Changes in the prevalence of thin bodies biases young women's judgements about body size

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Background

Body dissatisfaction is pervasive among young women in Western countries [1, 2, 3].

The thin ideal [4, 5] in visual media distorts "normal" body image, but the underlying cognitive mechanism by which this ideal influences concepts about women's bodies is less understood [6].

We propose that changes in the prevalence [7] of thin bodies in the environment drives this concept change.

Hypotheses

H1. As the **prevalence of thin bodies in the environment increases**, women will be more likely to judge other women's bodies as overweight.

H2. Women will be more likely to judge a computerized model of "their own body" (**self-concept**) as overweight after being exposed to more thin bodies.

H3. Women will judge themselves as heavier (**self-image**) after being exposed to this shift in prevalence.
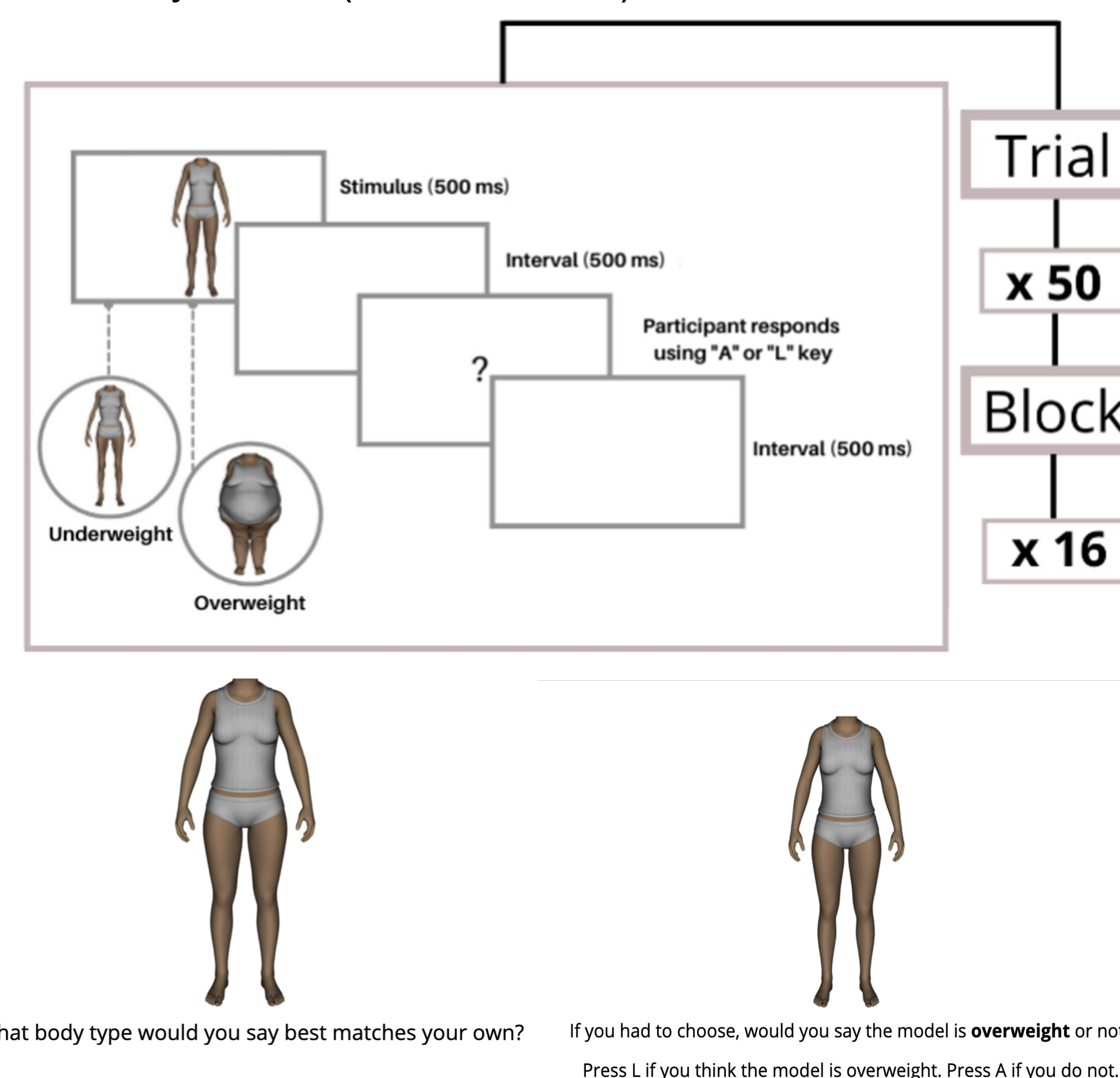
Participants

