

Morality or competence? The importance of affirming the appropriate dimension of self-integrity

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Running head: *Mortality and competence-based self-affirmation*

Morality or competence? The importance of
affirming the appropriate dimension of self-
integrity.

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Abstract

Objectives. Two studies explored the relative efficacy of a morality-based versus a competence-based self-affirmation manipulation at increasing acceptance of personally relevant health-risk information. In accordance with prior theorising (e.g., Cohen & Sherman, 2014), it was hypothesized that the morality affirmation would be more effective than the competence affirmation in such contexts, as the former targets a different domain to that threatened by the health-risk information.

Design. Both studies employed a cross-sectional experimental design.

Methods. Participants were presented with a morality affirmation, competence affirmation or no affirmation control prior to reading a message about the risks of (a) not engaging in daily dental flossing (Study 1) and (b) red meat consumption (Study 2). Participants subsequently completed a number of measures assessing acceptance of the message.

Results. In line with predictions, findings from both studies demonstrated that the morality affirmation precipitated greater acceptance of personally relevant health-risk information compared to the competence affirmation, as reflected in more positive attitudes (Studies 1 and 2) and intentions (Study 1). Study 2's findings further suggested that the superior efficacy of the morality affirmation in health-related contexts could not simply be attributed to a general tendency for this affirmation to outperform the competence affirmation.

Conclusions. The nature of the value affirmed may be a critical factor in determining the success of self-affirmation manipulations in health-related domains.

Morality or competence? The importance of affirming the appropriate dimension of self-integrity.

A major challenge facing society is how best to persuade people of the need to change their behaviour, either for their own benefit (e.g., the prevention of personal illness) or for a greater good (e.g., the protection of the environment). Public communication campaigns often highlight the negative consequences of people's actions, the rationale being that this will motivate behaviour change. However, such approaches have frequently been found to be ineffective (Ruiter, Abraham, & Kok, 2001). Moreover, people at whom such messages are aimed (e.g., those who engage in the targeted health-detrimental behaviour) have sometimes been shown to be the most likely to derogate the message (Freeman, Hennessy, & Marzullo, 2001) and the least likely to be persuaded by it (Lieberman & Chaiken, 1992).

Self-affirmation theory contends that people are continually motivated to protect their self-integrity, where the latter has been described as the belief that the self is “adaptively and morally adequate, that is, competent, good, coherent, unitary, stable, capable of free choice, capable of controlling important outcomes...” (Steele, 1988, p. 262). From this perspective, information detailing the negative consequences of one's chosen behaviours may present a threat to self-integrity, insofar as it challenges the view of the self as a competent and moral individual who would not engage in behaviours that may harm the self or others. Consequently, the defensive processing of threatening information can be interpreted as a mechanism aimed at safeguarding a person's self-integrity (Sherman & Cohen, 2006).

Critically, however, self-affirmation theory asserts that potential threats to self-integrity can be countered by affirming the self in an important domain (Steele, 1988). Thus, if individuals are given the opportunity to reflect on an important source of self-

integrity, this should allow them to maintain their overall sense of self-integrity in the face of potentially threatening information. As a result, self-affirmation should predispose individuals to consider such information in a more open and less biased manner, without needing to resort to defensive responses (Cohen & Sherman, 2014).

In support of this position, a growing body of research evidence has demonstrated that self-affirmed participants are more open to personally-relevant health-risk information than are non-affirmed participants. For example, self-affirmation has been shown to promote positive intentions and behaviour change in the context of reducing one's alcohol consumption (Armitage, Harris, & Arden, 2011; Harris & Napper, 2005; Scott, Brown, Phair, Westland, & Schütz, 2013); heightened perceptions of control, self-efficacy and intentions to reduce cigarette smoking (Armitage, Harris, Hepton, & Napper, 2008; Harris, Mayle, Mabbott, & Napper, 2007); more positive attitudes, stronger intentions, greater levels of response efficacy and corresponding behaviour change in the context of increased physical activity (Cooke, Trebaczyk, Harris, & Wright, 2014; Jessop, Sparks, Buckland, Harris, & Churchill 2014, Study 1); and greater levels of response-efficacy, self-efficacy and consumption with regard to eating five portions of fruit and vegetables a day (Epton & Harris, 2008; Harris et al., 2014). Furthermore, two recent meta-analyses have reported reliable, beneficial effects of self-affirmation on cognitive and behavioural outcomes in health-related contexts (Epton, Harris, van Koningsbruggen, Kane, & Sheeran, 2014; Sweeney & Moyer, 2014).

