Persuasion through facts and feelings: Integrating affect and cognition into behavioral decision models and health messages
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Chapter two

The role of affect and cognition in health decision making

Abstract

Both affective and cognitive evaluations of behaviours have been allocated various positions in theoretical models of decision making. Most often, they have been studied as direct determinants of either intention or overall evaluation, but these two possible positions have never been compared. The aim of this study was to determine whether affective and cognitive evaluations influence intention directly, or whether their influence is mediated by overall evaluation. A sample of 300 university students filled in questionnaires on their affective, cognitive, and overall evaluations in respect of 20 health behaviours. The data were interpreted using mediation analyses with the application of path modelling. Both affective and cognitive evaluations were found to have significantly predicted intention. The influence of affective evaluation was largely direct for each of the behaviours studied, whereas that of cognitive evaluation was partially direct and partially mediated by overall evaluation. These results indicate that decisions regarding the content of persuasive communication (affective vs. cognitive) are highly dependent on the theoretical model chosen. It is suggested that affective evaluation should be included as a direct determinant of intention in theories of decision making when predicting health behaviours.

The role of affect in theories of decision making is a much-debated topic. Social cognitive models have been criticized for not sufficiently considering the affective influences on decision making (e.g., Van der Pligt & De Vries, 1998). Such criticism is supported by several studies demonstrating that affect can influence the decision making process independently of social-cognitive determinants, such as instrumental attitude, subjective norm, and perceived behavioural control (French et al., 1998).
al., 2005; Lowe, Eves, & Carroll, 2002; Richard, Van der Pligt, & De Vries, 1995, 1996). However, systematic research pertaining to the position of affect within theories of decision making is lacking. The present study responds to this gap in the literature by assessing the structural position of both affective and cognitive evaluations of health behaviours with regard to intention as well as overall evaluation. More specifically, it investigates whether affective and cognitive evaluations influence intention directly, or whether that influence is mediated by overall evaluation. By so doing, this study will contribute to our understanding of the role of affect and cognition in theories of decision making.

Affect and cognition as determinants of overall evaluation

Research on the structure of attitudes has found that three components can be distinguished: an affective evaluation, a cognitive evaluation, and an overall evaluation of attitude objects (Crites, Fabrigar, & Petty, 1994; Trafimow & Sheeran, 1998; Van den Berg, Manstead, Van der Pligt, & Wigboldus, 2005). Affective evaluation refers to the emotions and drives associated with an attitude object, whereas cognitive evaluation alludes to the thoughts and judgments about it and overall evaluation indicates a very global assessment of an attitude object (e.g. good vs. bad, positive vs. negative; Breckler & Wiggins, 1989; Crites et al., 1994; Van den Berg et al., 2005). In this study, we use the terms affect, cognition, and overall evaluation to indicate each of these components. In general, affect and cognition are seen as the building-blocks of overall evaluation; supporting this view, studies have found that both influence it (Breckler & Wiggins, 1989; Crites et al., 1994; Trafimow & Sheeran, 1998). These studies also show that the relative importance of affect and cognition in predicting overall evaluation varies from one attitude object or behaviour to another. For example, Breckler and Wiggins found affect to be more important than
cognition in predicting overall evaluation of blood donation, whereas the reverse was true for legalized abortion.

This variation in relative importance has important implications for campaigns aimed at changing attitudes. For instance, if overall evaluation of an object or behaviour is determined mainly by affect (rather than cognition), then it would make sense to direct a persuasive message accordingly. This assumption was tested by Edwards (1990). She induced overall evaluations concerning a fictitious energy drink that were based either on affective information (tasting the drink) or cognitive information (reading about the drink). Half of the subjects were then exposed to an affective persuasion appeal, whilst the other half was subjected to a cognitive persuasion appeal. Individuals with an overall evaluation based on affective information exhibited more change in their overall evaluation under affective than under cognitive means of persuasion. By contrast, overall evaluations based on cognitive information were equally susceptible to affective and cognitive persuasion. Similar findings have been reported by Dubé and Cantin (2000), Edwards and Von Hippel (1995), and Fabrigar and Petty (1999). So distinguishing between affective and cognitive evaluations of attitude objects may substantially aid attitude-changing campaigns.

