

## **How do consumers react to physically larger models? Effects of model body size, weight control beliefs and product type on evaluations and body perceptions**

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The purpose of this article is to examine how a consumer's weight control beliefs (WCB), a female advertising model's body size (slim or large) and product type influence consumer evaluations and consumer body perceptions. The study uses an experiment of 371 consumers. The design of the experiment was a 2 (weight control belief: internal, external) X 2 (model size: larger sized, slim) X 2 (product type: weight controlling, non-weight controlling) between-participants factorial design. Results reveal two key contributions. First, larger sized models result in consumers feeling less pressure from society to be thin, viewing their actual shape as slimmer relative to viewing a slim model and wanting a thinner ideal body shape. Slim models result in the opposite effects. Second this research reveals a boundary condition for the extent to which endorser–product congruency theory can be generalized to endorsers of a larger body size. Results indicate that consumer WCB may be a useful variable to consider when marketers consider the use of larger models in advertising.

**Keywords:** larger sized models; brand evaluations; advertising; body image

Marketers frequently use female models in advertising that are slim and attractive. From a research perspective, while a substantial stream of research has examined endorser effects, this research has typically focused on the influence of endorser physical attractiveness and celebrities (Bower & Landreth, 2001; Kahle & Homer, 1985; Kamins, 1990; Till & Busler, 2000). To date, the notion of endorser body size has been relatively unexplored. This gap is relevant since a common theme in the endorser literature is that endorsers are more effective when there is a perceived fit between the endorser and the advertised product (Kamins & Gupta, 1994; Misra & Beatty, 1990). However, if the product is believed to increase body weight (e.g. hamburgers), does this mean a physically larger endorser would be seen as more appropriate than a slim model, given equal levels of physical attractiveness? Or would slim models be preferred? This study addresses this gap in the literature.

Larger model body size is particularly important given the controversy in the popular press regarding the perceived thinness of models and a movement to more realistic larger sized models. For example, in Germany, the editor of the most popular women's magazine, *Brigitte*, banned professional models saying he would only use models with 'normal

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figures' and that he had had enough of 'fattening girls up with Photoshop' (Connolly, 2009). Recent marketing campaigns for brands such as Dove cosmetics and American *Glamour* magazine have also used larger sized models suggesting that larger sized models may be a new avenue for marketers. In addition, from a theoretical perspective a stream of research asserts that the use of slim models in the media has contributed to negative effects for consumers, such as eating disorders among young women (Fouts & Vaughan, 2002; Furnham & Nordling, 1998; Martin & Gentry, 1997; Richins, 1991). One of the goals of this study is to study what effect larger sized models have upon a consumer's body esteem, and their ideal and actual perceived body shape, as compared to slim models.

The purpose of this research is to examine the effects of model body size, product type and consumer weight controllability beliefs (WCB) on consumer brand and advertising evaluations. In addition, we examine the effect of these variables on consumer body esteem and self-image. We offer three key contributions. First, we provide insights into whether the endorser congruity research applies to larger models in advertising. Second, we reveal the importance of WCB in the study of larger models. Third, we explore how model body size affects consumer body esteem and perceived body size which has implications not only for marketers, but also for policy makers and advertising planners considering the effects of advertising on consumers.

## Literature review

### *Consumer weight control beliefs*

A stream of research in marketing and psychology has examined the influence of control beliefs in terms of a person's locus of control (LOC). LOC relates to a person's expectancies for reinforcement or success, and the degree to which they feel in control of their successes and failures (Eccles & Wigfield, 2002; Lefcourt, 1966). Research here classifies people as 'internals' and 'externals'. Internals believe events are influenced by their actions (e.g. success through planning and effort), whereas externals tend to view events as beyond their control (e.g. success depending on luck). Yet despite the popularity of this construct, findings for health issues, such as obesity, have been mixed (Norman, 1995). It is for this reason that researchers have advocated using domain-specific measures of control beliefs, rather than a general LOC measure (Holt, Clark, & Kreuter, 2001). Yet the measure of Weight-LOC (Saltzer, 1982) which is specific to weight issues, has been found to have low internal reliability, with Cronbach's alpha in three datasets ranging from .49 to .58 (Holt et al., 2001; Saltzer, 1982). In this study, we use a measure of WCB which resolves this issue.