In sum, a body of evidence supports the utility of self-affirmation manipulations in increasing acceptance of personally relevant health-risk information. However, a significant limitation to our understanding of self-affirmation effects is that little is known about how to operationalize self-affirmation manipulations most effectively

(McQueen & Klein, 2006). Various techniques have been employed to induce self-affirmation in health-related contexts, with little attention directed towards exploring which manipulations are most effective and why this might be the case (cf. Epton et al., 2014; Jessop, Simmonds, & Sparks, 2009). The most frequently utilised self-affirmation manipulation involves participants contemplating a personally important value (Cohen & Sherman, 2014; Epton et al.; Sweeney & Moyer, 2014), and the results of a recent meta-analysis indicated that self-affirmation was most effective at changing behaviour when the affirmation task involved writing about such a value (Epton et al.). However, scant consideration has been paid to the nature of the actual value that is selected and affirmed. Furthermore, since participants typically choose the target value themselves (e.g., Sherman, Nelson, & Steele., 2000; Harris & Napper, 2005), the nature of the value that is affirmed may vary from person to person within a given study. This presents an important limitation to the interpretation of research findings and hinders the validity of comparisons made across studies.

It has been posited that the affirmed value should be from a different domain to that of the threat (Cohen & Sherman, 2014; but see Steele, 1988), as domain-relevant self-affirmations might *increase* resistance to change by consolidating self-certainty and impunity regarding the threatened domain (Blanton, Cooper, Skurnik, & Aronson, 1997; Sherman & Cohen, 2006; Sivanathan, Molden, Galinsky, & Ku, 2008).

However, research findings are not wholly consistent, with some studies demonstrating apparent benefits of domain-relevant self-affirmations (Klein, Lipkus, Scholl, McQueen, Cerully, & Harris, 2010; see also Sherman & Cohen, 2006, p. 225; Steele, 1988).

To date, no research has systematically manipulated the domain of the value affirmed prior to exposure to personally-relevant health-risk information (cf. Burson,

Crocker, & Mischkowski, 2012; Pavey, Greitemeyer, & Sparks, 2011, Study 2). It would seem to be important to establish whether different-domain value affirmations are more effective at promoting openness to personally relevant health-risk information compared to domain-relevant value affirmations (a perspective which we refer to as the “different domain hypothesis” from now on). Research has identified two basic and distinct sets of traits which appear to reflect two corresponding value domains: those relating to competence and those relating to morality¹ (Wojciszke, 2005a). We contend that the provision of personally-relevant health-risk information usually presents a threat primarily to one’s sense of competence, insofar as such information directly challenges one’s view of the self as competent, capable and adaptive, i.e., as someone who is sensible enough not to engage in behaviours that could potentially harm the self. By contrast, such information (which typically focuses on the personal costs of engaging in the behaviour) should pose less of a threat to one’s sense of morality, as morality is primarily concerned with the welfare of others (Mackie, 1977). In accordance with the different domain hypothesis, we would thus predict that a self-affirmation manipulation which focuses on a value related to competence should be less effective at increasing acceptance of personally-relevant health-risk information than a self-affirmation manipulation which focuses on a value that is related to a different and distinct domain (viz. morality).

In order to test this proposition, the current paper presents two studies designed to explore the relative efficacy of a competence-based and a morality-based values

¹ It is perhaps noteworthy that these two domains appear to be highly compatible with Steele’s original exposition of self-integrity as pertaining to “adaptive and moral adequacy” (p. 289).

affirmation manipulation at increasing acceptance of personally relevant health-risk information.

Study 1

Study 1 compared the efficacy of a competence-based and a morality-based affirmation manipulation at increasing acceptance of a message presenting the health-related risks of not engaging in regular dental flossing, which we believed would pose a threat primarily to recipients' sense of competence. We selected dental flossing as our target behaviour as we wanted to focus on a health-related behaviour with no obvious links to morality (in comparison, for example, to risky driving, where one's behaviour might have direct implications for the wellbeing of others). It was expected that participants in the *morality affirmation* condition would be more accepting of the health-risk information compared to those in the *competence affirmation* condition. Specifically, and as empirical hypotheses, it was predicted that participants in the *morality affirmation* condition would report more positive attitudes towards dental flossing (reflecting a greater acceptance that performance of this behaviour would be advantageous) and stronger intentions to floss, compared to those in the *competence affirmation* condition.

