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Research article

Risk factors in body image dissatisfaction: gender, maladaptive perfectionism, and psychological wellbeing

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ABSTRACT

Discontent with one's appearance (body image dissatisfaction) has become a global phenomenon, associated with the development of extreme behaviours in order to correct perceived body image problems. Much of the literature has focused on associated destructive behaviours that result from body image dissatisfaction; however, there has been a dearth of research examining risk factors for body image problems in adults. Thus, the current study aimed to investigate risk factors associated with adult body image problems, focusing on two variables highlighted in the literature (gender and maladaptive perfectionism). The current study (1) compared gender differences in body image dissatisfaction and (2) investigated psychological wellbeing as a mediator between maladaptive perfectionism and body image dissatisfaction. The sample included 139 Australian adults from universities (55.7%) and the community (44.3%). Participants completed demographic questions, the Frost Multidimensional Perfectionism Scale, the Psychological Wellbeing questionnaire, the Multidimensional Body-Self Relations Questionnaire, and Marlowe-Crowne Social Desirability Scale. In contrast to predictions, females had higher body area satisfaction and appearance evaluation scores. Furthermore, in line with the hypotheses, psychological wellbeing fully mediated the relationship between maladaptive perfectionism and poor body image. The findings suggest gender, maladaptive perfectionism, and psychological wellbeing may act as risk factors for body image dissatisfaction.

1. Introduction

The quest for physical perfection is a global phenomenon, with body image dissatisfaction affecting countries worldwide (Diedrichs et al., 2015) including the need to include information in school and college curricula (e.g., Arfasa and Weldmeskel, 2020; Gamble and Crouse, 2020). In particular, the 2018 Mission Australia Youth Survey highlighted that severe body image dissatisfaction was affecting 30.4% of Australian youth aged 15–19 (Carlisle et al., 2018); body image dissatisfaction was also affecting adults as well as adolescents (Kilpela et al., 2015; Schuck et al., 2018). However, exploration of disturbances in the older adult population represents an under-researched domain.

1.1. Body image dissatisfaction

Body image dissatisfaction has been identified as having perceptual, affective, cognitive, and behavioural components (American Psychiatric Association, 2013) and is considered a *normative discontent* in western societies (Rodin et al., 1984; Tantleff-Dunn et al., 2011). Self-appraisal

regarding body image is generally shaped in late childhood and adolescence with self-worth heavily tied in with beauty ideals, and beauty linked to perceptions of success, happiness, wealth, and positive romantic relationships (Etcoff, Orbach, Scott, & D'Agostino, 2006; Fallon et al., 2014; Rousseau and Eggermont, 2018; Tantleff-Dunn et al., 2011). Rousseau and Eggermont (2018) found that adolescents regularly use body surveillance and media internalization as coping strategies to regulate their body image.

Australians currently rank body image dissatisfaction in their top four causes of personal distress and the Australian Government has called for deeper research into this concern (Carlisle et al., 2018). Both males and females can develop body image problems with many men wanting to develop muscles and stature, while a large proportion of women want to reduce hip curvature or increase breast size (Fallon et al., 2014; Heider et al., 2015; Mousa et al., 2010; Quittkat et al., 2019). Etcoff et al. (2006) found that over 67% of women avoid certain activities in public settings due to shame associated with their looks; and other research showed 34% of five-year-old girls were already practicing dietary restraint (Damiano et al., 2015).

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Body image dissatisfaction often arises from an upward social comparison with negative self-appraisals leading to maladaptive behaviours to try to cope with the reactions (Chang et al., 2018).

To correct perceived body image flaws, extreme including maladaptive behaviours may be adopted such as seen in the demand for cosmetic surgery reported in 2015 (American Society of Plastic Surgeons, 2016), and the increases in eating disorders and practices, excessive exercise, increased consumption of diuretics or laxatives, and induced vomiting (Goltz et al., 2013; Kenny and Hicks, 2014; Nichols et al., 2018; Juarascio et al., 2011; Stapleton et al., 2017).

