Recommendation, all *p* < .05. As previously stated, the results indicate that the randomization of the experimental conditions was successful.

**Covariate Selection**

For the covariate selection, a correlation analysis between the dependent variables Attitude and Intention and the control variables was conducted. To further determine which variables should be added as covariates in the main analyses, a series of two-way ANOVA’s between the dependent variables (Attitude and Intention) and each control variable (as fixed factor) and Intention were also conducted.

The results showed significant positive correlations between the variable Stimulus Attitude and both dependent variables Attitude (*r* = .239, *p* < .001), as well as Intention (*r* = .284, *p* < .001). Moreover, significant negative correlations were found between Processed Meat Attitude and both dependent variables Attitude (*r* = -.304, *p* < .001) and Intention (*r* = -.503, *p* < .001). For the control variable Sex, the correlation analysis also showed significant positive correlations between both dependent variables Attitude (*r* = .135, *p* < .05), and Intention (*r* = .137, *p* < .05). In terms of the Meat Consumption Frequency, a significant positive correlation
between both dependent variables Attitude ($r = -.144, p < .05$), and Intention was also observed ($r = -.276, p < .001$).

Moreover, Age correlated positively with dependent variable Intention ($r = .120, p < .05$). Finally, a significant negative correlation between Ethnicity and the dependent variable Attitude ($r = -.139, p < .05$) was found.

In the ANOVA analyses, the variable Stimulus Attitude was not significant with both dependent variable Attitude, $F(277, 39) = 1.175, p = .277, \eta^2 = .893$ and Intention, $F(277, 39) = .959, p = .593, \eta^2 = .872$. Age also showed no significance for dependent variables Attitude, $F(50, 266) = 1.157, p = .234, \eta^2 = .179$ and Intention, $F(50, 266) = 1.293, p = .104, \eta^2 = .196$. The same is true for Education, which also showed no significance for dependent variables Attitude, $F(3, 313) = .509, p = .677, \eta^2 = .005$ and Intention, $F(3, 313) = .320, p = .811, \eta^2 = .003$. The variables Stimulus Attitude, Age and Education will therefore not be added as covariates in the main analyses.

The variable Processed Meat Attitude showed significant results with both dependent variable Attitude, $F(22, 294) = 2.546, p = .000, \eta^2 = .160$ and Intention, $F(22, 294) = 5.675, p = .000, \eta^2 = .298$. In addition, the variable Sex also showed significant results with both dependent variable Attitude, $F(1, 315) = 5.846, p = .016, \eta^2 = .018$ and Intention, $F(1, 315) = 6.006, p = .015, \eta^2 = .019$. The variable Meat Consumption Frequency also showed significant results with both dependent variable Attitude, $F(2, 313) = 3.881, p = .022, \eta^2 = .024$ and Intention, $F(2, 313) = 13.162, p = .000, \eta^2 = .078$.

Thus, the variables Processed Meat Attitude, Sex and Meat Consumption Frequency will be added as a covariate in the main analyses of both dependent variables Attitude and Intention.
While no significant results were found between Ethnicity and dependent variable Intention, $F(1, 315) = 3.558, p = .060, \eta^2 = .011$, the results were significant for dependent variable Attitude, $F(1, 315) = 6.249, p = .013, \eta^2 = .019$. Thus, the variable Ethnicity will be added as a covariate in the main analyses the dependent variable Attitude.

**Hypotheses Testing**

The first hypothesis (H1) states that messages promoting reduced processed meat intake that included a MSFA will have a greater positive effect on the intentions and attitudes towards reduced processed meat intake compared to when there no MSFA present. The second hypothesis (H2) states that recommendation will moderate the effect of the MSFA in a positive direction. The main analyses consisted of testing the hypotheses with analyses of variance for dependent variable Attitude and for dependent variable Intention, with the experimental conditions MSFA (absent vs. present) and recommendation (absent vs. present) as fixed factors and determined control variables per dependent variable as covariates. The results as presented below showed no support for both H1 and H2.

**Attitude.** Results of a two-way ANCOVA, with the covariates Sex, Ethnicity, Meat Frequency and Processed Meat Attitude showed that there were no significant main effects for MSFA (absent vs. present), $F(1, 296) = 2.062, p = .152, \eta^2 = .007$ nor recommendation (absent vs. present), $F(1, 296) = 2.048, p = .153, \eta^2 = .007$, nor the interaction between both factors on the attitude towards reduced processed meat intake, $F(1, 296) = 1.360, p = .244, \eta^2 = .005$.

