

Your goals or mine? Women's personal and vicarious eating regulation goals and their partners' perceptions of support, well-being, and relationship quality

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Abstract This research examined the types of eating regulation goals that women have for themselves as well as for their romantic partner, and how these relate to their interpersonal style toward their partner, and to their partner's psychological and relational well-being. Participants were 131 heterosexual couples. Results show that the eating regulation goals that women have for their partner (health or appearance oriented) reflect the type of goals that they personally pursue. Furthermore, women who have health-focused eating goals for their partner are perceived as more autonomy-supportive, which is associated with the partner's report of higher relationship quality. Conversely, women who have appearance-focused eating goals for their partner are more likely to be perceived as controlling, which negatively predicts the partner's psychological and relational well-being. These results attest to the importance of considering women's personal eating regulation goals for a better understanding of the type of goals they have for their partners and how these relate to their partners' well-being and relationship quality.

Keywords Eating regulation goals · Autonomy support · Controlling interpersonal style · Couples · Well-being

Introduction

When asked about the health behaviours they would like their romantic partner to change, many women report that they would like their partner to eat better (Tucker and Anders 2001). This can translate into actually helping the partner regulate their eating, whether by purchasing or cooking more healthy foods or by prompting them to regulate their consumption of certain food. Indeed, recent theory has examined the implications of such transactive self-regulation on both goal pursuit and relationship outcomes (Fitzsimons et al. 2015). While holding a vicarious goal for one's partner may be beneficial (Koestner et al. 2012, Study 3; Mageau et al. 2015), this is likely not the case for all goals—imagine if you encouraged your partner to go to the gym to get more muscular while he is completely satisfied with his appearance. Motivation, then, might play a pivotal role—why do you want your partner to change? The present study examines this question, considering how women's motivation for their own and partners' eating behaviours translates into interpersonal behaviour styles and ultimately affects men's relationship satisfaction and well-being.¹

Eating regulation goals

One of the most common health goals that people pursue is the regulation of eating behaviours. That is, eating healthy foods and avoiding unhealthy foods is a commonly endorsed goal among the general population (Milyavskaya

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¹ Since the data collected in this study are from only heterosexual couples, we use language associated with such couples throughout the paper, referring to women and their male partners.

and Nadolny 2016). However, such eating regulation can be pursued for a variety of reasons (Verstuyf et al. 2012a), including in order to reach a slender and physically attractive body or in order to have a more healthy and fit lifestyle.

According to Self-Determination Theory, goals are often pursued in the service of broader life-goals, or aspirations (Kasser and Ryan 1996), which can be categorized as intrinsic (such as aspirations for personal growth and community contribution) and extrinsic (such as aspirations for wealth, fame, image, and physical attractiveness). Intrinsic aspirations are focused on developing one's personal interests and potential (Duriez 2011). Goals related to these aspirations are inherently rewarding to pursue because they directly satisfy innate psychological needs (Sheldon et al. 2004). In contrast, goals pursued in the service of extrinsic aspirations are directed toward external indicators of worth. The appeal of extrinsic aspirations lies in the anticipated power, social approval or sense of worth that would result from attaining them (Kasser et al. 2004). The pursuit and attainment of intrinsic, relative to extrinsic, aspirations have been shown to yield higher satisfaction and well-being (e.g., Kasser and Ryan 1996; Schmuck et al. 2000; Vansteenkiste et al. 2007). Furthermore, focusing on predominantly extrinsic aspirations is not only associated with poorer mental health, but also has social costs (Duriez 2011). For example, pursuing extrinsic over intrinsic aspirations has been shown to predict poorer quality of love relations and friendships (Kasser and Ryan 2001).

A goal of regulating eating behaviours, then, can be pursued to accrue health benefits, or in the service of extrinsic aspirations. Recent research has begun to examine this distinction, proposing that individuals can focus on extrinsic aspirations (i.e., appearance) or on health benefits when regulating their eating behaviours (e.g., Putterman and Linden 2004; Schelling et al. 2011; Verstuyf et al. 2012a, 2014). For example, some individuals attempt to regulate their eating behaviours in order to obtain or maintain a desirable physical appearance (extrinsic aspirations) whereas other individuals are mostly focused on becoming healthier. As can be expected based on the consequences of pursuing these distinct aspirations, research has found that regulating one's eating behaviours out of concern for one's appearance is associated with negative outcomes, while focusing on health appears beneficial. For example, appearance-motivated eating behaviour has been associated with binge eating symptoms and unhealthy dieting strategies, while health-focused goals for eating regulation had no such associations with disordered eating (Putterman and Linden 2004; Verstuyf et al. 2012b). As suggested by Verstuyf and colleagues (2012b), women who focus on appearance (vs. health) in the context of eating regulation seem to have more rigid or strict dietary rules. Eating regulation based on the goal of physical appearance has also been

shown to be related to body dissatisfaction, which is not the case for health-focused eating regulation (Verstuyf et al. 2012b). Finally, appearance-related eating regulation goals have been found to be related to frustration of one's basic psychological needs (i.e., needs for autonomy, competence, and relatedness) in the context of eating, suggesting that these extrinsic aspirations for eating behaviours engender feelings of pressure, incompetence, and social tension (Verstuyf et al. 2012b). Health-oriented goals were either unrelated or negatively related to diet-specific need frustration.

On personal and vicarious goals

In addition to pursuing personal goals, many people have vicarious goals—that is, goals for their close others (see Koestner et al. 2012, Study 3). For example, Mary may have the goal for her daughter to obtain a university degree, or a goal for her partner to quit smoking. Research on vicarious goals has primarily focused on goals that parents hold for their children (Mageau et al. 2015; Soenens et al. 2015). However, vicarious goals also appear to be rather common in the context of romantic relationships (Koestner et al. 2012; Markey et al. 2008). Research by Markey et al. (2008) suggests that women are particularly likely to have eating regulation goals for their partner. In the present research, we posit that the health versus appearance orientation of personal eating regulation goals proposed by Verstuyf et al. (e.g., 2014; Verstuyf et al. 2012a) also applies to vicarious goals. That is, we propose that a woman who wants her partner to regulate his eating behaviours can have this goal either because she wants her partner to be or stay healthy or because she wants her partner to present a leaner and more attractive body. In this research, we first aim to examine whether the types of eating regulation goals that women have for their partner reflect their own personal goals. Specifically, we propose that women who regulate their own eating behaviours for health reasons will also tend to have health-oriented eating regulation goals for their partner. Similarly, we posit that the appearance-based eating regulation goals that women have for their partner originate from their own extrinsically motivated eating regulation goals.