Research on WCB reveals that internals place a high emphasis on body size, and behaviours such as diets, nutrition and exercise, which can help achieve their desired body size. They are more active in controlling their weight (Furnham & Greaves, 1994). Importantly, internals demonstrate a belief that obesity is related to eating habits and a lack of physical activity (Holt et al., 2001). Further, research suggests that internals are more likely to have negative attitudes towards people who are more heavier than a slim ideal, since they view body weight as a controllable condition (Tiggemann & Anesbury, 2000). Thus, it is plausible that internals will prefer slim models, since they would be expected to have a more negative attitude towards a larger sized model. On the other hand, externals are more likely to feel that there is nothing they can do to alter their body shape, and they have been shown to experience more body dissatisfaction (Furnham & Greaves, 1994). Since externals view body weight as uncontrollable, and this view has been found to result in feelings of empathy (Weiner, Perry, & Magnusson, 1988), they should react more favourably towards larger sized models in advertising. Thus, we predict:

- H1: There will be a significant interaction between WCB and model type. Specifically, internals will report more favourable attitudes towards the ad ( $A_{ad}$ ), attitudes towards the brand ( $A_b$ ), purchase intention and attitude towards the model ( $A_{model}$ ) when exposed to ads containing a slim model, as opposed to ads containing a larger sized model. In contrast, externals will report more favourable  $A_{ad}$ ,  $A_b$ , purchase intention and  $A_{model}$  when exposed to ads containing a larger sized model, as opposed to ads containing a slim model.

### *Effects for consumer WCB, model type and product type*

Research suggest that endorser–product congruency is important to consider when studying the advertising effectiveness of endorsers. While much of this research has studied physical attractiveness and/or celebrities (Bower & Landreth, 2001; Kahle & Homer, 1985; Kamins, 1990; McCracken, 1989; Solomon, Ashmore, & Longo, 1992; Till & Busler, 2000), a central theme is that the endorser’s image should suitably match the advertised product. Recognizing this, Kamins and Gupta (1994) have argued for the need to move beyond physical attractiveness (e.g. studying attractiveness-related products, such as perfume), to test endorser–product congruency. Here, an endorser is predicted to be effective when their image fits the advertised product. Applying this logic to the present research suggests that a slim model may be regarded as congruent with a weight-controlling product (e.g. a salad) whereas a larger model may be regarded as more congruent with a non-weight-controlling product (e.g. a hamburger).

Kamins and Gupta (1994) also suggest that endorsers can be effective when they exhibit values similar to the target audience. Thus, given H1, consumers may use model body size as an indicator of that model’s WCB, and react more favourably where there is a congruence between the WCB of the model (as evidenced by their body size) and the consumer viewing the ad. This notion of body shape influencing perceptions of endorser effectiveness has received support in the literature. Lynch and Schuler (1994) found evidence that endorser body shape can influence consumer perceptions of an endorser’s perceived knowledge of a product. In their study, as a male model’s muscularity increased from exercise so did consumer perceptions of the model’s perceived knowledge of exercise equipment. Thus, we expect a slim model to be perceived as a more effective endorser for a weight-controlling product (salad), and a larger sized model to be more effective for a non-weight-controlling product (hamburger). Consequently, given H1, internals should react most favourably to the slim model endorsing the weight-controlling product, whereas externals should prefer the larger sized model with the non-weight-controlling product.

- H2: There will be a significant interaction between WCB, model type and product type. Specifically, internals will report more favourable  $A_{ad}$ ,  $A_b$ , purchase intention and  $A_{model}$ , when exposed to ads containing a slim model and a weight-controlling product, than for other model–product combinations. Externals will report more favourable  $A_{ad}$ ,  $A_b$ , purchase intention and  $A_{model}$ , when exposed to ads containing a larger sized model and a non-weight-controlling product, than for other model–product combinations.