2. Gender studies on body image dissatisfaction: gender as a risk factor

Some recent research has suggested that females experience higher levels of body image dissatisfaction than do males or the research has targeted females indicating that being female is a risk factor (e.g., Donaghue, 2008; Esnaola et al., 2010; Franchina and Coco, 2018; Jones et al., 2007). Indeed, body image and eating disorder research has identified the influence of socio-cultural pressures in reports mainly on females (e.g., Culbert et al., 2015; Hrabosky et al., 2009; Mousa et al., 2010; Pedersen et al., 2018; Schuck et al., 2018). However, several studies have targeted males, indicating they suffer from body dissatisfaction also and experience similar distressing emotions and thoughts (Brennan et al., 2010; Burlew and Shurts, 2013; Farquhar and Wasylikiw, 2007; Lavender et al., 2012).

The inconsistencies in gender impacts may stem from methodological issues, particularly relating to the definitions of body image dissatisfaction adopted (McCabe and Ricciardelli, 2004).

Several studies suggest that the type of body image dissatisfaction experienced differs for males and females (Farquhar and Wasylikiw, 2007; Furnham et al., 2002; Vartanian et al., 2001). Most young women have reported wanting to lose weight - a desire that is largely shaped by the thin ideal portrayed in the media (e.g., Cafri et al., 2005; Furnham et al., 2002). However, males appear to be equally split between their desire to lose weight and their desire to gain weight (McCabe and Ricciardelli, 2004) or there are muscular elements seen to be important for males (e.g., Adams et al., 2005; Barnes 2020; Cooper, 2018). In defining body image dissatisfaction in terms of a desire to lose weight (e.g., Nowak et al., 1996; Wharton et al., 2008) the emphasis is thus on females. Under this approach (weight loss or gain), body image satisfaction is likely to be inappropriately used as the measure for males: rendering the comparison studies on gender differences invalid in relation to body satisfaction. Therefore, the definition of body image satisfaction adopted in the current study emphasised degree of satisfaction (happiness or unhappiness) with one's overall physical appearance and specific body features.

3. Perfectionism and body image dissatisfaction

Several studies have reported that personality characteristics (e.g., perfectionism) may impact how a person perceives external pressure to meet societal ideals, resulting in body image concerns (Ferreira et al., 2018; Grammas and Schwartz, 2009; Henderson-King and Henderson-King, 1997; MacNeill et al., 2017; Sherry et al., 2007; Wade and Tiggemann, 2013). For example, Polivy and Herman (2002) suggested that perfectionism increases an individual's susceptibility to developing body image dissatisfaction and unhealthy behaviours by intensifying perceptions of specific body related flaws. A small to moderate amount of perfectionism can lead to conscientiousness and positive self-improvement (adaptive perfectionism) but when the goals become so high as to create inflexible thinking and set mainly unachievable standards, the perfectionism is maladaptive. These two types of perfectionism have been demonstrated in numerous studies using the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990: see Method for details of the FMPS). Boone et al. (2012) in a study of 656 adolescents

found maladaptive perfectionism was significantly related to body image dissatisfaction and associated extreme behaviours (aimed at correcting the dissatisfaction). Wade and Tiggemann (2013) found maladaptive aspects of perfectionism were positively associated with body image dissatisfaction in a large sample of 1083 Australian women, consistent with prior research suggesting concerns over imperfections were strong predictors of body image dissatisfaction (Cumming and Duda, 2012; Sherry et al., 2007).

These studies are among many that support the distinction between maladaptive and adaptive perfectionism, suggesting that only maladaptive perfectionism predicts body image concerns. While much is known about maladaptive perfectionism and its prediction of body image dissatisfaction, further research examining associated factors and how they are related to the perfectionism-body image relationship, is still needed to identify other factors or alternative avenues that can help address the dissatisfaction. Psychological wellbeing is one such alternative factor that we considered relevant based on a literature review.

4. Psychological wellbeing

Psychological wellbeing is characterized by increased frequencies of positive mood states and satisfaction with life, accompanied by decreased frequencies of negative mood states (Diener et al., 2009). Increased psychological wellbeing has been related to positive feelings about one's own appearance (Delfabbro et al., 2011) and decreased prevalence of destructive behaviours and negative functioning (Quick et al., 2012; Ryff, 2014; Swami et al., 2018).

Many studies have investigated the association between perfectionism and psychological wellbeing as measured by the Frost Multidimensional Perfectionism scale (FMPS; Frost et al., 1990) and the Ryff Psychological Wellbeing Measure (PWB; Ryff, 1989). Results have shown concern over mistakes, parental criticism, and doubts about actions (sub scales associated with maladaptive perfectionism) were negatively associated with overall psychological wellbeing (e.g., Sotardi and Dubien, 2019; Vanstone and Hicks, 2019).