These hypotheses stem from prior work suggesting that when individuals enter a romantic relationship, they include their partner in their sense of self (e.g., Aron et al. 1992). More specifically, inclusion of the partner in the self refers to a process by which individuals' self-image becomes strongly associated with their partner's self (Strong and Aron 2006). Thus, the partner's identity, including his or her beliefs, feelings, ideology, resources, and personality, is perceived in some way as intertwined with one's own self (e.g., Aron et al. 1991; Strong and Aron 2006). Having one's sense of self somewhat merging

with that of their partner should make individuals likely to project their personal goals and values onto their partner. Thus, if it is important for a woman to present an attractive appearance, then she should be likely to have this same goal for her romantic partner, as he is part of her identity. Similarly, if a woman invests time and effort into regulating her eating behaviours because health is important for her, then her eating regulation goals for her partner should likely be oriented toward health as well.

On the autonomy-supportive and controlling interpersonal styles

A second aim of the present research is to examine whether the types of vicarious eating regulation goals that women have for their partner relate to their tendency to adopt an autonomy-supportive (relative to controlling) style toward their partner. According to Self-Determination Theory, autonomy-supportive behaviour includes providing choice and options to another person (in the present case, the partner), acknowledging his perspectives, and encouraging him to express oneself authentically rather than pressuring him to be a specific way (Deci et al. 1994; La Guardia and Ryan 2007; Ryan and Deci 2004). Autonomy-supportive environments allow opportunities for self-initiation and choice that promote high levels of psychological well-being and psychosocial functioning (e.g., Deci et al. 2001, 2006; Grolnick et al. 1997; Soenens et al. 2007; Vansteenkiste et al. 2005). Conversely, a controlling social environment is one in which the person is pressured to think, act, or feel a certain way (Soenens and Vansteenkiste 2010). Dismissing, minimizing, and invalidating another person's feelings and ideas, criticising and inducing guilt, and creating an environment in which acceptance and love are contingent on the other person's behaviour are all manifestations of a controlling interpersonal style (Silk et al. 2003). While autonomy support and control are often evident in hierarchical relationships (such as between parents and children), they can also be at play in more egalitarian relationships, such as romantic partnerships (e.g., Carbonneau et al. 2015).

The present research thus aims to examine whether women's vicarious goals for their partner shape their interpersonal behaviour (autonomy-supportive versus controlling) towards their partner. It is expected that women who have health-oriented eating regulation goals for their partner should provide autonomy-support to their partner. Since health-related goals are inherently beneficial, they should be congruent with growth tendencies and reflect one's innermost self and values (e.g., Sheldon et al. 2004). Additionally, since such health-related goals are not tied to external contingencies, they would not engender feelings of external pressure. In contrast, women's appearance-oriented eating

regulation goals are expected to be associated with a more controlling interpersonal style toward the partner. That is, appearance aspirations translate into instrumental, extrinsic goals that are directed towards achieving external acknowledgements and rewards. For example, the partner's achievement of appearance-related goal may convey some benefits for a woman, as she may anticipate the improved social status that comes from having a good-looking partner (Kappes and Shrout 2011). Thus, appearance-related goals can create a pressure to achieve them, which could translate into controlling behaviours. This would be consistent with Feeney and Collins (2003) who report that providers who offer support out of self-interest do so in a way that is more controlling.

On the interpersonal consequences of autonomy support and control

In line with past research, it is expected that perceiving one's partner as autonomy-supportive (vs. controlling) would be associated with more positive outcomes. This prediction stems from prior research that found the receipt of autonomy support to be associated with a variety of benefits, including increased relationship quality and general well-being (e.g., Deci et al. 2006; Demir et al. 2011; Niemiec et al. 2006). Conversely, feeling controlled in one's relationship is associated with more negative relational and well-being consequences (Deci et al. 2006; Hadden et al. 2015). Autonomy support is beneficial for the recipient as it conveys a sense of general caring, promotes feelings of overall need fulfillment, and provides opportunities for growth and development (Deci et al. 2006; Feeney and Collins 2014; Hadden et al. 2015). Previous research on autonomy support in romantic and platonic relationships has also found that it predicts increased relationship satisfaction and well-being over time (Koestner et al. 2012). Controlling behaviour, on the other hand, can undermine the relationship. Criticism, one of the hallmarks of controlling behaviour (e.g., Barber 1996), has been identified as one of the four processes that undermine relationship satisfaction (Gottman 1994; Gottman and Levenson 1992). Experiencing one's partner as controlling can also lead to a perception of the relationship as generally controlling. Previous work suggests that controlling social environments are detrimental for individuals' psychological well-being and create a vulnerability to maladjustment and psychopathology (e.g., Barber and Harmon 2002; Deci and Ryan 2000). This is likely because controlling environments thwart basic psychological needs, which are related to domain-specific and general well-being (Milyavskaya and Koestner 2011; Milyavskaya et al. 2013).