Method

*Participants*²

Ninety three participants completed the study and met the inclusion criterion that they were not engaging in daily dental flossing. The majority ($n = 87$) were (non-psychology) students; 68 (73.12%) participants were female. Ages ranged from 19-50 years ($M = 22.91$, $SD = 5.36$).

² Further information on participants in both studies is given in Supporting Information.

Materials

Participants completed a questionnaire including the following sections:

Demographic information. Participants indicated their age, gender, student status and subject studied (if they were a student).

Past behaviour. Participants' past behaviour was measured by the following item: "On how many days in the last week have you used dental floss as part of your dental routine?" (0 to 7).

Self-affirmation manipulation. Participants in the *competence affirmation* and *morality affirmation* conditions were asked to choose their most important value from a list of 9 values and write a short statement about it, focusing on why the value was so important to them and how it had influenced their behaviour. Critically, for participants in the *competence affirmation* condition, the 9 values given were related to competence (being able, being well-organised, competence, effectiveness, efficiency, intelligence, inventiveness, logicalness, and resourcefulness) while for participants in the *morality affirmation* condition, the 9 values given were related to morality (altruism, fairness, forgiveness, goodness, honesty, kindness, loyalty, sincerity, and tolerance). Participants in the *control* condition received no self-affirmation task³.

Health-risk information. Participants were asked to read a passage comprising three paragraphs detailing the potential link between not flossing one's teeth and developing gum disease and coronary heart disease. They were additionally informed that the American Dental Association recommends daily dental flossing. Pilot

³ Further information on this manipulation, including associated pilot studies, the rationale for using a no-task control condition and the frequency with which each value was selected, is given in Supporting Information.

research⁴ suggested that this message was perceived as presenting more of a threat to competence than to morality.

Prior knowledge. Participants were asked to respond to the item “Before reading the information above, were you aware that flossing your teeth might help prevent coronary heart disease?” (*yes / no*).

Attitudes. Participants responded to the statement “Flossing my teeth daily over the next seven days as part of my dental routine would be:” on three pairs of semantic differentials (*bad* [1] to *good* [7], *harmful* [1] to *beneficial* [7], and *foolish* [1] to *wise* [7]), $\alpha = .81$.

Intentions. Participants’ intentions were measured by two items, e.g., “I intend to floss my teeth daily over the next seven days as part of my dental routine” (*definitely do not* [1] to *definitely do* [7]), $r(90) = .96, p < .001$.

Procedure and design

Participants were approached opportunistically at several venues on a UK university campus (e.g., the library) and asked if they would be willing to take part in a study exploring their beliefs about dental flossing. All participants completed the questionnaire alone and were instructed to complete the materials in the order that they were presented (i.e., in the order detailed above). Participants were sequentially allocated to one of the three conditions resulting from the oneway design (Self-Affirmation Manipulation: *competence affirmation* [$n = 30$], *morality affirmation* [$n = 31$], and *control* [$n = 32$]). Ethical approval for the study was obtained from the institutional Ethics Committee.

Results

Participants’ past behaviour scores ranged from 0 to 6 ($M = 0.68, SD = 1.39$).

⁴ Please see Supporting Information

Preliminary Analyses

Chi-square analysis and one-way ANOVAs revealed no difference between conditions in terms of participants' gender, age or past behaviour⁵ ($ps > .21$).

Message Acceptance

A series of one-way ANOVAs was conducted to establish whether Self-Affirmation Manipulation influenced attitudes or intentions. The relevant means and standard deviations are given in Table 1.

Attitudes. There was a significant effect of Self-Affirmation Manipulation on attitudes, $F(2, 90) = 3.66, p = .030, \eta_p^2 = .08$. A planned contrast demonstrated that participants in the *morality affirmation* condition reported more positive attitudes towards dental flossing than participants in the *competence affirmation* condition, $t(49.59) = 2.45, p = .018, \text{Cohen's } d = 0.70$ ($Ms = 6.61$ & 5.99 respectively). Additional contrasts⁶ revealed that the *control* condition differed significantly only from the *morality affirmation* condition.