Other studies have linked psychological wellbeing and body image. Murray, Byrne, and Rieger (2011) found that high levels of stress and depression coupled with low self-esteem (low psychological wellbeing) were significantly correlated with body image dissatisfaction in high school students. Delfabbro et al. (2011) also found similar results in Australian secondary school children between their body dissatisfaction and their lower overall general psychological health.

Psychological wellbeing has been cited as an important explanatory mechanism for the relationship between maladaptive perfectionism and body image (Barnett and Sharp, 2016; Chan, 2007) but there are no other studies found by the authors that address the explanatory mechanisms or relationships among the three variables in an adult population.

5. Present research

Taken together, these studies referred to above suggested the importance of examining what the relationships are among maladaptive perfectionism, body image satisfaction measured with limited emphasis on weight concerns, and psychological wellbeing.

The current study aimed to identify whether gender differences and personality traits (namely, maladaptive perfectionism) were risk factors for developing body image dissatisfaction and similarly whether low psychological wellbeing was also a risk factor and how it was related to the perfectionism - body image link.

Two main hypotheses, on gender and psychological wellbeing, were developed as follows:

H1. That females would show lower levels of body image satisfaction and psychological wellbeing than males (when using body image satisfaction in relation to appropriate measures, and a measure combining Ryff's six wellbeing elements).

This hypothesis aimed to confirm or otherwise previous research on maladaptive perfectionism, wellbeing, and body image satisfaction using appropriate measures.

H2. That psychological wellbeing (measured by the PWB total) would be related negatively with both maladaptive perfectionism and with body image dissatisfaction and would mediate the relationship between maladaptive perfectionism and body image satisfaction.

This hypothesis aimed to explicate the relationship between maladaptive perfectionism and psychological wellbeing in predicting body image satisfaction defined via two variables that limit attention to weight concerns: body area satisfaction and appearance evaluation.

6. Method

Data screening of some 300 respondents lead to a final sample of 139 participants for the study: 99 (71.2%) males and 40 (28.8%) females, who were aged 18 to 75 ($M = 30.53$, $SD = 13.51$). Participants came from the community (61, 44%) as well as from universities (78, 56%) and responded to invitations to participate in the online study posted in the participating universities and in social media. A broad cross-section of respondents was obtained across age and education level.

6.1. Measures

6.1.1. Demographic questions

Participants were asked three demographic questions regarding their age, gender, and whether they were currently studying at university.

6.1.2. Frost Multidimensional Perfectionism Scale (FMPS: Frost et al., 1990)

The self-report 35-item FMPS was used to capture the six dimensions of perfectionism such as parental expectations, parental criticism, personal standards, concern over mistakes, doubts about actions, and organization. The FMPS has good psychometrics with Cronbach's alphas for the subscales ranging from $\alpha = .77$ to $.93$ in several studies (cf., Frost et al., 1990); our study found similar results ($\alpha = .79$ to $.88$; $N = 139$). Participants indicate their responses on a five-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*, for such questions as "I set higher goals for myself than most people" (Frost et al., 1990). In the present study scores on the variable of interest, *maladaptive perfectionism*, were obtained by summing the subscales *concerns over mistakes* and *doubts about actions* (following earlier research, e.g., by Wade and Tiggemann, 2013).

6.1.3. Psychological wellbeing (PWB: Ryff, 1989)

In line with previous research, the 54-item PWB was used to assess psychological wellbeing; the scale includes six dimensions: self-acceptance, personal growth, purpose in life, autonomy (in thought and action), environmental mastery, and quality relationships with others. Participants responded on a 6-point scale from (1) *strongly disagree* to (6) = *strongly agree* to such questions as "I like most aspects of my personality" with some items reversed scored. A total psychological wellbeing score is obtained by summing the six dimensions, with higher scores associated with high levels of psychological wellbeing. The PWB has sound psychometrics (e.g., Chen et al., 2012; Ryff, 1989), as also shown in the current study ($\alpha = .76$).

