Can self-reassurance buffer against the impact of bullying? Effects on body shame and disordered eating in adolescence

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Running head: Self-reassurance, bullying, body shame and disordered eating in adolescence

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Abstract

Bullying experiences are associated with body image and eating-related problems. Nonetheless, research on possible resilience factors is scant. The current study tested a path model examining the association between emotional memories of experiences of warmth and safeness, and self-reassuring abilities, and whether these abilities moderate the impact of bullying experiences on body image shame and eating psychopathology. We tested this model in a nonclinical sample of 609 adolescent girls aged 12-18 years. The examined model accounted for 22% of body image shame variance and 51% of eating psychopathology variance. Memories of warmth and safeness were significantly associated with self-reassurance, and negatively linked to body image shame and eating psychopathology. Self-reassurance significantly moderated the association between bullying experiences and both body image shame and eating psychopathology. The present findings suggest the relevance of assessing the quality of interpersonal experiences reported by adolescents and their potential association with self-reassuring abilities. Moreover, these results suggest that the ability to reassure and soothe the self may have a buffering effect against the negative impact of bullying experiences on adolescents' body image and eating behaviours.

Keywords

Warmth and safeness memories; Bullying; Self-reassurance; Body image shame; Eating psychopathology

Introduction

The quality of early interactions can have important physiological and psychological effects (Gilbert & Procter, 2006; Mikulincer & Shaver, 2004; Schore, 1994). Affiliative interactions in childhood that promote safeness, warmth, connectedness and soothing, create the basis of a sense of self as loveable and valued (Baumeister & Leary, 1995). Positive early experiences have been associated with wellbeing and reduced vulnerability to psychopathology (Cheng & Furnham, 2004; DeHart, Pelham, & Tennen, 2006; Irons & Gilbert, 2005; Mikulincer & Shaver, 2004). In particular, experiences of safeness and soothing may play an important role in emotion regulation (Baldwin & Dandeneau, 2005; Gillbert, Baldwin, Irons, Baccus, & Palmer, 2006). In fact, research suggests that memories of early parental interactions characterized by warmth, care and safeness, are associated with self-reassurance abilities (Richter, Gilbert, & McEwan, 2009; Mikulincer & Shaver, 2004), and may protect against the effects of adverse life events (Cacioppo, Berston, Sheridan, & McClintock, 2000; Gilbert et al., 2009; Masten, 2001; Matos, Pinto-Gouveia, & Duarte, 2015). Self-reassurance involves a positive, compassionate and warm disposition to the self, with a sense of concern, acceptance, understanding and encouragement when the self faces difficulties, setbacks or failures (Gilbert, Clarke, Hempel, Miles, & Irons, 2004). In fact, this adaptive form or self-to-self relating promotes reassurance and resilience when facing vulnerability or threat (Irons, Gilbert, Baldwin, Baccus, & Palmer, 2006; Gilbert et al., 2004; Leary, Tate, Adams, Allen & Hankock, 2007).

Adolescence is a challenging developmental period during which a series of physiological, relational and environmental changes occur. The circle of interpersonal relationships broadens and adolescents become more oriented towards joining groups of peers. During this period, peers become a particularly important source of self-evaluation, support and validation (Allen & Land, 1999). With these changing dynamics in social relationships, issues of acceptance, approval, of fitting in and of being attractive to others become intensified. Perceptions of failing in achieving these social goals, can have important deleterious effects, being associated with feelings of inferiority, shame and self-criticism (Gilbert, 1989, 1997, 2005; Gilbert & Irons, 2009). Gilbert's evolutionary biopsychosocial model of shame (Gilbert, 1992, 1997, 1998, 2002) proposes that shame is both a self-focused and socially-focused emotion. Shame involves therefore both negative self-evaluations that the self is flawed or inadequate in some way, and evaluations that others see the individual in the same negative manner, and may criticize, exclude or even attack the individual. Perceptions that one's physical appearance fails to fit within what others find attractive and may be the cause of such social threats, have been