419 young women (M_{age} = 22.60, s_{age} = 2.93) recruited from Prolific and the Concordia Psychology Participant Pool

Participants were assigned to one of two conditions of the **Bodies Task** : a **stable** prevalence condition and an **increasing** prevalence condition.
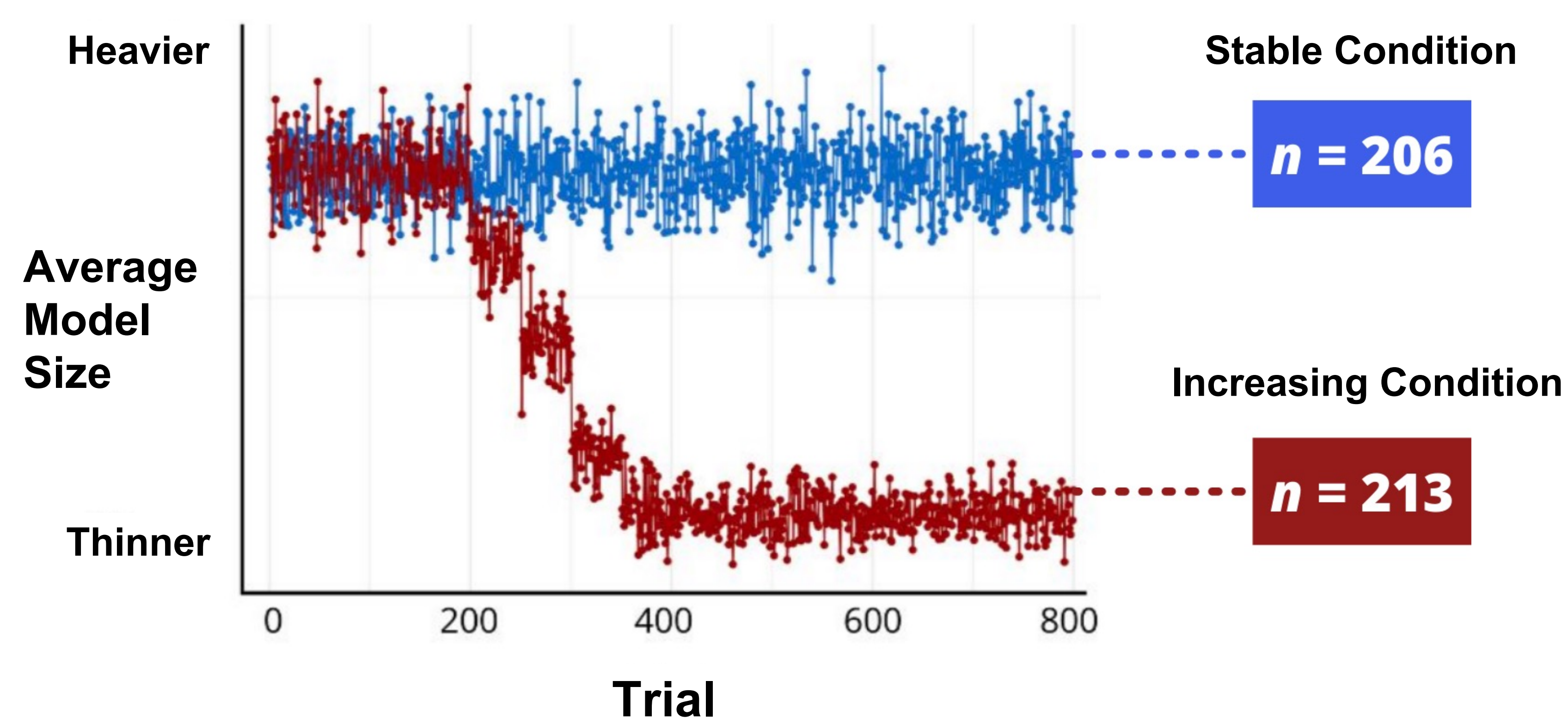
Bodies Task

Participants were instructed to judge whether a computer-generated body presented on the screen was overweight or not. Bodies ranged from emaciated (BMI = 13.19) to severely obese (BMI = 120.29) [8].