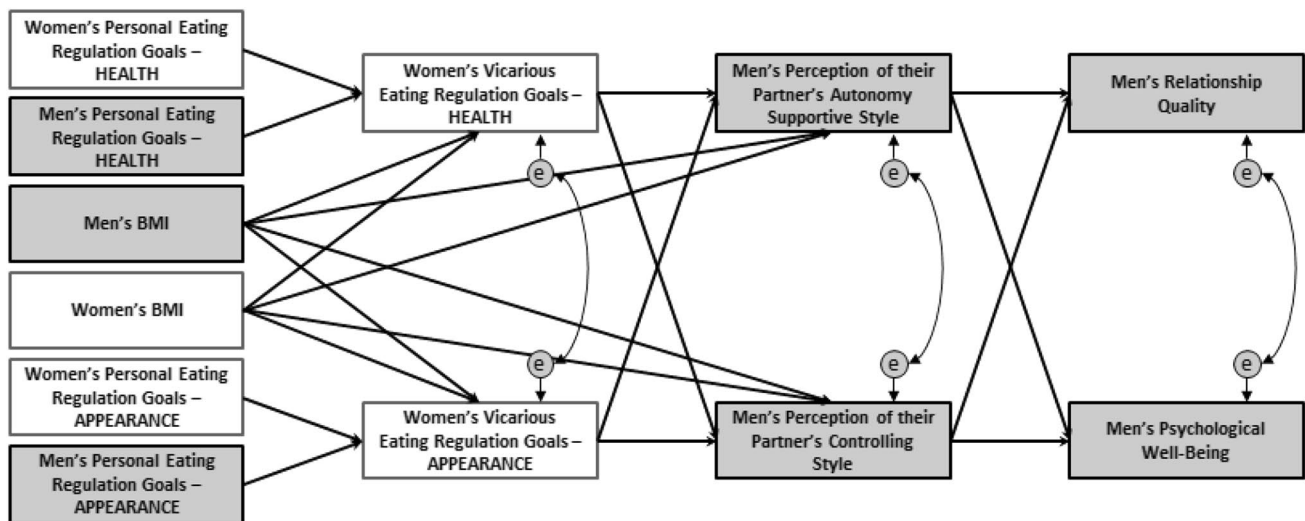


Fig. 1 Hypothesized Model. Variables in *dark gray* were reported by men, variables in *light gray* were reported by women

The present research

Using the theoretical lens of Self-Determination Theory (SDT; Deci and Ryan 2000; Ryan and Deci 2000), the present research investigates the relationship between women's eating regulation goals for themselves and for their partner, and how these relate to the partner's experiences in the relationship and his psychological and relational well-being.

First, we hypothesized that women who endorse health-oriented personal goals would also report having health-related vicarious goals for their partner. Similarly, women who endorse more appearance-oriented reasons for pursuing personal goals were expected to also entertain more appearance-oriented goals for their partner. Second, we hypothesized that women who have more appearance-oriented eating goals for their partner are perceived as more controlling, whereas women who have more health-oriented goals for their partner would be perceived as more autonomy-supportive. Third, we hypothesized that men's perceptions of their partner as autonomy-supportive are related to greater psychological well-being and higher relationship quality, while perceptions of the partner as controlling are related to reduced well-being and poorer relationship satisfaction. A model illustrating the hypothesized relationships is presented in Fig. 1.

Finally, the present research also aimed at examining the potential mediating role of women's interpersonal styles in the relationship between women's vicarious goals and men's outcomes. More specifically, it was hypothesized that the way women behave towards their partner (i.e., in a supportive or controlling manner) would mediate the relationships between women's vicarious goals (i.e., health- vs.

appearance-oriented) and their partner's psychological and relational well-being.

Materials and methods

Participants and procedure

Participants were 131 heterosexual couples from the province of Quebec (Canada). Couples were recruited by a professional survey firm. Inclusion criteria were being a French Canadian couple between 20 and 80 years old. Mean age was 44.69 for men ($SD=13.57$ years, min. 28, max. 78) and 44.13 for women ($SD=12.59$ years, min. 23, max. 78). More than half of the men and women from the sample were under 40 years old. Most (95.2%) participants identified as Caucasian. The average relationship length was 10 years and 9 months ($SD=5$ years and 10 months). Regarding relationship status, 63.2% of couples were married, 30.8% were cohabiting, and 6% were dating.

Individuals interested in participating in the study were directed to an online survey website that contained the questionnaires. All measures were completed online. Upon completion of the questionnaire, participants were entered into a prize draw. The complete survey can be found online at osf.io/u7h5f/.

Instruments

Demographic variables

Participants completed a demographic information section that included questions on age, relationship status and relationship length, among others.

Body mass index

Men's and women's BMI (kg/m^2) was calculated using self-reported height and weight.

Personal eating regulation goals

Both men and women were asked about their personal eating regulation goals. Using Verstuyf et al. (2012b) scale, two types of goals were assessed: the goal of physical fitness/health and the goal of physical appeal/beauty. Participants read the stem "I regulate my food intake because..." and indicated on a 7-point Likert scale ranging from 1 (Not at all important) to 7 (Very important) how strongly they valued each of the regulation goals. Health-oriented goals were assessed with three items (e.g., "I want to be healthy"; $\alpha=0.86$ for men and 0.90 for women). Appearance-oriented goals were also assessed with three items (e.g., "I want to have more muscles or be thinner to look more attractive"; $\alpha=0.92$ for men and 0.89 for women). The two types of goals were correlated for men, $r=.31$, $p<.001$, and for women, $r=.38$, $p<.001$.

Women's vicarious eating regulation goals

Women were also asked about the eating regulation goals they have for their partner. An adapted version of Verstuyf et al.'s (2012b) scale was used. Women read the stem "I want my partner to regulate his food intake because..." and indicated on a 7-point Likert scale ranging from 1 (Not at all important) to 7 (Very important) how strongly they valued each of the regulation goals. Health-oriented goals were assessed with three items (e.g., "I want him to be healthy"; $\alpha=0.84$). Appearance-oriented goals were also assessed with three items (e.g., "I want him to have more muscles or be thinner to look more attractive"; $\alpha=0.96$). The two types of vicarious goals were not significantly correlated, $r=0.13$, $p=0.127$.

