Perception of Parental Love as a Predictor of Children's Life Satisfaction

Kaitlyn Kidder*[1], Alan R. King[2]
[1,2] Department of Psychology, University of North Dakota, USA
e-mail: ***kaitlyn.j.kidder@ndus.edu**

Abstract. Love is a fundamental part of psychological well-adjustment, but a gap in the literature exists surrounding how perceptions of how loved adults felt by their biological parents in childhood can contribute to life satisfaction and psychological adjustment. This study aims to fill that gap by examining the impact of feeling loved by biological parents and grandparents on psychological well-being and adjustment factors later in life. 1,189 college-aged participants volunteered for the study and were recruited online via SONA at a university in the United States. We constructed a Likert-style rating scale to measure individuals' level of perceived love (LUV) and its contribution to various adjustment indicators, including life satisfaction, depression, anxiety, trait anger, and conduct disturbance. Linear regression models and bivariate correlations were calculated for the predictor and maladjustment indicators. Results showed a modest correlation between the LUV index and life satisfaction as well as other maladjustment indicators and revealed that LUV significantly predicted life satisfaction. LUV was also a significant predictor of depression, anxiety, anger, and conduct disturbance. These results suggest that perceived love could be an important resilience factor and could be used to predict life satisfaction and psychological adjustment later in life.
Keywords: *adjustment indicators, life satisfaction, perceived love*

Love has been a topic of interest for researchers studying child development, relationships, and various factors of well-being. Parental love in particular has many applications for predicting well-being or adjustment factors later in life through attachment theory, promoting self-esteem, and happiness (Moran, et al., 2018). Maximo and Carranza (2016) found that parental attachment and love language indicators such as quality time, acts of service, and words of affirmation were significantly correlated with resilience in university students. Prior research done on family love has focused on parenting behaviors that influence adjustment factors and well-being over the lifespan (Moran et al., 2018). Zimmerman et al. (2008) found that retrospective reports of warm

or affectionate parenting practices are positively associated with well-being later in life and Lehman et al. (2009) found that retrospective reports of poor parenting quality were associated with higher rates of negative emotions and psychopathology later in life. Other studies have focused on different aspects of love including the capacity to love, love styles, and attachment styles in couples (Surijah et al., 2020). Still, other studies have examined how parental rejection can influence life satisfaction with Yasmin & Hossain (2014) reporting that parental rejection accounted for 25.6% of the variance of life satisfaction.

The parental acceptance-rejection theory (PARTheory) has been a focus of research on how parental love impacts later life development. This theory suggests that parental acceptance, including warmth, affection, interest, and love, is on an opposite spectrum from rejection, where parents act cold, negligent, criticizing, or unavailable toward their children (Rohner, 2005; Rohner et al., 2005; Ildiz & Ayhan, 2022). According to this theory, rejection from parents can lead to more emotional difficulties, negative personality traits, and behavior problems (Ildiz & Ayhan, 2022). When a child feels accepted by their parents, they are more likely to be psychologically well-adjusted, have higher self-esteem, and have more secure attachments (Giotsa et al., 2018). Most of these studies focus on the PARTheory in relation to secure attachment between children and parents; however, few studies have been done about how loved adults felt throughout their childhood by older caregivers and parental figures. Khaleque et al. (2019) studied PARTheory in adults and found significant associations between maternal and paternal acceptance in childhood and psychological adjustment in young adult males and females. Rohner et al. (2005) suggested that childhood acceptance-rejection from a caregiver can account for up to 21% of the variance in adult psychological adjustment.

Little research has been done about the effects of how loved individuals felt by parents and grandparents may contribute to adjustment later in life. Almost no research has been done on perceived levels of love by other family members such as grandparents, instead focusing on parental figures and significant others. Rather, retrospective reports have focused on parental warmth, acceptance, empathy, and caring as opposed to feeling loved. Moran et al. (2018) used retrospective measures of parental

warmth (i.e., "How much did she or he understand your problems and worries?") to examine coping styles and well-being in adulthood and found that lower reports of perceived parental warmth were correlated with higher rates of negative affect and higher rates of parental warmth were associated with higher levels of positive affect after accounting for depressed affect, perceived emotional and verbal abuse from parents, age, and gender. Sillick and Schutte (2006) studied reports of parental love as measured by parental support in early childhood as it relates to understanding problems or worries and how much love the subjects felt they received. The researchers found that higher ratings of perceived parental love from both the mother and father were significantly correlated with higher self-esteem and happiness ratings and that total parental love (maternal and paternal combined) also significantly predicted happiness and self-esteem scores (Sillick & Schutte, 2006).

One potential reason for the lack of research on the impact of feeling love on life satisfaction is that the term "life satisfaction" or "well-being" is unclear and can be impacted by several different variables, including depression, trauma, and personality traits (Surijah et al., 2020). Researchers have found that children who reported abuse or maltreatment have higher rates of depression, suicidality, and aggression (Kitzmann et al., 2003; Voith et al., 2020; Devries et al., 2014; Fergusson et al., 2008). In addition, family patterns of alcoholism, mental illness, imprisonment, or divorce leads to higher rates of maladjustment with recurrent or multiple maltreatment indicators posing the highest risks for maladjustment later in life (Dube et al., 2001; van der Feltz-Cornelis et al., 2019; Finkelhor et al., 2007; Finkelhor et al., 2009). Prior research has indicated that retrospective reports of parental caring are associated with lower ratings of depression, anxiety, somatic, and hostility symptoms for both males and females (Russek et al., (1998). Similarly, Trumpeter et al., (2008) found that in university undergraduates, reports of perceived inconsistent parental love were related to psychological maladjustment including depression, lower self-esteem, and narcissistic personality traits. Most studies examining parental love only study its impact on one or two other outcomes such as life satisfaction, well-being, or self-esteem (Surijah et al., 2020; Sillick & Schutte, 2006; Moran et al., 2018; Zimmerman et al., 2008; Lehman et al., 2009).