What body type would you say best matches your own?

If you had to choose, would you say the model is **overweight** or not?
Press L if you think the model is overweight. Press A if you do not.

Participants were asked at the beginning and again at the end of the task to *1)* indicate the body that best matched their own weight and *2)* indicate whether they would judge their chosen body as overweight or not.

References

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Analyses, Models and Results

H1. Judgements of other bodies

We fit the data to model [9] that would indicate the likelihood of a participant judging a body as overweight on a given trial.
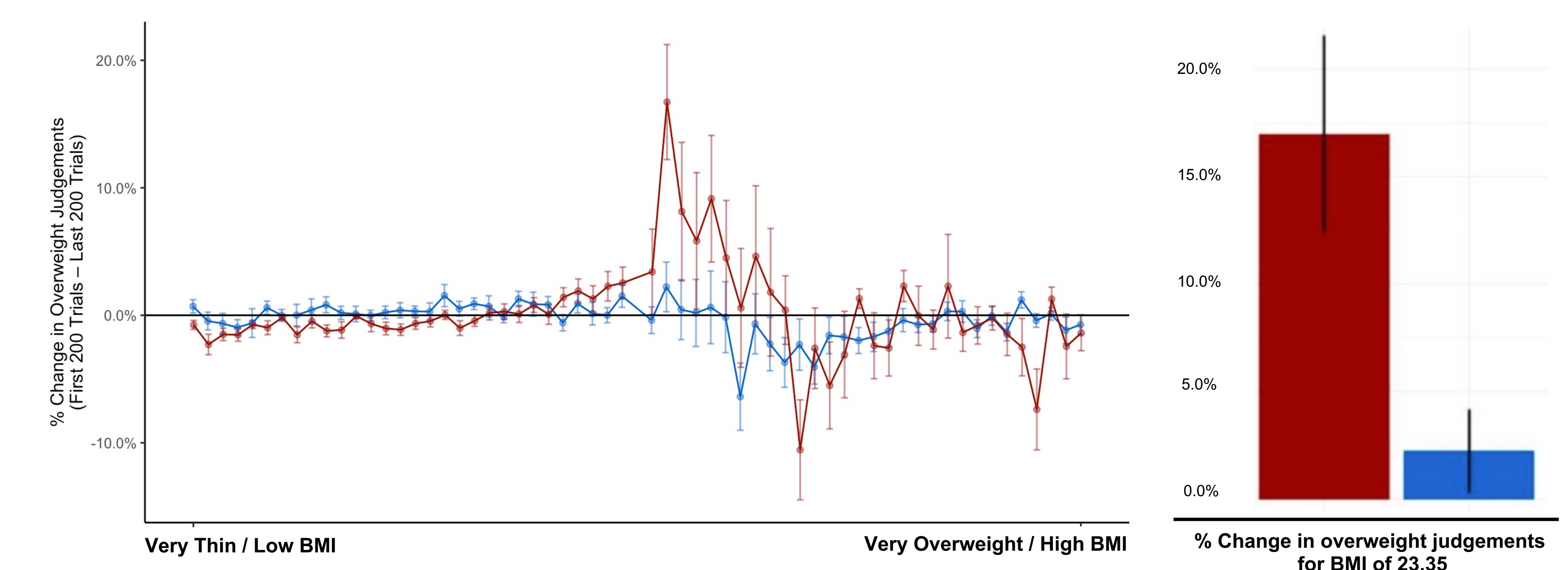

The best fitting model included all main effects and interactions of *Size*, *Trial*, and *Condition* ($p < .0001$). We also found a three-way interaction between *Condition*, *Trial*, and *Size* ($p < .0001$). When the prevalence of thin bodies in the environment increased over the task, **participants judged more average-sized bodies as overweight than when the prevalence was stable.**

H2. Self-concept:

We did not find a significant effect of condition on participants' categorical judgements of the self ($p = .8636$), so participants did not rate themselves as overweight as a result of an increasing prevalence of thin bodies in the task.