6.1.4. Body image dissatisfaction: the Multidimensional Body-Self Relations Questionnaire-appearance scales (MBSRQ-AS; Cash, 2000)

To assess dissatisfaction with body image the 34-item MBSRQ-AS was used which consists of five subscales including body area satisfaction, appearance orientation, appearance evaluation, overweight preoccupation, and self-classified weight. The subscales of appearance evaluation and body area satisfaction were used as indicators of body image dissatisfaction. High scores on the appearance evaluation scale represented feelings of physical attractiveness and satisfaction with one's

looks whilst low scores represented feelings of unattractiveness and unhappiness with one's appearance. The body area satisfaction scale is similar to the appearance evaluation scale; however, the body area satisfaction scale measures satisfaction with distinct aspects of one's appearance. High scores suggest that individuals are content with most areas of their body.

Participants were required to indicate their response to each question on a 5-point Likert-type scale ranging from (1) definitely disagree to (5) definitely agree, with higher scores indicating greater levels of body image dissatisfaction. An example question from the appearance evaluation scale was "my body is sexually appealing". From the body area satisfaction scale respondents were asked to rate specific areas of their physical appearance such as "hair" or "muscle tone." The internal reliability for the appearance evaluation and body area satisfaction scales were similar and sound (well above .70) for both males and females in each (Cash, 2000). The current study revealed excellent internal consistency for the appearance evaluation subscale ($\alpha = .89$) and sound internal consistency for the body area satisfaction subscale ($\alpha = .69$). Good evidence for psychometrics can be found in Huang and Liu (2008) and Lavender et al. (2012).

6.1.5. Marlowe-Crowne Social Desirability Scale (MC-SDS; Crowne and Marlowe, 1960)

The Marlowe-Crowne Social Desirability Scale of 33 true-false items, was used to control for social desirability responding. A sample item is "I have never intensely disliked anyone" (Agree vs Disagree). The scores are added and higher scores indicate a greater likelihood of distorted or dishonest responding. The current study revealed sound internal consistency ($\alpha = 0.75$), consistent with the numerous studies reporting on the use of the MC-SDS or shorter versions.

6.2. Procedure

The research project reported in this paper was approved by the Bond University Human Research Ethics Committee and all procedures and principles followed accordingly. The online questionnaire was made available for the three months of the study to all potential respondents by providing a URL link to the Web hosted software company, Survey Monkey. A preliminary explanatory statement outlined the purpose of the research and the University standards of ethical compliance, anonymity, voluntary participation and the freedom to withdraw at any time without penalty. The demographic questions and the surveys were then presented. Continuation to completion of the questionnaire was accepted as consent. The average response time was 30 min.

6.3. Data analysis

Data was first screened following Tabachnick and Fidell (2014), retaining all participants who met the criteria-yielding the final sample of 139 (99 males, 40 females). An a priori G*Power 3.10 analysis (Faul et al., 2007) indicated that a sample size of at least 89 participants was sufficient to detect an effect size of .15. SPSS version 25 was used for all analyses with an alpha level of .05 indicating statistical significance. We used MANCOVA and multiple mediation to address the hypotheses, with all assumptions met including of normality, skewness and kurtosis (Kim, 2013), and of linearity and homogeneity of variance. Further, the suitability of key study variables for entry into each of the mediation regression models was tested by controlling the covariates (social desirability, gender, and age); and confirming assumptions were met.

7. Results

7.1. Preliminary analyses

Table 1 displays means, standard deviations, and Pearson bivariate correlations between variables. Pearson's bivariate correlations between

Table 1. Descriptive Statistics (Means, SD, Correlations) for Key Study Variables (N= 139).

Variable	M	SD	1.	2.	3.	4.	5.
1. Maladaptive Perfectionism	29.82	7.69	–				
2. Psychological Wellbeing	305.87	17.32	-.58**	–			
3. Appearance Evaluation	3.33	0.77	-.28**	.42**	–		
4. Body Area Satisfaction	3.30	0.65	-.38**	.46**	.81**	–	
5. Social Desirability	31.17	4.96	-.35**	.35**	.21*	.21*	–
6. Age	30.53	13.51	-.16	.21*	.11	.07	.33**

M = Mean. SD = Standard Deviation. * $p < .05$. ** $p < .01$.

pairs of the variables: maladaptive perfectionism, appearance evaluation, body area satisfaction, psychological wellbeing and age, ranged between $-.58$ to $.81$ and confirmed multicollinearity was not of concern (Tabachnick and Fidell, 2014). The correlations among the variables were in the expected direction in each case.

The significant correlations between social desirability responding and each of the main variables confirmed the decision to include SDS as a control variable in our analyses. Age and gender were also used as control variables in the analyses.