## **Method**

### *Participants, design and procedure*

Three hundred and seventy-one business undergraduates from an Australasian business school were randomly assigned to an experimental condition. The experiment was a 2

(model size: large, slim) X 2 (product type: weight-controlling, non-weight-controlling) between-subjects factorial design, with WCB (internal, external) a measured independent variable based on a median split following prior research (Fouts & Vaughan, 2002; Venkat & Ogden, 2002). Participants were informed that a study was being conducted on print advertisements. Next, they read a booklet containing an ad and the questionnaire. Participants were asked to read the ad as they would normally do so if reading a magazine. The entire procedure took 15 minutes to complete. At the conclusion of the data collection, participants were informed of the purpose of the study.

### *Ad stimuli development*

A pretest was performed with 61 undergraduate participants, excluded from the main study, to identify slim and larger sized ad models. Participants rated three slim models or three larger sized models, which had been identified from a content analysis of foreign magazines and websites. Models were tested in independent groups (30 and 31 participants respectively) to avoid body size assimilation-contrast order effects influencing participants' evaluations (Stapel, Koomen, & Velthuisen, 1998). Participants rated  $A_{\text{model}}$  on four seven-point scales (e.g. bad-good, unpleasant-pleasant) adapted from prior research (Deshpandé & Stayman, 1994; Williams & Qualls, 1989). Model attractiveness was assessed using five seven-point items (e.g. unattractive-attractive) from Ohanian (1990). In addition, participants rated body shape on a nine-point scale, adapted from Stunkard, Sorenson and Schulsinger (1983), which displays thin to larger sized female body shapes (see Appendix 1). Other measures included prior exposure to the model picture (yes-no), and respondent demographics (i.e. gender, ethnicity, age, height and weight). Analyses resulted in the selection of two models for the main study (one slim, one larger sized) who did not significantly differ on  $A_{\text{model}}$  ( $p > .10$ ) or perceived attractiveness ( $p = .07$ ). Yet, as desired, the slim model was seen as significantly slimmer in body shape than the larger sized model ( $M_{\text{slim}} = 3.81$ ,  $M_{\text{larger sized}} = 6.23$ ,  $F(1, 59) = 109.90$ ,  $p < .001$ ,  $\omega^2 = .64$ ).

Next, a focus group of five postgraduate marketing students was used to derive products for the product type manipulation. Three criteria influenced product selection: (1) products had to be related to body weight; (2) products could be classified as weight-controlling and non-weight-controlling; and (3) products had to be familiar to the student sample, so that a sensible judgement could be reached. This resulted in the selection of the food products, salads for the weight-controlling product, and hamburgers for the non-weight-control product. Next, a pretest was conducted to verify this product choice. On a seven-point scale anchored by strongly disagree-strongly agree ('Eating this product makes you put on weight'), 26 participants excluded from the main study, indicated that hamburgers make you put on more weight ( $M = 5.42$ ) than salads ( $M = 2.35$ ,  $t(25) = -8.67$ ,  $p < .001$ ). No differences were evident between these products for perceived familiarity when rated on seven-point scales anchored by unfamiliar-familiar ( $p > .12$ ). Consequently, salads and hamburgers were chosen for use in the main study.

### *Independent variables*

For model type, each ad displayed a slim model or larger sized model. For product type, each ad presented a salad (weight-controlling) or hamburger (non-weight-controlling). In both cases, a fictitious brand name ('RFP - The Real Food People'), was used with identical product ingredients (organically grown tomatoes and RFP sauce). To aid realism, ads were printed in colour. WCB were measured using four seven-point items (i.e. 'People

have control over their weight', 'Being overweight is an individual's fault', 'Losing weight requires willpower' and 'People can become thin if they try') anchored by strongly disagree–strongly agree (Cronbach's  $\alpha = .70$ ), adapted from Tiggemann and Anesbury (2000). Principal axis factor analysis was performed on all measures comprising three or more scales. As all measures loaded onto single factors and yielded suitable reliability, the items were averaged for analyses.