However, there were significant main effects found for the dependent variable Attitude with the covariates Ethnicity, $F(1, 296) = 4.692, p = .031, \eta^2 = .016$ and Processed Meat Attitude, $F(1, 296) = 19.020, p = .000, \eta^2 = .060$. For the covariate Processed Meat Attitude
there was also an interaction effect found between both factors, $F(1, 296) = 3.203, p = .024, \eta^2 = .031$.

**Intention.** Results of a two-way ANCOVA, with the covariates Sex, Meat Consumption Frequency and Processed Meat Attitude also showed that there were no significant main effects for MSFA (absent vs. present), $F(1, 300) = .054, p = .816, \eta^2 = .000$ nor recommendation (absent vs. present), $F(1, 300) = .242, p = .623, \eta^2 = .001$, nor the interaction between both factors on the attitude towards reduced processed meat intake, $F(1, 300) = .812, p = .386, \eta^2 = .003$.

Similar to the previous analyses, there was also a significant main effect found for the dependent variable Intention with the covariate Processed Meat Attitude, $F(1, 300) = 73.248, p = .000, \eta^2 = .196$. Additionally, there is also a significant main effect found with the covariate Meat Consumption Frequency, $F(1, 300) = 7.529, p = .006, \eta^2 = .024$.

**Conclusion & Discussion**

This study explored the effects of mortality salient fear appeals on consumers’ attitude and intention towards consuming less processed meat by comparing different message conditions. The main research question this study aimed to answer was: to what extent mortality salience in a fear appeal is effective at reducing positive attitudes and intentions towards processed meat consumption. The findings showed that messages containing an MSFA do not significantly reduce the attitude nor intention towards processed meat consumption. Moreover, the study showed no significant main effects on the attitude and intention towards reduced processed meat consumption in any of the conditions. These findings suggest that mortality
salient fear appeals might not be effective in influencing individuals towards reducing their processed meat consumption.

These results go against the Terror Management Health Model (TMHM; Goldenberg & Arndt, 2008), which states that mortality salience can positively influence the underlying motivation of individuals towards decisions concerning their health. The results also go against the assumption that mortality salience could positively influence the effectiveness of fear appeals (Shehryar & Hunt, 2005). Interestingly though, the results are also not in line with the findings that mortality salience could even account for adverse effects, leading individuals to increase the unwanted behavior instead of reducing it (e.g., Hansen et al., 2010; Jessop & Wade, 2008).

While it could be argued that the findings are in line with the current discussion on the actual effectiveness on fear appeals (Peters et al., 2013), it was expected that adding a recommendation as a moderator in accordance to the fear appeal design as proposed by Witte and Allen (2000) in their Extended Parallel Processing Model (EPPM) would render an increased, or at least a significant influence. Thus, the sub research question in this study was an inquiry about the effect of a recommendation in the MSFA on the attitude and intention towards consuming less processed meat. However, there were also no significant differences found for the recommendation as a moderating variable, which goes against the EPPM stating that the recommendation would serve as a catalyst for perceived efficacy which in turn would work towards positive message acceptance when preceded by a perceived threat (Witte, 1992). It can be argued that perhaps the threat appraisal resulted in low perceived threat or low perceived susceptibility to the threat, which resulted in fear control consequently causing the participants to reject the message.
Another possible explanation for the fact that there were no significant main effects found in this study could be attributed to the methodology used. Previous research on TMT and TMHM has incorporated a factor of delay between the mortality salient messages and the assessment of the individuals’ attitudes and intentions, by introducing a distraction task aiming to remove conscious awareness of death (e.g., Arndt et al. 2002; Goldenberg & Arndt, 2008; Hansen et al. 2010). It was found that when directly assessed without delay, the conscious awareness of death triggered proximal defenses (fear control) such as downplaying the mortality salient message (Hansen et al., 2010). As the current study did not incorporate such a delay, it could be possible that proximal defenses overruled the efficacy appraisal in the recommendation conditions, and even any potential main effect of the MSFA. However, this does not explain the fact that there are also no significant main effects on attitude and intention in the conditions without an MSFA.

