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Body dissatisfaction and disordered eating in gay Australian men: exploring social support and self-compassion as protective factors

Timothy Hill, Lauren L. Saling and Robyn L. Moffitt

ABSTRACT
Gay men report higher levels of body dissatisfaction than heterosexual men, which is positively associated with clinical and sub-clinical disordered eating. Given this, it remains important to explore potential protective factors that could be leveraged for interventions specifically designed for gay men. The present study investigated whether self-compassion and social support, both found in previous studies to buffer against minority stress, may moderate the relationship between body dissatisfaction and disordered eating in gay men. Results from an online survey of 100 gay Australian men found that, as expected, body dissatisfaction was positively associated with disordered eating. Moreover, it was found that social support moderated this relationship such that the association between body dissatisfaction and disordered eating was stronger at lower levels of social support. Contrary to expectations, self-compassion did not moderate the body dissatisfaction-disordered eating relationship. Findings suggest that intervention at the level of social support may provide a pathway through which to assist gay men in reducing symptoms of disordered eating. Future studies could more closely examine the type of social support that best mitigates disordered eating symptomatology in gay men, as well as the impact of interventions designed to increase social support in this vulnerable group.

Disordered eating in gay men
Disordered eating behaviours can be a consequence of a heightened preoccupation with one’s body and a drive to achieve or maintain a desired body type (Walcho et al., 2012), or as a mechanism to regulate negative affect (Bell et al., 2019). Disordered eating behaviour includes a range of clinical and sub-clinical maladaptive eating and dieting behaviours that are risk factors for full syndrome eating disorders, such as binge eating, purging, excessive dieting, skipping meals, and fasting (Miller & Luk, 2019; Parker & Harriger, 2020). Existing research exploring disordered eating in gay men has revealed that gay men are at higher risk of both sub-clinical and full syndrome eating disorders (Miller & Luk, 2019; Parker & Harriger, 2020). This heightened risk has been found amongst both adolescent and adult gay men (Hadland et al., 2014; Parker & Harriger, 2020). It has also been found that gay men experience more acute eating disorder symptomatology than heterosexual men.
(Mensinger et al., 2020). Given this, it remains important to explore the potential correlates of disordered eating in gay men.

**Body dissatisfaction in gay men**

One known correlate of disordered eating is body dissatisfaction, which can be defined as the presence of negative emotions, feelings, or thoughts about one’s own physical attributes including height, body fat, muscularity, and penis size (Griffiths et al., 2017; Schwartz & Andsager, 2011). Gay men have been found to have a higher incidence of body dissatisfaction than heterosexual men, reporting the greatest levels of dissatisfaction and distress in relation to lower than desired muscularity and higher than desired body fat (Bell et al., 2019; Frederick & Essayli, 2016; Griffiths et al., 2019). Disordered eating behaviours in gay men have also consistently been found to be strongly and positively associated with body dissatisfaction (Brown & Graham, 2008; Calzo et al., 2017; Chaney, 2008; Miller & Luk, 2019; Parker & Harriger, 2020). Indeed, shape and weight concerns have been identified as a common risk factor for eating disorder pathology (Bell et al., 2019). According to the interpersonal theory of eating disorders (IPT-ED), real or perceived judgements from others, feelings of not belonging, and negative social interactions common among sexual minority and gender diverse populations can lower self-esteem, increase negative self-related affect, and consequently, contribute to the emergence of eating disorder symptoms (Bell et al., 2019).

In addition to elevated symptoms of psychological distress, several high-risk and maladaptive behaviours have also been associated with gay men’s body dissatisfaction and a drive for a muscular lean body. For instance, these have included higher use of Anabolic-Androgenic Steroids, unregulated supplements, opioids, methamphetamine, and cocaine (Frederick & Essayli, 2016; Griffiths et al., 2019; Pope et al., 2017). In an attempt to obtain an ideal body, gay men have also reported more interest in, and prior experience of, cosmetic surgery (Frederick & Essayli, 2016), obsessive exercise, and disordered eating (Blashill & Vander Wal, 2009; Brown & Graham, 2008; Calzo et al., 2017; Chaney, 2008).