The present study attempted to partially replicate and extend previous findings (Surijah et al., 2020) suggesting that perceived love was a significant predictor of life satisfaction. Surijah et al. (2020) examined the impact of perceived partner love on life satisfaction but did not account for any extraneous variables. The research objective was to address the gap in the literature surrounding the impact of perceived parental love on both life satisfaction and other maladjustment indicators while controlling for other possible predictor variables or maltreatment indicators that have a known impact on life satisfaction and other maladjustment indicators. To the authors' knowledge, no previous study has examined the impact of perceptions of parental love on such a wide range of maladjustment indicators. The following analyses tested the extent to which perceived parental and grandparental love accounted for unshared variance in life satisfaction after control of maltreatment developmental influences. Additional criterion measures of depression, anxiety, trait anger, and conduct disturbance were included in the analysis to determine the extent to which family love as a resilience factor generalized across maladjustment symptom clusters. Two hypotheses were tested: H1) Perceived love was expected to correlate with higher ratings of life satisfaction and H2) Perceived love was expected to account for unshared variance in life satisfaction and other maladjustment indicators including depression, anxiety, anger, and conduct disturbance.

Methods

Research Participants

This college sample (N = 1,266) was comprised of volunteers to the department participant pool who completed the Qualtrics survey that included the indices through a department testing platform (SONA Systems) for extra credit for their respective introductory, personality, developmental, or abnormal psychology at a large Midwestern state college in the United States. Participants were not given test feedback, and the study was described as an examination of developmental and personality factors that might be associated with psychological adjustment.

This project was approved by the university Institutional Review Board, and informed consent was required for all respondents. Respondents were excluded from the final analysis if they did not complete ratings for both biological parents on the family love index and the majority of items on the remaining maladjustment criterion measures, leaving a final sample of 1,189 participants. This final sample varied in gender (Women, n = 920, 77.4%; Men, n = 269, 22.6%), age (M = 20.36, SD = 3.16, Range = 18-49), and ethnicity (White, 86.6%; Asian, 4.5%, Native American, 2.6%; African American, 1.9%; Hispanic, 1.1%; Multi-Racial, 1.1%; Other, 2.2%). Compared to the data from the United States Census Bureau (2018), this college sample was represented disproportionately by non-Hispanic White respondents in contrast to national population figures (White, 60.7%; Black, 13.4%; Hispanic, 18.1%; Asian, 5.8%; American Indian, 1.3%; Multi-Racial, 2.7%). This same sample was examined previously (King & Russel, 2017; King et al., 2019) to establish associations between child abuse and lifetime mood, anxiety, and/or stress-related disorders.

The nature of this secondhand data analysis limited the amount of bias in the data analysis as there was no researcher-to-participant interaction and all of the participants remained completely anonymous. Furthermore, bias in the scores on the questionnaires, particularly the LUV index was controlled by limiting the sample to only participants who completed both biological paternal and maternal ratings of perception of love to avoid skewing the data due to the nature of the questionnaire if participants who may have only had one parental figure or who had non-biological parental figures.

The study by Surijah et al. (2020), only included perceived love from a romantic partner and life satisfaction as the outcome variables. We included other predictor variables to determine the strength of the perceived love in comparison to other known variables influencing life satisfaction, including childhood sexual and physical abuse, intimate partner violence, family emotional abuse, childhood sibling abuse, peer bullying, and maternal and paternal alcohol abuse in addition to the perceived love. Likewise, we included other maladjustment factors that could be correlated with life satisfaction or the predictor variables, including depressive symptoms, anxiety symptoms, trait aggression, and conduct disorder symptoms.

Research Instruments

Primary Predictor

Family Love Index. The LUV is a customized index for the purposes of the present analysis. The LUV provided survey respondents the opportunity to describe the extent to which they felt loved by their biological parents and grandparents during upbringing. Respondents in this survey study were required to rate both biological parents. An average score was calculated from the four items about grandparents to compensate for the fact that respondents will vary in the extent to which they recalled relationships with each of their four biological maternal and paternal grandparents. LUV total scores varied from 0 to 7 (maximum total of 21) for maternal, paternal, and grandparental closeness ratings. Perceived maternal love was found in an earlier analysis (King et al., 2019) to be associated positively with dispositional mindfulness (r = .13, $p < .001$).

Figure 1

Family Love Index

Please identify the **extent to which you felt loved** by each of the following family members during upbringing (ages 5-16).