Men's perceptions of their partner's interpersonal style

Men were asked to report on the autonomy-supportive and controlling style displayed by their romantic partner with regard to eating regulation. The 6-item autonomy support subscale developed by Koestner et al. (2012) was used to assess the autonomy-supportive style. A sample item is "My partner listens to how I would like to do things regarding this goal." In the present study, the Cronbach alpha value for this scale was 0.86. Men's perceptions of their partner's controlling style with regard to their eating regulation was assessed using a scale adapted for this purpose and used in previous research (see Carbonneau et al. 2015). This scale was adapted from scales assessing the

controlling interpersonal style in other contexts (see Bartholomew et al. 2010, and Moreau and Mageau 2012). A sample item is: "My partner embarrasses me in front of others if I do not do the things she wants me to do." The 14 items demonstrated good internal consistency in the present study ($\alpha=0.94$) and were thus aggregated into a global score. Responses were scored on a 7-point Likert scale, ranging from 1 (Not at all true) to 7 (Very true). The autonomy-supportive and controlling styles were found to be moderately and negatively related ($r=-0.27$, $p=0.002$).

Men's psychological well-being

The measure of men's psychological well-being was comprised of positive and negative affect and life satisfaction (see Koestner et al. 2012, for a similar procedure). More specifically, men completed a nine-item scale of affect (Emmons 1992) that consists of words that describe different feelings and emotions that people sometimes experience. Participants were asked to indicate, for each item, to what extent they generally feel this way. The scale included four positive (e.g., joyful) and five negative (e.g., frustrated) items that were rated on a scale from 1 (Not at all) to 7 (Extremely). Men also completed the five-item "Satisfaction with Life Scale" (Diener et al. 1985). A sample item is "I am satisfied with my life." Items were rated on a scale from 1 (Strongly disagree) to 7 (Strongly agree). Each of the three subscales was internally reliable, all alphas >0.82 . After reversing the negative affect score, intercorrelations between the three subscales ranged from $r=0.46$ to 0.68, $ps<0.001$. The subscales were therefore aggregated into a global psychological well-being score.

Men's relationship quality

Men's relationship quality was assessed using the six-item Quality of Marriage Index (QMI; Norton 1983). Sample items include "My relationship with my partner makes me happy" and "We have a good relationship." Responses were scored on a 7-point Likert-type scale from 1 (Not at all) to 7 (Very strongly). The six items yielded an internal reliability of $\alpha=0.93$.

Statistical analyses

Means, standard deviations, and correlations between the model variables were obtained using SPSS software (version 23). The structural equation modeling analyses were performed using Amos 24 (Arbuckle 2016). The models were also run in EQS version 6.2 (Bentler 1989) to obtain additional fit statistics. Adjustment between predicted and observed data was investigated using the following fit indices: the normed fit indice (NFI), the non-normed fit indice

(NNFI), the goodness of fit index (GFI), the comparative fit index (CFI), the standardized root mean square (SRMR), and the root mean square error of approximation (RMSEA). The cut-off values for those fit indices were $NFI > 0.90$, $NNFI > 0.90$, $GFI > 0.90$, $CFI > 0.93$, $SRMR < 0.10$ and $RMSEA < 0.05$ (Hair et al. 1992).

The model was composed of six exogenous variables (i.e., men's and women's BMI, men's and women's appearance- and health-oriented eating regulation goals) and six endogenous variables (i.e., the appearance- and health-oriented eating regulation goals that women have for their partner, men's perceptions of their partner's autonomy-supportive and controlling interpersonal style, men's psychological well-being, and men's relationship quality). To test the hypothesized model, a path analysis was conducted. Fig. 1 illustrates the full hypothesized model.

Bias-corrected bootstrapped 95% confidence interval (CI) estimates of indirect effects (see Preacher and Hayes 2008; Shrout and Bolger 2002) were also conducted to test whether vicarious goals mediate the relationships between women's personal goals and men's perception of their partner's interpersonal style and whether men's perceptions of their partner's style mediate the relationships between women's vicarious goals and men's psychological and relational well-being. Bootstrapping is a resampling technique that creates resamples of the same size as the original sample using sampling with replacement. This process is repeated several times, thus providing sample distributions of indirect effects. As a result, indirect effects can be statistically estimated as well as their 95% confidence intervals. In the present research, the confidence interval was bias corrected given that this correction is believed to improve power and Type 1 error rates (MacKinnon et al. 2004). Outputs from all analyses are available online at osf.io/u7h5f/.

Results

Preliminary analyses

The means and standard deviations of the main variables are reported in Table 1 while correlations among the study variables are presented in Table 2. The variance inflation factor (VIF) was used to detect the presence of multicollinearity among the predictors. A VIF greater than ten is often taken as a sign that multicollinearity may be a problem. All the predictors had a VIF ranging from 1.03 to 1.68, implying that multicollinearity was not a problem in this study (Montgomery et al. 2007). Inspection of the model's variables indicated that a number of them were not normally distributed. Specifically, men and women's health-oriented eating regulation goals, health-oriented eating regulation goals that women have for their partner,

Table 1 Means and standard deviations for study variables

Subscales	<i>M</i>	<i>SD</i>
Men's BMI (kg/m ²)	27.46	4.05
Women's BMI (kg/m ²)	26.19	5.20
Women's personal eating regulation goals (appearance)	4.81	1.55
Men's personal eating regulation goals (appearance)	3.92	1.66
Women's vicarious eating regulation goals (appearance)	3.30	1.71
Women's personal eating regulation goals (health)	6.40	0.74
Men's personal eating regulation goals (health)	5.97	0.96
Women's vicarious eating regulation goals (health)	6.46	0.84
Men's perception of their partner's autonomy-supportive style	4.94	1.20
Men's perception of their partner's controlling style	1.60	0.88
Men's relationship quality	6.12	0.81
Men's psychological well-being	5.67	0.79

n = 131 Heterosexual couples. BMI was calculated using self-reported height and weight. Means and standard deviations of all other variables come from 7-point Likert type scales

men's psychological well-being, and men's relationship quality were negatively skewed (left skewness) while men's perceptions of their partner's controlling interpersonal style was found to be positively skewed (right skewness). In an attempt to improve the distribution of those variables, a square (x^2) transformation was conducted on the variables with a negative skewness and a reciprocal ($1/x$) transformation was conducted on the variable with a positive skewness. These transformations were successful in improving the variables' distributions. The transformed variables were used in the following analyses.