Two main theories have been used to explain the higher prevalence of body dissatisfaction in gay men compared to heterosexual men. The first is Objectification Theory, which proposes that the sexual objectification of one’s body by men results in hypervigilance about appearance (body scanning), and poorer body image (Fredrickson & Roberts, 1997; Tran et al., 2020). Similarly, a heightened focus on appearance and sexual objectification in the gay community is thought to result in the internalisation of body image ideals, and thus, higher body dissatisfaction (Tran et al., 2020). It has also been found that appearance-based conversations and social comparisons are more common amongst gay men (Frederick & Essayli, 2016; Jankowski et al., 2013). A study of 215 gay men aged from 18 to 78 years found that more than a third of participants had been subjected to anti-fat bias from the gay community, an experience that is related to higher body dissatisfaction (Foster-Gimbel & Engeln, 2016). Moreover, gay community norms favour lean, muscular, masculine body ideals (Hammack et al., 2022; Pachankis et al., 2020) stigmatising fat as a feminine trait (Austen et al., 2022). Thus, exposure to this intracommunity stigma can contribute to body dissatisfaction, and extreme dieting and exercise behaviours, among men whose bodies do not conform to these ideals (Regan et al., 2021).

An alternative theory that may explain heightened body dissatisfaction in gay men is Minority Stress Theory (MST; Meyer, 2003). MST suggests that minoritised individuals, such as gay men, experience extraordinary stress uniquely associated with their minority position in society (Meyer, 2003). Although attitudes towards sexuality have progressed, gay men continue to be subjected to stress on account of structural stigma and prejudice through laws and systematic discrimination, and individual stigma through victimisation, bullying, and rejection (Lea et al., 2014). In the context of body dissatisfaction, MST proposes that discrimination and stigma experienced as a sexual minority is internalised into gay men’s identity, thus contributing to a negative view of themselves and their
bodies (Calzo et al., 2017). Thus, theoretically, high levels of body dissatisfaction and its association with disordered eating in gay men is likely due to a combination of body objectification and minority stress.

**Protective factors**

Although the association between body dissatisfaction and disordered eating in gay men has been established, protective factors are not as clearly understood (Choi et al., 2016). Management of disordered eating in gay men typically focuses on affect regulation, which is a therapeutic approach derived from research into disordered eating in women (Bell et al., 2019). Meyer (2003) proposed that interventions aimed at minoritised individuals could reduce negative self-view and associated negative outcomes seen in gay men, including those associated with body dissatisfaction. Studies to date have highlighted self-compassion as a potential internal resource, and social support as a possible external resource that may be leveraged for better mental health outcomes in vulnerable populations (Frost et al., 2016; Vigna et al., 2018).

**Self-compassion**

Self-compassion is the ability to be kind and accepting of oneself during experiences of perceived failure, suffering, and inadequacy (Beard et al., 2017). It is proposed that self-compassion, due to its focus on common humanity (understanding that suffering is a shared human experience), mindfulness (maintaining a balanced perspective in response to difficult thoughts and feelings), and self-kindness (being gentle and understanding towards the self), may promote resilience to stigma and disrupt the internalisation of negative attitudes by using warmth and acceptance instead of self-criticism (Vigna et al., 2018). Self-compassion can promote the acceptance of one’s non-heterosexual identity by influencing the interpretation of stigma by gay men, such that these interpretations are not internalised into a negative self-view (Vigna et al., 2018). There is some evidence to support self-compassion as a protective factor against minority stressors in gay men. For example, Vigna et al. (2018) found that self-compassion mediated the relationship between bullying and negative mental health outcomes in school-aged young gay men, such that the experience of bullying was associated with lower levels of self-compassion and, consequently, poorer mental health. This study also found that young gay men overall scored lower on self-compassion than their heterosexual peers (Vigna et al., 2018).

Self-compassion has also been found to be a stronger predictor of wellbeing in gay men than gay-specific factors such as outness and internalised homonegativity (the internalising of negative societal attitudes towards gay men) (Beard et al., 2017; Keng & Liew, 2017). Moreover, lower self-compassion in gay men has been related to higher eating disorder proneness and body dissatisfaction (Bell et al., 2019; Regan et al., 2023). Meta-analyses have provided further evidence that interventions promoting self-compassion can improve body image and reduce disordered eating (Turk & Waller, 2020), as well as improve general eating behaviours and indices of mental health (Ferrari et al., 2019). Employing a Randomised Control Trial (RCT), Grey et al. (2022) found that both self-compassion and self-esteem brief writing interventions improved the body image of queer men relative to a control intervention (which involved writing about activities undertaken that day). Thus, although preliminary, there are indications that self-compassion may be a potential protective factor for disordered eating in gay men.