Most studies that have distinguished between affect and cognition have focused on attitudes towards objects, not behaviours. To bridge this gap in the literature, the present study will explore the roles of affect and cognition with regard to a variety of health behaviours. As was true for attitude objects, the relative importance of affect and cognition may be of considerable value to those aiming to change such behaviours. For example, if affective considerations play a dominant role in performing a particular health behaviour, it is likely that messages promoting it will be more effective when they focus on affect rather than cognition.
The conception that affect and cognition are the building-blocks of overall evaluation impacts not only the practice of persuasive communication but also social-cognitive theories. For instance, researchers measuring attitude in the context of the theory of planned behaviour (TPB; Ajzen, 1985, 1991) are now advised to include affective and cognitive items in their measures, not just items assessing overall evaluation (Ajzen, 2006). In recent years, however, the very notion that affect and cognition constitute the building-blocks of overall evaluation has been challenged.

**Affect and cognition as determinants of intention**

Some studies have considered affect and cognition as direct determinants of intention, instead of overall evaluation (e.g. French et al., 2005; Kraft, Rise, Sutton, & Roysamb, 2005; Lawton, Conner, & McEachan, 2009; Lowe et al., 2002). Whilst the relative influence of affect and cognition on overall evaluation has been shown to vary, work on their influence on intention has generated more clear-cut results. Trafimow et al. (2004) examined this relationship with regard to a variety of behaviours and found that, although both affect and cognition do influence intention, in most cases affect made the larger contribution. A superior impact of affect has also been reported by French et al. (2005), Kraft et al. (2005), Lawton et al. (2009), and Lowe et al. (2002). Importantly, since a greater impact of affect has not consistently been found with regard to overall evaluation, these results may indicate that its influence on intention is not fully mediated by overall attitude. In other words, affect may have a direct effect on intention (independently of overall evaluation) in addition to that mediated by overall evaluation. Unfortunately, most of the studies described here did not measure overall evaluation of the behaviour, making it impossible to establish whether affect influences intention directly, or indirectly through overall evaluation.
To our knowledge, only one study has included measures of both overall evaluation and intention as well as of affect and cognition (Trafimow & Sheeran, 1998). Looking at smoking behaviour, this measured the predictive ability of both affect and cognition on overall evaluation. In addition, analyses were performed to assess whether each could account for significant variance in intention to smoke above and beyond that accounted for by overall evaluation. The results indicated that both affect and cognition predicted overall evaluation, but only affect was able to explain additional variance in intention. This finding suggests that, while the influence of cognition on intention is fully mediated by overall evaluation, the influence of affect is only partially mediated.

Importantly, if this is true then including both affective and cognitive items in addition to overall evaluation items in a single measure of attitude – as is recommended for studies using the TPB (Ajzen, 2006) – obscures the difference in the structural relationships between affect and intention and between cognition and intention. In addition, persuasive communication based on the relative influence of affect and cognition on overall evaluation may underestimate the influence of the former on decision making. As far as we are aware, the influence of affect and cognition on intention, independent of overall attitude, has only been tested once, and only with respect to smoking behaviour. The present study extends this finding by conducting mediation analyses to investigate whether the same structural relationships can be found for other behaviours in the health domain.

**The present study**

The main question guiding this study concerns the structural relationships between affective, cognitive, and overall evaluations of health behaviours, and the intention to perform those behaviours. More specifically, it seeks to determine whether the influence of affect and
cognition on intention is direct, as recent studies suggest, or mediated by overall evaluation, as the dominant view on these components of attitude suggests. No research has yet addressed this question. Most studies have investigated either the direct route or the mediated one, but these have never been compared. We formulated our hypotheses based on the results found in those studies which looked at only one of the two routes.

As we have seen, studies including affect, cognition, and intention—but not overall evaluation—have found that both affect and cognition influence intention for a variety of behaviours (e.g. Trafimow et al., 2004). In line with these findings, we expect the same to be true for health behaviours. Our first hypothesis, then, concerns the overall effect (by both direct and mediated routes) of affect and cognition on intention.

**H1:** Both affect and cognition influence intention.

The second and third hypotheses concern the influence on intention of affect and cognition, respectively. Affect has been found to influence overall evaluation (e.g. Crites et al., 1994), indicating that part of its influence on intention is mediated by overall evaluation. But, affect has also been found to influence intention independently of overall evaluation (e.g. Trafimow & Sheeran, 1998), indicating a direct effect. We have therefore formulated the following hypothesis.