Main analyses

The original model tested did not provide a satisfactory overall fit to the data. The Chi square value was not significant, χ^2 ($df = 28$, $N = 131$) = 40.67, $p = .058$, but other fit indices were not fully adequate: $NFI = 0.89$, $NNFI = 0.90$, $GFI = 0.96$, $CFI = 0.96$, $SRMR = 0.07$, and $RMSEA = 0.06$ [.00; .10]. First, paths from women and men's BMI were all found to be non significant. For this reason, these paths were removed from the model but the BMI variables were kept in order to control for their impact on the overall model fit. Second, modification indices were inspected in order to determine what additional paths needed to be estimated. In accordance with these indices, a path from men's appearance-oriented personal goal to men's well-being and paths from women's health-oriented personal goals to men's well-being and relationship quality were added (see Fig. 2). This new model provided a satisfactory overall fit to the data. The Chi square value was non-significant, χ^2 ($df = 33$, $N = 131$) = 35.27, $p = 0.361$, and other fit indices were

Table 2 Correlations among the study variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. M's BMI	1	0.38***	-0.20*	-0.16	-0.06	-0.29**	-0.19*	-0.10	0.10	0.12	0.02	0.06
2. W's BMI		1	-0.21*	-0.11	-0.20*	-0.16	-0.09	0.01	0.03	0.04	-0.01	-0.01
3. W's personal goals (appearance)			1	0.36***	0.54***	0.38***	0.21*	0.25**	0.05	0.04	-0.06	-0.07
4. M's personal goals (appearance)				1	0.35***	0.06	0.31***	0.03	0.01	0.17	-0.16	-0.27**
5. W's Vicarious Goals (appearance)					1	0.21*	0.11	0.13	-0.12	0.21*	-0.24**	-0.22**
6. W's personal goals (health)						1	0.27**	0.44***	0.21*	-0.09	0.22*	0.27**
7. M's personal goals (health)							1	0.28**	0.15	-0.07	0.12	0.05
8. W's vicarious goals (health)								1	0.27**	-0.05	0.24**	0.20*
9. M's Perception of W's AS Style									1	-0.27**	0.33***	0.23**
10. M's perception of W's cont styl										1	-0.44***	-0.38***
11. M's RQ											1	0.59***
12. M's WB												1

n = 131 heterosexual couples

W women, M men, AS autonomy-supportive, CONT controlling, RQ relationship quality, WB psychological well-being

*p < .05, **p < .01; ***p < .001

adequate: NFI = 0.90, NNFI = 0.99, GFI = 0.96, CFI = 0.99, SRMR = 0.05, and RMSEA = 0.02 [.00; .07].

The standardized solution of the final model is presented in Fig. 2. First, the health-oriented eating goals that women have for their partner were found to be rooted in men's own health goals ($\beta = 0.188$, 95% CI [0.036; 0.335], $p = 0.018$), but also in women's personal health-oriented eating goals ($\beta = 0.427$, 95% CI [0.268; 0.582], $p = 0.002$). Similarly, women's appearance-oriented eating goals for their partner were based on men's own appearance goals ($\beta = 0.176$, 95% CI [0.004; 0.351], $p = 0.044$), while also reflecting women's own appearance-oriented eating goals ($\beta = 0.471$, 95% CI [0.302; 0.612], $p = 0.002$).

The type of eating regulation goals that women have for their partner were found to be differently associated with the interpersonal styles they adopted with their partner, as perceived by the partner. More specifically, women who had health-oriented goals for their partner were perceived as more autonomy-supportive by their partner ($\beta = 0.280$, 95% CI [0.078; 0.464], $p = 0.004$), whereas women who had appearance-oriented goals for their partner were perceived as more controlling ($\beta = 0.220$, 95% CI [0.047; 0.374], $p = 0.017$) and less autonomy-supportive ($\beta = -0.161$, 95% CI [-0.306; -0.006], $p = 0.047$).

Finally, men who perceived their partner as more autonomy-supportive also reported experiencing a higher-quality relationship ($\beta = 0.224$, 95% CI [0.083; 0.369], $p = 0.003$), whereas men's perceptions of their partner as controlling was associated with lower relationship quality ($\beta = -0.363$, 95% CI [-0.508; -0.173], $p = 0.002$) and psychological well-being ($\beta = -0.360$, 95% CI [-0.539; -0.166], $p = 0.002$). Women's personal health-oriented eating goals were also directly related to men's well-being ($\beta = 0.229$, 95% CI [0.050; 0.379], $p = 0.012$), and to relationship quality ($\beta = 0.180$, 95% CI [0.014; 0.349], $p = 0.032$), while men's personal appearance-oriented eating goals had a direct negative relationship with their own well-being ($\beta = -0.168$, 95% CI [-0.319; -0.016], $p = 0.017$).

Indirect effects

Bootstrap analyses were performed to examine the mediating role of women's autonomy-supportive and controlling styles in the relationship between women's health and appearance-oriented vicarious goals and men's relationship quality and well-being. To distinguish the indirect effect through women's autonomy-supportive and controlling styles, the phantom model approach was used (see Macho and Ledermann 2011). Thus, the specific indirect effect of women's vicarious health goals on men's relationship quality and well-being through women's *autonomy-supportive* style could be examined by constraining to zero the paths from women's vicarious health goals to men's relationship