### *Dependent variables*

$A_{ad}$  was measured on three seven-point scales (bad–good, uninteresting–interesting, dislike–like, Cronbach's  $\alpha = .89$ ) from MacKenzie and Lutz (1989).  $A_b$  was measured on three seven-point scales (bad–good, unpleasant–pleasant, dislike–like, Cronbach's  $\alpha = .91$ ) from MacKenzie and Lutz (1989). Purchase intention was measured on three seven-point scales (unlikely–likely, definitely would–definitely would not, improbable–probable, Cronbach's  $\alpha = .96$ ) adapted from previous research (Homer, 1995; MacKenzie, Lutz, & Belch, 1986).  $A_{model}$  was measured on the same four seven-point scales from the pretest (Cronbach's  $\alpha = .89$ ).

### *Covariates*

Covariates were measured based on a review of relevant marketing and social psychology literature. These covariates included pressures to be thin, endorser expertise, gender, body esteem, actual-ideal self discrepancies and body mass index (BMI). Pressures to be thin was measured on four seven-point scales, such as 'There is definitely an expectation for people to be thin', anchored by strongly disagree–strongly-agree (Cronbach's  $\alpha = .88$ ) adapted from previous research (R.G. Netemeyer, personal correspondence, cited in Bruner, James, & Hensel, 1997, p. 259). Endorser expertise was rated on five seven-point scales (e.g. not an expert–expert, unqualified–qualified, Cronbach's  $\alpha = .88$ ) from Ohanian (1990). Body esteem refers to self-evaluations of one's body. This construct varies from self-esteem in that it is only concerned with an individual's body image perceptions and attitudes (Mendelson, Mendelson, & White, 2001). Body esteem was measured on four seven-point scales, such as 'I feel satisfied with the way my body looks right now', and 'I am pleased with my appearance right now', anchored by strongly disagree–strongly agree (Cronbach's  $\alpha = .72$ ) adapted from past research (Heatherton & Polivy, 1991).

Research on actual self–ideal self discrepancies (AI) suggests that actual–ideal mismatches can generate dejection-related emotions (Boldero & Francis, 2000). For our study, this measure related to a person's ideal body shape and their perceived actual body shape. Using an adaptation from Stunkard et al. (1983), participants were shown a nine-point scale which displayed thin to larger sized male and female body shapes and asked to identify a number which reflected 'Your ideal figure' (i.e. ideal self) and 'The figure that reflects the way you think you look' (i.e. actual self).

An examination of skewness and kurtosis statistics verified that the normality assumption was satisfied for the dependent variables and covariates. Further, a correlation matrix was performed to test the assumption that covariates are correlated with the dependent variables (Hair, Anderson, Tatham, & Black, 1998). This revealed that pressures to be thin ( $r > .10, p < .05$ ), expertise ( $r > .32, p < .001$ ) and gender ( $r > .12, p < .05$ ) were significant covariates. However, body esteem, AI and BMI were not significantly correlated with the dependent variables ( $ps > .26$ ). Thus, pressures to be thin, expertise and gender were used as covariates in the main study data analysis, with body esteem, AI and BMI excluded from subsequent analysis as covariates.

## Results

### *Hypothesis 1: effects for WCB and ad model type*

H1 predicts that internals will prefer ads showing slim models, rather than larger sized models whereas externals should prefer the larger sized model. Analyses revealed significant WCB X Model Type interactions for  $A_{ad}$  ( $F(1, 326) = 6.50, p < .05$ ),  $A_b$  ( $F(1, 326) = 4.94, p < .05$ ), purchase intention ( $F(1, 326) = 3.96, p < .05$ ), but not for  $A_{model}$  ( $F(1, 326) = 3.69, p = .06$ ).