Family Love Source	Unconditional Love *My Welfare Top Priority*			Emotionally Unavailable *Less Than Top Priority*			Judgment/Rejection/ Contempt *Disregard for My Welfare*
	1	2	3	4	5	6	7
Biological Mother	☐	☐	☐	☐	☐	☐	☐
Biological Father	☐	☐	☐	☐	☐	☐	☐
Maternal Grandmother	☐	☐	☐	☐	☐	☐	☐
Maternal Grandfather	☐	☐	☐	☐	☐	☐	☐
Paternal Grandmother	☐	☐	☐	☐	☐	☐	☐
Paternal Grandfather	☐	☐	☐	☐	☐	☐	☐

Note. Family Love Index (LUV) scores derived from summed ratings of biological mother, biological father, and average of the grandparents who were rated. Analyses excluded respondents who did not rate both their biological mother and father.

Maltreatment Indicators

Sexual Abuse & Assault Self-Report (CSA). The CSA was launched by University of Carolina through the Consortium of Longitudinal Studies on Child Abuse and Neglect (LONGSCAN). The development of the scale itself involved the children and adolescents who got sexually victimized as the participants. There were minor modifications on the wording processes in adult retrospective format. One item (an attempted but not completed act) was deleted, and two questions about rape were added. The scoring process was dichotomously scored over each of three developmental periods for each of the 12 items. Sexual Abuse score was the sum of the total of sexually abusive action that being experienced in the childhood phase prior to age of 16 (scores ranging potentially from 0 to 24).

The items can contribute to the categorization of the sexual abuse such as Non-Contact, Actual (or Attempted) Fondling, Actual (or Attempted) Oral-Genital Contact, and Actual (or Attempted) Penetration. There were slight modifications in the stem items because of the presence of adult sampling (i.e., "genitalia" instead of "sexual parts", "put a part of his body inside your private parts" instead of "rape"). Using a three-point scale, the severity of the sexual abuse can be identified by asking the respondents about the experience based on the index events of the developmental period (prior to age 13, between ages 13 and 16, or after age 16). The item examples varied include: "Someone made you look at something sexual like pictures or a movie"; "Someone touched your genitalia in some way"; "Someone put their mouth on your genitalia or made you put your mouth on their genitalia". Through entering the LONGSCAN website, availability of the concurrent validation can be accessed.

Violent Experiences Questionnaire (VEQ-R). The VEQ-R (King, 2012; King, 2014a; King, 2014b; Mugge et al., 2015; Russell et al., 2015; Walter & King, 2013) is a retrospective self-report questionnaire that presents 12 screening index variations of child and adolescent maltreatments (including parental physical abuse, sibling physical abuse, domestic violence exposure, peer bullying, corporal punishment, and four factor "hostility" scores). The VEQ-R score points out the total of days per year of actions occurred that belong to the index group in the 12-year periods of recording which the

score calculated in a range between 0 to 104 days per year. Physical abuse experiences will be shown at least one on average twice times a year over the 12-year recollection period (24 total acts) if the CPA score was 2. For its reliability, the test developer presented the data origin (CPA, α = .87, r = .81, κ = 0.68; SPA, α = .87, r = .63, κ = 0.57; OPV, α = .90, r = .64, κ = 0.66; & BULL, α = .82, r = .64, κ = 0.70; PVD, α = .94, r = .73; OPV, α = .92, r = .77; SPV, α = .91, r = .67). The subscales of VEQ-R indicate the potential threat of the maladjustment in both internalized and externalized forms (Green & King, 2009; King, 2014a, 2014b, 2016, 2017, 2018, 2019, 2020a 2020b, 2021; Mangold & King, 2020; Moe et al., 2004; Mugge et al., 2009, 2015; Veith et al., 2017).

Children of Alcoholics Screening Test (CAST). The CAST (Jones, 1983) is a self-report screening test that consists of 30 items and is being used for identification purposes of adults who were nurtured by alcohol-addicted parents both in mother and father. The scoring process involves a range between 0 to 30 which the threshold for identification of problematic drinking in parents typically exceeds 6. This popular screening test used dimensional measurement of problems caused by parental drinking which happened in the individual family systems. For the categorization, the biological mother (MCAST) and father (DCAST) have their own parental alcoholism indicator which has been separated.

Maladjustment Indicators

Satisfaction with Life Scale (SLS). The SLS (Diener et al., 1985) is a measurement tool that consists of 5 items to assess the holistic global satisfaction in one's life up to the point of testing. The content of the item scale has been judged to have high face validity (e.g., in most ways my life is close to my ideal). This scale used a Likert metric in which the score has a range from 1 (strongly disagree) to 7 (strongly agree). For reliability, the item content has been shown as internally consistent (α = .72) with high (r = .84) eight-week test retest-retest reliability among college students (Pavot et al., 1991). Through the range of samples, the sum of SLS scores has been validated with its standard deviation around 6.4 and the index mean around 23.5 (Pavot & Diener, 1993, 2008). Life dissatisfaction will be indicated in the results if the scores drop below 15.

Active Mental Health Symptoms (Depr & Anx). This measurement involves criteria from both Major Depression (Depr) and Anxiety symptom (Anx) based on the DSM-5 (American Psychiatric Association, 2013). Major Depression can be identified by using 12 primary DSM-5 criteria by asking "Have you experienced any of these depression symptoms within the past two weeks?". While the Anxiety symptom can be identified by using 13 primary DSM-5 criteria in order to define the panic attacks by asking: "Have you experienced any of these panic symptoms within the past year (the emerging symptom that was quick and peaked should be rated within ten minutes. Based on the five-point metric, the rating scale ranged between 0 (symptom not present) to 5 (present daily with significant distress or impairment). The total score ranged from 0 to 60 points maximum for the depression and 75 points maximum for the panic attack.