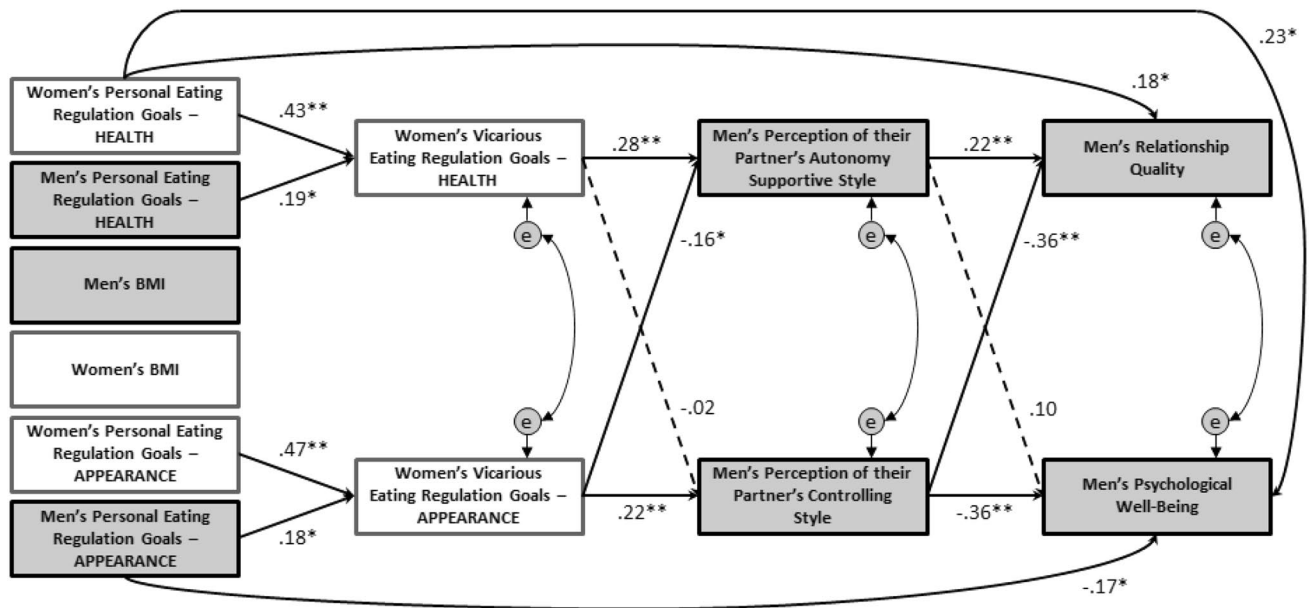


Fig. 2 Results of the path analysis. Variables in *dark gray* were reported by men, variables in *light gray* were reported by women. For clarity concerns, covariances between exogenous variables do not appear in the figure. BMI = body mass index; $n = 131$ couples; * $p < 0.05$, ** $p < 0.01$

Table 3 Bias-corrected bootstrapped estimates of the mediations

	Bootstrapping point estimate	Bias-corrected bootstrapped 95% confidence interval estimates	<i>p</i> value
W's vicarious goals (HEA) → M's perception of W's AS style → Men's RQ	0.088	(0.024; 0.191)	0.003
W's vicarious goals (HEA) → M's perception of W's AS style → Men's WB	0.054	(0.001; 0.157)	0.033
W's vicarious goals (HEA) → M's perception of W's CONT style → Men's RQ	-0.021	(-0.109; 0.056)	0.524
W's vicarious goals (HEA) → M's perception of W's CONT style → Men's WB	-0.019	(-0.105; 0.055)	0.521
W's vicarious goals (APP) → M's perception of W's AS style → Men's RQ	-0.034	(-0.101; 0.010)	0.112
W's vicarious goals (APP) → M's perception of W's AS style → Men's WB	-0.021	(-0.081; 0.006)	0.109
W's vicarious goals (APP) → M's perception of W's CONT style → Men's RQ	-0.075	(-0.192; -0.010)	0.019
W's vicarious goals (APP) → M's perception of W's CONT style → Men's WB	-0.069	(-0.177; -0.004)	0.027

$n = 131$ heterosexual couples

W women, M men, APP appearance, HEA health, AS autonomy-supportive, CONT controlling, RQ relationship quality, WB psychological well-being

quality and well-being through women's *controlling* style, and vice versa. The same procedure was then used again to examine the indirect effects of women's vicarious appearance goals on men's relationship quality and well-being through women's autonomy-supportive versus controlling styles. This allowed us to examine if the indirect effects of women's health and appearance vicarious goals on men's outcomes are significant through women's autonomy-supportive and controlling styles (see Macho and Ledermann 2011).

As can be seen in Table 3, the analyses revealed that women's autonomy-supportive style was a significant mediator of the relationship between women's *health-related*

vicarious goals and men's relationship quality (bootstrapping point estimate = 0.088, 95% CI [0.024–0.191], $p = 0.003$) and men's well-being (bootstrapping point estimate = 0.054, 95% CI [0.001; 0.157], $p = 0.033$), whereas women's controlling style was not (bootstrapping point estimate for relationship quality = -0.021, 95% [-0.109 to 0.056], $p = 0.524$; bootstrapping point estimate for well-being = -0.019, 95% CI [-0.105 to 0.055], $p = 0.521$). The analyses further revealed that women's controlling style was a significant mediator of the relationship between women's *appearance-related* vicarious goals and men's relationship quality (bootstrapping point estimate = -0.075, 95% CI [-0.192; -0.010], $p = 0.019$) and men's well-being

(bootstrapping point estimate = -0.069 , 95% CI [-0.177 ; -0.004], $p=0.027$), whereas women's autonomy-supportive style was not (bootstrapping point estimate for relationship quality = -0.034 , 95% CI [-0.101 ; 0.010], $p=0.112$; bootstrapping point estimate for well-being = -0.021 , 95% CI [-0.081 ; 0.006], $p=0.109$). These results indicate that men whose partner has health-related vicarious goals for them are more likely to report greater relationship quality and well-being as a result of seeing their partner as more autonomy-supportive whereas men whose partner has appearance-related goals for them are likely to report lower relationship quality and well-being as a result of perceiving their partner as more controlling.