identified as important determinants of shame (Duarte et al., 2015; Ferreira, Pinto-Gouveia, & Duarte, 2013; Goss & Allan, 2009; Goss & Gilbert, 2002; Pinto-Gouveia, Ferreira, & Duarte, 2014). In particular, body image shame comprises negative evaluations that because of one's physical attributes (i.e., body shape, size or weight), others view the oneself as unattractive, inferior, or defective as a person (Gilbert, 2002; Gilbert & Thompson, 2002). Research suggests that pathological attempts to control physical appearance and eating behaviour may be understood as maladaptive defensive strategies in face of these shame feelings (Ferreira, Pinto-Gouveia, & Duarte, 2013; Goss & Allan, 2009; Goss & Gilbert, 2002; Pinto-Gouveia, Ferreira, & Duarte, 2014).

Shame can emerge from negative peer interactions, namely bullying experiences. Bullying involves negative interactions in which the perpetrator has an aggressive behaviour towards the victim (including ridiculing, name-calling or rejection), in order to inflict injury or discomfort (Smith & Thompson, 1991). Growing research demonstrates that bullying experiences may have a pathogenic impact on several psychological indicators (Gilbert & Irons, 2009; Hawker & Boulton, 2000; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000; Smokowski & Kopasz, 2005; Yena, Liua, Koa, Wud, & Chenge, 2014). In particular, studies indicate that bullying experiences are associated with disordered eating, namely among adolescent girls (Engström & Norring, 2002; Gilbert, 2002; Gilbert & Thompson, 2002; Kaltiala-Heino, Rissanen, Rimpela, & Rantanen, 1999; Menzel et al., 2010). Also, there is evidence suggesting that bullying is associated with adolescents' negative perceptions that their body is the target of criticism from others (Lunde, Frisén, & Hwang, 2006). A recent study conducted with adolescent girls revealed that the extent to which bullying is associated with eating psychopathology symptoms is influenced by how bullying becomes linked to body image shame and self-criticism (Duarte, Pinto-Gouveia, & Rodrigues, 2015). Moreover, bullying experiences may have lasting effects on body image and eating-related difficulties. In fact, these types of negative experiences with peers in childhood and adolescence were found to be commonly recalled by patients with eating disorders (Ferreira, Matos, Duarte, & Pinto-Gouveia, 2014; Fosse & Holen, 2006; R. Striegel-Moore, Dohm, Pike, Wilfley, & Fairburn, 2002; Matos, Ferreira, Duarte, & Pinto-Gouveia, 2014).

To sum up, mounting evidence suggests that bullying experiences may contribute to eating psychopathology, which is a serious public health problem within the adolescent population (Croll, Neumark-Sztainer, Story, & Ireland, 2002; French, Story, Downes, Resnick, & Blum, 1995; Gilbert & Thompson, 2002). Nonetheless, not all adolescents who go through bullying experiences develop psychopathology symptoms and disordered eating. Therefore, it is important to identify factors that may promote resilience against the negative impact of bullying experiences on adolescents' body image and eating behaviour. It is plausible that growing up

in caring, supportive and safe environments promotes positive internal self-regulation linked to compassionate self-reassuring abilities. Self-reassurance, in turn, may deter the engagement in maladaptive defensive strategies (e.g., pathological dieting) to cope with bullying and shame feelings (Baumeister & Leary, 1995; Baldwin & Dandeneau, 2005; Gillbert et al., 2006; Gilbert et al., 2009; Matos et al., 2015; Richter et al., 2009). In fact, a recent study demonstrated that adolescents with higher levels of self-compassion present higher emotional wellbeing and lower stress in response to social stressors (Bluth et al., 2016). Nonetheless, to our knowledge, there are no studies on the role that early interpersonal experiences play on positive self-regulation through self-reassurance and body image and eating behaviour in adolescence.

The goal of the current study was to examine a path model testing the associations between memories of positive, soothing and safe interactions during childhood, bullying experiences with peers during adolescence, abilities to self-soothe and reassure, and body image shame and eating psychopathology in a sample of adolescent girls. It was hypothesized that adolescents who reported memories of growing up in a warm, supportive and safe childhood environment would have higher self-reassuring and self-soothing abilities. Moreover, it was hypothesized that those self-reassuring abilities would moderate the impact of bullying during adolescence on body image shame and eating psychopathology symptoms.