Buss-Perry Aggression Questionnaire (BPAQ). The BPAQ (Buss & Perry, 1992) is a Likert scale questionnaire that involves 29 items with four subscale categorization such as Physical Aggression, Verbal Aggression, Trait Anger, and Trait Hostility. The reliability of BPAQ has been previously established with the range between .72 to .89 (Buss & Perry, 1992; Buss & Warren, 2000) which the scores linked to the literature of angry and aggressive behavior (Archer & Webb, 2006; Gerevich et al., 2007).

Conduct Disorder (Conduct). This DSM-5-based survey helps the researcher to quantify the number of Conduct Disorder core symptoms that exhibit prior to age 15. The 15 symptoms can be scored with 0 or 1 with the CDS total score that is generated from the calculation of the sum. This reliability and concurrent validity of the survey has been established to the prior aggression studies based on the evidence by using the symptom checklist (King, 2020b; King et al., 2017; Mangold & King, 2020).

Data Analysis

Descriptive statistics were analyzed for all predictors and maltreatment variables. Bivariate correlations between the predictor variables and maladjustment indicators were conducted separately for males and females due to the high degree of significant gender differences. Linear Regression models were conducted between participants' SLS scores and each of the predictor variables in addition to age. All data

analysis was conducted using IBM Statistical Package for Social Sciences (SPSS) Version 28.

Results

Descriptive statistics for the predictor and maladjustment indices in this college sample appeared generally consistent with frequency distributions generated in prior maltreatment analysis by this team examined in these analyses (Table 1). Mean scores on each of the indices were calculated along with any gender differences between male and females. With the exception of trait aggression, women often scored moderately higher on the maltreatment or predictor and maladjustment indicators. The mean score on the LUV questionnaire was 19.22 out of 21, indicating a positive skew in the scores suggesting that most participants felt loved by their parents and grandparents in this sample. All of the other predictor variables had means that were on the low end of the score range (0.70-13.85) suggesting that most of the participants did not report or reported minimal childhood maltreatment predictors. The mean score for life satisfaction was 20.53 out of a total score of 30 and the mean for the trait aggression questionnaire was 56.44 out of 137, which were the two highest maladjustment indicators in this sample.

Table 1

Descriptive Statistics for Predictor and Maladjustment Indicators

Variables	Label	a	Women	Men	M	SD	Range	Gender	
			n	n				p	d
					Predictor Indices				
Family Love Index	LUV	.83	856	234	19.22	2.60	3-21	.261	.08
Childhood Sexual Abuse	CSA	.91	920	269	0.70	2.29	0-24	.370	.06
Childhood Physical Abuse	CPA	.84	904	264	1.16	7.59	0-104	**<.001**	.14
Intimate Partner Violence	IPV	.88	899	264	.96	7.18	0-104	.882	.01
Family Emotional Abuse	FEA	.74	864	256	5.63	12.36	0-91	.356	.07
Childhood Sibling Abuse	SPA	.87	895	263	4.13	13.86	0-104	.550	.04
Peer Bullying	BULL	.81	897	260	3.50	13.38	0-104	.898	.01
Maternal Alcohol Abuse	MCAST	.97	811	234	1.24	4.09	0-28	**.009**	.15
Paternal Alcohol Abuse	DCAST	.96	811	234	1.89	.150	0-28	.200	.09
					Maladjustment Indicators				
Life Satisfaction	LSI	.92	688	204	20.53	6.13	0-30	**.013**	.20
Depression Symptoms	DEP	.92	622	199	6.16	7.94	0-44	**.005**	.23
Anxiety Symptoms	ANX	.94	646	193	5.53	8.25	0-46	**<.001**	.31

Trait Aggression	BPAQ	.83	785	215	56.44	18.84	29-137	**<.001**	.46
Conduct Disorder Symptoms	COND	.74	776	228	0.66	1.267	0-10	**<.001**	.38

Note. Women generated higher scores in all significant gender comparisons except trait aggression and conduct disorder symptoms.

Bivariate correlation analyses established that LUV relationships with life satisfaction and the other maladjustment indicators were modest in size but pervasive in their distribution (Table 2). The analyses were conducted separately by gender due to the significant gender differences found in the demographic analysis of the maladjustment indicators. Gender differences in these correlation strengths were common with the predictive utility of LUV as a resilience factor stronger among the women in this college sample. High scores on the LUV index were significantly positively correlated with life satisfaction in both males and females and negatively correlated with depression, anxiety, aggression, and conduct disorder symptoms in females (p <.001).

Childhood sexual abuse, childhood physical abuse, family emotional violence, sibling physical violence, bullying, and maternal and paternal alcohol abuse were all significantly correlated with all outcome measures in females, while intimate partner violence was only significantly correlated with anxiety symptoms and conduct disorder in females. For males, childhood sexual abuse was significantly negatively correlated with life satisfaction and positively correlated with anxiety and aggression. Family emotional violence was significantly correlated with depression and conduct disorder. Sibling physical violence and bullying were significantly positively correlated with conduct disorder. Maternal alcohol abuse was negatively associated with life satisfaction and positively correlated with depression and anxiety. Paternal alcohol abuse was negatively correlated with life satisfaction and positively associated with conduct disorder. Childhood physical abuse and intimate partner violence failed to reach significance in males for any of the maladjustment indicators.

