

Kindness begins with yourself: The role of self-compassion in adolescent body satisfaction and eating pathology

Rachelle Pullmer MA¹  | Jennifer S. Coelho PhD^{2,3} | Shannon L. Zaitsoff PhD¹

¹Department of Psychology, Simon Fraser University, Burnaby, British Columbia, Canada

²Provincial Specialized Eating Disorders Program for Children & Adolescents, British Columbia Children's Hospital, Vancouver, British Columbia, Canada

³Department of Psychiatry, University of British Columbia, Vancouver, British Columbia, Canada

Correspondence

Rachelle Pullmer, Weight and Eating Laboratory, Simon Fraser University, RCB 5305, 8888 University Drive, Burnaby, BC V5A 1S6, Canada.
Email: rpullmer@sfu.ca

Funding information

BC Children's Hospital Research Institute; Canadian Institutes of Health Research; Provincial Health Services Authority; Simon Fraser University

Abstract

Objective: A wealth of evidence indicates that self-compassion is linked with positive psychological outcomes; however, little is known about the process through which self-compassion exerts its effect. The primary purpose of this research was to investigate the direct and indirect impact of self-compassion on body satisfaction and eating pathology in adolescents.

Method: Two hundred and thirty-eight students were recruited from three local high schools ($M_{age} = 16.49$, 43.7% boys). All participants completed the Self-Compassion Scale (SCS), Hopkins Symptom Checklist (SCL-5), Body Areas Satisfaction Scale (BASS), and Eating Disorder Examination Questionnaire - Adolescent Version (EDE-Q) at baseline. The SCL-5, BASS, and EDE-Q were completed 4 months later.

Results: Self-compassion was positively associated with body satisfaction and negatively associated with psychological distress and eating pathology in boys and girls at both time points. Longitudinal conditional process analyses revealed that self-compassion predicted changes in body satisfaction and eating pathology through changes in psychological distress for girls only. Notably, self-compassion was higher in boys than in girls.

Discussion: Results underscore how self-compassion may be an important factor to target in fostering a positive body image and preventing disordered eating in adolescents.

KEYWORDS

adolescents, body satisfaction, eating pathology, psychological distress, self-compassion

1 | INTRODUCTION

A dearth of research exists on eating disorder prevention, with only two studies producing moderate reductions in eating disorder onset (Stice, Becker, & Yokum, 2013). In order to maximize the public health impact of prevention efforts, it is imperative to uncover transdiagnostic factors that can foster resilience and yield large and persistent reductions in body dissatisfaction and eating pathology. One promising factor that appears to have widespread implications for a multitude of mental health problems is self-compassion, which prospectively predicts improved psychological outcomes and health behaviors across the lifespan (Zessin, Dickhauser, & Garbade, 2015). Self-compassion is defined by three interacting components demonstrated during times of

suffering and failure: (a) adopting an attitude of self-kindness rather than judgment, (b) viewing pain as a common human experience rather than as isolating, and (c) being mindful as opposed to ruminating on painful thoughts or experiences (Neff, 2003).

Although the adult literature demonstrates that self-compassion is a malleable construct that has robust associations with health outcomes, only a handful of studies have explored the longitudinal role of self-compassion in body satisfaction and eating pathology (e.g., Stutts & Blomquist, 2018). Notably, few studies have investigated the relationship between self-compassion and body image in adolescents (Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011; Rodgers et al., 2017, 2018), and not one study to date has examined the link between self-compassion and disordered eating in youth. Consequently, the temporal

process by which self-compassion impacts body satisfaction and eating pathology remains unknown (Braun, Park, & Gorin, 2016).

1.1 | Mediating role of psychological distress

A recently conducted meta-analysis established an inverse relationship between self-compassion and psychological distress in adolescents (Marsh, Chan, & MacBeth, 2017). Further, prospective research provides support for the notion that psychological distress predicts body satisfaction and eating pathology (Paxton, Eisenberg, & Neumark-Sztainer, 2006; Stice, Gau, Rohde, & Shaw, 2017). Considering that depressive and anxiety symptoms are among the most common mental health issues in adolescents (Cummings, Caporino, & Kendall, 2014) and are strongly linked with self-compassion, body dissatisfaction, and eating pathology, they represent an important pathway to consider in determining how self-compassion exerts its effect over time.