**Social support**

Social support is another potential protective factor against the development of body dissatisfaction and eating disorder symptomatology, and refers to an experience or perception of belonging to a loving and caring social network (Hu et al., 2020). Social support can be intangible, such as having
someone to talk to about problems, companionship, or a sense of belonging. Alternatively, social support can be more tangible practical support in the form of assistance with tasks (Hu et al., 2020). Sources of social support include friends, family, community, and a relationship partner (Hu et al., 2020).

Although social support has consistently been found to be positively related to wellbeing in the general population (Frost et al., 2016; Tsai & Papachristos, 2015), it is proposed to function in a unique way amongst gay men (Frost et al., 2016). Gay men, often alienated from their family and having less access to social support generally due to non-acceptance of their sexuality (Hu et al., 2020; Lyons, 2015), are more likely to seek support from likeminded others, referred to in the gay community as ‘chosen family’ (Amola & Grimmett, 2015). Specifically, for day-to-day support as well as large gestures of support (i.e. borrowing significant sums of money), gay men primarily seek social support from other gay men of the same ethnicity (Frost et al., 2016). Social support from friends is also a better predictor of reduced depression in gay men than family support (Fingerhut, 2018; Hu et al., 2020). Heterosexual men, in comparison, are more likely to rely on family for both kinds of support (Frost et al., 2016).

Irrespective of the source of social support, higher levels of perceived social support have been positively related to wellbeing. For example, research has reported lower levels of depression, anxiety, and suicidal ideation in those gay men with higher levels of social support (Hu et al., 2020; Wong et al., 2014; Yan et al., 2014). Social support has also been found to buffer against the impacts of minority stress in gay men, and has been associated with reduced levels of anxiety, depression and suicidality (Hu et al., 2020; Li et al., 2016; Wong et al., 2014; Yan et al., 2014). Parra et al. (2018), propose that social support, particularly from peers or ‘chosen family’, may build resilience, assist with social adjustment, and provide a haven away from potential rejection or conflict (i.e. a reduction in exposure to stigma). Convertino et al. (2021) found that greater involvement in the gay community was related to lower levels of body dissatisfaction in the areas of muscularity and thinness. However, community involvement was also positively related to overall body dissatisfaction and dietary restraint (Convertino et al., 2021). Thus, although gay community involvement may play a protective role against body dissatisfaction through providing social support, it may also contribute to body dissatisfaction by creating pressure to fit in. Given that social support appears to protect against the impact of minority stressors in gay men, and minority stress is found to play a role in body dissatisfaction and disordered eating, social support may also be valuable as a target for intervention for gay men with disordered eating.

The present study

Overall, the current study aims to contribute to the understanding of the association between body dissatisfaction and disordered eating in gay Australian men by exploring the possible moderating role of self-compassion and social support. Adopting a strength-based approach to disordered eating intervention and treatment, these constructs enabled exploration of both an internal (self-compassion) and external (social support) coping resource (Burke et al., 2020). It was hypothesised that body dissatisfaction in gay men would be positively associated with disordered eating, and that both body dissatisfaction and disordered eating would be negatively associated with self-compassion. We also expected that the relationship between body dissatisfaction and disordered eating would be moderated by self-compassion and social support such that body dissatisfaction would be more strongly positively associated with disordered eating at lower levels of both self-compassion and social support.
Materials and methods

Participants

Following guidance provided by Memon et al. (2020), an a priori power analysis was conducted using G*Power 3.1.9.7. The analysis revealed that a sample size of 77 would be sufficient to detect an interaction in moderated regression, with a medium effect size ($f^2 = 0.15$), 80% power, and error probability of .05 (Memon et al., 2020). The final sample comprised 100 gay Australian participants ranging from 19 to 81 years old ($M = 41.00$, $SD = 10.94$). In relation to gender identification, 98 participants identified as ‘male’, 1 identified as ‘non-binary’, and 1 identified as ‘other’. Most participants resided in metropolitan areas of Australia (82%). Aside from age, gender identification, and location (metropolitan/regional Australia), we did not collect any further demographic information to protect the privacy and anonymity of participants. Participants were recruited via convenience sampling, with a direct link to the survey embedded in an advertisement posted on social media platforms Facebook and LinkedIn. Participants were volunteers; there was no incentive offered for participation.