Method

Participants

Six-hundred and nine adolescent girls were recruited from middle and high schools from urban (34.15%), semi-urban (56.16%) and rural (9.69%) areas of the central region of Portugal. The mean age was 14.10 (*SD* = 1.16) years old, ranging from 12 and 18 years. The years of education mean was 8.89 (*SD* = 1.05), ranging from 8 to 12. The majority (99.18%) of the participants were Caucasian; 47.7% were from low, 29.9% from medium and 22.4% from high socioeconomic status. Participants' Body Mass Index (BMI) ranged from 13.12 to 35.14, with a mean of 20.90 (*SD* = 3.29). Two participants (0.3%) presented severe thinness, 12(2%) thinness, 427(70.2%) had normal weight, 139 (22.8%) were overweight, and 29 (4.7%) presented obesity (De Onis et al, 2007).

Procedure

This study is part of a wider research investigating the role of interpersonal experiences on body image and eating-related difficulties in adolescence. The relevant local authorities (General Direction of Innovation and Curricular Development; Portuguese Data Protection Authority) approved the study, which was then presented to and approved by the Boards of the schools involved. Written informed consent was obtained from the participants and from their parents/legal tutors. Each school scheduled the day and the class period for the questionnaires completion. The teacher in charge introduced the researchers to the participants and then left the class room. The researchers gave standardized instructions to the participants, reiterated that their participation was voluntary, that the data collected was confidential and used only for research purposes, and administered the set of self-report questionnaires (in groups of 5 to 36 participants).

Measures

Body Mass Index. Participants' BMI was calculated by dividing reported weight (in Kg) by height squared (in m).

Early Memories of Warmth and Safeness Scale (EMWSS; Richter et al., 2009) is a self-report instrument of personal emotional memories of feeling safe, warm and being cared for in childhood. The scale includes 21 items that are rated in a 5-point scale (ranging from *0 = no, never* to *4 = yes, most of the time*). The scale presented good psychometric properties in its original study (Richter et al., 2009), as well as in the Portuguese version of the scale validated for adolescents (Cunha, Xavier, Martinho, & Matos, 2014).

Peers Relations Questionnaire (PRQ; Rigby & Slee, 1993) is a 20-item self-report measure that includes a subscale used to assess victimization experiences inflicted by peers - Victim. Items are rated in a 4-point scale (ranging from *1 = never* to *4 = very often*). The scale presents good psychometric properties in both the original (Rigby & Slee, 1993) and Portuguese study (Silva & Pinheiro, 2010). In this study the subscale Victim was used to assess bullying experiences.

Body Image Shame Scale – Adolescents Version (BISS-A; Duarte & Pinto-Gouveia, 2014) is a 9-item scale that assesses body image shame, including perceptions that others negatively evaluate and criticize the self because of one's body image, and body image-focused negative self-evaluations. Participants are asked to rate the items using a 5-point scale (ranging from *0 = never* to *4 = almost always*). The original scale (Duarte, Pinto-Gouveia, Ferreira, & Batista, 2014) and the adapted version for adolescents (Duarte & Pinto-Gouveia, 2014) presents good psychometric properties.

Forms of Self-Criticising/Attacking and Self-Reassuring Scale – Adolescents version (FSCRS-A; Gilbert et al., 2004) comprises 22 items and assesses self-critical and self-reassuring abilities in response to personal setbacks or failures. Items are rated on a 5-point scale (ranging from *0 = not at all like me* to *4 = extremely like me*). This scale presented good psychometric properties in both the original version (Gilbert et al., 2004) and in the Portuguese version adapted for adolescents (Salvador & Tavares, 2011). In the current study we considered the Reassured self subscale.

Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994) includes 36 items assessing disordered eating behaviours and attitudes. The EDE-Q presented good psychometric properties in the original (Fairburn & Beglin, 1994) and in its Portuguese version (Machado et al., 2014). We used the global score of the questionnaire in the current study.