1.2 | Moderating role of sex

Psychological distress, body dissatisfaction, and disordered eating are more prevalent in girls than in boys (American Psychiatric Association, 2013). Despite these differences, eating disorders constitute a significant mental health problem for boys (Paxton et al., 2006; Swanson, Crow, Le Grange, Swendsen, & Merikangas, 2011). To our knowledge, only two cross-sectional studies have investigated whether the role of self-compassion varies for boys versus girls (Bluth & Blanton, 2015; Bluth, Campo, Futch, & Gaylord, 2016), one of which categorized their sample according to gender as opposed to assigned sex at birth (Bluth et al., 2016). While one study found no differences in the association between self-compassion and increased negative affect for boys and girls (Bluth & Blanton, 2015), another study demonstrated that self-compassion may be more strongly associated with decreased anxiety in self-identified boys when compared to girls (Bluth et al., 2016). Due to conflicting findings, further research is needed to clarify how the role of self-compassion differs according to sex.

With respect to sex differences in self-compassion, a recently conducted meta-analysis revealed that self-compassion is slightly higher for men than for women (Yarnell et al., 2015). While some research provides support for this notion in adolescents (e.g., Cunha, Xavier, & Castilho, 2016), other studies reveal no sex differences (e.g., Neff & McGehee, 2010). In order to adequately inform future research and interventions, it is imperative to elucidate whether boys have higher levels of self-compassion than girls.

1.3 | Primary research objectives

To date, the longitudinal effect of self-compassion on eating pathology has not been studied in youth. Thus, although self-compassion protects against a maladaptive body image and disordered eating in women, little is known about the relationship between these variables in boys and girls. As such, research is needed to examine whether self-compassion is indeed linked with body satisfaction and eating pathology and to investigate the process through which self-compassion exerts its effect.

The current study sought to fill these primary gaps in the literature at baseline and 4 months later.

1.4 | Hypotheses

1. Self-compassion will be higher in boys than in girls.
2. Self-compassion will be positively associated with body satisfaction and negatively associated with psychological distress and eating pathology in boys and girls at both time points.
3. Changes in psychological distress will mediate the effect of self-compassion on increases in body satisfaction and decreases in eating pathology.
4. Sex will moderate the indirect effect of self-compassion on changes in body satisfaction and eating pathology through changes in psychological distress as well as the direct relationships between these variables.

2 | METHOD

2.1 | Participants and procedure

Five hundred and four students were invited to participate in the study. Of these, 311 adolescents (61.7%) consented at Time one (T1) and 238 participants (76.5% of the initial sample) completed Time two (T2) questionnaires. The final sample was comprised of 134 girls and 104 boys between the ages of 13 and 18 ($M = 16.49$, $SD = 1.23$). There were no significant differences on main study variables between T2 completers and noncompleters (all $ps > 0.26$).

All procedures were approved by the research ethics boards (REBs) at relevant institutions as well as by two school districts. Data were collected as part of a larger study investigating the role of body checking on eating pathology (Zaitsoff, Pullmer, & Coelho, submitted). Participants were recruited from three secondary schools. One week before data collection, a lecture was conducted for students in their respective classes on basic research methodology. A brief overview of the current study was also provided and study-related forms were subsequently distributed.

Initial data collection took place during one class period and T2 data collection took place 14–16 weeks later. Adolescents completed questionnaires assessing socio-demographic variables and self-compassion at T1. Measures of psychological distress, body satisfaction, and eating pathology were completed at both time points. Participants also had their height and weight measured by research personnel in a private room. Measurements were taken in light clothes without shoes and were not disclosed to participants.

2.2 | Measures

2.2.1 | Participant characteristics

Sociodemographic data was obtained from a questionnaire developed for this study. As mandated by the Canadian Institutes of Health Research (2018), it is essential to account for both sex and gender in

health research. In accordance with these guidelines, participants reported their assigned sex at birth as well as their gender identity. Participants were also asked if they had ever been diagnosed with an eating disorder, and if so, to list the diagnosis and any past or current treatment.