7.2. Gender Impacts: Is gender confirmed as a risk factor?

To investigate the impact of gender, a one-way between-subjects MANCOVA was conducted with body area satisfaction, appearance evaluation, psychological wellbeing, and maladaptive perfectionism while controlling for social desirability and age. Box's M test of equality of covariances was met; $F(10, 26617) = 1.22, p = .273$. Levene's test of equality of error variances was also met for each of the dependent variables. An alpha level of $.05$ was used to determine statistical significance and Wilk's lambda was reported for multivariate tests. A Bonferroni correction ($\alpha = .0125$) was applied to determine significance at the univariate level.

A significant multivariate effect of social desirability on the dependent variables was found, justifying the inclusion of social desirability as a covariate in the analysis; $F(4, 132) = 5.23, p = .001$, partial $\eta^2 = .137$, power = $.966$. However, no significant effect of age was found; $F(4, 132) = 0.70, p = .596$, partial $\eta^2 = .021$, power = $.221$. Tests of between subjects effects revealed that social desirability had a significant effect on body area satisfaction [$F(1, 135) = 6.71, p = .011$, partial $\eta^2 = .047$, power = $.730$], appearance evaluation [$F(1, 135) = 5.42, p = .021$, partial $\eta^2 = .039$, power = $.638$], psychological wellbeing [$F(1, 135) = 13.93, p < .001$, partial $\eta^2 = .094$, power = $.960$], and maladaptive perfectionism [$F(1, 135) = 16.44, p < .001$, partial $\eta^2 = .109$, power = $.981$] scores. Thus, the effect of social desirability on the results was controlled for when examining gender differences in the dependent variables.

With regards to gender differences, there was a significant multivariate effect of gender on the dependent variables after controlling for social desirability; $F(4, 132) = 4.86, p = .001$, partial $\eta^2 = .128$, power = $.952$. Means and standard deviations for scores on the dependent variables for gender are displayed in Table 2. Follow-up univariate tests

Table 2. Significance of gender differences on study variables.

Dependent Variable	Males (n = 99)	p level	Females (n = 40)
	M (SD)		M (SD)
Body Area Satisfaction	3.17 (0.61)	*	3.64 (0.95)
Appearance Evaluation	3.22 (0.75)	*	3.60 (0.12)
Psychological Wellbeing	304.33 (1.63)	ns	309.68 (2.56)
Maladaptive Perfectionism	30.66 (0.72)	ns	27.74 (1.13)

Note. N = 139; M = Mean. SD = Standard Deviation; p level: * $p \leq .0125$.

showed that there was a significant effect of gender on body area satisfaction and appearance evaluation (components of positive body image); $F(1, 135) = 17.92, p < .001$, partial $\eta^2 = .117$, power = $.988$ and $F(1, 135) = 7.34, p = .008$, partial $\eta^2 = .052$, power = $.767$ respectively- but not in the direction hypothesised.

As shown in Table 2, females were significantly more satisfied with their body (body area satisfaction) and their overall appearance (appearance evaluation) than were males. This finding does not support hypothesis one which proposed that females in line with much earlier research would be less satisfied with their appearance compared to males. Following these findings, gender and social desirability were both controlled for in the subsequent multiple mediation analyses. Comments on gender as a risk factor are given in the Discussion.

7.3. Psychological wellbeing as a mediator

This section aimed to answer the question: How are maladaptive perfectionism and psychological wellbeing related as risk factors in body image dissatisfaction?

Two separate mediations were carried out using PROCESS (Hayes, 2013) to assess whether psychological wellbeing would act as a partial or full mediator between maladaptive perfectionism and body image satisfaction (body area satisfaction and appearance evaluation). Gender, age, and social desirability were entered as covariates and controlled for in both mediations. Estimates of the indirect effect, direct effect, and total effect were computed based on 10,000 bootstrapped samples following Hayes (2013). An alpha level of $.05$ was used to determine statistical significance for each of the paths in the mediation models. Mediation was supported by a significant indirect effect (product of path a and b), determined by a 95% bias-corrected confidence interval that did not cross zero (Hayes, 2013).