**H2:** The influence of affect on intention is partly direct and partly mediated by overall evaluation.

Cognition, too, has been found to influence overall evaluation (e.g. Crites et al., 1994). But, unlike affect, it has never been found to influence intention independently of overall evaluation. These considerations resulted in our final hypothesis.

**H3:** The influence of cognition on intention is fully mediated by overall evaluation.
The present study seeks to test these hypotheses by measuring affect, cognition, overall evaluation, and intention across 20 health behaviours. For each of these, we then investigate whether affect and cognition influence intention directly or whether their influence is mediated by overall evaluation.

**Method**

**Participants and procedure**

The participants were 300 students from the University of Amsterdam (70% women, 30% men) who received financial compensation (8 euros) for taking part in this study. Respondents completed a computer-assisted questionnaire assessing affect, cognition, overall evaluation, and intention with regard to 20 health behaviours. The behaviours were selected from various recommendations communicated to the public by health organizations. From these recommendations, those with the highest expected relevance to and variance in a student population were selected. The questionnaire consisted of several pages, each covering one of the behaviours. The order of these pages, and thus of the behaviours, was randomized for each respondent. The behaviour in question was described at the top of every page in terms of an action, a frequency and a time-span. For example, ‘The following questions all concern the behaviour “Brushing your teeth at least twice a day during the coming month”’. Each of the subsequent questions then referred to the behaviour in question as ‘the behaviour specified above’. For example, ‘I intend to perform the behaviour specified above. (definitely do not/definitely do).’

**Measures**

*Affect, cognition, and overall evaluation.* Each of these three constructs was measured using seven-point bipolar scales. The word
pairs were based on those used by Crites et al. (1994) and Trafimow and Sheeran (1998). For all affect, cognition, and overall evaluation items, participants responded to the stem ‘For me to perform the behaviour specified above would be...’ followed by nine seven-point semantic differential scales (three items for each construct). The order of the nine items was randomized. The word pairs used to represent affect were unpleasant/pleasant, not enjoyable/enjoyable, and nasty/nice. The pairs for cognition were useless/useful, harmful/beneficial, and worthless/valuable. Finally, those for overall evaluation were negative/positive, bad/good, and undesirable/desirable. Because all three measures had high internal reliability (median alpha values were .91, .86, and .84 for affect, cognition, and overall evaluation, respectively), a single scale was computed for each measure.

**Intention.** Intention was measured by two seven-point bipolar scales. The statements used were ‘I intend to perform the behaviour specified above (definitely do not/definitely do)’ and ‘I will try to perform the behaviour specified above (definitely will not/definitely will)’ (adapted from Sparks, Harris, & Lockwood, 2004). As the correlation between these items was high (median $r = .93$), a single scale for intention was computed.

**Analyses**

The affect, cognition, and overall evaluation measures were checked for multicollinearity. Variance inflation factors (VIF) were examined for each of the behaviours, and in three cases the VIF score exceeded 5 (refrain from using drugs, use condom, and ventilate home). In all three, multicollinearity existed between the measures of overall evaluation and cognition. So, to prevent ambiguity in the results of this study, these three behaviours were excluded from further analyses.

Mediation was tested using the bootstrapping approach described by Shrout and Bolger (2002) in path modelling. The model is illustrated in
Figure 1. As can be seen from that, affect and cognition were considered simultaneously in each of the analyses and both their direct and indirect effects on intention were estimated. Mediation analyses were conducted separately for each behaviour.

Results

In line with our first hypothesis, examination of the total effects (see Table 1) revealed that both affect and cognition significantly predicted intention for most behaviours studied (median betas were 0.46 and 0.27, respectively). Overall, affect and cognition did not differ significantly in their ability to predict intention (Wilcoxon test: mean ranks were 11.50 and 5.43, \( Z = -1.82, \; p > .05 \)).