Further analysis performed on these interactions showed that internals prefer the slim model for  $A_{ad}$  ( $F(1, 160) = 21.50, p < .001, \omega^2 = .10$ ),  $A_b$  ( $F(1, 160) = 12.95, p < .001, \omega^2 = .06$ ), and purchase intention ( $F(1, 160) = 8.55, p < .01, \omega^2 = .04$ ). Table 1 shows internals consistently prefer the slim model. For example, for  $A_{ad}$ , the slim model ( $M = 4.10$ ) rates higher than the larger sized model ( $M = 3.34$ ). Externals present a different picture. As shown in Table 1, externals exhibit equal preference for model type regarding their  $A_{ad}$  ( $p > .21$ ),  $A_b$  ( $p > .76$ ) and purchase intention ( $p > .54$ ). Thus, these results support H1 for internals, and provide a mixed picture for externals.

### *Hypothesis 2: effects for WCB, model type and product type*

Hypothesis 2 suggest that internals prefer the slim model advertising salad. By contrast, externals should prefer the larger sized model hamburger ad. Analyses revealed a significant three-way interaction for WCB X Model Type X Product Type for  $A_{ad}$  ( $F(1, 322) = 8.46, p < .01, \omega^2 = .02$ ),  $A_b$  ( $F(1, 322) = 6.14, p < .02, \omega^2 = .01$ ) and purchase intention ( $F(1, 322) = 5.77, p < .02, \omega^2 = .01$ ), but not for  $A_{model}$  ( $p > .10$ ). Further analysis revealed that consistent with H2, internals respond most favourably to slim models advertising salads for both  $A_{ad}$  ( $F(1, 71) = 28.66, p < .001, \omega^2 = .24$ ),  $A_b$  ( $F(1, 71) = 17.96, p < .001, \omega^2 = .18$ ), and purchase intention ( $F(1, 71) = 9.63, p < .01, \omega^2 = .09$ ). These results involve two large effect sizes and a medium–large effect size respectively (Cohen, 1977). For  $A_{ad}$ , Figure 1 displays how internals prefer slim models ( $M = 4.59$ ) to larger sized models ( $M = 3.19, p < .001$ ) when salads are advertised.

Table 1. Means and standard deviations for attitudes and intentions categorized by individual's weight controllability beliefs and model type.

Dependent measure	Weight controllability beliefs	
	Internals	Externals
<b>Attitude towards the Ad (<math>A_{ad}</math>)</b>		
Slim model	4.10 (1.31) <sup>a</sup>	3.85 (1.18)
Larger sized model	3.34 (1.11)	3.53 (1.12)
Significance	$p < .001$	$p > .21$
<b>Brand attitudes (<math>A_b</math>)</b>		
Slim model	4.43 (1.06)	4.12 (1.05)
Larger sized model	3.94 (.96)	3.91 (1.16)
Significance	$p < .001$	$p > .76$
<b>Purchase intention (PI)</b>		
Slim model	3.92 (1.42)	3.60 (1.34)
Larger sized model	3.33 (1.53)	3.41 (1.43)
Significance	$p < .01$	$p > .54$

Note: <sup>a</sup> Standard deviations reported in parentheses.

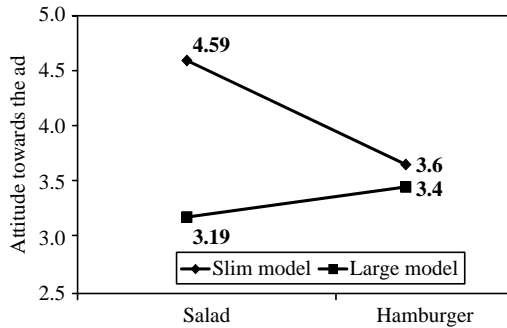


Figure 1. Plot of the interaction of model type and product type for internals on attitude towards the ad.

Similarly, this result is repeated for brand attitudes (Figure 2,  $p < .001$ ) and purchase intention (Figure 3,  $p < .01$ ), where slim models are again preferred to larger sized models for salads. Yet when internals view hamburger ads, no significant difference between model type is evident for  $A_{ad}$ ,  $A_b$  or purchase intention ( $ps > .22$ ). Overall, results for internals support H2.