7.3.1. Body area satisfaction

The overall model accounted for 25% of the variance in body area satisfaction and was significant; $R^2 = .25, F(4, 135) = 11.32, p < .001$. Additionally, the covariate of gender accounted for significant variance in the overall model [$\beta = .27, SE = .07, p < .001$]; however, social desirability and age did not account for significant variance; $\beta = .10, SE = .08, p = .236$ and $\beta = .01, SE = .08, p = .952$. Figure 1 displays the unmediated and mediated models for the relationships among maladaptive perfectionism, psychological wellbeing, and body area satisfaction with covariates excluded. As shown in the unmediated model, the path between maladaptive perfectionism and body area satisfaction (path c , total effect) was significant and negative, indicating that higher maladaptive perfectionism scores predicted lower levels of body area satisfaction.

Referring to Figure 1, the relationship between maladaptive perfectionism and psychological wellbeing (path a) was significant and negative, such that higher scores on maladaptive perfectionism corresponded to lower scores on psychological wellbeing. The relationship between psychological wellbeing and body area satisfaction (path b) was significant and positive, such that high scores on psychological wellbeing corresponded to high scores on body area satisfaction. The overall

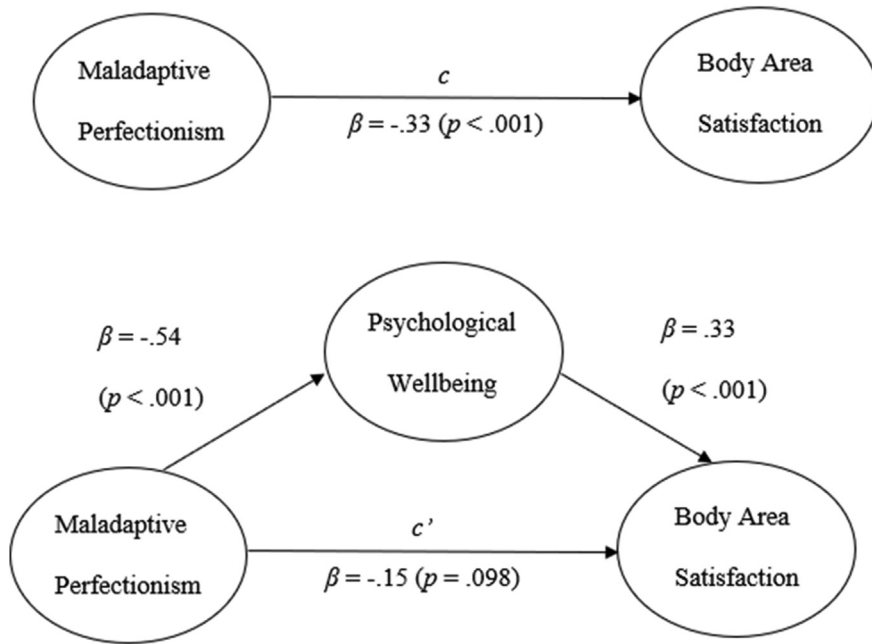


Figure 1. Unmediated and mediated models for body area satisfaction. Standardised beta coefficients reported. Covariates controlled = social desirability, gender, and age.

indirect effect (product of path *a* and path *b*) indicated that the relationship between maladaptive perfectionism and body area satisfaction through psychological wellbeing was significant such that maladaptive perfectionism worked through psychological wellbeing to predict lower scores on body area satisfaction; $\beta = -.18$, $SE = .05$, boot 95% CI [-0.30, -0.08]. Thus, the indirect effect of psychological wellbeing on the relationship between maladaptive perfectionism and body area satisfaction was significant as the 95% confidence interval did not cross zero. The results indicate indirect-only mediation whereby psychological wellbeing fully mediated the relationship between maladaptive perfectionism and body area satisfaction (Zhao et al., 2010). This indicates that

the mediator identified is consistent with the hypothesized theoretical framework, fully supporting hypothesis 2.

7.3.2. Appearance evaluation

The overall model accounted for 15% of the variance in appearance evaluation and was significant; $R^2 = .15$, $F(4, 135) = 6.01$, $p < .001$. Regarding covariates, gender accounted for significant variance in the overall model [$\beta = .18$, $SE = .08$, $p = .025$] whereas social desirability and age did not account for significant variance; $\beta = .12$, $SE = .09$, $p = .227$ and $\beta = .06$, $SE = .08$, $p = .460$. Figure 2 shows the unmediated and mediated models for the relationships among maladaptive perfectionism,