The means, standard deviations and Cronbach's alphas of the measures used in the current study are reported in Table 1.

Analytic strategy

Descriptives and correlational analyses were conducted using the software SPSS (v.21 SPSS; Armonk, NY: IBM Corp.) The AMOS software (version 21, SPSS; Armonk, NY: IBM Corp) was used to examine the path model (Figure 1; Hayes, 2013; Kline, 2005), which tested the hypothesis that early memories of warmth and safeness (exogenous, independent variable) present a significant positive effect on self-reassurance, and a negative effect on bullying experiences (endogenous, mediator variables), body image shame (endogenous, mediator variable) and eating psychopathology symptoms (endogenous, dependent variable). Moreover, the model examined whether self-reassurance would moderate the association between bullying experiences and both body image shame and eating psychopathology symptoms.

The Maximum Likelihood estimation method was used. The adequacy of the model was examined considering the following model fit indices: Chi-square (χ^2); Normed Chi-Square (CMIN/DF), with values ranging from 2 to 5 revealing a good global model adjustment; Tucker Lewis Index (TLI) and Comparative Fit Index (CFI), which indicate a very good fit with values above .95; and the Root-Mean Square Error of Approximation (RMSEA) with values ≤ 0.05 indicating a very good fit and values ≤ 0.08 representing reasonable errors of approximation (Kline, 2005; Tabachnick & Fidell, 2013).

To illustrate the association between bullying experiences and both body image shame and eating psychopathology symptoms, considering distinct levels of the moderator – self-reassurance – , a graphical

representation was created with a curve for each level of the moderator (*low*, one *SD* below the mean; *medium*, mean; *high*, one *SD* above the mean; Cohen, Cohen, West, & Aiken, 2003).

Results

The correlations between the study variables are reported in Table 1. Memories of warmth and safeness in childhood were strongly positively associated with self-reassurance, and negatively associated with bullying, body image shame and eating psychopathology symptoms. Memories of warmth and safeness were negatively but weakly associated with BMI. Bullying was positively and moderately associated with body image shame and eating psychopathology symptoms. Body image shame and eating psychopathology presented a positive strong association (but that did not indicate multicollinearity).

Furthermore, the self-reassurance was negatively correlated with body image shame and eating psychopathology symptoms, with bullying experiences, and (with a weaker association) with BMI. Moreover, BMI presented positive moderate associations with body image shame and eating psychopathology symptoms.

Partial correlations between the study variables accounting for the effect of BMI were conducted and findings confirmed the direction and strength of the examined associations even when controlling for BMI.

Insert Table 1 here

The model examined through a path analysis accounted for a total of 16% of the variance of bullying experiences, 27% of the variance of self-reassurance, 22% of the variance of body image shame and 51% of the variance of eating psychopathology (Figure 1). The model fit indices provided strong evidence for the adequacy of the model ($\chi^2_{(3)} = 8.871$, $p = .031$; CMIN/df = 2.957; CFI = .994; TLI = .968; RMSEA = .057 [.015, .102]; $p = .326$).

Insert Figure 1 here

Early memories of warmth and safeness presented a significant direct effect of .52 on self-reassurance ($b_{EMWSS} = .20$; SE$b = .01$; $Z = 14.91$; $p < .001$) and of -.41 on bullying ($b_{EMWSS} = -.05$; SE$b = .00$; $Z = -10.86$; $p < .001$). Moreover, early memories of warmth and safeness presented an indirect effect of -.27 on body image

shame (CI = -.33, -.21; $p < .001$), and -.25 on eating psychopathology (CI = -.31, -.20; $p < .001$). Bullying presented a direct effect of .31 on body image shame ($b_{PRQ} = .14$; SEb = .02; $Z = 7.83$; $p < .001$), which in turn presented a direct effect of .64 on eating psychopathology ($b_{BISS} = .82$; SEb = .04; $Z = 20.74$; $p < .001$). Bullying experiences presented an indirect effect of .20 on eating psychopathology mediated by body image shame (CI = .14, .25; $p < .001$). In a negative direction, self-reassurance presented a direct effect of -.26 on body image shame ($b_{\text{Reassured self}}$= -.04; SE$b$ = .01; $Z = -6.91$; $p < .001$). Moreover, self-reassurance presented a total effect of -.29 on eating psychopathology, with a direct effect of -.13 ($b_{\text{Reassured self}}$ = -.02 SEb = .01 $Z = -4.20$; $p < .001$), and an indirect effect of -.16, mediated by body image shame (CI = -.22, -.12; $p <.001$).