Measures

Body dissatisfaction

Body dissatisfaction was measured using the Revised Male Body Attitudes Scale (MBAS-R; Ryan et al., 2011). The MBAS-R contains 15-item statements (e.g. ‘I think my body should be leaner’) and participants were asked to indicate how frequently each statement applied to them on a five-point scale from 1 (Never) to 5 (Always). Scores could range from 15 to 75 and a total score was calculated where higher scores represented higher overall body dissatisfaction. Previous studies of gay men have found the MBAS-R to have good internal consistency (Cronbach’s $\alpha = .87$) (Griffiths et al., 2017, 2019). In the present study, the MBAS-R had acceptable internal consistency (Cronbach’s $\alpha = .77$).

Disordered eating

Disordered eating was measured using the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994). The EDE-Q contains 28 questions about eating behaviour (e.g. ‘have you gone for long periods of time without eating in order to influence your shape or weight?’) and participants were asked to indicate on how many days ranging from 0 (no days) to 6 (every day) they engaged in this behaviour in the last 4 weeks. A total mean score (average of the subscale scores: eating restraint, eating concerns, weight concerns, and shape concerns) was calculated (possible range 0–6) whereby higher scores indicated higher levels of disordered eating. The EDE-Q had good internal consistency in the present study (Cronbach’s $\alpha = .90$).

Social support

Social Support was measured using the Interpersonal Support Evaluation list (ISEL-12; Cohen et al., 1985). The ISEL-12 contains 12 statements about perceived level of social support (e.g. ‘I feel there is no one I can share my most private worries and fears with’). Participants were asked to indicate how true each statement was about them on a four-point scale from 1 (Definitely false) to 4 (Definitely True). A total score (possible range 12–48) was used to represent level of social support, with higher scores representing higher perceived access to social support. The internal consistency of the ISEL-12 in the present study was excellent (Cronbach’s $\alpha = .89$).

Self-compassion

Self-compassion was measured using the Self Compassion Scale – Short Form (SCS-SF; Raes et al., 2011). The SCS-SF contains 12 statements (e.g. ‘I am disapproving and judgmental about my own flaws...')
and inadequacies) asking participants to indicate how often they behave in the stated manner on a scale from 1 (Almost Never) to 5 (Almost Always). The SCS-SF contains two items measuring each of the six domains of self-compassion: self-kindness, self-judgement, common humanity, isolation, mindfulness, and over-identification. A total score was calculated in the present study where higher scores represented a higher level of self-compassion (possible range 12–60). The SCS-SF had good reliability in the present study (Cronbach’s α = .85).

Procedure

Ethical approval was granted by the RMIT Human Research Ethics Committee (Approval number 24,319). The survey was hosted by the secure online platform Qualtrics. Inbuilt bot detection settings were enabled to validate responses, and no issues with the data were identified. Participants were first directed to an information statement outlining details of the study, the voluntary nature of participation, and how to discontinue at any time prior to submitting survey responses. Participants then completed a screening questionnaire to assess eligibility. Eligible participants were asked to provide basic demographic details before completing the MBAS-R, followed by the EDE-Q, the SCS-SF, and the ISEL-12. The average time to complete the questionnaire was 12 min. After submitting their responses, participants were debriefed and given contact details of support services to access in the event of distress.

Statistical analyses

Statistical analyses were conducted using IBM SPSS Statistics (Version 28). Two moderated regression models were examined, with body dissatisfaction the predictor variable and disordered eating behaviour the outcome variable. Social support and self-compassion were analysed as potential moderators of this relationship using the PROCESS Macro version 4.2 by Andrew F. Hayes (Hayes, 2013). Simple slopes analysis was conducted to interpret the significant interaction found; the slope of the relationship between body dissatisfaction and disordered eating behaviour was tested at low (1 SD below the mean), moderate (mean), and high (1 SD above the mean) levels of social support.

There was no missing data, and assumption checking prior to undertaking the data analyses confirmed that moderation analysis was appropriate. Several outliers identified were not found to meaningfully change the results and were therefore retained in the data set.