On the other hand, while the results were not significant in reducing attitudes and intentions toward processed meat consumption within the limits of the current research, these results are not generalizable. First of all, it may well be that the participants in the MSFA conditions by now actually have changed their attitudes, intentions and even behavior towards reduced processed meat consumption, due to the abovementioned delay that by now has occurred after completing the experiment. A recommendation for future research would thus be to adhere to delays within the experiment, or even between experiments by having two or more moments of measurements. Secondly, the results are not generalizable for the entire Dutch population, as most of the participants were highly educated. As the findings towards reduced consumption of processed meat would be ideally used in aiding future interventions aimed at members of Dutch
society of all educational levels, different results are expected if the participants are more evenly dispersed in terms of educational levels.

Another confounding factor within the current research could be possible desensitization to mortality salience, due to the fact that we are consciously and unconsciously made aware of our mortality in daily life. In our daily news, we are confronted with mortality salient messages of war and crime, but also in relation to our lifestyles in terms of what we consume. The idea that ‘almost everything’ we consume these days has been related to increased risk of deadly diseases such as cancer could cause many to adopt the attitude that current consumption patterns might as well be continued, as death is inevitable. Another recommendation towards future research would thus be to take this possible level of desensitization towards mortality salience.

In conclusion, while there are no significant results found for mortality salient fear appeals in relation to reduced processed meat consumption in this study, more research on this issue is needed both to fill the scientific research gap as well as contribute to society by aiding the development of future interventions towards this cause.

References


doi:10.1177/109019810002700506
Appendix A: IARC Press Release

International Agency for Research on Cancer

PRESS RELEASE
N° 240

26 October 2015

IARC Monographs evaluate consumption of red meat and processed meat

Lyon, France, 26 October 2015 – The International Agency for Research on Cancer (IARC), the cancer agency of the World Health Organization, has evaluated the carcinogenicity of the consumption of red meat and processed meat.

Red meat

After thoroughly reviewing the accumulated scientific literature, a Working Group of 22 experts from 10 countries convened by the IARC Monographs Programme classified the consumption of red meat as probably carcinogenic to humans (Group 2A), based on limited evidence that the consumption of red meat causes cancer in humans and strong mechanistic evidence supporting a carcinogenic effect.

This association was observed mainly for colorectal cancer, but associations were also seen for pancreatic cancer and prostate cancer.

Processed meat

Processed meat was classified as carcinogenic to humans (Group 1), based on sufficient evidence in humans that the consumption of processed meat causes colorectal cancer.

Meat consumption and its effects

The consumption of meat varies greatly between countries, with from a few percent up to 100% of people eating red meat, depending on the country, and somewhat lower proportions eating processed meat.

The experts concluded that each 50 gram portion of processed meat eaten daily increases the risk of colorectal cancer by 18%.

“For an individual, the risk of developing colorectal cancer because of their consumption of processed meat remains small, but this risk increases with the amount of meat consumed,” says Dr Kurt Straif, Head of the IARC Monographs Programme. “In view of the large number of people who consume processed meat, the global impact on cancer incidence is of public health importance.”

The IARC Working Group considered more than 800 studies that investigated associations of more than a dozen types of cancer with the consumption of red meat or processed meat in many countries and populations with diverse diets. The most influential evidence came from large prospective cohort studies conducted over the past 20 years.

Public health

“These findings further support current public health recommendations to limit intake of meat,” says Dr ChristopherWild, Director of IARC. “At the same time, red meat has nutritional value. Therefore, these results are important in enabling governments and international regulatory agencies to conduct risk assessments, in order to balance the risks and benefits of eating red meat and processed meat and to provide the best possible dietary recommendations.”
Appendix B: Questionnaire

Geachte Respondent,

U bent uitgenodigd deel te nemen aan een onderzoek dat wordt uitgevoerd onder verantwoordelijkheid van onderzoeksinstituut ASCoR, onderdeel van de Universiteit van Amsterdam. ASCoR doet wetenschappelijk onderzoek naar media en communicatie in de
 samenleving. Aan dit onderzoek kunnen mannen en vrouwen boven de 18 deelnemen, die in Nederland woonachtig zijn. Het onderzoek bestaat uit een korte vragenlijst van ongeveer 7 minuten en de antwoorden zullen geanalyseerd worden als onderdeel van mijn Master thesis. Omdat dit onderzoek wordt uitgevoerd onder de verantwoordelijkheid van ASCoR, Universiteit van Amsterdam, heeft u de garantie dat:

1. Uw anonimiteit is gewaarborgd en dat uw antwoorden of gegevens onder geen enkele voorwaarde aan derden zullen worden verstrekt, tenzij u hiervoor van tevoren uitdrukkelijke toestemming hebt verleend.