The interaction term between bullying and self-reassurance presented significant direct effects of -.08 on both body image shame ($b_{\text{Reassured self}}$ = -.01 SEb = .00 $Z = -2.02$; $p = .044$) and eating psychopathology ($b_{\text{Reassured self}}$ = -.01 SEb = .00 $Z = -2.64$; $p = .008$). These effects suggest the moderator effect of self-reassurance on the association between bullying experiences and body image shame, as well on the association between bullying and eating psychopathology.

The visual inspection of the moderator effect of self-reassurance on the association between bullying experiences and body image shame (Figure 2) demonstrates that adolescents who go through bullying experiences more frequently report higher body image shame. Nonetheless, those with a higher ability to self-reassure present lower levels of body image shame, even when frequently experiencing bullying; in comparison to those with medium and especially those with lower levels of self-reassurance.

Insert Figure 2 here

The moderator effect of self-reassurance on the association between bullying and eating psychopathology (Figure 3) also suggested that adolescents with a higher ability to self-reassure present lower levels of eating psychopathology even when frequently experiencing bullying.

A final path model was conducted to understand whether self-reassurance would moderate the association between body image shame and eating psychopathology. Results indicated that the interaction term between body image shame and self-reassurance and eating psychopathology was not significant ($p > .050$), which suggests the absence of a moderator effect.

Insert Figure 3 here

Discussion

This study examined whether memories of feeling cared for, valued and soothed as a child, were associated with current compassionate abilities to soothe and reassure the self when in challenging situations. Also, we aimed at examining whether self-reassurance might operate as a buffer against the impact of bullying experiences on body image shame and eating psychopathology. These associations were examined in a sample of relatively young adolescent girls, which comprises a population identified in the literature as being at a higher risk for the development of a range of psychopathological conditions, namely eating disorders (Croll et al., 2002; Duarte et al., 2015; French et al., 1995; Gilbert & Irons, 2009; Gilbert & Thompson, 2002; Irons & Gilbert, 2005). A number of important findings can be noted. Results revealed that personal emotional memories of nurturing and soothing experiences were positively linked to self-reassurance and negatively associated with bullying experiences. Moreover, these emotional memories were associated with decreased body image shame and eating psychopathology. Thus, the present findings support previous research conducted with adolescent (Cunha et al., 2014) and adult populations (Richter et al., 2009; Matos et al., 2015) that demonstrated that memories of feeling soothed, safe and connected with significant others, are associated with self-reassurance and soothing abilities and with lower levels of psychopathology symptoms.

Furthermore, the present findings indicate that bullying experiences were negatively associated with self-nurturing abilities of soothing and reassurance in face of setbacks or difficult situations, and positively linked to body image shame and eating psychopathology. This data are also in accordance with prior research that revealed that memories of shame experiences, including bullying, are associated with poorer emotional regulation and negative psychological outcomes in adolescence (Cunha et al., 2012; Duarte et al., 2015) and also later in life (Matos & Pinto-Gouveia, 2010; Matos et al., 2013). Moreover, the current findings are in line with research about the role that early negative social experiences, especially those occurring with peers, plays on the severity of eating disorders (Ferreira et al., 2014; Matos et al., 2014).