Analyses controlling for age of participants

Women's age was found to be significantly and negatively correlated with their personal health-oriented ($r=-0.18$, $p=0.042$) and appearance-oriented ($r=-0.27$, $p=0.002$) eating goals. Meanwhile, men's age was not significantly related with their personal health-oriented ($r=0.11$, $p=0.216$) and appearance-oriented ($r=0.04$, $p=0.623$) eating goals. Therefore, the analyses were conducted again while controlling for women's age. The pattern of results was not affected by the addition of this variable in the model. Specifically, men's own health goals ($\beta=0.200$, 95% CI [0.040 ; 0.350], $p=0.021$) and women's personal health-oriented eating goals ($\beta=0.438$, 95% CI [0.249 ; 0.603], $p=0.0031$) were still found to predict the health-oriented eating goals that women have for their partner. Similarly, men's own appearance goals ($\beta=0.172$, 95% CI [0.003 ; 0.364], $p=0.049$) and women's personal appearance-oriented eating goals ($\beta=0.482$, 95% CI [0.315 ; 0.615], $p=0.003$) were still found to predict the appearance-oriented eating goals that women have for their partner. All other paths remained unchanged.

Alternative model

An alternative model was tested in which the autonomy-supportive and controlling styles, relationship quality and well-being—along with men's and women's BMI and health and appearance personal goals—served as predictors of the appearance- and health-oriented eating regulation goals that women have for their partner instead of outcome variables. The Chi square value was non-significant, χ^2 ($df=4$, $N=131$) = 5.75 , $p=0.219$, and other fit indices were adequate, except for the RMSEA's upper confidence limit: NFI = 0.98 , NNFI = 0.91 , GFI = 0.99 , CFI = 0.99 , SRMR = 0.02 , and RMSEA = 0.06 [0.00 ; 0.15]. Results revealed that the autonomy-supportive style, the controlling style, relationship quality, and well-being did not significantly predict either appearance- or health-oriented

vicarious goals (β s ranging from -0.106 to 0.159 ; p s ranging from 0.132 to 0.855). The model was trimmed (i.e., the paths that were far from significant were removed) and the model was run again. The fit indices were adequate. The Chi square value was non-significant, χ^2 ($df=10$, $N=131$) = 10.79 , $p=0.374$, and other fit indices were adequate: NFI = 0.97 , NNFI = 0.98 , GFI = 0.99 , CFI = 0.99 , SRMR = 0.02 , and RMSEA = 0.03 [0.00 ; 0.10]. Results revealed that the autonomy-supportive style, the controlling style, relationship quality, and well-being still did not significantly predict either appearance- or health-oriented vicarious goals (β s ranging from -0.106 to 0.158 ; p s ranging from 0.112 to 0.848). Globally, these results suggest that appearance- and health-oriented goals that women have for their partner better predict autonomy-supportive and controlling styles, relationship quality, and well-being than the other way around. The original and alternative models were also compared using the Akaike's information criterion (AIC) and the Bayesian information criterion (BIC) statistics. When comparing competing models, the one with the lowest AIC and BIC value is preferred (Kline 2005). The original model yielded an AIC of 125.27 , whereas the alternative models yielded AICs of 153.75 and 146.79 . The BIC of the original model (254.66) was also lower than the two competing models (366.51 and 342.31 , respectively). These differences in BIC between the models were converted to Bayes Factors (Wagenmakers 2007); these indicated that the original model predicts the observed data 152.02 times better than the first alternative model, and 119.13 times better than the second alternative model. This is usually considered to be strong statistical support (Raftery 1995; Wagenmakers 2007).

Discussion

The present study examined the relationship between women's eating regulation goals for themselves and for their partner, and how these relate to the partner's experiences in the relationship and to his psychological and relational well-being. Overall, our hypotheses were supported in the present research. First, when women self-regulated their own eating behaviours for health-related reasons, they were more likely to have health-oriented vicarious goals for their partner, while an appearance-oriented personal eating goal translated into a more appearance-oriented vicarious goal. Women's vicarious goals for their partner, then, were related to their partners' perceptions of their interpersonal behaviour styles. The more that women wanted their partners to regulate their eating for health-related reasons, the more they were perceived as autonomy-supportive. Conversely, wanting their partners to regulate their eating behaviours for appearance-related reasons was related to

being perceived as more controlling. Furthermore, perceiving one's partner as autonomy supportive was related to greater relationship satisfaction for men and was positively (although not significantly) related to well-being, while perceiving one's partner as controlling was related to lower relationship satisfaction and well-being.

Support was also found regarding the hypothesis that women's interpersonal styles would mediate the relationships between women's vicarious goals and men's outcomes (i.e., well-being and relationship quality). It has to be noted that women's *autonomy-supportive* style toward their partner significantly mediated the relationship between women's health-related vicarious goals and men's outcomes, which was not the case for women's controlling style. In addition, while women's *controlling* style toward their partner significantly mediated the relationship between women's appearance-related vicarious goals and men's outcomes, women's autonomy-supportive style did not. These results shed light on distinct mechanisms through which women's health and appearance-oriented vicarious goals are linked to their close others' outcomes. More specifically, these results suggest that having a partner whose vicarious goals are health-oriented is beneficial for a man not because he does not feel any pressure from her, but because he feels that she is empathic and understanding towards him. Furthermore, it would appear that the negative outcomes associated with being with an overly appearance-focused partner are not due to the partner's lack of empathy and support, but rather to her pressuring and controlling attitude. Nevertheless, these findings need to be replicated in other studies and with different populations before any definitive conclusions can be drawn.

Our examination of the vicarious goals that women hold for their partners represents one of the first studies directly examining vicarious goals in relationships. Although research has recognized that others can help us pursue important goals (e.g., Chua et al. 2015; Gore 2014), the idea that they also have goals *for* us has rarely been considered outside of a parent–child relationship. The present study presents initial evidence on how vicarious goals in romantic relationships are set (i.e., paralleling the personal goals women have for themselves), and how they influence people's interpersonal behaviours. Future research is needed to better understand exactly how vicarious goals are set and pursued, as well as their interrelation to both partners' goal attainment. For example, will Mary's perception of her partner and their relationship change if he is successful (or unsuccessful) at attaining the vicarious goal she has for him? Research can also experimentally examine whether motivation for one's own goals affects the vicarious goals that a person sets for her partner, for example by priming reasons for goal pursuit and examining effects on vicarious goals that are set.