Results

Bivariate correlations between the key variables are provided in Table 1. Self-compassion and social support were moderately positively correlated \( r(98) = .29, p = .003 \). Body dissatisfaction was strongly positively correlated \( r(98) = .78, p < .001 \), and self-compassion was negatively correlated \( r(98) = -.54, p < .001 \), with disordered eating. Moreover, body dissatisfaction was strongly negatively correlated with self-compassion \( r(98) = -.53, p < .001 \). Social support was not associated with disordered eating \( r(98) = -.17, p = .08 \) or body dissatisfaction \( r(98) = -.16, p = .12 \).

<table>
<thead>
<tr>
<th>Variable</th>
<th>( M(SD) )</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 EDE-Q</td>
<td>2.12(1.37)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2 MBAS-R</td>
<td>44.77(10.80)</td>
<td>.779**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3 ISEL-12</td>
<td>35.13(7.93)</td>
<td>-.171</td>
<td>-.155</td>
<td>-</td>
</tr>
<tr>
<td>4 SCS-SF</td>
<td>34.39(8.88)</td>
<td>-.536**</td>
<td>-.525**</td>
<td>.290**</td>
</tr>
</tbody>
</table>

EDE-Q = disordered eating, MBAS-R = body dissatisfaction, ISEL-12 = social support, SCS-SF = self-compassion, **p < .001.
The overall model for the moderated regression for self-compassion was significant, $F(3, 96) = 56.35, p < .001, R^2 = 0.64$. As revealed in Table 2, body dissatisfaction was independently and positively associated with disordered eating. However, self-compassion was not significantly associated with disordered eating. The interaction effect was also not significant. The non-significant interaction revealed that the association between body dissatisfaction and disordered eating did not differ at low, moderate, and high levels of self-compassion. Thus, there was no evidence of moderation.

Table 2. Moderated regression results for self-compassion and social support.

<table>
<thead>
<tr>
<th></th>
<th>b(SE)</th>
<th>t</th>
<th>p</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Compassion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBAS-R</td>
<td>0.127(0.03)</td>
<td>4.539</td>
<td>.000</td>
<td>0.0717</td>
<td>0.1831</td>
</tr>
<tr>
<td>SCS-SF</td>
<td>0.023(0.03)</td>
<td>0.617</td>
<td>.539</td>
<td>-0.0460</td>
<td>0.0874</td>
</tr>
<tr>
<td>MBAS-R*SCS-SF</td>
<td>-0.001(0.00)</td>
<td>-1.507</td>
<td>.135</td>
<td>-0.0026</td>
<td>0.0004</td>
</tr>
<tr>
<td>Social Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBAS-R</td>
<td>0.189(0.04)</td>
<td>4.751</td>
<td>.000</td>
<td>0.1099</td>
<td>0.2677</td>
</tr>
<tr>
<td>ISEL-12</td>
<td>0.105(0.05)</td>
<td>2.098</td>
<td>.039</td>
<td>0.0056</td>
<td>0.2043</td>
</tr>
<tr>
<td>MBAS-R*ISEL-12</td>
<td>-0.003(0.00)</td>
<td>-2.331</td>
<td>.022</td>
<td>-0.0047</td>
<td>-0.0004</td>
</tr>
</tbody>
</table>

$MBAS-R =$ body dissatisfaction, $ISEL-12 =$ social support, $SCS-SF =$ self-compassion.

![Figure 1](image)

Figure 1. Relationship between body dissatisfaction and disordered eating moderated by social support.

The overall model for the moderated regression for social support was significant, $F(3, 96) = 54.62, p < .001, R^2 = 0.63$. Body dissatisfaction and social support were positively associated with disordered eating. However, the interaction effect was also significant (see Table 2). This result demonstrated evidence of moderation; the relationship between body dissatisfaction and disordered eating differed with levels of social support.