The examined model offers important directions to understand the role of experiences of care and warmth on self-soothing and reassuring abilities, and how these may moderate the effect of bullying experiences on body image shame and eating psychopathology. Research conducted in adult populations suggests that the recall of positive emotional memories characterized by safeness, soothing and warmth, promote the capacity to be self-reassuring and caring as a way to cope with setbacks and failures (Gilbert et al., 2006; Gilbert & Procter, 2006; Matos et al., 2015). In keeping with what has been reported in the literature, the current data suggest that adolescent girls who recall being loved, cared for, safe and valued as a child, present higher self-reassurance

abilities and less body image shame and disordered eating. Our findings further suggest that self-reassuring abilities may protect against the impact of negative interpersonal experiences, which is also in line with prior research demonstrating the beneficial effect of self-compassion abilities in adolescents' mental health (Bluth et al., 2016). There is consistent evidence that bullying experiences are a common hazard among adolescents, and are associated with mental health problems, especially body image and eating related problems in adolescent girls (Engström & Norring, 2002; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000; Menzel et al., 2010). The results of this study indicate however that this association is not linear and most notably, self-reassurance may have a buffer effect in it. In fact, our results suggest that adolescent girls who are able to offer themselves the comfort, warmth and support to cope with bullying situations, present a lower tendency to evaluate their body image as a source of shame and to engage in disordered eating.

These findings have important preventive and therapeutic implications. Results indicate that the perceived quality of early developmental environments should be carefully assessed as these may have an important impact on adolescents' ability to be self-soothing and reassuring. Also, findings support the relevance of therapeutic interventions that target the development of compassionate abilities that involve a genuine concern and commitment to foster others' and one's wellbeing and the cultivation of feelings of self-directed warmth, safeness and contentment (e.g., Compassion-Focused Therapy; Gilbert, 2002; Gilbert & Irons, 2005, 2009). There is now evidence that these therapeutic approaches may be especially effective in individuals with eating disorders with high levels of shame and self-criticism (e.g., Goss & Allan, 2010; Gale, Gilbert, Read & Goss, 2014). Together with this evidence, the current study's findings offer tantalizing suggestions that helping adolescents build self-soothing compassionate abilities may counteract the effect of negative interpersonal interactions and prevent the development of body image disturbances and disordered eating.

However, the current findings are derived from a cross-sectional design and thus these suggestions should be investigated in future research using longitudinal and experimental designs. The model tested in this study is also inherently limited as it excludes other important social and contextual variables and processes operating in the development and protection against body image difficulties and eating psychopathology. Also, although self-report data may facilitate honest responding, it may suffer from biases, and thus future studies should include data obtained from other assessment methods (e.g., structured interviews) and other sources (e.g., parents and teachers). Moreover, although adolescent girls are a particularly vulnerable population for body image and eating-related difficulties, future research should examine the current model in male adolescents and

consider possible distinct outcomes considering intra and inter-individual differences. Future research should also consider the role that cultural/racial differences may play in the examined associations.

This is the first study investigating memories of warmth and safeness, and self-reassurance abilities, as resilience factors to social threat and its impact on body image shame and disordered eating. The current data support the relevance of addressing relational experiences within the family and with peers, and of cultivating emotion regulation through compassion, when working with adolescents at both prevention and intervention levels.

Compliance with Ethical Standards

1.Disclosure of potential conflicts of interest

The authors declare that they have no conflict of interest.

2.Research involving Human Participants and/or Animals

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

3.Informed consent

Informed consent was obtained from all individual participants included in the study.

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Table 1

Cronbach's alphas, descriptive statistics and correlations between the study measures (N = 609)

	α	*M*	*SD*	EMWSS	FSCRS Reass. Self	PRQ Victim	BISS	EDEQ
EMWSS	.97	61.44	18.58	1				
FSCRS Reass. Self	.86	18.37	7.10	.52***	1			
PRQ Victim	.80	6.61	2.20	-.41***	-.23***	1		
BISS	.96	0.90	0.98	-.32***	-.33***	.39***	1	
EDEQ	.95	1.43	1.26	-.31***	-.34***	.36***	.70***	1
BMI		20.90	3.29	-.14***	-.10**	.02	.30***	.33***

*** $p < .001$

EMWSS: Early Memories of Warmth and Safeness Scale; FSCRS Reass. Self: Reassured Self subscale of the Forms of Self-criticizing/attacking and Self-reassuring Scale; PRQ Victim: Victim subscale of the Peers Relations Questionnaire; BISS: Body Image Shame Scale; EDEQ: Eating Disorder Examination Questionnaire global score.