2.2.2 | Anthropometric measurements

Weight and height (measured to the nearest 0.1 kg/0.1 cm) were used to calculate BMI (kg/m^2) at T1 and T2. Using reference values from the World Health Organization, the 50th BMI percentile was computed for every participant (Onis et al., 2007). Percent median BMI values (%mBMI) were calculated to examine BMI in relation to the 50th BMI percentile (e.g., Madden et al., 2015). Values over 100 indicate a higher than median BMI for age and sex, whereas values under 100 indicate a lower than median BMI for age and sex.

2.2.3 | Self-compassion

Trait self-compassion was assessed with the 26-item Self-Compassion Scale (SCS; Neff, 2003). Responses range from 1 (*almost never*) to 5 (*almost always*) and items are averaged to yield a total score and six subscale scores (i.e., self-kindness, common humanity, mindfulness, self-judgment, isolation, and over-identification). Higher total scores indicate a more self-compassionate mindset. The SCS has demonstrated excellent psychometric findings in numerous samples, including adolescents (e.g., Cunha et al., 2016). Internal consistency (α) in the current sample was .93.

2.2.4 | Psychological distress

The Hopkins Symptom Checklist (SCL-5; Aasheim et al., 2012) is a 5-item self-report questionnaire that assesses depressive and anxiety symptoms over the past 2 weeks. Each item is rated on a 4-point Likert scale ranging from 1 (*not bothered*) to 4 (*very bothered*), with higher mean scores indicating higher psychological distress. In addition to demonstrating excellent psychometric findings in adults, the SCL-5 is widely used in adolescents (Skrove, Romundstad, & Indredavik, 2013). Internal consistency in the current sample was .87 at T1 and .84 at T2.

2.2.5 | Body satisfaction

Perceived body satisfaction was assessed with the 9-item Body Areas Satisfaction Scale (BASS; Brown, Cash, & Mikulka, 1990). Participants rated their degree of body satisfaction with specific body parts and appearance on a 5-point Likert scale ranging from 1 (*very dissatisfied*) to 5 (*very satisfied*). Items were averaged to yield a mean score, with higher scores indicating greater body satisfaction. Strong psychometric findings of the BASS have been demonstrated in adults and adolescents (Cash, 2002; Marco, Perpina, Roncero, & Botella, 2017). Internal consistency was demonstrated at both time points in the current sample ($\alpha_{T1} = .86$; $\alpha_{T2} = .87$).

2.2.6 | Eating pathology

The Eating Disorder Examination Questionnaire (EDE-Q) - Adolescent Version is a 36-item self-report questionnaire adapted and validated for use in boys and girls (Mond et al., 2014). The EDE-Q assesses eating pathology over the past 28 days on a 7-point scale. A global score was derived from the average of the 22 subscale items, with higher scores indicating higher levels of eating pathology (Aardoom, Dingemans, Slof Op't Landt, & Van Furth, 2012). Internal consistency in the current sample was .96 at both time points.

2.3 | Statistical analyses

Univariate outliers were assessed through inspection of Z-scores (Tabachnik & Fidell, 2013) and all cases were deemed appropriate. Normality assumptions were satisfied for all variables. Given the low proportion of item level missing data across all participants and measures at both time points (0.26%), participants missing >10% of items on a particular questionnaire were excluded from analyses (i.e., complete case analysis; Graham, 2012).

Johnson and colleagues (2009) provide concrete recommendations for the incorporation of sex and gender-based analyses in health research. Specifically, they describe how a necessary first step in conducting sex and gender-sensitive research is to begin with analyses aimed at determining whether sex differences exist. As such, all participants were included in analyses based on their assigned sex at birth. Descriptive statistics were calculated for anthropometric measurements and main study variables. As indicated by an independent samples *t*-test (equal variances not assumed), age did not differ according to sex ($t_{[210]} = -0.56$, $p = .59$, $d = 0.23$). Independent samples *t*-tests were therefore conducted to examine whether boys had higher SCS total scores than girls. To reduce the risk of Type I error for multiple comparisons, the Bonferroni correction was applied ($\alpha = .05$ divided by the number of comparisons; $.05/7 = .007$). Levene's test indicated no violations in the homogeneity of variance assumption. Pearson correlations were computed to investigate associations between main study variables for boys and girls.