Intentions. There was a significant effect of Self-Affirmation Manipulation on intentions, $F(2, 90) = 3.09, p = .050, \eta_p^2 = .06$. A planned contrast demonstrated that participants in the *morality affirmation* condition reported greater intentions to floss their teeth daily than participants in the *competence affirmation* condition $t(90) = 2.49, p = .015, \text{Cohen's } d = 0.52$ ($Ms = 4.14$ & 2.88 respectively). Additional contrasts⁶ showed that the *control* condition did not differ significantly from either affirmation condition.

⁵ Due to the small number of participants ($n = 5$) indicating that they had previously known all of the health-risk information presented, it was not possible to test whether prior knowledge of this information differed across conditions.

⁶ Contrasts with the control condition for both studies are reported in full in Supporting Information.

Discussion

The results of Study 1 support the prediction that a morality-related affirmation manipulation would be more effective than a competence-related affirmation manipulation at increasing acceptance of a message detailing the health-related risks of not engaging in daily dental flossing. These findings are broadly consistent with the different domain hypothesis. However, they could simply reflect a general tendency for self-affirmation manipulations which focus on morality to be more effective than those which focus on competence, irrespective of the match between the foci of the affirmation and the personally relevant health-risk information.

Study 2

In light of the above, Study 2 was designed to test whether Study 1's finding that the morality-based affirmation outperformed the competence-based affirmation was contingent on its targeting a different domain to that threatened. Thus in Study 2 we manipulated the focus of the information provided, such that it presented a threat to either competence or morality. Participants in the *health-risk information* conditions read a message about the damage caused to one's health by red meat consumption. As with Study 1, we hypothesized that such personally relevant health-risk information should pose a threat primarily to the individual's sense of competence. Participants in the *environmental-risk information* conditions read a message about the damage caused by red meat consumption to the environment and for future generations. We hypothesized that this information should pose a threat primarily to recipients' sense of morality, insofar as the focus is on the harm caused to others (see Wojciszke, 2005a, 2005b). We elected to focus on red meat consumption because we required a behaviour which could convincingly be framed in terms of either (a) negative health-

related consequences for the individual or (b) negative consequences for the environment and for others.

We predicted that the *morality affirmation* would be more effective than the *competence affirmation* at eliciting message acceptance for those in the *health-risk information* conditions, as the former affirms a different domain to that which is threatened. By contrast, following the same rationale, we predicted that the *competence affirmation* condition would be more effective than the *morality affirmation* at eliciting message acceptance for those in the *environmental-risk information* conditions.

Method

Participants²

One hundred and eight participants completed the study satisfactorily and met the inclusion criterion that they typically ate red meat on more than two days of the week. Fifty-five participants (50.93%) were students. Sixty-four (59.26%) participants were male, 41 (37.96%) were female, and three did not indicate their gender. Ages ranged from 16-87 years ($M = 30.68$, $SD = 14.46$).

Materials

Participants completed a questionnaire on red meat consumption, including the following sections. They were informed that “for the purposes of the current study, red meat is defined as beef, lamb, pork and veal”.

Past behaviour. Participants’ past behaviour was measured by the following item “On average, on how many days per week do you eat red meat?” (0 to 7).

Self-affirmation manipulation. Participants in the *competence affirmation*, *morality affirmation* and *control* conditions completed the same manipulations as in Study 1.

*Risk information*⁷. Participants in the *health-risk information* conditions read a passage detailing the potential health-damaging consequences of red meat consumption. Participants in the *environmental-risk information* conditions read a passage detailing the potential environment-damaging consequences of red meat consumption. The passages were matched closely for word length, information type and structure. Both passages finished by stating “National guidelines recommend eating red meat no more than twice a week.”

Pilot research⁸ suggested that the health-risk information was perceived as presenting more of a threat to competence than morality, whereas the environmental-risk information was perceived as presenting more of a threat to morality than competence.

Prior knowledge. Participants were asked to respond to the item “I already knew all of the information about the risks of red meat consumption presented on the previous page” (*strongly disagree* [1] to *strongly agree* [7]).

Message derogation. Participants were asked to what extent they felt the information about the risks of red meat consumption (i) was overblown, (ii) was exaggerated, (iii) tried to manipulate their feelings and (iv) tried to strain the truth (*strongly disagree* [1] to *strongly agree* [7]; adapted from Ruiters, Verplanken, Kok, & Verrij, 2003), $\alpha = .87$.

Attitudes. Participants responded to the statement “For me to eat red meat no more than twice a week would be:” on five pairs of semantic differentials (*harmful* [1] to *beneficial* [7], *good* [1] to *bad* [7], *negative* [1] to *positive* [7], *foolish* [1] to *wise* [7], and *worthless* [1] to *valuable* [7]), $\alpha = .82$.