On the other hand, externals display equal preferences for larger sized and slim models by product type across the dependent variables. For  $A_{ad}$ ,  $A_b$  and purchase intention (Figure 4), externals show equal preference for larger sized and slim models for ads for salads ( $ps > .27$ ) or hamburgers ( $ps > .10$ ). Overall, results for externals do not support H2 as they appear to show that externals have no clear preference for a model type.

Following the endorser literature, we also investigated whether a match-up hypothesis effect (Kahle & Homer, 1985) was present outside of the inclusion of WCB individual differences. Such an effect would be shown by a significant Model X Product interaction, where there was a fit between the model and product, irrespective of a consumer's WCB. However, no such interaction was evident across the dependent variables ( $ps > .08$ ) suggesting that notions of endorser congruity for ads featuring larger sized models must include consumer WCB.

### *Effects of larger sized models on consumer body image*

In the interests of assessing whether larger sized models are positive or negative role models, we examined what effects larger sized models in advertising have on consumers

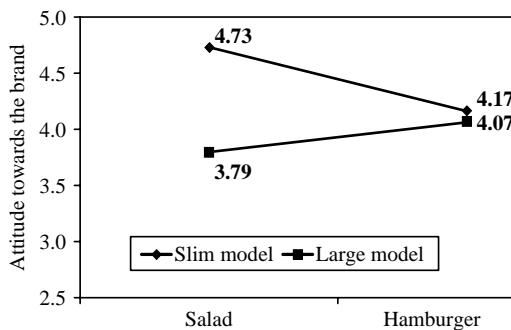


Figure 2. Plot of the interaction of model type and product type for internals on brand attitudes.

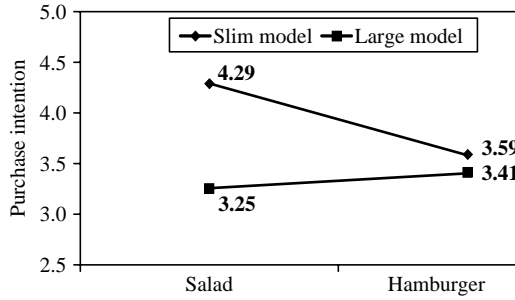


Figure 3. Plot of the interaction of model type and product type for internals on purchase intention.

beyond their attitudes and intentions. For example, do slim models in advertising affect people's ideal body shape and perceived actual body shape? Analysis revealed that participants want a slimmer ideal body size after viewing a larger sized model ( $M = 3.91$ ), than after seeing a slim model ( $M = 4.22$ ,  $F(1, 369) = 7.43$ ,  $p < .01$ ,  $\omega^2 = .02$ ). In addition, participants saw their actual self as larger after viewing a slim model ( $M = 4.25$ ), as opposed to a larger model ( $M = 3.93$ ,  $F(1, 369) = 8.05$ ,  $p < .01$ ,  $\omega^2 = .02$ ). Further, larger sized models result in people feeling less pressure to be thin ( $M = 5.05$ ), than when seeing slim models ( $M = 5.37$ ,  $F(1, 369) = 6.55$ ,  $p < .02$ ,  $\omega^2 = .02$ ). No differences were evident for body esteem ( $p > .27$ ) or WCB scores ( $p > .69$ ).

We also examined gender in relation to these variables, since research suggests attractive models in advertising (presumably the slim archetype) can have a negative effect upon females (Martin & Gentry, 1997). A large body of research also studies females who have eating disorders that may be influenced by the use of slim models in the mass media (Furnham & Nordling, 1998). Generally speaking, our analysis showed no gender differences ( $ps > .07$ ). Yet interestingly, females with internal-WCB reported a higher body esteem after viewing a larger sized model ( $M = 4.71$ ), than after seeing a slim model ( $M = 3.91$ ,  $F(1, 96) = 15.56$ ,  $p < .001$ ,  $\omega^2 = .13$ ).