Two moderated mediation models were employed to examine hypotheses 3 and 4, whereby the strength of the relationships between self-compassion, psychological distress, and relevant outcome variables (i.e., body satisfaction and eating pathology) were tested as being conditional on sex (Hayes, 2017). Conditional process analyses were conducted using the PROCESS macro in SPSS (Version 3, Model 59; Hayes, 2017) to examine the following research questions: (a) Does self-compassion *indirectly* effect changes in body satisfaction (Model 1) and eating pathology (Model 2) through changes in psychological distress? And (b) Does sex *moderate* the relationships between these variables?

The projected sample size needed with an expected R^2 of .39 was approximately $N = 200$ boys and girls (Power > .80; Preacher, Rucker, & Hayes, 2007). Thus, our sample size of 238 participants was adequate. For all analyses, baseline self-compassion was entered as the independent variable (X), T2 psychological distress was entered

TABLE 1 Main study variables according to sex

	Boys		Girls	
	T1: M (SD)	T2: M (SD)	T1: M (SD)	T2: M (SD)
Age	16.45 (1.29)	16.75 (1.30)	16.54 (1.19)	16.83 (1.20)
Self-compassion	3.16 (0.67)	-	2.89 (0.71) ^a	-
Psychological distress	1.85 (0.69)	1.71 (0.60) ^b	2.20 (0.87) ^a	2.21 (0.75)
Body satisfaction	3.59 (0.73)	3.63 (0.71)	3.18 (0.71) ^a	3.20 (0.72)
Eating pathology	0.95 (1.00)	0.80 (0.82) ^b	1.91 (1.40) ^a	1.72 (1.28) ^b

Note. Higher mean scores indicate higher total self-compassion, psychological distress, body satisfaction, and eating pathology.

^aSignificant difference between boys and girls (all $ps < .001$).

^bValues changed from T1 to T2 (all $ps < .05$).

as the mediating variable (M), and sex was entered as the moderating variable (W). Dependent variables (Y) included T2 body satisfaction and eating pathology (bootstrap $N = 10,000$). To account for change over time, psychological distress and dependent variables at T1 were included as covariates in models of M and Y (Hayes, 2017). PROCESS adjusts for heteroscedasticity using an HC3 estimator and provides unstandardized regression coefficients and standard errors. Conditional effects and moderated mediation analyses (depicted by the index of moderated mediation) were considered significant when zero was not contained in the 95% percentile bootstrap confidence interval (PB CI).

3 | RESULTS

3.1 | Descriptive findings and sex differences

Self-identified ethnic-cultural breakdown was as follows: 41.2% Asian, 35.7% Caucasian, 10.9% mixed background, 5.0% "Other", 5.0% First Nations, Hispanic or African, and 2.1% did not respond. With respect to gender identity, 2.1% of assigned girls at birth self-identified with a different gender identity (0.8% as boys, 0.8% as transgender, 0.4% as "other" [i.e., nonbinary]) and 0.4% of the sample did not respond.

The mean %mBMI was 103% at both time points for boys ($SD_{T1} = 0.16$; $SD_{T2} = 0.17$) and 105% at baseline and 104% at follow-up for

girls ($SD = 0.19$ at both time points). The majority of the sample (97.5%) did not report a formal eating disorder diagnosis. The following compensatory behaviors were reported on the EDE-Q: laxative/diuretic use (1% boys, 3% girls), self-induced vomiting (0% boys, 2.2% girls), and diet pill use (0% boys, 1.5% girls). Of the sample, 7.6% of boys and 8.2% of girls reported binge-eating episodes in the past 28 days. As indicated in Table 1, boys had higher SCS total scores than girls ($t_{233} = 3.00$, $p < .001$, $d = .39$).

3.2 | Relationships between main study variables

For both boys and girls, self-compassion was positively associated with body satisfaction and negatively associated with psychological distress and eating pathology at both time points (Table 2).

3.3 | The effect of psychological distress for boys and girls

As can be seen in Table 3, self-compassion indirectly influenced changes in body satisfaction (Model 1; Table 4) and eating pathology (Model 2; Table 5) through changes in psychological distress for girls only. Self-compassion and psychological distress did not predict different magnitudes of change in outcome variables for boys versus girls (all $ps > .19$). There was also no evidence that sex moderated the