Table 1 reveals which part of the total effect of affect and cognition on intention was mediated by overall evaluation, and which part was direct. With regard to affect, we hypothesised that both direct and mediated effects would be present. The results show that the total effect of affect (median \( \beta = 0.46 \)) comprised a large direct component (median \( \beta = 0.43 \)) and a much smaller mediated one (median \( \beta = 0.03 \)). The difference between the direct effect coefficients and the mediated effect...
coefficients was statistically significant (Wilcoxon test: mean ranks were 0.00 and 9.00, $Z = -3.62, p < .001$). For all behaviours, the direct effect was larger than the mediated effect. Although the mediated effect reached statistical significance for several behaviours, these effects were small in every case and so little supporting evidence was found for the expectation that overall evaluation mediates the impact of affect on intention. By contrast, the expectation that affect has a direct effect on intention was strongly supported by the findings. The influence of affect on intention was thus largely direct; that is, not mediated by overall evaluation.

A different pattern occurred when we examined the direct and mediated effect coefficients of cognition. We hypothesized that the impact of cognition on intention is fully mediated by overall evaluation. In fact, the total effect (median $\beta = 0.27$) comprised a direct effect (median $\beta = 0.13$) and a mediated effect (median $\beta = 0.16$) which were approximately equal in size. The difference between them did not reach statistical significance (Wilcoxon test: mean ranks were 8.23 and 11.50, $Z = -1.45, p < .05$). The direct effect of cognition on intention was larger than the mediated effect for four behaviours, whilst for 13 the reverse was true. Overall, cognition influenced intention equally through the direct and the mediated routes. It should be noted, however, that large differences between behaviours were found in the relative weight of the direct and indirect paths. For example, the direct effect was larger than the indirect effect for ‘get enough sleep’, whereas the reverse was true for ‘limit weekly alcohol consumption’.

No hypothesis was formulated with regard to the relative impact of affect and cognition on overall evaluation. However, the results concerning these relationships are worth mentioning. For most behaviours, both affect and cognition were highly significant predictors of overall evaluation, but the impact of cognition (median $\beta = 0.73$) was consider-
### Table 1. Standardized regression coefficients of direct and mediated effects of affect, and cognition on intention.

<table>
<thead>
<tr>
<th></th>
<th>Total effects</th>
<th>Mediated effects</th>
<th>Direct effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$A_{I}$</td>
<td>$C_{I}$</td>
<td>$A_{Oe}C_{I}$</td>
</tr>
<tr>
<td>Wear seatbelt</td>
<td>.24***</td>
<td>.36***</td>
<td>.03*</td>
</tr>
<tr>
<td>Limit weekly alcohol consumption</td>
<td>.46**</td>
<td>.17*</td>
<td>.03*</td>
</tr>
<tr>
<td>Engage in moderate exercise</td>
<td>.56**</td>
<td>.12</td>
<td>.04</td>
</tr>
<tr>
<td>Refrain from binge drinking</td>
<td>.58**</td>
<td>.50**</td>
<td>.04*</td>
</tr>
<tr>
<td>Take breaks from computer work</td>
<td>.48***</td>
<td>.27**</td>
<td>.06*</td>
</tr>
<tr>
<td>Drink 1.5 litres of non-alcoholic drinks a day</td>
<td>.35***</td>
<td>.27**</td>
<td>.03*</td>
</tr>
<tr>
<td>Eat two pieces of fruit a day</td>
<td>.56***</td>
<td>.05</td>
<td>.04*</td>
</tr>
<tr>
<td>Decline cake when offered</td>
<td>.36***</td>
<td>.43***</td>
<td>.03***</td>
</tr>
<tr>
<td>Eat 200 grams of vegetables a day</td>
<td>.57***</td>
<td>.05</td>
<td>.07***</td>
</tr>
<tr>
<td>Eat breakfast every day</td>
<td>.56***</td>
<td>.09</td>
<td>.06*</td>
</tr>
<tr>
<td>Get enough sleep</td>
<td>.27***</td>
<td>.28***</td>
<td>-.02</td>
</tr>
<tr>
<td>Engage in sports twice a week</td>
<td>.55**</td>
<td>.19**</td>
<td>.00</td>
</tr>
<tr>
<td>Have dental check-ups</td>
<td>.12**</td>
<td>.51**</td>
<td>.02</td>
</tr>
<tr>
<td>Brush teeth twice a day</td>
<td>.30**</td>
<td>.34**</td>
<td>.01</td>
</tr>
<tr>
<td>Take at least two minutes to brush teeth</td>
<td>.29**</td>
<td>.36***</td>
<td>.01</td>
</tr>
<tr>
<td>Take stairs instead of escalator/lift</td>
<td>.55**</td>
<td>.27**</td>
<td>.01*</td>
</tr>
<tr>
<td>Use toothpicks or dental floss</td>
<td>.31***</td>
<td>.40**</td>
<td>.03*</td>
</tr>
</tbody>
</table>

Note. $A =$ affect; $C =$ cognition; $Oe =$ overall evaluation; $I =$ intention.