2. U zonder opgaaf van redenen kunt weigeren mee te doen aan het onderzoek of uw deelname voortijdig kunt afbreken. Ook kunt u achteraf (binnen 24 uur na deelname) uw toestemming intrekken voor het gebruik van uw antwoorden of gegevens voor het onderzoek.

3. Deelname aan het onderzoek geen noemenswaardige risico’s of ongemakken voor u met zich meebrengt, geen moedwillige misleiding plaatsvindt, en u niet met expliciet aanstootgevend materiaal zult worden geconfronteerd.

Voor meer informatie over dit onderzoek en de uitnodiging tot deelname kunt u te allen tijde contact opnemen met mij, via het emailadres natasha.fongpoen@student.uva.nl. Mochten er naar aanleiding van uw deelname aan dit onderzoek bij u toch klachten of opmerkingen zijn over het verloop van het onderzoek en de daarbij gevolgde procedure, dan kunt u contact opnemen met het lid van de Commissie Ethiek namens ASCoR, per adres: ASCoR secretariaat, Commissie Ethiek, Universiteit van Amsterdam, Roetersstraat 166, 1018 WV Amsterdam; 020- 525 3680; ascor-secr-fmg@uva.nl. Een vertrouwelijke behandeling van uw klacht of opmerking is daarbij gewaarborgd.
Wij hopen u hiermee voldoende te hebben geïnformeerd en danken u bij voorbaat hartelijk voor uw deelname aan dit onderzoek dat voor ons van grote waarde is.

Met vriendelijke groet,

Natasha Fong Poen

Graag vragen wij u nog om naar aanleiding van de informatie op de voorgaande pagina, schriftelijk toestemming te verlenen voor deelname aan dit klein onderzoek:

Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard en methode van het onderzoek, zoals uiteengezet op het informatieblad op de voorgaande pagina. Mijn vragen zijn naar tevredenheid beantwoord. Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud daarbij het recht deze instemming weer in te trekken zonder dat ik daarvoor een reden hoe op te geven. Ik besef dat ik op elk moment mag stoppen met het experiment. Als mijn onderzoeksresultaten gebruikt worden in wetenschappelijke publicaties, of op een andere manier openbaar worden gemaakt, dan zal dit volledig geanonimiseerd gebeuren. Mijn persoonsgegevens worden niet door derden ingezien zonder mijn uitdrukkelijke toestemming. Als ik meer informatie over het onderzoek wil, nu of in de toekomst, dan kan ik me wenden tot Natasha Fong Poen via het emailadres natasha.fongpoen@student.uva.nl. Voor eventuele klachten over dit onderzoek kan ik me wenden tot het lid van de Commissie Ethiek namens ASCoR, per adres: ASCoR secretariaat, Commissie Ethiek, Universiteit van Amsterdam, Roetersstraat 166, 1018 WV Amsterdam; 020-5253680; ascor-secr-fmg@uva.nl.

☐ Ik ga akkoord (1)
☐ Ik ga niet akkoord (2)
Op de volgende pagina start de korte vragenlijst. Er zijn geen goede of foute antwoorden, dus wees vooral oprecht in uw respons. Houdt u er a.u.b. rekening mee dat u niet terug kunt naar de vorige pagina's om de vragen nog eens te bekijken of uw antwoorden te veranderen. Bij voorbaat dank voor uw medewerking!