TABLE 2 Correlations among main study variables for boys and girls

	1	2	3	4	5	6	7
Time one							
1. Self-compassion	-	-0.66	0.58	-0.42	-0.57	0.54	-0.38
2. Psychological distress	-0.58	-	-0.45	0.37	0.69	-0.52	0.41
3. Body satisfaction	0.42	-0.47	-	-0.58	-0.38	-0.76	-0.51
4. Eating pathology	-0.36	0.46	-0.61	-	0.27	-0.43	0.77
Time two							
5. Psychological distress	-0.39	0.68	-0.26	0.20*	-	-0.49	0.37
6. Body satisfaction	0.36	-0.35	0.77	-0.48	-0.34	-	-0.63
7. Eating pathology	-0.34	0.47	-0.53	0.80	0.28	-0.49	-

Note. Area below diagonal shows Pearson's correlations for boys; area above shows correlations for girls. All correlations significant at the $p < .01$ level, except * $p < .05$.

TABLE 3 Conditional indirect effects of self-compassion through psychological distress

	Girls		Boys		Index of moderated mediation	
	Coeff (SE)	95% PB CI	Coeff (SE)	95% PB CI	Coeff (SE)	95% PB CI
Body satisfaction	0.04 (0.02)	0.00 to 0.09 ^a	0.01 (0.02)	−0.02 to 0.05	0.03 (0.02)	−0.01 to 0.08
Eating pathology	−0.06 (0.04)	−0.14 to −0.01 ^a	−0.01 (0.01)	−0.04 to 0.01	−0.05 (0.04)	−0.14 to 0.00

Note. Bootstrap $N = 10,000$.

^aPB CI does not contain zero.

indirect effects of self-compassion. Alternate conditional process models revealed no evidence for the reverse direction of effects; that is, self-compassion did not predict changes in psychological distress through body satisfaction or eating pathology.

4 | DISCUSSION

This research represents an innovative contribution to the self-compassion literature on multiple fronts. Not only was this the first study to investigate the longitudinal effect of self-compassion on body satisfaction and eating pathology in adolescents, but it was also the first empirical examination of how self-compassion might exert its effect. Consistent with Hypothesis 1, boys had higher self-compassion than girls at baseline. As proposed in Hypothesis 2, self-compassion was positively related to body satisfaction and negatively related to eating pathology in boys and girls. In partial accordance with Hypothesis 3, higher self-compassion protected girls against declines in body satisfaction and increases in eating pathology over a 4-month period. Notably, changes in psychological distress mediated the relationships between these variables. Contrary to Hypotheses 3 and 4, self-compassion did not predict changes in outcome variables through psychological distress for boys and sex did not moderate the role of self-compassion.

The results of this study are consistent with previous research indicating that self-compassion protects against a maladaptive body image and eating pathology in adults (Braun et al., 2016; Kelly, Miller, & Stephen, 2016). This is the first study to highlight a pathway through which self-compassion exerts its effect and is in line with

prior research in adolescents demonstrating a strong negative relation between self-compassion and psychological distress (Marsh et al., 2017), as well as the subsequent impact of psychological distress on body satisfaction and eating pathology (Stice et al., 2017). The absence of reverse direction of effects provides further support for the directionality of observed relationships.

With respect to sex differences in self-compassion, our results are concordant with research suggesting that self-compassion is higher in males than in females (Bluth et al., 2016; Yarnell et al., 2015). These findings are also in line with research on sex differences in internalizing symptoms, which underscore a dramatic increase in girls. Although theories on the development of sex differences are inconclusive, research implicates a complex interplay between numerous biopsychosocial factors (e.g., genetics, rumination, interpersonal stress; Nolen-Hoeksema & Hilt, 2009). It is possible that lower self-compassion in girls has a similar multifaceted etiology. It may also be that sex differences in self-compassion are due, in part, to varied gender-role norms. To elaborate, it is theorized that self-identified women are encouraged to be nurturing and sacrifice their own needs for others. Indeed, research indicates that women exhibit greater compassion for *others* than men and it is posited that this emphasis on compassion does not necessarily extend to how women respond toward themselves (Yarnell et al., 2015).