⁷ Further details on the risk information provided are given in Supporting Information.

⁸ Please see Supporting Information

Response-efficacy. Participants' beliefs in the benefits of eating red meat no more than twice a week for their health (for those in the *health risk information* conditions) or the environment (for those in the *environmental risk information* conditions) were assessed by the corresponding version of two items, e.g., "If I eat red meat no more than twice a week it will be beneficial to my health / the environment" (*strongly disagree* [1] to *strongly agree* [7]; adapted from Ruiter et al., 2003), $r(105) = .66, p < .001$.

Intentions. Participants' intentions were measured by three items, e.g., "I intend to eat red meat no more than twice a week" (*extremely unlikely* [1] to *extremely likely* [7]), $\alpha = .83$.

Demographic information. Participants indicated their age, gender, student status and subject studied (if they were a student).

Procedure and design

Participants were recruited opportunistically at several venues (e.g., a library) and via contacts of the researchers and asked if they would be willing to take part in a study exploring their beliefs about red meat consumption. All participants completed the questionnaire alone and were instructed to complete the materials in the order that they were presented (i.e., in the order detailed above).

Participants were sequentially allocated to one of the six conditions resulting from the 3 (Self-Affirmation Manipulation: *control*, *competence affirmation*, *morality affirmation*) by 2 (Risk Information: *health risk information*, *environmental risk information*) design.

Ethical approval for the study was obtained from the institutional Ethics Committee.

Results

The number of days on which participants ate red meat in the average week ranged from 3 to 7 ($M = 3.81$, $SD = 1.00$).

Preliminary Analyses

Chi-square analyses and two-way ANOVAs revealed no difference between conditions in terms of participants' gender, student status, age, prior knowledge or past behaviour ($ps > .12$).

Message Acceptance

A series of 3 (Self-Affirmation Manipulation: *control*, *competence affirmation*, *morality affirmation*) by 2 (Risk Information: *health risk information*, *environmental risk information*) ANOVAs was conducted with each of the following measures entered in turn as the dependent variable: message derogation, attitudes, response-efficacy and intention. The relevant means and standard deviations are given in Table 2.

Message derogation. There was no significant main effect of either Self-Affirmation Manipulation or Risk Information on message derogation and no significant interaction effect ($ps > .37$).

Attitudes. There was no significant main effect of either Self-Affirmation Manipulation or Risk Information on attitudes. Importantly, however, there was a marginally significant interaction effect, $F(2, 100) = 2.69$, $p = .073$, $\eta_p^2 = .05$, see Figure 1.

A planned contrast was conducted to test our hypothesis that among participants given the health-risk information, those in the *morality affirmation* condition would report more positive attitudes than those in the *competence affirmation* condition. The findings of this contrast revealed a significant difference in the predicted direction

between the attitude scores of those in the *morality affirmation* and *competence affirmation* conditions, $F(1, 100) = 5.45, p = .022, \eta_p^2 = .05$ ($M_s = 4.86$ & 4.04 respectively). Additional contrasts⁶ revealed that the *control* condition differed only from the *morality affirmation* condition.

A further planned contrast was conducted to test our hypothesis that among participants given the environmental-risk information, those in the *competence affirmation* condition would report more positive attitudes than those in the *morality affirmation* condition. This contrast revealed no difference between the attitude scores of those in the *competence affirmation* and *morality affirmation* conditions, $F(1, 100) = 0.25, p = .616, \eta_p^2 = .00$. Additional contrasts⁶ revealed no differences between the *control* condition and either affirmation condition.

Response-efficacy. There was no significant main effect of either Self-Affirmation Manipulation or Risk Information on response-efficacy. There was, however, a significant interaction effect, $F(2, 101) = 3.13, p = .048, \eta_p^2 = .06$, see Figure 2.

A planned contrast was conducted to test our hypothesis that among participants given the health-risk information, those in the *morality affirmation* condition would report higher levels of response-efficacy than those in the *competence affirmation* condition. While the pattern of means was in the predicted direction, the resultant contrast did not reveal a statistically significant difference between the response efficacy scores of those in the *morality affirmation* and *competence affirmation* conditions, $F(1, 101) = 2.62, p = .109, \eta_p^2 = .03$ ($M_s = 4.66$ & 3.82 respectively). Additional contrasts⁶ revealed a marginally significant difference between the *control* condition and the *competence affirmation* condition.