*p < .05. **p < .01. ***p < .001.
ably stronger than that of affect (median $\beta = 0.15$; Wilcoxon test: mean ranks were 0.00 and 9.00, $Z = -3.62$, $p < .001$). Impressively, this was true for every one of the 17 behaviours. The relative influence of affect and cognition on overall evaluation was thus substantially different from their relative influence on intention. The implications of this finding will be considered in the discussion.

**Discussion**

In the dominant conception of attitudes, affective and cognitive evaluations are seen as the building-blocks of overall evaluation. It follows from this view that the influence of affect and cognition on intention is mediated by overall evaluation. By contrast, though, recent findings indicate that affect impacts intention independently of overall evaluation. In an attempt to reconcile these discrepant findings, mediation analyses were conducted across a variety of health behaviours to determine whether affect and cognition do indeed have a direct effect on intention, or whether their influence is mediated by overall evaluation.

In line with our first hypothesis, for most behaviours a significant total effect of affect and cognition on intention was found. Previous studies (French et al., 2005; Kraft et al., 2005; Trafimow et al., 2004) have found affect to be more strongly related to intention than cognition. The present study confirms this for most health behaviours of the kind investigated in those earlier ones (e.g. limit weekly alcohol consumption, engage in sports twice a week, and eat two pieces of fruit a day). Importantly, however, several behaviours not investigated in those studies (e.g. decline cake when offered, have dental check-ups and use toothpicks or dental floss) were found by us to be more influenced by cognition than by affect. So the dominance of affect over cognition in predicting intention is not absolute, but limited to specific behaviours.
Our second hypothesis, that the influence of affect on intention is partly direct and partly mediated by overall evaluation, was partially supported by our actual results. There was considerable substantiation of the direct effect, a finding in line with Trafimow and Sheeran (1998) and additional evidence of the independent role of affect in health decision making. By contrast, little support was found for the mediated effect of affect on intention. The indirect effects were very small for every one of the behaviours. Even though several were statistically significant, they were still not large enough to warrant much support for this part of our hypothesis. In short, then, the influence of affect on intention was largely direct.

Our third hypothesis stated that the influence of cognition on intention is fully mediated by overall evaluation. This, too, was partially supported by the data. Although for three behaviours the indirect effect coefficients were very small and did not reach statistical significance, overall about half of the total effect of cognition was mediated by overall evaluation. Surprisingly, for some behaviours cognition also had a direct effect on intention. Although statistical significance was attained in only 4 of the 17 cases (compared with every single one for affect), this finding is worth mentioning since, as far as we know, an effect of cognition on intention, independent of overall evaluation, has never previously been reported.

Another important finding is that affect had a much smaller influence on overall evaluation than cognition, whereas the impact on intention was generally larger for affect. Several past studies of attitudes have measured only the impact of affect and cognition on overall evaluation, not on intention (e.g. Bodur, Brinberg, & Coupey, 2000; Breckler & Wiggins, 1989). A crucial implication of our findings, then, is that such studies may severely underestimate the influence of affect in behavioural decision making. To illustrate the potential
significance of this finding, consider the development of a campaign promoting fruit consumption. Based on the influence of affect and cognition on overall evaluation, it would be advisable to devise a campaign targeting cognition. But looking at the influence of affect and cognition on intention, campaign developers would be advised to target affect. Intention is considered a more proximal determinant of actual behaviour than overall evaluation. We would therefore recommend that future studies aimed at determining the relative weight of affect and cognition in health decision making compare the impact of these constructs with regard to either intention or the actual behaviour.

In essence, the results of the present study support the idea that overall evaluation is made up of both affective and cognitive evaluations. Both significantly predicted overall evaluation for most behaviours studied. But this is only part of the story. The impact of affect and cognition on health decision making does not end at overall evaluation. Affect in particular – and in some cases cognition as well – impacts intention directly, independently of overall evaluation. These findings force researchers to critically consider the structural position and measurement of attitude in social cognitive theories. In the TPB (Ajzen, 1985, 1991), for example, attitudes are measured using scales including affective, cognitive, and overall evaluation items (Ajzen, 2006). By doing this, the paths whereby affect and cognition exert their impact on intention (either direct or indirect, or both) are obscured. Most importantly, the large direct effect of affect on intention is neglected.