Finally, a significant WCB X Product interaction was evident for  $A_{\text{model}}$  ( $F(1, 322) = 7.19$ ,  $p < .01$ ) which revealed that internals prefer ads for salads ( $M_{\text{salad}} = 4.31$ ,  $M_{\text{burger}} = 3.94$ ), whereas externals have no specific preference ( $p > .09$ ). This is consistent with the nature of WCB for internals, who should prefer ads for products which can act as a vehicle for controlling their weight, whereas externals – who regard weight as beyond their control – exhibit no such preference. Supporting this interpretation was a significant main effect for WCB on pressures to be thin, where internals feel greater pressure to be thin than

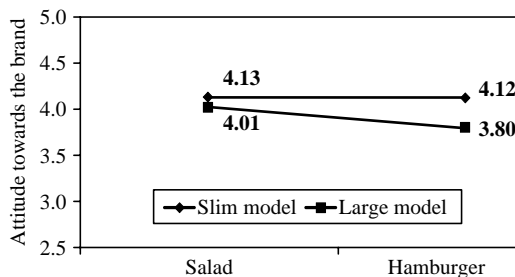


Figure 4. Plot of the interaction of model type and product type for externals on brand attitudes.



externals ( $M_{\text{internals}} = 5.52$ ,  $M_{\text{externals}} = 4.88$ ,  $F(1, 331) = 24.35$ ,  $p < .001$ ). Thus, not only do internals view weight as within their personal control, but they feel under more pressure from society than externals to control their weight. Internals also reported a higher body esteem than externals ( $M_{\text{internals}} = 4.66$ ,  $M_{\text{externals}} = 4.40$ ,  $F(1, 331) = 4.94$ ,  $p < .03$ ), although there was no difference in self-reported weight or BMI ( $ps > .40$ ).

## Discussion

Our findings offer key implications for marketing research. First, regarding endorser effects, our results suggest a boundary condition for the extent to which the notion of endorser–product congruency can be generalized to different contexts. We found a model–product preference only when a consumer’s weight controllability beliefs were considered. This revealed that internals (i.e. consumers who believe they can control their weight) prefer slim models, particularly for ads for weight-controlling products. The effects sizes for these results were strong for ad attitudes, to a lesser degree for brand evaluations, and a small effect for purchase intention. Yet externals (i.e. consumers who believe that their weight is beyond their control) show no preference for slim or larger sized models, irrespective of the product being advertised. These results support our hypotheses for slim models, but do not exhibit the larger sized model preference we expected for externals. Why is this? We speculate that since externals feel less pressured by society to be thin, they may be attributing model slimness to some external factor, such as luck or genetics. Research indicates that externals are more likely to attribute body weight to genetic causes, or a lack of social support, than personal actions such as overeating (Holt et al., 2001). Thus externals may be more accepting towards larger models. In contrast, internals – who regard slimness as a function of willpower and personal effort – may denigrate larger sized models as appropriate endorsers.

Second, our findings offer relevant insights regarding how larger sized models in advertising affect consumers body image. We discovered that after viewing a larger sized model, consumers appear to want a slimmer ideal some time in the future, but in the present, feel less pressure to lose weight. In contrast, slim models result in people feeling larger than the slim model, and feeling more pressure to be thin.

At first glance, these results suggest for advertising to encourage a healthy body weight, that the use of slim models is more appropriate, since slim models result in more actual–self discontent and societal pressure in the present. Yet the results for ideal body size suggest an aversion to both larger sized models and slim models. Thus, future research should consider what body weight is the most effective while also not incurring negative psychological consequences on the consumer. Given concerns regarding the use of slim models and eating disorders (Furnham & Nordling, 1998), this issue is worthy of future research.

Female-internals also revealed a medium–large effect in showing higher body esteem after viewing a larger sized model. Given that internals feel more pressure to be thin, female-internals may be comparing themselves to the larger sized model in advertising as a means to enhance or maintain their body esteem (e.g. by regarding themselves as closer to the society’s slimmer ideal than the larger sized model). Researchers considering obesity in advertising from a social marketing perspective (e.g. advertising to reduce obesity) should consider this issue.