Given the strong link between self-compassion and wellbeing, it is somewhat surprising that self-compassion did not have an indirect effect on body satisfaction and eating pathology for boys. This lack of replication may be partly accounted for by sex differences in main study variables. It may also be that self-compassion operates through alternate pathways in boys (e.g., pathways that influence muscularity-oriented

TABLE 4 Ordinary least squares regression coefficients for Model 1

X (predictor)	M (changes in psychological distress)			Y (body satisfaction)		
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Self-compassion	0.08	0.57	.81	0.00	0.16	1.00
Sex	0.69	0.31	.03	−0.61	0.43	.89
Self-compassion X sex	−0.13	0.10	.18	0.02	0.10	.89
T1 body satisfaction	0.02	0.05	.69	0.69	0.05	<.001
T1 psychological distress	0.52	0.05	<.001	0.02	0.06	.67
T2 psychological distress	−	−	−	−0.14	0.17	.42
T2 psychological distress X sex	−	−	−	−0.03	0.10	.73
	$R^2 = 0.54$			$R^2 = 0.65$		
	$F(5, 225) = 52.55, p < .001$			$F(7, 223) = 60.27, p < .001$		

Note. $n = 231$.

TABLE 5 Ordinary least squares regression coefficients for Model 2

X (predictor)	M (changes in psychological distress)			Y (global eating pathology)		
	Coeff.	SE	p	Coeff.	SE	p
Self-compassion	0.08	0.14	.55	−0.05	0.20	.81
Sex	0.73	0.29	.01	−0.46	0.63	.46
Self-compassion X sex	−0.14	0.09	.13	0.08	0.13	.61
T1 global eating pathology	−0.04	0.07	.25	0.69	0.05	<.001
T1 psychological distress	0.53	0.07	<.001	0.06	0.09	.49
T2 psychological distress	−	−	−	−0.07	0.21	.75
T2 psychological distress X sex	−	−	−	−0.19	0.13	.19
	$R^2 = 0.54$			$R^2 = 0.70$		
	$F(5, 226) = 51.37, p < .001$			$F(7, 224) = 55.93, p < .001$		

Note. $n = 232$.

concerns or behavioral outcomes, such as substance use and aggression; Barry, Loflin, & Doucette, 2015). While the current findings indicate that self-compassion may have a more potent effect on body image and eating pathology for girls, further research is needed to substantiate this speculation.

Given that research on adolescent self-compassion is nascent, this study focused on sex differences. Important next steps include analyzing gender-specific measures of body satisfaction and other layers of gender, such as gender role orientation. Another pertinent consideration is the potential interaction between sex, gender, and age, as it is possible that the impact of self-compassion would be more robust across sex and/or gender at a younger age than that of the current sample. In terms of study limitations, while alternate model analyses indicated that self-compassion did not indirectly effect psychological distress through body satisfaction and eating pathology, replication of the study findings over three time points would be valuable for fully inferring directionality (Hayes, 2017). It is also important to note that 38% of recruited adolescents did not participate in the study. While this was in part due to differential attendance at recruitment and T1, one cannot negate the potential for sampling bias and its impact on generalizability.

From a clinical standpoint, research indicates that interventions are effective in increasing self-compassion and producing positive psychological outcomes (Bluth & Eisenlohr-Moul, 2017; Neff & Germer, 2013). Although findings from the adult literature are highly informative, alternate considerations likely apply for adolescents (Neff & McGehee, 2010). The current study, in conjunction with extant research, provides support for the notion that interventions focused on increasing self-compassion and decreasing psychological distress may influence eating disorder risk factors. By continuing to explicate the role of self-compassion, we can ultimately develop and implement programs to optimize health outcomes across the lifespan.

5 | CONCLUSION

The present study extends limited research on adolescent self-compassion by providing evidence for the role that self-compassion

may play in protecting against body dissatisfaction and eating pathology. Importantly, this study underscores psychological distress as a potentially pertinent pathway through which self-compassion exerts its effect, particularly in girls. Noting that eating pathology constitutes an important public health concern, it is essential that prevention efforts focus on critical developmental periods. Given that self-compassion has been deemed a malleable trait, it may represent a crucial factor to target in large-scale health initiatives aimed at stemming the tide of body dissatisfaction and eating pathology.