A further planned contrast was conducted to test our hypothesis that among participants given the environmental-risk information, those in the *competence affirmation* condition would report higher levels of response-efficacy than those in the *morality affirmation* condition. The findings of this contrast revealed a marginally significant trend in the predicted direction between the response-efficacy scores of those in the *competence affirmation* and *morality affirmation* conditions, $F(1, 101) = 3.09, p = .082, \eta_p^2 = .03$ ($M_s = 4.48$ & 3.67 respectively). Additional contrasts⁶ revealed no differences between the *control* condition and either affirmation condition.

Intentions. There was no significant main effect of Self-Affirmation Manipulation on intentions and no significant interaction effect ($p_s > .43$). There was, however, a significant main effect of Risk Information, $F(1, 101) = 7.15, p = .009, \eta_p^2 = .07$, reflecting the fact that those in the *health-risk information* conditions reported stronger intentions to eat meat no more than twice a week than did those in the *environmental-risk information* conditions (marginal means = 3.58 & 2.82 respectively).

Discussion

Study 2's findings provide some further support for the hypothesis that a morality-based affirmation would be more effective than a competence-based affirmation at increasing acceptance of personally relevant health-risk information. Thus, after reading information detailing the health-related risks of red meat consumption, participants in the *morality affirmation* condition reported more positive attitudes towards limiting their red meat consumption. While this same pattern of findings held for response-efficacy (and for behavioural intentions; Table 2), it failed to reach statistical significance.

In addition, Study 2's findings provided some limited support for the complementary hypothesis that a competence-based affirmation would be more effective than a morality-based affirmation at increasing acceptance of information detailing the damage caused by red meat consumption to the environment and for future generations. We had hypothesized that this information should pose a threat primarily to recipients' sense of morality, and hence that the competence-based affirmation would be more effective as it affirms a different domain to that which is threatened (Cohen & Sherman, 2014). However, our prediction was supported statistically for only one of our four outcome measures, with participants in the *competence affirmation* condition reporting marginally higher levels of response-efficacy than those in the *morality affirmation* condition. While the same pattern of findings was apparent for both attitudes and behavioural intention (Table 2), the mean difference failed to approach statistical significance for either outcome.

Critically, however, the findings of Study 2 suggest that the superior performance of the morality-based affirmation at increasing acceptance of personally relevant health-risk information does not simply reflect a general tendency for this manipulation to outperform the competence-based affirmation. Rather, findings provide tentative support for the position that it may be the mismatch between the foci of the personally relevant health-risk information and the morality-based affirmation manipulation which is important for the success of the latter.

General Discussion

Self-affirmation manipulations in health-related domains have typically involved participants focusing on a personally important value (e.g., Harris & Napper, 2005; Sherman et al., 2000). The findings of the current research provide some support for the assertion that the nature of the value which is affirmed might have important

implications for the success, or otherwise, of a self-affirmation manipulation. Specifically, we contended that information detailing the negative consequences of one's health-related behaviours presents a threat primarily to one's sense of competence, as it threatens one's perception of oneself as a competent and capable decision maker. Accordingly, in line with the different-domain hypothesis (Blanton et al., 1997; Cohen & Sherman, 2014; Sherman & Cohen, 2006; Sivanathan et al., 2008), we predicted that a competence-based affirmation would be less effective than a morality-based affirmation at increasing acceptance of such personally relevant health-risk information, as the former targets the same domain as that which is threatened.

In line with these predictions, Study 1 demonstrated that a morality-based affirmation precipitated greater acceptance of a message detailing the health-risks of not engaging in daily flossing compared to a competence-based affirmation, with participants in the *morality affirmation* condition reporting more positive attitudes towards daily flossing and stronger intentions to engage in this behaviour. Study 2 provided some further support for the related hypothesis that the same morality-based affirmation would result in greater acceptance of a message detailing the health-risks of red meat consumption compared to the competence-based affirmation, with participants in the *morality affirmation* condition reporting more positive attitudes towards eating red meat no more than twice a week. However, there was no significant impact of the *mortality affirmation* (versus the *competence affirmation*) on message derogation, response efficacy or behavioural intentions (albeit the pattern of means was in the predicted direction for the latter two constructs).