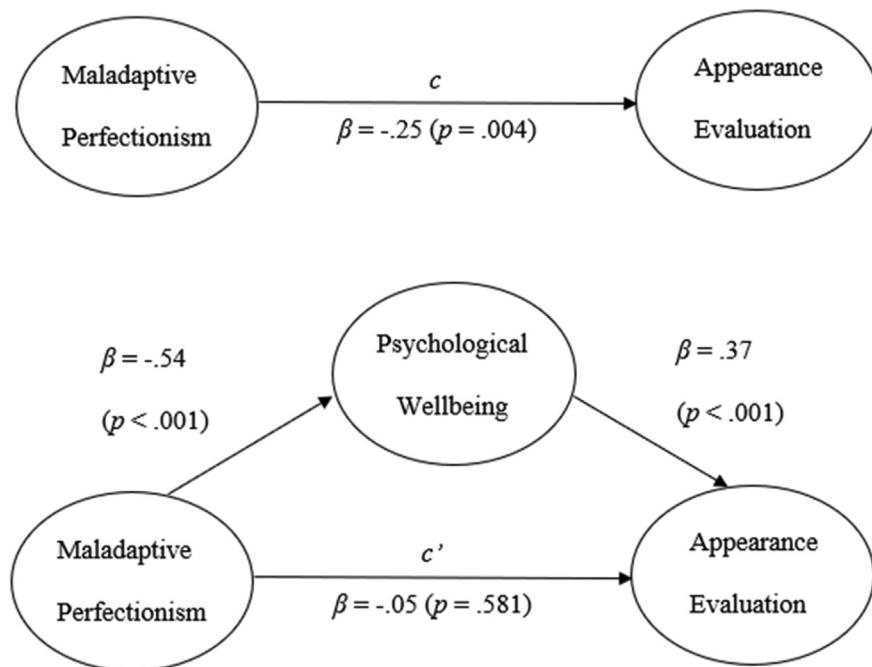


Figure 2. Unmediated and mediated models for appearance evaluation. Standardised beta coefficients reported. Covariates controlled = social desirability, gender, and age.

psychological wellbeing, and appearance evaluation with covariates excluded. The total path between maladaptive perfectionism and appearance evaluation was significant and negative, such that higher scores in maladaptive perfectionism corresponded to lower scores in appearance evaluation.

As shown in [Figure 2](#), the relationship between maladaptive perfectionism and psychological wellbeing was significant and negative with higher scores on maladaptive perfectionism corresponding to lower psychological wellbeing scores. The relationship between psychological wellbeing and appearance evaluation was significant and positive, such that higher scores on psychological wellbeing related to higher scores on appearance evaluation. The overall indirect effect (path $a \times b$) showed that the relationship between maladaptive perfectionism and appearance evaluation through psychological wellbeing was significant such that maladaptive perfectionism worked through psychological wellbeing to predict lower scores on appearance evaluation; $\beta = -.20$, $SE = .06$, boot 95% CI [-0.31, -0.09]. The results from the current mediation model indicate indirect-only mediation whereby psychological wellbeing fully mediated the relationship between maladaptive perfectionism and appearance evaluation, providing full support for hypothesis 2 ([Zhao et al., 2010](#)).

8. Discussion

The current study investigated risk factors associated with the development of body image problems in adults, focusing on two variables highlighted in the literature (gender and maladaptive perfectionism) and also on the relationship or mediating role of psychological wellbeing in explaining the effect of maladaptive perfectionism on body image dissatisfaction.

A review of the literature revealed a notable discrepancy concerning how body image has been measured over the years (i.e., many studies have focused on weight loss concerns lending themselves to portray women as more dissatisfied with their body image). There is a large proportion of men who are also engaged in potentially destructive behaviours such as steroid and performance enhancing drug use, not just weight related issues. Thus, the current study redefined the measure of body image, emphasising satisfaction with specific body area features (body area satisfaction) and overall physical appearance (appearance evaluation). By adopting this approach as a measure of body image dissatisfaction we aimed to reduce the bias in measurement, of the drive for weight loss, and incorporate a more encompassing aspect of dissatisfaction common to both males and females.

8.1. Findings- gender comparisons

The current study found that females were more satisfied with their body areas and appearance than were males. The gender difference in the current study provides support for the notion that body image dissatisfaction experienced by males and females differs, depending on the emphasis taken regarding body image. In particular, women have reported wanting to lose weight whereas only some men desire to lose weight; others desire to gain weight. The desire to gain weight (muscle) and lose weight (body mass) in males may provide an explanation for the current results, suggesting that males experience greater body image dissatisfaction compared to females.