Figure 1. Path model showing the association between early memories of warmth and safeness, bullying victimization experiences, self-reassurance, body image shame and eating psychopathology, with standardized estimates and square multiple correlations (R^2; N = 609).

Figure 2. Graphic representation of the moderator effect of self-reassurance (FSCRS) on the association between bullying victimization experiences (PRQ Victim) and body image shame (BISS).

Figure 3. Graphic representation of the moderator effect of self-reassurance (FSCRS) on the association between bullying victimization experiences (PRQ Victim) and eating psychopathology (EDEQ).

Figure

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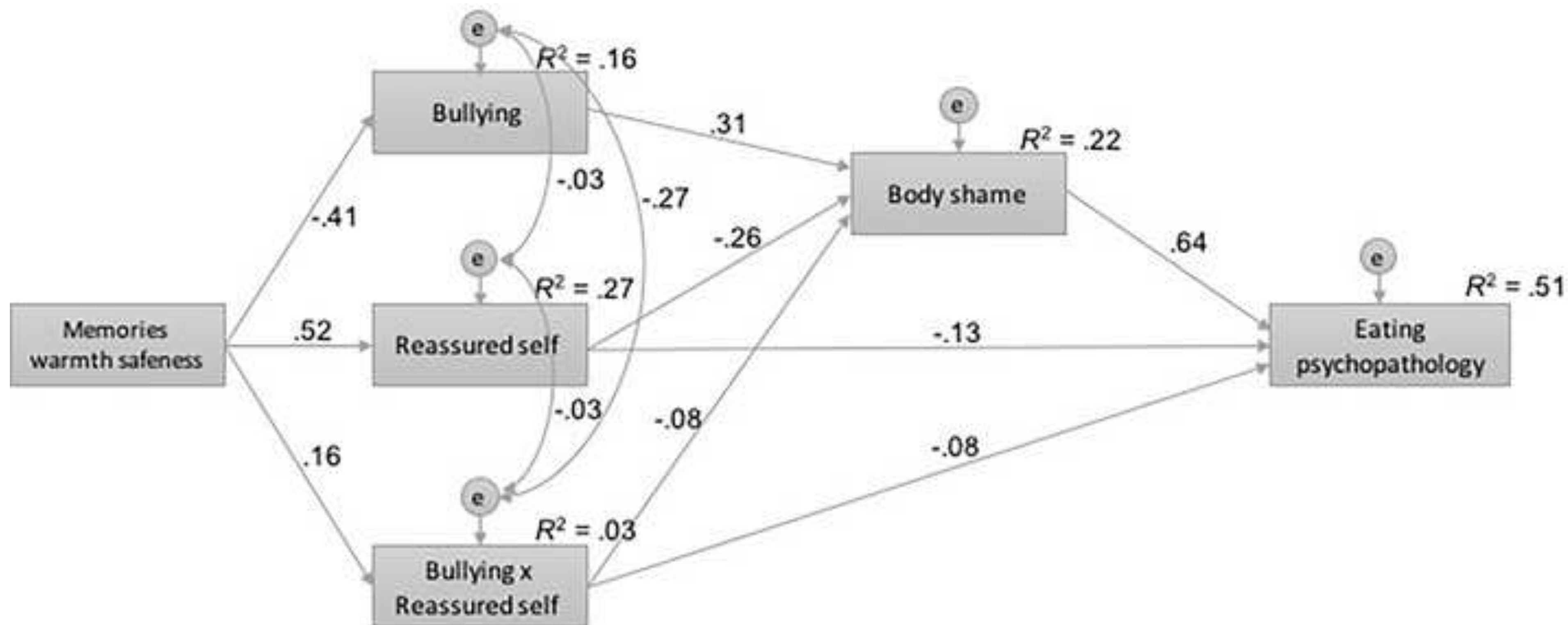