Simple slopes analysis revealed that the relationship between body dissatisfaction and disordered eating was significant and positive at low ($b = 0.120, 95\% \text{ CI } [0.095, 0.144], t = 9.80, p < .001$), moderate ($b = 0.099, 95\% \text{ CI } [0.084, 0.115], t = 12.41, p < .001$), and high ($b = 0.079, 95\% \text{ CI } [0.057, 0.102], t = 6.96, p < .001$) levels of social support. As shown in Figure 1, the interaction was produced by the size of the effect being strongest at low levels of social support and weakening as social support increased (see Figure 1).
Discussion

Although the relationship between body dissatisfaction and disordered eating has been established in gay men, less is known about protective factors specific to gay men, with most research into disordered eating focusing on women. The present study contributes to our knowledge of these relationships by exploring self-compassion and social support as potential protective factors. Specifically, it was hypothesised that body dissatisfaction would be positively associated with disordered eating, and that this relationship would be stronger among those participants with lower levels of self-compassion and social support. Unexpectedly, self-compassion did not moderate the relationship between body dissatisfaction and disordered eating. However, as expected, higher levels of body dissatisfaction were associated with higher disordered eating. Moreover, social support moderated the relationship between body dissatisfaction and disordered eating; this association was the strongest when participants reported lower levels of social support, decreased at moderate social support, and was weakest at high levels of social support. These findings extend previous studies which found that social support buffered against minority stress in gay men, and demonstrate that social support may function as a protective mechanism in the relationship between body dissatisfaction and disordered eating.

Body dissatisfaction and disordered eating

The finding that participants with higher levels of body dissatisfaction reported higher levels of disordered eating was consistent with expectations and previous research indicating that disordered eating behaviours are engaged in by gay men to achieve the lean muscular body ideal (Brown & Graham, 2008; Calzo et al., 2017; Chaney, 2008; Miller & Luk, 2019; Parker & Harriger, 2020). Indeed, there is pressure in the gay community to achieve a lean, muscular, and masculine body ideal (Austen et al., 2022; Hammack et al., 2022; Pachankis et al., 2020), and such perceived intracommunity stigma can contribute to body dissatisfaction, and extreme dieting and exercise behaviours (Regan et al., 2021). In previous research, Griffiths et al. (2019) also found that gay men’s body dissatisfaction was predominantly related to a desire to be more muscular and have less body fat, and the current findings are congruent with the idea that disordered eating is a potential mechanism through which to achieve this goal. Although theory and research support the idea that shape and weight concerns are a risk factor for eating disorder pathology (Bell et al., 2019), we acknowledge that the relationship we have observed here is correlational, and the link between these two variables may indeed be bidirectional or reciprocal over time.

Self-compassion

Bivariate correlations revealed that self-compassion was significantly negatively correlated with both body dissatisfaction and disordered eating; those with higher levels of body dissatisfaction and disordered eating reported lower levels of self-compassion. These results are consistent with findings reported by Bell et al. (2019) where lower levels of self-compassion were related to higher eating disorder proneness in gay men, as measured by a clinical screening tool. Contrary to expectations, however, self-compassion did not significantly moderate the relationship between body dissatisfaction and disordered eating.

Studies investigating self-compassion as a protective mechanism in gay men have proposed that an ability to be kind and accepting of oneself may interrupt the internalisation of minority stress and stigma (Vigna et al., 2018). In this study, it was theorised that given the relationship between body dissatisfaction, intracommunity stigma, and minority stress observed in gay men, self-compassion may interrupt the internalisation of stigma such that it acts as a protective mechanism that may change the strength of the relationship between body dissatisfaction and disordered eating. In the present study, this hypothesis was not supported. Despite not significantly moderating the relationship between body dissatisfaction and disordered eating, the negative bivariate correlations found
between self-compassion and both disordered eating and body dissatisfaction indicate that higher levels of self-compassion may still be associated with lower severity of both presentations.

**Social support**

In the moderation model, social support interacted with body dissatisfaction to predict disordered eating; body dissatisfaction was more strongly positively associated with disordered eating for participants with lower levels of social support. Although a very small effect, these results support earlier preliminary research demonstrating that social support may play a protective role against minority stress, which is found to be associated with body dissatisfaction (Adkins & Keel, 2005; Hu et al., 2020; Kimmel & Mahalik, 2005; Li et al., 2016; Wong et al., 2014).

In addition, the findings of this study support the MST explanation of body dissatisfaction and disordered eating in gay men. MST (Meyer, 2003) explains that heightened body dissatisfaction in gay men can be a function of internalisation of stigma, and perceived victimisation, thus manifesting in a negative self-view. Previous studies have found that body dissatisfaction and disordered eating are more prevalent among those experiencing minority stress (Bell et al., 2019; Kimmel & Mahalik, 2005). Based on extant findings that social support buffers against minority stressors (Wong et al., 2014; Yan et al., 2014), it was theorised that social support would be a protective mechanism in the relationship between body dissatisfaction and disordered eating. The present finding that social support moderated the relationship between body dissatisfaction and disordered eating supports this expectation.