Past research on parent–child relationships by Mageau et al. (2015) has shown that the types of goals that mothers have for their adolescent differently predict their tendency to adopt autonomy-supportive and controlling behaviours. Results of the present research support these past findings, showing that vicarious goals in romantic relationships also affect people's behaviours toward their partner. More specifically, our results show that having appearance-oriented eating regulation goals is linked to using controlling behaviours with one's partner. In contrast, valuing health-oriented eating regulation goals appears to promote engagement in autonomy-supportive behaviours, as perceived by the partner. These findings suggest that endorsing health-related reasons for regulating eating may facilitate women's ability to take their partner's feelings and perspective into consideration. Conversely, focusing on extrinsic reasons for regulating eating may lead one to pressure others into thinking or acting a certain way. Overall, this research thus contributes to our understanding of the determinants of autonomy support and control in relationships.

In this study, we started with a theoretically-based model including all our hypothesized relationships of interest (as illustrated in Fig. 1). However, although most of the hypothesized paths were significant, that model did not provide a great fit to the data. Furthermore, statistical tests suggested three additional paths that were added to our model to improve fit. Specifically, men's appearance-oriented goals had a direct negative effect on well-being, while women's health-oriented goals were directly related to men's reports of their relationship satisfaction and well-being. The relationship between men's appearance related goals and well-being may be a reflection of contingent self-esteem resulting from an emphasis placed on appearance, as such contingent self-esteem has previously been shown to be detrimental to well-being (Crocker and Park 2004). This finding is also in line with previous research showing that endorsing more extrinsic aspirations is detrimental to well-being (Kasser and Ryan 1996). The other two proposed paths illustrating the direct positive relationship between women's health-related goals and men's outcomes are especially intriguing. One possible reason for such a relationship is that women who regulate eating behaviours for health (rather than appearance) related reasons behave in a different way. For example, previous research has found that appearance-oriented motivation is related to more rigid eating behaviours, and greater body dissatisfaction. This, in turn, could translate into poorer relationship with a partner (e.g., Arcelus et al. 2012). However, as it was more health-related behaviours (and not less appearance-related reasons) that showed the relationships, other explanations may be more plausible. For example, it may be that women who are health-oriented exhibit a different set of personality traits or general behaviours (e.g., are more communal;

Horowitz et al. 2006), which in turn affects their partners' general and relational well-being. Future research is needed to better understand how women's eating behaviours, and especially their reasons for engaging in these behaviours, impact their partners.

The present study examined the effects of women's vicarious goals on men's perceptions of their autonomy-supportive and controlling behaviour. While controlling interpersonal behaviour is clearly detrimental, it would be interesting to examine the relationship between vicarious goals and other more subtle types of supportive behaviours in this context. For example, previous research has distinguished between autonomy support and directive support, showing that directive support confers limited benefits (Koestner et al. 2012). Additionally, research on invisible and visible support has found that invisible support can be more beneficial than visible support (Bolger et al. 2000). Future research can examine the role of vicarious goals (and the motivations behind these goals) on the provision of different types of supports.

In the present paper we related eating regulation goals to broader life aspirations. It is interesting to note, however, that other research has examined motivation for eating behaviour regulation from a different angle. For example, a person can eat healthy because they enjoy it (want-to motivation), or because they feel like they have to (Milyavskaya et al. 2015). Such have-to motivation could encompass health-related reasons if these reasons are external to the person—for example, a doctor telling an overweight patient to lose weight to prevent cardiac complications (Guertin et al. 2015). A woman's vicarious eating regulation goal for her partner, then, can be interpreted by the partner as externally motivated (he may feel like he has to do it to please her, even if she has his health in mind). This possibility and its implications for well-being and goal attainment need to be further examined.

Limitations and future directions

One limitation of the present research is that it did not examine how the eating regulation goals are ultimately pursued and whether they are attained. Previous research suggests that vicarious goals (whether from parents, partners, or friends) can affect actual goal pursuit and attainment (Koestner et al. 2012). This is especially important to understand in the domain of eating regulation, considering the societal and individual problems that can stem from unhealthy eating habits. Although we would expect that vicarious appearance-related goals and more controlling interpersonal behaviours would result in decreased goal progress, such a proposition needs to be empirically tested. Additionally, new models and theories of interpersonal influences in goal pursuit (Fitzsimons et al. 2015)

should consider the role of vicarious goals in shaping goal pursuit and transactive self-regulation.

An important limitation of our study is that it relied on self-report measures. These measures are subject to recall and social desirability bias, which may have influenced the results. Another limitation of the present study, and a reason why we were unable to assess goal progress, is that data was correlational and only collected at one time point. This also means that it was impossible to tease out the directionality of some of these effects. For example, rather than men's motivations leading to women's vicarious goals (as is currently proposed in the model), it may be the case that women's motivation for their own and for their partner's eating behaviours affect the men's motivation for engaging in health behaviours. Or, more likely, it may be that there is a reciprocal process that unfolds across time, with women's goals influencing their partners' goals and vice versa. Future repeated-measures longitudinal studies are needed to tease out these nuances.

Men's perception of their partner's controlling style with regard to eating regulation was assessed using a scale that has not yet been validated, which constitutes another limitation of the present study. Finally, the present study sample comprised 131 couples, which limited the type of analyses that could be conducted. A structural equation model testing simultaneously the structural model and the measurement model with latent variables would have been optimal but the sample size did not allow us to test such model. Future research should aim for larger sample sizes in order to test such hybrid models and replicate the present findings.

Conclusion

The results of this research add to the body of literature suggesting that the type of goals that women pursue are not only associated with more or less positive personal experiences but are also linked to the relational and psychological well-being of their close others. Indeed, the present results show that eating regulation based on the pursuit of a healthy and fit lifestyle is linked to more adaptive consequences for the partner than eating regulation driven by the goal of attaining a slender and physically attractive body. These findings improve our understanding of the interpersonal dynamics involved in eating regulation, and the consequences on both individual and relational outcomes.

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Compliance with ethical standards

Conflict of interest None of the authors have reported any financial or personal conflict of interest to the present manuscript.

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