The failure to replicate the finding of Study 1 with regard to behavioural intentions could potentially reflect differences between the behaviours under

investigation. For example, in Study 1, the targeted action involved the (increased) uptake of a health promoting behaviour, whereas in Study 2 it required the reduction of an established health-damaging behaviour. Furthermore, dental flossing may represent a fairly simple private behaviour to implement, compared to dietary choices which may be relatively complex and influenced by factors such as culture, normative variables and shared decision-making. Nonetheless, it should be noted that self-affirmation manipulations have successfully promoted intentions to reduce the performance of moderately complex and established health-damaging behaviours in previous research (e.g., Armitage et al., 2008).

The findings of Study 2 further suggest that the superior performance of the morality-based affirmation in health-related domains could not simply be attributed to a general tendency for this affirmation to outperform the competence-based affirmation. This adds support to the position that it may be the mismatch between the foci of the threat and the value affirmed that is important in determining the success of self-affirmation manipulations. We acknowledge, however, that the disparity between the performance of the *morality affirmation* and the *competence affirmation* could reflect other core differences between them. For example, we did not assess the relative impact of these manipulations on variables that have been hypothesised to (a) signify the extent to which people are self-affirmed (e.g., self-appraisal; Napper, Harris, & Epton, 2009) or (b) mediate the effects of self-affirmation on outcomes (e.g., positive other-directed feelings; Crocker, Niiya, & Mischkowski, 2008). Our rationale for avoiding the inclusion of such manipulation checks (e.g., Napper et al., 2009) or mediators (e.g., Crocker et al., 2008) was that we were concerned that completion of the resultant items might in itself be self-affirming for control participants (see Harris & Epton, 2009; Napper et al., 2009). Nonetheless, future

research would benefit from establishing whether morality- and competence-based self-affirmation manipulations have equivalent impacts on variables thought to be important for the underlying process, not least because it seems intuitively plausible that a morality-based self-affirmation might be more likely to promote (for example) positive other-directed feeling than would a competence-based manipulation.

It is interesting to observe that the differential performance of the affirmation manipulations was not always attributable solely to increased message acceptance in the different domain condition. For example, in Study 1, the difference in intentions appeared to be driven as much by the lower intention scores of those in the *competence affirmation* condition (compared to the *control* condition) as by the higher intention scores of those in the *morality affirmation* condition. Certainly, it is striking that the *competence affirmation* condition consistently conferred no advantage in the context of health-related information, compared to the *control* condition. Indeed, on occasion, it exerted a detrimental impact on outcomes (e.g., response efficacy, Study 2), contributing to a literature documenting backlash effects of same-domain affirmation manipulations (Blanton et al., 1997; Sivanathan et al., 2008).

Furthermore, it is perhaps noteworthy that participants selected their own value in both the *competence affirmation* and the *morality affirmation* conditions, albeit they were constrained to choose from a list of competence-related and morality-related values respectively. This approach allowed participants to select a *personally important* value, while simultaneously enabling us to manipulate the value-domain affirmed. Nonetheless, it is plausible that the specific competence- and morality-related values selected may have differed in the extent to which they overlapped with the behavioural domains under investigation. Future research could explore the impact

of restricting participants to write about the same (competence- or morality-related value) on outcomes.

The findings of the present research have potentially important applied implications for the integration of values-based self-affirmation manipulations into health promotion materials. Specifically, they suggest that careful consideration should be paid to the nature of the value affirmed, as this may have important implications for the success - or otherwise - of the resultant intervention. They also highlight the need to develop a clearer understanding of the nature of the threat presented in health promotion materials, not least with regard to which aspect of the self-concept is most likely to be threatened. Importantly, as the findings suggest that the value affirmed might benefit from being in a different domain to the threat, this may present unique challenges to those involved in the design of integrated self-affirmation manipulations, as it may prove more difficult to seamlessly integrate an unrelated value affirmation into health promotion materials than a domain-relevant value affirmation.

One limitation to the present research is that participants were allocated to condition sequentially. While preliminary analyses revealed no differences between conditions on socio-demographic variables or baseline behaviour in either study, future research should employ methods of random allocation. A further limitation to the current programme of research is that we did not explore the impact of our manipulations on behavioural outcomes. Rather, our primary focus was on the capacity of the different value-domain affirmations to promote health-congruent cognitions. Because previous self-affirmation research has demonstrated that such changes in cognition do not necessarily translate into subsequent behaviour change (e.g., Harris & Napper, 2005), exploration of the impact of different value-domain

affirmations on behaviour change represents a promising avenue for future research. Furthermore, research should seek to establish whether the findings reported here hold across behavioural domains and generalize across populations.