Figure

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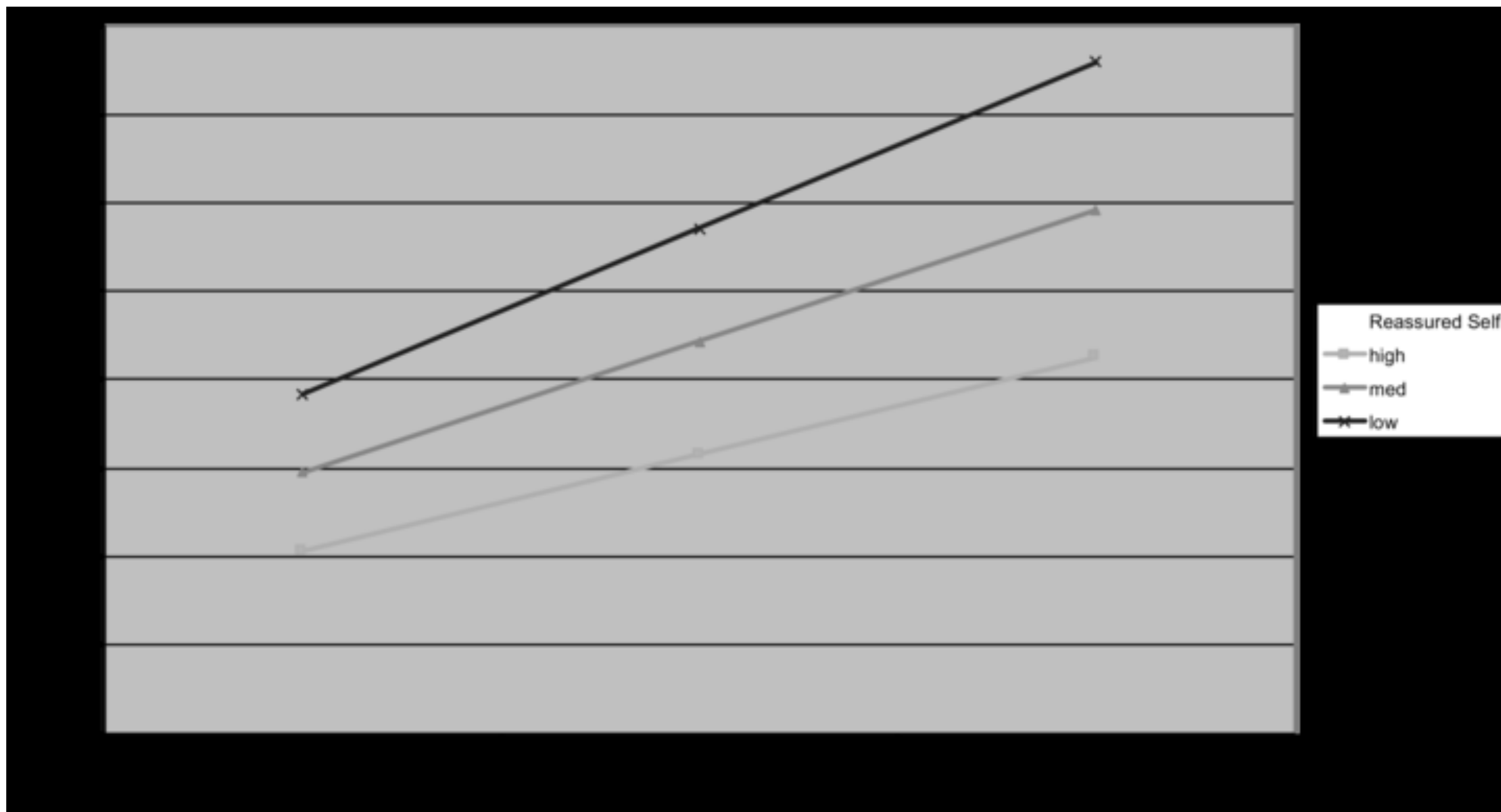

Figure

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