The present findings are in line with a growing body of research that indicates that affect plays a large role in health decision making. Compared to cognition, affect has been found to better predict both intention (Kraft et al., 2005; Lowe et al., 2002) and actual behaviour (Kiviniemi, Voss-Humke, & Seifert, 2007; Lawton, Conner, & Parker, 2006).
Although each of these studies contributed significantly to our understanding of the role of affect in behavioural models, the scope of their outcomes is limited as each investigated only one or two health behaviours. The present study adds to these findings by demonstrating the large role of affect across a wide range of health behaviours.

Considering these studies, we would argue that affect should be included in social cognitive theories. Inevitably, this proposition leads to the question of where affect should be positioned within such theories. Some researchers have positioned it as a predictor of intention (e.g. Kraft et al., 2005) whilst others have positioned both affect and cognition as direct determinants of overall evaluation (e.g. Breckler & Wiggins, 1989; Crites et al., 1994). As our data show that most by far of the influence of affect on intention is direct (i.e. not mediated by overall evaluation), we would argue that affect be positioned parallel with overall evaluation, as a direct determinant of intention rather than of overall evaluation.

Since the influence of cognition on intention was both mediated by overall evaluation and direct, our data suggest that it should be positioned both behind and parallel with overall evaluation. That is, with one arrow pointing to overall evaluation and one pointing directly to intention. Alternatively, in order to maintain the parsimony of the model, it can be argued that either cognition or overall evaluation should be left out of social-cognitive models altogether.

As we have investigated determinants of 17 behaviours, we were able to explore possible patterns across types of behaviour. We found that behaviours that belong to the same health domain tend to have matching main determinants. For example, all behaviours to do with dental hygiene were predicted mainly by cognition, and those involving exercise or ingestion were predicted mainly by affect. Unfortunately, we were unable to distil a single behavioural characteristic that could fully
distinguish between behaviours determined largely by affect versus cognition. Future research is needed to confirm and explain the patterns found, and to investigate whether other patterns exist. Such research may also study the extent to which such patterns are applicable to behaviours outside the realm of health.

Several limitations of the present study need to be considered. First, the student sample and its underrepresentation of males limit the generalizability of the present findings. Second, the outcomes of our path analyses may have been biased by limitations with respect to the validity of our measures. More specifically, the validity may have been influenced by a time component in our measures. That is, affect items (e.g., not enjoyable/enjoyable) may have induced judgments about the short-term consequences of the behaviour (i.e., how do I feel about performing it), whereas both the cognitive (e.g., useless/useful) and overall evaluations (e.g., bad/good) items may have induced judgments about the long-term consequences of the behaviour. The finding that affect was a lesser predictor of overall evaluation may thus simply reflect the possibility that it measured a different type of judgment (short term) than overall evaluation, whereas cognition did not. Further research is required to determine whether items such as those used in our study differentially induce short- and long-term thinking.

Finally, based on the large beta weights for the cognition to overall evaluation paths, one may suspect that these two constructs lack discriminant validity. Adding to such suspicion are the high correlations between these two constructs (minimum and maximum correlation coefficients were .70 and .87, respectively). To investigate discriminant validity, we performed confirmatory factor analyses. These analyses revealed that for 16 of the 17 behaviours, the model in which overall evaluation and cognition were considered separate constructs, fitted the data significantly better than the model in which they were considered
the same construct. For only one behaviour (have dental check-ups), there was no significant difference between the models. Therefore, we contend that our measures adequately distinguished between cognition and overall evaluation.

In conclusion, we believe that this study has provided an important step towards determining the structural relationships between affective, cognitive, and overall evaluations of health behaviour, and intention to perform those behaviours. Although previous research indicated that affect influences intention independently of overall evaluation (Trafimow & Sheeran, 1998), this is the first study to apply mediation analyses to further investigate this result. Our findings indicate that affect – and in some cases cognition, too – impacts health decision making beyond its influence on overall evaluation. The dominant conception that affect and cognition are the building-blocks of attitude is not contradicted by our findings, but rather is extended by them.