Table 2

Predictor Bivariate Associations with Maladjustment Indicators

Predictors	Women					Men				
	SLS	DEP	ANX	BPAQ	COND	SLS	DEP	ANX	BPAQ	COND
LUV	.26***	-.23***	-.20***	-.22***	-.23***	.27***	-.05	.01	-.12	.02
CSA	-.16***	.21***	.24***	.22***	.28***	-.14*	.17*	.38***	.23***	.12
CPA	-.19***	.12**	.16***	.14***	.27***	.06	.04	-.03	.07	.02
FEA	-.20***	.23***	.21***	.28***	.20***	-.02	.19**	.03	.12	.18**
IPV	-.07	.03	.09*	.03	.13***	-.02	.02	-.05	.01	.02
SPA	-.15***	.16***	.16***	.21***	.13***	.13	-.06	.01	.02	.21**
BULL	-.11**	.21***	.21***	.12***	.12***	-.01	.17*	-.04	.10	.19**
MCAST	-.14***	.19***	.23***	.14***	.17***	-.21**	.19**	.18**	.01	.01
DCAST	-.10*	.20***	.19***	.11**	.10**	-.16*	.11	.12	.02	.22***

Note. LUV=Family Love Index; CSA=Childhood Sexual Abuse; CPA=Childhood Physical Abuse; FEA=Family Emotional Abuse; IPV=Exposure to Intimate Partner Violence; SPA=Childhood Sibling Abuse; BULL=Peer Bullying; MCAST=maternal alcohol abuse; DCAST=paternal alcohol abuse; LSI=Life Satisfaction Index; DEP=Depression Symptoms; ANX=Anxiety Symptoms; BPAQ=Buss-Perry Trait Aggression; COND=Conduct Disorder Symptoms prior to age 15. Shading designates significant gender differences in coefficient strength. *$p < 05$. **$p < .01$. ***$p < .001$.

Linear regression models to predict life satisfaction were tested independently within the gender subsets (Table 3). The regression models were significant for both subsamples (Women, $F (10, 623) = 6.95$, $p < .001$ (Adj $R^2 = .095$); Men, $F (10, 166) = 3.22$, $p < .001$ (Adj $R^2 = .112$). LUV was the only predictor to account for unshared variance in life satisfaction among the women. In males, LUV was also a significant predictor of unshared variance for life satisfaction, but sibling physical abuse also significantly predicted life satisfaction in the male participants.

The LUV factor was found in bivariate correlation analyses to be closely associated with scores from the other maladjustment indicators as well. Regression models were tested for the four remaining criterion measures among the women. These models were all significant (Depression, $F (10, 601) = 12.09$, $p < .001$ (Adj $R^2 = .154$); Anxiety, $F (10, 586) = 10.81$, $p < .001$ (Adj $R^2 = .141$), Anger, $F (10, 685) = 10.73$, $p < .001$ (Adj $R^2 = .123$); Conduct, $F (10, 642) = 10.35$, $p < .001$ (Adj $R^2 = .125$)

Table 3

Linear Regression Model Prediction of Life Satisfaction

Predictor	Women		Men	
	B	*p*	*B*	*p*
LUV	.191	**< .001**	.254	**< .001**
CSA	-.078	.055	-.104	.151
CPA	-.088	.060	.098	.199
FEA	-.028	.633	-.175	.096
IPV	.048	.279	.048	.579
SPA	-.071	.142	.211	**.019**
BULL	-.050	.200	-.009	.904
MCAST	-.069	.100	-.152	.040
DCAST	-.024	.560	-.048	.550
Age	.043	.316	-.059	.433

Note. LUV=Family Love Index; CSA=Childhood Sexual Abuse; CPA=Childhood Physical Abuse; FEA=Family Emotional Abuse; IPV=Exposure to Intimate Partner Violence; SPA=Childhood Sibling Abuse; BULL=Peer Bullying; MCAST= maternal alcohol abuse; DCAST=paternal alcohol abuse. Pairwise exclusions were made for missing data points. *p < 05. **p < .01. ***p < .001.

Discussion

The study showed that perceived love from parents and grandparents in this sample was associated with evidence of significantly higher life satisfaction and psychological adjustment. Women scored higher on all maltreatment and maladjustment measures except for trait aggression. The presence of a gender difference has not been consistent in previous literature. For example, Russek et al. (1998) did not find any significant differences between males and females when studying the correlation between the Harvard Parental Caring Scale and the SCL90R checklist.

Perceived love was the only predictor out of several to account for life satisfaction in women, while childhood sibling abuse was also significant for men, confirming our first and second hypotheses. These results were consistent with previous findings that feeling loved significantly explained a portion of the variance for positive well-being and life satisfaction. Surijah et al. (2020) reported that feeling loved significantly predicted SWL scores ($\chi 2 = .106$, t (498) = 2.32, p < .05) and accounted for a significant proportion of the variance in SWL scores ($R^2 = .011$, F (1, 498) = 5.69, p < .05) with an effect size of r = .106. These researchers also found that feeling loved explained

a significant proportion of variance for PWB scores (R^2 = .045, F (1, 498) = 24.72, p < .001) with an effect size of r = .217 (Surijah et al., 2020). Our results were also consistent with previous literature relating to PARTheory suggesting that feeling neglected by parents leads to more psychological maladjustment (Ildiz & Ayhan, 2022; Giotsa et al., 2018).