Leest u graag?
○ Ja, ik lees graag (1)
○ Soms wel, soms niet (2)
○ Nee, ik lees helemaal niet graag (3)

Wat leest u zoal? (Meerdere antwoorden zijn mogelijk)
□ De krant (1)
□ Boeken (2)
□ Blogs (3)
□ Wetenschappelijke artikelen (4)
□ (Nieuws)berichten op social media (5)
□ Tijdschriften (6)
□ Niets, ik hou niet van lezen (7)
□ Anders, namelijk: (8) ____________________
Welke van de volgende opties heeft uw voorkeur:

- Op papier lezen (1)
- Op een computer, tablet of e-reader lezen (2)
- Ik vind beide bovenstaande opties even prettig (3)

Op de volgende pagina krijgt u een kort nieuwsbericht te zien. Lees deze aandachtig, en klik daarna door om verder te gaan met de vragenlijst. Houd er rekening mee dat u niet terug kunt om het bericht nog eens te lezen.

Condition 1 +FA+REC Leest u a.u.b. dit krantenartikel aandachtig door en klik als u klaar bent op de oranje knop rechtsonder om te starten met de vragenlijst

Condition2: +FA-REC Leest u a.u.b. dit krantenartikel aandachtig door en klik als u klaar bent op de oranje knop linksonder om te starten met de vragenlijst

Condition3: -FA+REC Leest u a.u.b. dit krantenartikel aandachtig door en klik als u klaar bent op de oranje knop linksonder om te starten met de vragenlijst

Condition4: -FA-REC Leest u a.u.b. dit krantenartikel aandachtig door en klik als u klaar bent op de oranje knop linksonder om te starten met de vragenlijst
Het eten van bewerkt vlees en bewerkte vleeswaren zoals worstjes, ham, rookvlees, paté etc. vind ik:

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Als ik de komende 3 maanden minder bewerkt vlees eet, zal dit ............... zijn:

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In hoeverre bent u het met de volgende stelling eens of oneens?

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<th>Het is mijn intentie om de komende 3 maanden minder bewerkt vlees te eten. (1)</th>
<th>Helemaal niet mee eens (1)</th>
<th>Niet mee eens (2)</th>
<th>Eerder oneens (3)</th>
<th>Noch eens noch oneens (4)</th>
<th>Enigszins mee eens (5)</th>
<th>Mee eens (6)</th>
<th>Helemaal mee eens (7)</th>
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In hoeverre bent u het met de volgende stellingen eens?

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<th>Ik ben een vleeseter (1)</th>
<th>Helemaal niet mee eens (1)</th>
<th>Eerder oneens (2)</th>
<th>Noch eens noch oneens (3)</th>
<th>Enigszins mee eens (4)</th>
<th>Helemaal mee eens (5)</th>
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<td>Vlees is ongezond voor de mens (2)</td>
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<td>Vlees is niet lekker (3)</td>
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<td>Vlees is nodig om een gebalanceerd voedingspatroon aan te houden (4)</td>
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Hoeveel dagen in de week eet u ongeveer vlees?

- Elke dag (1)
- 4-6 dagen (2)
- 1-3 dagen (3)
- Nooit, ik ben vegetarisch/veganistisch en/of eet niet graag vlees (4)

In hoeverre bent u het met de volgende stellingen eens of oneens?

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<thead>
<tr>
<th>Informatief (1)</th>
<th>Helemaal niet mee eens (1)</th>
<th>Eerder oneens (2)</th>
<th>Noch eens noch oneens (3)</th>
<th>Enigszins mee eens (4)</th>
<th>Helemaal mee eens (5)</th>
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<td>Goed geschreven (2)</td>
<td>Helemaal niet mee eens (1)</td>
<td>Eerder oneens (2)</td>
<td>Noch eens noch oneens (3)</td>
<td>Enigszins mee eens (4)</td>
<td>Helemaal mee eens (5)</td>
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<td>Ongeloofwaardig (3)</td>
<td>Nep (4)</td>
<td>Duidelijk (5)</td>
<td>Verwarrend (6)</td>
<td>Prettig om te lezen (7)</td>
<td>Helemaal niet mee eens (1)</td>
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Heeft u dit nieuwsbericht of een nieuwsbericht met dezelfde informatie al eerder ergens gelezen?

- Ja, ik heb dit nieuwsbericht en/of deze informatie al eerder ergens gelezen (1)
- Ik weet het niet (2)
- Nee, ik heb dit nieuwsbericht en/of deze informatie nog nooit ergens gelezen (3)

Wat vond u van de grafische vormgeving van het nieuwsbericht?