**Limitations and future direction**

There are some limitations of the study to consider. First, our investigation was cross-sectional, correlational, and relied on self-report. Based on existing theory and research, our selected criterion variable was eating disordered symptomatology; however, the design of the current study means we cannot claim causation. The observed relationships in the current research may be bidirectional, and body dissatisfaction and eating disorder symptomatology may also reciprocally influence each other over time. Prospective longitudinal research is important in future research to further unpack the directionality of these interrelationships.

The moderation effect for social support was also small, and we did not use a queer-specific subscale to assess this construct (i.e. Connectedness to the LGBT Community Scale; Frost & Meyer, 2012). A specific measure would enable exploration of the role of different aspects of social support (i.e. perceived closeness/connectedness with the LGBT community, positivity of relationships with others, and/or the extent to which connections facilitate problem-solving). In addition, we did not collect demographic information regarding participants ethnicity/race, SES, and sexual identity/history as has been done in other research involving sexual minority men (i.e. Grey et al., 2022). Most participants in our research identified as ‘male’ (98%) and resided in metropolitan Australia (82%), and this limits the generalisability of our results. For instance, gay men from regional Australia experience higher rates of mental health issues than those in metropolitan settings (Lyons et al., 2015). Regionally based gay men also report less access to social support (Lyons, 2015). As such, the findings we have reported here may not be representative of gay men Australia-wide. Future research could further explore these relationships in a larger sample of both regional and metropolitan sexual minority men.

Additionally, a larger sample size may also provide more power to detect the effect of self-compassion. To detect a small interaction effect, the required sample size estimation escalated substantially from 77 to 550. However, this sample size target is challenging when recruiting from a specific minority population as we have in the current investigation. Selection is important, as suggested by Memon et al. (2020); a carefully selected smaller sample can provide more meaningful
and accurate information than a poorly selected larger sample. Importantly, our research has paved the way for future research to replicate and extend.

The findings of this study suggest that social support may be leveraged to reduce the strong positive link between disordered eating and body dissatisfaction in gay men. Future research could more specifically examine the types of social support that are most strongly linked to disordered eating symptomatology. Interventions designed to increase social support could also be examined in the specific context of body dissatisfaction and disordered eating. Research with women has indicated that individuals with an eating disorder can find it difficult to establish deep relationships with others, and this can contribute to self-distancing and social isolation. This isolation from others can then decrease one’s social network and reduce coping capacity (Leonidas & dos Santos, 2014). Although social support has not been widely researched as a potential intervention for gay men, participants attending a gay youth drop-in centre and group programs in the UK for 6-months were found to report increased levels of perceived social support, higher levels of self-esteem, and lower levels of depression (Wilkerson et al., 2017). Participants were given a safe space and encouraged to play games, as well as attend groups where everyone presented to the group on important issues facing the gay community. Gay men are often alienated from their families due to non-acceptance of their sexuality (Hu et al., 2020; Lyons, 2015). Thus, our results are consistent with the suggestion that social support interventions in this area should consider extended networks beyond immediate family bonds (i.e. friends, colleagues, neighbours, or chosen family) (Amola & Grimmett, 2015; Leonidas & dos Santos, 2014).

Conclusion
The present study has meaningfully contributed to the existing literature exploring disordered eating in gay men. Prior studies have established a positive relationship between body dissatisfaction and disordered eating symptomatology, and the current study has contributed to knowledge about potential protective factors that could be leveraged for interventions specifically designed for gay men. The results of this study have provided further evidence that body dissatisfaction is strongly positively associated with disordered eating in gay men. Self-compassion was not found to significantly moderate the positive relationship between body dissatisfaction and disordered eating symptomatology. The relationship between body dissatisfaction and disordered eating was, however, found to be moderated by social support. Boosting social support may therefore offer a fruitful intervention for gay men with elevated symptoms of body dissatisfaction or disordered eating. Future studies should more closely examine the type of social support that is most strongly linked to body dissatisfaction and disordered eating symptomatology in gay men, as well as the impact of interventions designed to increase social support.

Disclosure statement
No potential conflict of interest was reported by the author(s).

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