Perceived love was also significantly correlated with measures of depression, anxiety, anger, and conduct also confirming our second hypothesis. This is consistent with previous research which found small but significant correlations between parental caring reports and psychological symptom reports (r = -.211 (p < .00004)) for depression, anxiety, hostility, and somatic symptoms (Russek et al., 1998). This is also consistent with prior research on the PARTheory that suggests that parental rejection is associated with greater levels of psychological maladjustment and behavior problems (Ildiz & Ayhan, 2022; Rohner et al., 2005).

These results show that of all the maladjustment indicators examined that have been associated with life satisfaction scores in previous research, perceived love was the only significant factor for females and one of two predictors (including childhood sibling abuse) for males. This has important implications for both future research and practice as our results show that perceived love was the most significant of the predictors included in this study for life satisfaction, suggesting that the perception of being loved by biological parents and grandparents can be a protective factor in college students against differing kinds of maltreatment indicators influencing life satisfaction, including different kinds of abuse, bullying, parental alcoholism, and witnessing or experiencing familial violence. Existing research surrounding love largely studies attachment theory, love languages, romantic relationships, or parental acceptance-rejection (Ildiz & Ayhan, 2022; Khaleque et al., 2019; Surijah et al., 2020; Giotsa et al., 2018; Trumpeter, 2008; Rohner et al., 2005). The current study adds an important insight into attachment theory, PARTheory, and the relationship between child-parent relationships and adult psychological adjustment by including perceptions of love as a predictive factor. In showing that perceived love was the largest predictor of life satisfaction for both men and women and was negatively correlated with maladjustment outcomes, our results

coincide with the research that suggests children with secure attachments or high parental acceptance have better psychological adjustment.

Our results were limited by the use of a previously collected college-aged sample for analysis. Participants had a small age range, which could indicate that participants were all in a similar stage of reflection in their life about their relationships and other factors might have influenced life satisfaction that were not accounted or such as career planning or transitioning to adulthood. In addition, our sample was limited to participants who had answered questions regarding their biological mother and father as well as their biological grandparents, which could potentially result in a more biased sample than the general population. This leaves out the possibility of perceptions of love from non-biological parents and grandparents influencing life satisfaction and limits the interpretation of the results to only individuals from a two-parent biological household with grandparents. This study was an extension of Surijah et al. (2020) study that examined perceived love among significant others, but future researchers should consider incorporating all parental figures such as aunts or uncles and adoptive parents. As always with the use of retrospective self-report measurements for variables, the accuracy of the variables measured is only as accurate as the participants' reports, so there remains the possibility that the reported scores were not fully accurate representations of the participants' perception of love during childhood. Finally, our results are limited to correlational relationships between the variables due to the nature of the study.

Conclusion

This study examined the association between perceived love and life satisfaction along with maladjustment indicators. The results suggest that greater ratings of feeling loved predicted higher rates of life satisfaction and lower rates of depression, anxiety, anger, and conduct disturbance. Love also accounted for a significant proportion of variance in life satisfaction for both women and men and was the only predictor to account for unshared variance in women. Focusing on how loved individuals felt by various sources provides a greater picture in how attachment and love can impact

outcomes later in life. Examining the extent to which participants felt loved also allows for differences in perception between receiving love and feeling love to be explored.

Suggestions

Ratings of perceived love from biological parental and grandparent figures showed significant correlations with life satisfaction in both males and females. Studies examining the level of perceived love and its impact on adult outcomes have been few and far between in past literature. Future researchers should examine the impact of perceived love on other areas of adult adjustment, including employment, relationship satisfaction, and resilience. In addition, future research should examine the differences between perceived love of maternal and paternal figures on various maladjustment outcomes. Li and Meier (2017) outline various theoretical frameworks that suggest that there may be differences between the love of a father and the love of a mother that could impact not only parent-child relationships but also adulthood outcomes. Third, future research should include a broader participant scope that is more representative of the general population to limit and sample bias influencing the results. Finally, future research should examine the impact of perceived love from non-biological parental figures to include a wider variety of family situations that could contribute to adult psychological adjustment and life satisfaction. Studying perceptions of love in childhood is a valuable tool in understanding later life adjustment but underutilized in current theories and research approaches. This article aims to fill the gap in the literature, but future research should continue to explore the impact of perceived love from different figures in childhood and its impact on later life adjustment.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, 5th Edition: DSM-5 (5th ed.).* Washington: American Psychiatric Publishing.

Archer, J., & Webb, I.A. (2006). The relation between scores on the Buss–Perry Aggression Questionnaire and aggressive acts, impulsiveness, competitiveness, dominance, and sexual jealousy. *Aggressive Behavior*, 32, 464–473. https://doi.org/10.1002/ab.20146

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology, 63*(3), 452–459. https://doi.org/10.1037/0022-3514.63.3.452

Buss, A. H., & Warren, W. L. (2000). *Aggression Questionnaire Manual.* Los Angeles, CA: Western Psychological Services.