ACKNOWLEDGMENTS

This article is based on Rachele Pullmer's doctoral dissertation. This research was conducted in the context of a larger study funded by the Mental Health and Concurrent Disorders Clinical and Translational Research Seed Grant from the Provincial Health Services Authority/BC Children's Hospital Research Institute (Principal Investigators: Dr. Shannon Zaitsoff and Dr. Jennifer Coelho; Clinical Trainee: Rachele Pullmer) and Dr. Shannon Zaitsoff's Departmental Research Grant (Simon Fraser University). The Vanier Canada Graduate Scholarship, awarded to Rachele Pullmer from the Canadian Institutes of Health Research, also supported this project. We would like to thank Dr. Alexander Chapman, Dr. Allison Kelly, and Dr. Brent McFerran for their involvement and feedback on Rachele Pullmer's dissertation. Thanks are also due to Sarah Anderson, Lindsay Samson, Jason Chung, Sherene Balanji, Laurissa Wilson, Avarna Fernandes, and Janet Suen. Importantly, thank you to the schools, teachers, and students who participated in this study.

DATA ACCESSIBILITY

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Rachele Pullmer  <https://orcid.org/0000-0001-6252-7260>

REFERENCES

- Aardoom, J. J., Dingemans, A. E., Slof Op't Landt, M. C., & Van Furth, E. F. (2012). Norms and discriminative validity of the eating disorder examination questionnaire (EDE-Q). *Eating Behaviors, 13*, 305–309.
- Aasheim, V., Waldenstrom, U., Hjelmsstedt, A., Rasmussen, S., Pettersson, H., & Schytt, E. (2012). Associations between advanced maternal age and psychological distress in primiparous women, from early pregnancy to 18 months postpartum. *An International Journal of Obstetrics and Gynaecology, 119*, 1108–1116.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Barry, C. T., Loflin, D. C., & Doucette, H. (2015). Adolescent self-compassion: Associations with narcissism, self-esteem, aggression, and internalizing symptoms in at-risk males. *Journal of Personality and Individual Differences, 77*, 118–123.
- Bluth, K., & Blanton, P. W. (2015). The influence of self-compassion on emotional well-being among early and older adolescent males and females. *The Journal of Positive Psychology, 10*(3), 219–230.
- Bluth, K., Campo, R. A., Futch, W. S., & Gaylord, S. A. (2016). Age and gender differences in the associations of self-compassion and emotional well-being in a large adolescent sample. *Journal of Youth and Adolescence, 46*, 840–853.
- Bluth, K., & Eisenlohr-Moul, T. A. (2017). Response to a mindful self-compassion intervention in teens: A within-person association of mindfulness, self-compassion, and emotional well-being outcomes. *Journal of Adolescence, 57*, 108–118.
- Braun, T. D., Park, C. L., & Gorin, A. (2016). Self-compassion, body image, and disordered eating: A review of the literature. *Body Image, 17*, 117–131.
- Brown, T. A., Cash, T. F., & Mikulka, P. J. (1990). Attitudinal body-image assessment: Factor analysis of the body-self relations questionnaire. *Journal of Personality Assessment, 55*, 135–144.
- Canadian Institutes of Health Research. (2018, March 1). How to integrate sex and gender into research. Retrieved from <http://www.cihr-irsc.gc.ca/e/50836.html>.
- Cash, T. F. (2002). Cognitive-behavioural perspectives on body image. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 38–46). New York, NY: Guilford Press.
- Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin, 140*, 816–845.
- Cunha, M., Xavier, A., & Castilho, P. (2016). Understanding self-compassion in adolescents: Validation study of the self-compassion scale. *Personality and Individual Differences, 93*, 56–62.
- Graham, J. W. (2012). *Missing data: Analysis and design*. New York, NY: Springer.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: The Guilford Press.
- Johnson, J. L., Greaves, L., & Repta, R. (2009). Better science with sex and gender: Facilitating the use of a sex and gender-based analysis in health research. *International Journal for Equity in Health, 8*, 1–11.
- Kelly, A. C., Miller, K. E., & Stephen, E. (2016). The benefits of being self-compassionate on days when interactions with body-focused others are frequent. *Body Image, 19*, 195–203.
- Madden, S., Miskovic-Wheatley, J., Wallis, A., Kohn, M., Lock, J., LeGrange, D., ... Touyz, S. (2015). A randomized controlled trial of in-patient treatment for anorexia nervosa in medically unstable adolescents. *Journal of Eating Disorders, 3*, 415–427. <https://doi.org/10.1186/2050-2974-3-51-044>