The findings from the current study highlight that body image definitions associated with the desire to lose weight do not accurately capture body image problems encountered by males.

8.2. Findings: perfectionism and psychological wellbeing

In terms of how perfectionism, psychological wellbeing, and body image dissatisfaction, are related, a few past studies had linked and body image dissatisfaction with broader elements of psychological wellbeing ([Boone et al., 2012](#); [Polivy and Herman, 2002](#); [Wade and Tiggemann,](#)

[2013](#)); however, no studies had examined how this relationship occurs including what other variables might be involved. This current research has provided evidence for the potential role of psychological wellbeing as a mediator between maladaptive perfectionism and the development of body image problems.

8.3. Implications from the current study- theory and future research

These results indicate that, first, gender differences need to be taken into account and, second, that low levels of psychological wellbeing as well as levels of maladaptive perfectionism may need to be investigated to help those struggling with body image dissatisfaction.

As a result, in clinical psychology and health counselling practice for example, specific attention to elements of low psychological wellbeing may prove to be a significant contributor to lowering body image dissatisfaction and the insidious effects when destructive measures are being taken by those with poor body image. The effects of the use of CBT with maladaptive perfectionism (one current intervention strategy) may be increased when combined with strategies aimed at improving relevant aspects of psychological wellbeing-in our study, selected elements from the six attributes of psychological wellbeing (e.g., improvements in self-acceptance, purpose, and/or social relationships).

8.4. Limitations in the current study

There are several limitations in the current study, relating to sample size and make-up, nature of the research (correlational), and the chosen measurement(s) of body image.

First, the study had twice as many males as females and was relatively small. New studies might increase the sample size and balance the gender ratio to help confirm or otherwise the current findings. In addition, our study used a variety of formal and informal means to recruit participants, accepting all who attempted the scales (resulting in many who did not complete all scales). This gave the 'community group' we have referred to in this study. However, a more targeted approach with emphasis on known groups (e.g., different professional, business and health groups) would allow the findings to be extended).

Second, our study used correlational research, so causality cannot be inferred. It is not known whether increased levels of psychological wellbeing acted as a protective factor for the development of body image dissatisfaction or whether individuals who experienced body image related concerns have lower psychological wellbeing as a result of dissatisfaction with their appearance.

Third, the subscales of the MBSRQ-AS instrument, body area satisfaction and appearance evaluation, were chosen to assess body image dissatisfaction. Both measures were included in the current study to establish a broad body image dissatisfaction concept without emphasis on weight loss concerns. Studies of the internal reliability (as indicated we obtained alphas of .81 and .69) and validity of the subscales are needed that will add to psychometric information provided here and in some earlier studies (e.g., [Cash, 2000](#); [Huang and Liu, 2008](#); [Lavender et al., 2012](#)). It is possible the choice of the scales on body area satisfaction as a measure of body image dissatisfaction is also inadequate. Nevertheless, the scales used achieved the set purpose of a less weight-based measure of body image and the related satisfaction experienced.

9. Conclusion

The current study contributes to body image research and practice by highlighting that (1) males experience more body image problems compared to females (according to the results from the study using body image scales that are not weight-oriented) and (2) that psychological wellbeing fully mediates the relationship between maladaptive perfectionism and components of body image satisfaction. These findings

confirm that the definition of body image needs to be considered carefully in research, to ensure adequate application.

Results obtained from the current study also have significant clinical implications concerning identification, intervention, and treatment of possibly destructive behaviours related to body image dissatisfaction, including gender differences, maladaptive perfectionism, and low psychological wellbeing as potential risk factors. Identifying and developing psychological wellbeing attributes in individuals who present with body image concerns are likely to be invaluable for these individuals

The current study is one of the earliest studies to examine psychological wellbeing as a mediating variable in the relationships between perfectionism and body image dissatisfaction. Future studies on body image could include additional variables that investigate pathways to specific maladaptive or destructive behaviours (for example, eating and exercise disorders) and could develop experimental designs to enable causal inferences to be made regarding these relationships. The results obtained from the current study show that gender, maladaptive perfectionism and low psychological wellbeing are risk factors in the development of body image dissatisfaction, and that careful assessment of each factor may help advance our research and practice.

Declarations

Author contribution statement

Bridget Kenny: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Richard Hicks: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Daisy Vanstone & Simone Stevenson: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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