In sum, the research reported here represents the first systematic attempt to manipulate the nature of the value that is affirmed prior to exposure to personally-relevant health-risk information (cf. Burson et al., 2012; Pavey et al., 2011). Our findings highlight the importance of the value category in determining the success (or otherwise) of self-affirmation manipulations in health-related domains and suggest that the interrelationship between the foci of the value affirmed and the threat may be an important determinant of the relative efficacy of competence-based and morality-based affirmation manipulations.

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Table 1

Outcome measures by Condition: Study 1

	Control	Competence affirmation	Morality affirmation
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Attitudes	5.97 (1.20)	5.99 (1.18)	6.61 (0.77)
Intentions	3.55 (2.04)	2.88 (1.92)	4.14 (1.98)

Table 2

Outcome Measures by Condition: Study 2

	Health Risk Information			Environmental Risk Information		
	Control	Competence affirmation	Morality affirmation	Control	Competence affirmation	Morality affirmation
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Message derogation	4.74 (1.28)	4.20 (1.29)	4.21 (1.37)	4.44 (1.70)	4.72 (1.39)	4.72 (1.49)
Attitudes	4.09 (1.00)	4.04 (0.87)	4.86 (0.95)	4.43 (1.04)	4.43 (1.17)	4.27 (0.84)
Response-efficacy	4.71 (0.73)	3.82 (1.54)	4.66 (1.50)	4.03 (1.59)	4.48 (1.56)	3.67 (1.64)
Intentions	3.65 (1.52)	3.36 (1.43)	3.73 (1.44)	3.02 (1.32)	2.96 (1.54)	2.48 (1.42)

Figure Captions

Figure 1. Mean attitude scores as a function of Self-Affirmation Manipulation and Risk Information.

Figure 2. Mean response efficacy scores as a function of Self-Affirmation Manipulation and Risk Information.

Figure 1

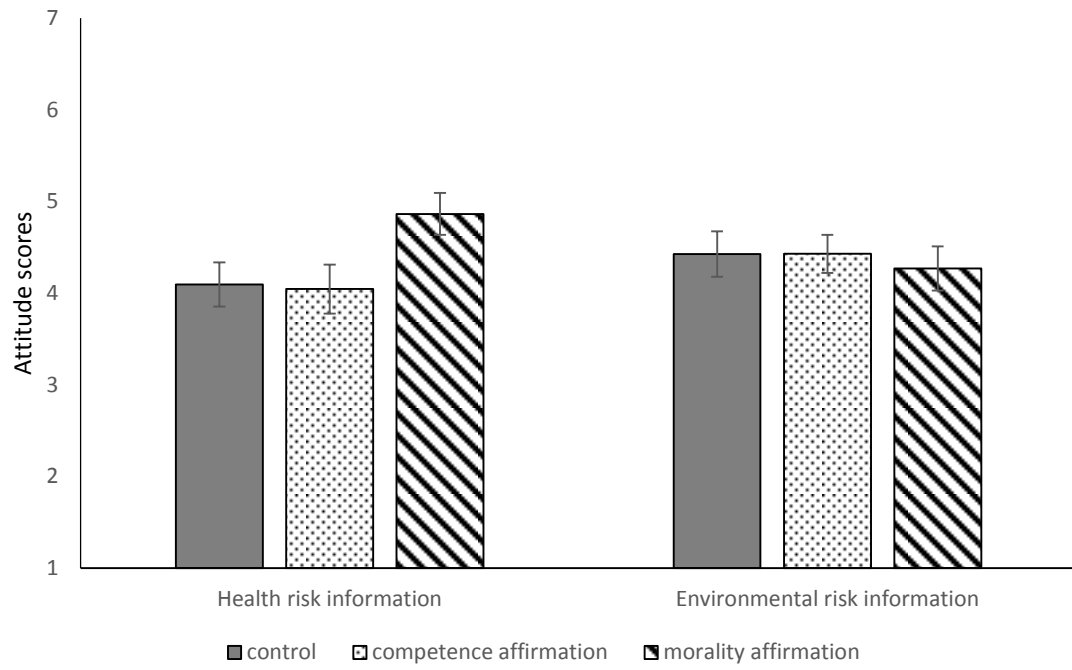


Figure 2