Devries, K. M., Mak, J. Y., Child, J. C., Falder, G., Bacchus, L. J., Astbury, J., & Watts, C. H. (2014). Childhood sexual abuse and suicidal behavior: a meta-analysis. *Pediatrics, 133*(5),   e1331-e1344. https://doi.org/10.1542/peds.2013-2166

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood abuse, household dysfunction and the risk of attempted suicide throughout the life span: Findings from the Adverse Childhood Experiences Study. *Journal of the American Medical Association, 286*, 3089–3096. https://doi.org/10.1001/jama.286.24.3089

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2008). Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect, 32*(6), 607-619. https://doi.org/10.1016/j.chiabu.2006.12.018

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007). Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19,* 149–166. https://doi.org/10.1017/S0954579407070083

Finkelhor, D., Ormrod, R., Turner, H., & Holt, M. (2009). Pathways to poly-victimization. *Child Maltreatment, 14*, 316–329. https://doi.org/10.1177/1077559519859080

Gerevich, J., Bacskai, E., & Czobor, P. (2007). The generalizability of the Buss-Perry Aggression Questionnaire. *International Journal of Methods of Psychiatric Research, 16*(3), 124-136. https://doi.org/10.1002/mpr.221

Giotsa, A., Kyriazos, T., & Mitrogiorgou, E. (2018). Parental acceptance-rejection and interpersonal anxiety in young adults. *Hellenic Journal of Psychology, 15*, 138-150.

Green, J.S., & King, A.R. (2009). Domestic violence and parental divorce as predictors of best friendship qualities among college students. *Journal of Divorce & Remarriage, 50(2),* 100-118. https://doi.org/10.1080/10502550802365805

Ildiz, G. I., & Ayhan, A. B. (2022). A study of predictive role of parental acceptance rejection perceived by children on secure attachment level. *Current Psychology, 41*, 3741-3750. https://doi.org/10.1007/s12144-020-00897-9

Jones, J. W. (1983). The children of alcoholics screening test: A validity study. *Bulletin of the Society of Psychologists in Addictive Behaviors, 2*(3), 155–163.

Khaleque, A., Uddin, m. K., Hossain, K. N., Siddique, N., Shirin, A. (2019). Perceived parental acceptance-rejection in childhood predict psychological adjustment and

rejection sensitivity in adulthood. *Psychological Studies, 64*(4), 447-454. https://doi.org/10.1007/s12646-019-00508-z

King, A. (2014a). Violent Experiences Questionnaire predictors of low base-rate aggressive acts. *Journal of Aggression, Maltreatment & Trauma*, *23*(8), 804-822. https://doi.org/10.1080/10926771.2014.940480

King, A. R. (2014b). Childhood physical abuse and sociopathy: is this link magnified among firstborn children? *Journal of Aggression, Maltreatment & Trauma, 23*(9), 963-981. https://doi.org/10.1080/10926771.2014.953718

King, A. R. (2016). Peer first impressions of childhood maltreatment victims. *Journal of Aggression, Maltreatment & Trauma*, *25*(2), 164-179. https://doi.org/10.1080/10926771.2016.1121188

King, A.R. (2020a). PID-5 trait indicators of emotional instability and childhood adversity antecedents. *Psychological Reports*, *125*(1), 310-327. https://doi.org/10.1177/0033294120973940

King, A.R. (2020b). The ACE Questionnaire and lifetime physical aggression. *Journal of Aggression, Maltreatment & Trauma, 30(2)*, 243-260. https://doi.org/10.1080/10926771.2020.1796875

King, A. R. (2021). Childhood adversity links to self-reported mood, anxiety, and stress-related disorders. *Journal of Affective Disorders, 292*, 623-632. https://doi.org/10.1016/j.jad.2021.05.112

King, A.R., Auen, A.J., & Russell, T.D. (2019). Childhood maltreatment and adult dispositional mindfulness. In S. Aideen Xu (Ed.), *Violence exposure: Perspectives, gender differences and outcomes* (pp. 55-78). Nova Science Publishers, Inc.

King, A.R., Ratzak, A., Ballantyne, S., Knutson, S., Russell, T.D., Pogalz, C.R., & Breen, C.M. (2018). Differentiating corporal punishment from physical abuse in the prediction of lifetime aggression. *Aggressive Behavior, 44*(3), 306-315. https://doi.org/10.1002/ab.21753

King, A. R., & Russel, T. D. (2017). Psychometric properties of the Violent Experiences Questionnaire. *Child Abuse & Neglect, 67*, 64-75. http://dx.doi.org/10.1016/j.chiabu.2017.02.008

King, A.R., Russell, T.D., & Bailly, M.D. (2017). Psychometric properties of the Lifetime Acts of Violence Assessment. *Violence and Victims, 32*(6), 998-1013. http://dx.doi.org/10.1891/0886-6708.VV-D-16-00067

Kitzmann, K. M., Gaylord, N. K., Holt, A. R., & Kenny, E. D. (2003). Child witnesses to domestic violence: a meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*(2), 339. https://doi.org/10.1037/0022-006X.71.2.339

Lehman, B. J., Taylor, S. E., Kiefe, C. I., & Seeman, T. E. (2009). Relationship of early life stress and psychological functioning to blood pressure in the CARDIA study. *Health Psychology, 28*(3), 338–346. https://doi.org/10.1037/a0013785

Li, X., & Meier, J. (2017). Father love and mother love: Contributions of parental acceptance to children's psychological adjustment. *Journal of Family Theory & Review, 9*, 459-490. https://doi.org/10.1111/jftr.12227

Mangold, A., & King, A.R. (2020). Relationships between experiences of sibling physical abuse and lifetime aggression using statistical controls for poly-victimization. *Journal of Family Violence, 36*(2), 235-247. https://doi.org/10.1007/s10896-020-00134-8