H3. Self-image:

We found an effect of condition on participants' self-image ($p = .0261$). When the prevalence of thin bodies increased, participants judged themselves as **thinner**.
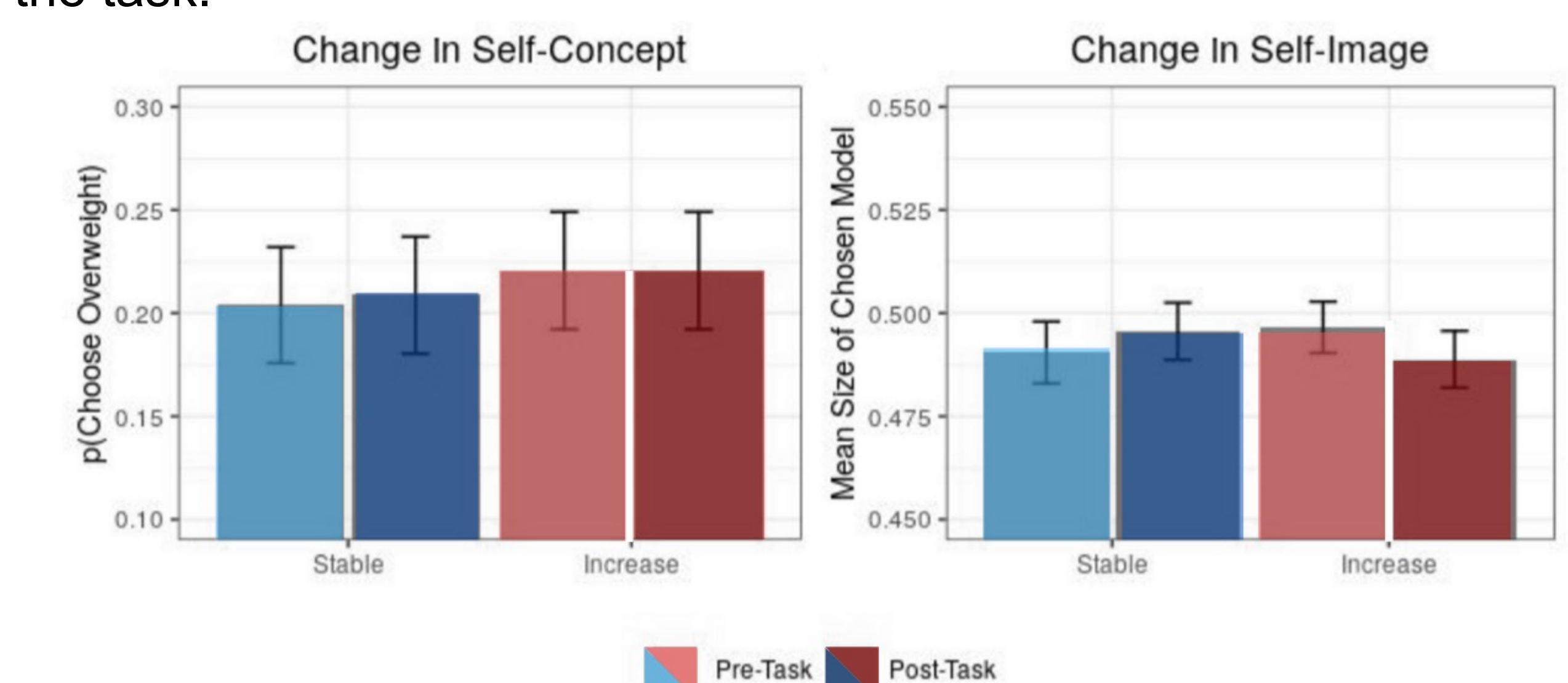
Discussion

When the prevalence of thin bodies in the environment increases, the concept of overweight expands to include bodies that would otherwise be thought of as normal. There is also individual variation in among the strength of prevalence induced concept change among young women that may be related to women's own judgements about self-concept and self-image. We describe one cognitive mechanism that may underlie how visual media alters women's perception of what constitutes a "normal" body and why we should instead strive to portray a truthful distribution of women's bodies in our media.