## Managerial implications

For managerial implications, our findings suggest that marketers should not reject the notion of using larger sized models in advertising out of hand. Instead, considering the

target consumer's WCB provides useful insights for whether larger models will be viewed favourably by consumers. Yet while marketers can change the type of model in an ad, how can advertisers make use of findings relating to WCB? We suggest that consumer individual differences like WCB offer additional information for market segmentation (Luna & Peracchio, 2002), where segments can be classified as internals or externals. This can be achieved by studying the type of media vehicle in which the ad is to be placed. Marketers can then make a judgement regarding the level of WCB of the target market reader, based on preferred content and featured articles. For instance, readers of health magazines featuring diets and planning for the future style articles could be assumed to be more likely to be internals. Likewise readers of a motivational magazine which involves planning for the future suggests an internal orientation, thus the emphasis should be on slim models. In contrast, consumers with external WCBs appear open to seeing larger models in advertising.

In addition to gaining insight from the media vehicles used by the target consumer, marketers can also collect data on WCBs. We used a four-item measure which could be readily used in a website survey or as part of a questionnaire in an email newsletter which consumers read to gain information (Martin, van Durme, Raulas, & Merisavo, 2003). Alternatively consumers could be asked questions on the efficacy of exercise programmes and dieting products that are currently on the market which would provide insight into their weight control beliefs.

### *Limitations and future research*

Our research includes limitations. First, while the results for weight and BMI were not significant, asking participants to report their own weight may have resulted in some biased weight data, either from participants being ignorant of their exact weight, or reporting an incorrect figure. Future research should consider the use of actual height and weight data which could be collected as a separate study prior to main data collection. Second, a student sample was used which limits the generalizability of the results. Future research should consider a sample of adults across a more representative age range.

Future research should also explore the effects of celebrities of different body sizes. In this study we used models, yet celebrities could provide useful insights into endorser body size effects, given the additional meaning they bring to advertising. McCracken (1989) asserts that a celebrity represents an amalgam of their fictional roles, which offer a range of personality and lifestyle meanings. Thus, it would be useful to study the effect of larger sized celebrity endorsers, and what impact these celebrity meanings have upon externals.

Future research could also examine how a consumer's view of time and the future (Martin, Gnoth, & Strong, 2009) affects their perspective on body size, diet and the size of promotional models. Similarly, other individual differences such as a consumer's susceptibility to normative influence (Martin, Wentzel, & Tomczak, 2008) could prove insightful to understanding when and how larger sized models are effective.

Useful insights could also be gained by examining body size in advertising from the perspective of schema theory. A schema represents prior expectations a consumer can have about an endorser or product (Speck, Schumann, & Thompson, 1988). For example, how an endorser should look. Research suggests that these expectations can influence consumer attitudes towards advertising (Goodstein, 1993). Moreover, where an ad element is incongruous with these prior expectations (e.g. seeing a larger sized model instead of a slim one) this information may be integrated into the existing schema

regarding ad models (i.e. assimilation). Alternatively, the schema may be greatly modified to include a new subtype (i.e. accommodation; see Suján & Bettman, 1989 for a discussion of assimilation versus accommodation). Such research would be useful in revealing how larger sized models are integrated into consumer advertising knowledge structures, and how this influences the processing of subsequent advertising.

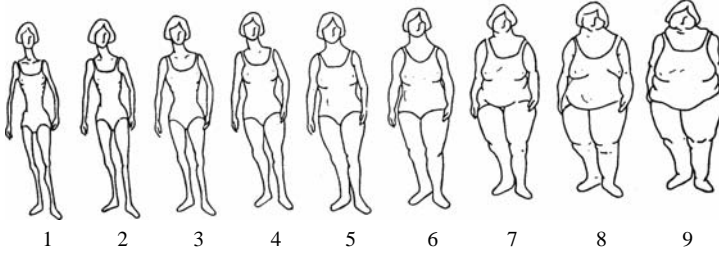
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**Appendix 1. Pretest: body size measure**

Please circle the figure that reflects how you think the model looks (circle the number).



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