- Uitstekend (1)
- Goed (2)
- Gemiddeld (3)
- Niet goed (4)
- Verschrikkelijk (5)

Bijna klaar! Vult u a.u.b. de volgende vragen in zoals u het zich kan herinneren van het nieuwsbericht dat u eerder in deze vragenlijst te zien kreeg.
Wat is bewerkt vlees volgens het nieuwsbericht dat u gelezen hebt?

☐ Vlees dat is gebakken, gestoofd of gegrild (1)

☐ Vlees waar verder niets aan is toegevoegd om de smaak te versterken of de houdbaarheid te verlengen (2)

☐ Vlees dat is gerookt, gedroogd, gezouten, gefermenteerd en/of langer houdbaar is gemaakt met conservingmiddelen (3)

☐ Varkensvlees (4)

Wat is uw geslacht?

☐ Man (1)

☐ Vrouw (2)

Wat is uw leeftijd?

----

Wat is uw hoogst genoteerde opleiding?

☐ Basis Onderwijs (1)

☐ VMBO/MBO (2)

☐ HAVO/VWO (3)

☐ HBO/WO (4)

☐ Anders (5)
Wat is uw afkomst?

☐ Nederlands (autochtoon) (1)

☐ Surinaams (2)

☐ Antiliaans (3)

☐ Turks (4)

☐ Marokkaans (5)

☐ Chinees (6)

☐ Indonesisch (7)

☐ Gemengd (8)

☐ Anders, namelijk: (9) ____________________

Bent u woonachtig in Nederland?

☐ Ja, ik ben woonachtig in Nederland (1)

☐ Nee, ik ben niet woonachtig in Nederland (2)

Appendix C: Stimulus Material

Fear appeal present x Recommendation absent
WHO: Bewerkt Vlees Kankerverwekkend

Lyon, Frankrijk, 26 oktober 2015 - De IARC (International Agency for Research on Cancer), de kanker divisie van de WHO (World Health Organisation), heeft langdurig onderzoek en grondige evaluatie verricht naar bewerkt vlees. Er is geconcludeerd dat de consumptie van bewerkt vlees zeer schadelijk is voor de gezondheid, vanwege het verhoogde risico op darmkanker.

Bewerkt Vlees
Vlees wordt gecategoriseerd als bewerkt indien het is gerookt, gedroogd, gezouten, gefermenterd of op een andere manier bewerkt is om smaak te versterken of houdbaarheid te verhogen. Hieronder valt ook vlees waar conserveringsmiddelen aan is toegevoegd. Denk aan rookworsten, frikadellen, speklappen en ingeblikte vlees, maar ook vleeswaren die bijvoorbeeld als broodbeleg geconsumeerd worden, zoals ham, rookvlees, knakworsten, bacon en salami. Ook vleeswaren die in eerste instantie niet bewerkt lijken zoals hamburgers, gehakt en tartaar zijn vaak toch bewerkt met conserveringsmiddelen.

Darmkanker
De IARC heeft bewerkt vlees nu in de categorie kankerverwekkend voor mensen (Groep 1) geplaatst, gebaseerd op voldoende bewijs dat de consumptie van bewerkt vlees darmkanker veroorzaakt bij mensen. Darmkanker komt het meest voor in Westerse landen, met name in Europa. Ter wereld is darmkanker de 4e meest dodelijke vorm van kanker, en in Europa is het zelfs de 2e meest dodelijke vorm. Substanties zoals alcohol, tabak en asbest behoren ook tot Groep 1, de categorie met het hoogste risico tot het veroorzaken van kanker.

Voorbeelden van bewerkt vlees

Figure 2. Stimulus material containing mortality salient fear appeal.
WHO Analyseert Bewerkt Vlees

Lyon, Frankrijk, 26 oktober 2015 - De WHO (World Health Organisation), heeft langdurig onderzoek en grondige evaluatie verricht naar bewerkt vlees. Er is geconcludeerd dat de consumptie van bewerkt vlees schadelijk is voor de gezondheid.

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Aangeraden Maximum
Er wordt aangeraden niet meer dan 50 gram bewerkt vlees per dag te consumeren. Deze hoeveelheid staat ongeveer gelijk aan bijvoorbeeld 3 plakjes ham, of 2 knakworstjes. Alternatieven voor bewerkte vleeswaren op brood zijn bijvoorbeeld zuivelproducten zoals kaas en bijvoorbeeld noten pasta's zoals pindakaas. Verder wordt er aangeraden om bij het kopen van vlees te letten op de ingrediënten lijst, om zo conserveringsmiddelen te vermijden.