- Marco, J. H., Perpina, C., Roncero, M., & Botella, C. (2017). Confirmatory factor analysis and psychometric properties of the Spanish version of the multidimensional body-self relations questionnaire-appearance scales in early adolescents. *Body Image, 21*, 15–18.
- Marsh, I. C., Chan, S. W., & MacBeth, A. (2017). Self-compassion and psychological distress in adolescents – A meta-analysis. *Mindfulness, 9*, 1011–1027. <https://doi.org/10.1007/s/12671-017-0850-7>
- Mond, J., Hall, A., Bentley, C., Harrison, C., Gratwick-Sarll, K., & Lewis, V. (2014). Eating-disordered behavior in adolescent boys: Eating disorders examination questionnaire norms. *International Journal of Eating Disorders, 47*, 335–341.
- Mosewich, A. D., Kowalski, K. C., Sabiston, C. M., Sedgwick, W. A., & Tracy, J. L. (2011). Self-compassion: A potential resource for young women athletes. *Journal of Sport & Exercise Psychology, 33*, 103–123.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223–250.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69*, 28–44.
- Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*, 225–240.
- Nolen-Hoeksema, S., & Hilt, L. M. (2009). Gender differences in depression. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (pp. 386–404). New York, NY: Guilford Press.
- Onis, M., Onyango, A., Borghi, E., Siyam, A., Nishida, C., & Siekmann, J. (2007). Development of a WHO growth reference for school-aged children and adolescents. *Bulletin of the World Health Organization, 85*, 660–667.
- Paxton, S. J., Eisenberg, M. E., & Neumark-Sztainer, D. (2006). Prospective predictors of body dissatisfaction in adolescent girls and boys: A five-year longitudinal study. *Developmental Psychology, 42*, 888–899.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42*, 185–227.
- Rodgers, R. F., Donovan, E., Cousineau, T., Yates, K., McGowan, K., Cook, E., ... Franko, D. L. (2018). BodiMojo: Efficacy of a mobile-based intervention in improving body image and self-compassion among adolescents. *Journal of Youth and Adolescence, 47*, 1363–1372.
- Rodgers, R. F., Franko, D. L., Donovan, E., Cousineau, T., Yates, K., McGowan, K., ... Lowy, A. S. (2017). Body image in emerging adults: The protective role of self-compassion. *Body Image, 22*, 148–155.
- Skrove, M., Romundstad, P., & Indredavik, M. S. (2013). Resilience, lifestyle and symptoms of anxiety and depression in adolescence: The young-HUNT study. *Social Psychiatry and Psychiatric Epidemiology, 48*, 407–416.
- Stice, E., Becker, C. B., & Yokum, S. (2013). Eating disorder prevention: Current evidence-base and future directions. *International Journal of Eating Disorders, 46*, 478–485.
- Stice, E., Gau, J. M., Rohde, P., & Shaw, H. (2017). Risk factors that predict future onset of each DSM-5 eating disorder: Predictive specificity in high-risk adolescent females. *Journal of Abnormal Psychology, 126*, 38–51.
- Stutts, L. A., & Blomquist, K. K. (2018). The moderating role of self-compassion on weight and shape concerns and eating pathology: A longitudinal study. *International Journal of Eating Disorders, 51*, 879–889. <https://doi.org/10.1002/eat.22880>
- Swanson, S. A., Crow, S. J., Le Grange, D., Swendsen, J., & Merikangas, K. R. (2011). Prevalence and correlates of eating disorders in adolescents: Results from the national comorbidity survey replication adolescent supplement. *Archives of General Psychiatry, 68*, 714–723.
- Tabachnik, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Allyn and Bacon.
- Yarnell, L. M., Stafford, R. E., Neff, K. D., Reilly, E. D., Knox, M. C., & Mullarkey, M. (2015). Meta-analysis of gender differences in self-compassion. *Self and Identity, 14*, 499–520.

Zaitsoff, S. L., Pullmer, R. P., & Coelho, J. S. (submitted). A longitudinal examination of body checking behaviours and eating disorder psychopathology in a community sample of adolescent males and females.

Zessin, U., Dickhauser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well Being*, 7, 340–364.

How to cite this article: Pullmer R, Coelho JS, Zaitsoff SL. Kindness begins with yourself: The role of self-compassion in adolescent body satisfaction and eating pathology. *Int J Eat Disord*. 2019;52:809–816. <https://doi.org/10.1002/eat.23081>