Maximo, S. I., & Carranza, J. S. (2016). Parental attachment and love language as determinants of resilience among graduating university students. *SAGE Open, 6*(1), 1-11. https://doi.org/10.1177/2158244015622800

Moe, B. K., King, A. R., & Bailly, M. D. (2004). Retrospective accounts of recurrent parental physical abuse as a predictor of adult laboratory-induced aggression. *Aggressive Behavior, 30*(3), 217–228. https://doi.org/10.1002/ab.20019

Moran, K. M., Turiano, N. A., & Gentzler, A. L. (2018). Parental warmth during childhood predicts coping and well-being in adulthood. *Journal of Family Psychology, 32*(5), 610-621. https://doi.org/10.1037/fam0000401

Mugge, J. R., Chase, S. L., & King, A. R. (2015). Child peer abuse and perceptions of executive-functioning competencies. *Applied Neuropsychology: Child, 5*(1), 67-75. https://doi.org/10.1080/21622965.2014.986327

Mugge, J.R., King, A.R., & Klophaus, V. (2009). The quality of young adult best friendships after exposure to childhood physical abuse, domestic violence or parental alcoholism. In F. Columbus (Ed.), *Friendships: Types, cultural variations, and psychological and social aspects*. Nova Science Publishers, Inc.

Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction With Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment, 57*(1), 149–161. https://doi.org/10.1207/s15327752jpa5701_17

Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment, 5*(2), 164–172. https://doi.org/10.1037/1040-3590.5.2.164

Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology, 3*(2), 137–152. https://doi.org/10.1080/17439760701756946

Rohner, R. P. (1986). *The warmth dimension: Foundations of parental acceptance-rejection theory.* Sage.

Rohner, R. P. (2005). Parental acceptance-rejection questionnaire (PARQ): Test manual. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4th ed., pp. 43–106). Rohner Research Publications.

Rohner, R. P., Kaleque, A., & Cournoyer, D. E. (2005). Parental acceptance-rejection: Theory, methods, cross-cultural evidence, and implications. *ETHOS, 33*(3), 299-334.

Russek, L. G., Schwartz, G. E., Bell, I. R., & Baldwin, C. M. (1998). Positive perceptions of parental caring are associated with reduced psychiatric and somatic symptoms. *Psychosomatic Medicine, 60*(5), 654-657. https://doi.org/10.1097/00006842-199809000-00024

Russell, T. D., Veith A., King, A. R. (2015). Childhood maltreatment predictors of trait impulsivity. In Alesandra M.C (Ed.). *Advances in psychology research* (pp.33-56). Nova Science Publishers, Inc.

Sillick, T. J., & Schutte, N. S. (2006). Emotional intelligence and self-esteem mediate between perceived early parental love and adult happiness. *E-Journal of Applied Psychology: Emotional Intelligence, 2*(2): 38-48.

Surijah, E. A., Rahayu, K. D. A., & Supriyadi. (2020). The capacity of feeling loved predicted life satisfaction and positive affect in married individuals. *Jurnal Ilmu Perilaku, 4*(1), 1-19. https://doi.org/10.25077/jip.4.1.1-19.2020

Trumpeter, N. N., Watson, P. J., O'Leary, B. J., & Weathington, B. L. (2008). Self-functioning and perceived parenting: Relations of parental empathy and love inconsistency with narcissism, depression, and self-esteem. *The Journal of Genetic Psychology, 169*(1), 51-71. https://doi.org/10.3200/GNTP.169.1.51-71

United States Census Bureau (2018). U.S. Department of Commerce. www.census.gov/quickfacts/fact/table/US/PST045218

van der Feltz-Cornelis, C. M., Potters, E. C., van Dam, A., Koorndijk, R. P., & Elfeddali, I. (2019). Adverse Childhood Experiences (ACE) in outpatients with anxiety and depressive disorders and their association with psychiatric and somatic comorbidity and revictimization. Cross-sectional observational study. *Journal of Affective Disorders, 246*, 458–464. https://doi.org/10.1016/j.jad.2018.12.096

Veith, A.C., Russell, T.D., & King, A.R. (2017). PID-5 trait mediation of childhood maltreatment effects. *Personality and Individual Differences, 104*, 56-63. https://doi.org/10.1016/j.paid.2016.07.024

Voith, L. A., Anderson, R. E., & Cahill, S. P. (2020). Extending the ACEs framework: Examining the relations between childhood abuse and later victimization and perpetration with college men. *Journal of Interpersonal Violence, 35*(7-18), 3487-3512. https://doi.org/10.1177/0886260517708406

Walter, N., & King, A. R. (2013). Childhood physical abuse and mindfulness as predictors of young adult friendship maintenance difficulty. In C. Mohiyeddini (Ed.). *Emotional relationships: Types, challenges and Physical/Mental health impacts.* Hauppauge, NY: Nova Science Publishers, Inc.

Yasmin, S., & Hossain, A. (2014). Relation of parental rejection with self-esteem and life satisfaction of young adults. *Dhaka University Journal of Biological Sciences, 23*(1), 69–76. https://doi.org/10.3329/dujbs.v23i1.19828

Zimmermann, J. J., Eisemann, M. R., & Fleck, M. P. (2008). Is parental rearing an associated factor of quality of life in adulthood? *Quality of Life Research, 17*(2), 249–255. https://doi.org/10.1007/s11136-007-9261-x