Voorbeelden van bewerkt vlees

Figure 3. Stimulus material with a recommendation on the maximum daily consumption of processed meat.
MSFA present x Recommendation present

**WHO: Bewerkt Vlees Kankerverwekkend**

Lyon, Frankrijk, 26 oktober 2015 - De IARC (International Agency for Research on Cancer), de kanker divisie van de WHO (World Health Organisation), heeft langdurig onderzoek en grondige evaluatie verricht naar bewerkt vlees. Er is geconcludeerd dat de consumptie van bewerkt vlees zeer schadelijk is voor de gezondheid, vanwege het verhoogde risico op darmkanker.

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De IARC heeft bewerkt vlees nu in de categorie kankerverwekkend voor mensen (Groep 1) geplaatst, gebaseerd op voldoende bewijs dat de consumptie van bewerkt vlees darmkanker veroorzaakt bij mensen. Darmkanker komt het meest voor in Westerse landen, met name in Europa. Ter wereld is darmkanker de 4e meest dodelijke vorm van kanker, en in Europa is het zelfs de 2e meest dodelijke vorm. Substanties zoals alcohol, tabak en asbest behoren ook tot Groep 1, de categorie met het hoogste risico tot het veroorzaken van kanker.

**Aangeraden Maximum**

Er wordt aangeraden niet meer dan 50 gram bewerkt vlees per dag te consumeren. Deze hoeveelheid staat ongeveer gelijk aan bijvoorbeeld 3 plakjes ham, of 2 knakworstjes. Elke 50 gram bewerkt vlees per dag extra vergroot het risico tot het krijgen van darmkanker met 18%. Alternatieven voor bewerkte vleeswaren op brood zijn bijvoorbeeld zuivelproducten zoals kaas en bijvoorbeeld noten pasta’s zoals pindakaas. Verder wordt er aangeraden om bij het kopen van vlees te letten op de ingrediënten lijst, om zo conservingmiddelen te vermijden.

Figure 4. Stimulus material containing a mortality salient fear appeal as well as a recommendation on the maximum daily consumption of processed meat.
WHO Analyseert Bewerkt Vlees

Lyon, Frankrijk, 26 oktober 2015 - De WHO (World Health Organisation), heeft langdurig onderzoek en grondige evaluatie verricht naar bewerkt vlees. Er is geconcludeerd dat de consumptie van bewerkt vlees schadelijk is voor de gezondheid.

Bewerkt Vlees
Vlees wordt gecategoriseerd als bewerkt indien het is gerookt, gedroogd, gezouten, gefermenteerd of op een andere manier bewerkt is om smaak te versterken of houdbaarheid te verhogen. Hieronder valt ook vlees waar conserveringsmiddelen aan is toegevoegd. Denk aan rookworsten, friandellen, speklappen en ingeblik vlees, maar ook vleeswaren die bijvoorbeeld als broodbeleg geconsumeerd worden, zoals ham, rookvlees, knakworsten, bacon en salami. Ook vleeswaren die in eerste instantie niet bewerkt lijken zoals hamburgers, gehakt en tartaar zijn vaak toch bewerkt met conserveringsmiddelen.

Voorbeelden van bewerkt vlees

Figure 5. Stimulus material containing only general information on processed meat.
Appendix D: Dieting Intention Scale (DIS)

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In the next three months, I intend to go on a diet.</td>
</tr>
<tr>
<td><em>Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree</em></td>
</tr>
<tr>
<td>2. In the next three months, I intend to reduce my calorie intake.</td>
</tr>
<tr>
<td><em>Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree</em></td>
</tr>
<tr>
<td>If I diet in the next 3 months, this would be . . .</td>
</tr>
<tr>
<td>3. <em>Harmful . . . beneficial</em></td>
</tr>
<tr>
<td>4. <em>Unpleasant . . . pleasant</em></td>
</tr>
<tr>
<td>5. <em>Useless . . . useful</em></td>
</tr>
<tr>
<td>6. <em>Foolish . . . wise</em></td>
</tr>
<tr>
<td>7. <em>Bad . . . good</em></td>
</tr>
</tbody>
</table>