ORIGINAL ARTICLE

Dismissing Children's Perceptions of Their Emotional Experience and Parental Care: Preliminary Evidence of Positive Bias

Jessica L. Borelli · Daryn H. David · Michael J. Crowley ·
Jonathan E. Snavely · Linda C. Mayes

Abstract The tendency to perceive caregivers in highly positive terms and to perceive the self as strong and problem-free are two facets of the positive bias characteristic of a dismissing attachment classification in adulthood. However, this link has not yet been examined in children. We evaluated the association between dismissing attachment and positive bias in school-aged children's reports of their own emotional experience and their parental care, hypothesizing that: (1) compared to secure children, dismissing children would underreport their subjective distress relative to physiological indicators of distress, and (2) dismissing children would report that their parents were warmer/more caring than would secure children. Ninety-seven children between the ages of 8 and 12 completed the Child Attachment Interview, reports of maternal and paternal care, and a psychophysiological threat paradigm. Compared to secure children, dismissing children reported less distress than their startle responses during threat would suggest. In other words, dismissing children showed a greater divergence between subjective and physiological emotional response. Dismissing children rated their parents as warmer and more caring as compared to secure children's ratings. Results provide support for the association between dismissing attachment and inflated positivity on child-report measures of parental care and emotional experience. Implications of the study's findings for attachment theory are discussed.

J. L. Borelli (✉)
Pomona College, 647 N. College Way, Claremont, CA 91711, USA
e-mail: Jessica.borelli@pomona.edu

D. H. David
Yale University School of Medicine, New Haven, CT, USA

M. J. Crowley · L. C. Mayes
Yale University Child Study Center, New Haven, CT, USA

J. E. Snavely
Claremont Graduate University, Claremont, CA, USA

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Introduction

According to attachment theory, variations in the degree to which parents respond sensitively to their children's needs correspond to differences in children's internal working models (IWMs) of relationships [12], or the mental representations individuals hold about the nature of caregivers' responsiveness. In general, caregivers who consistently respond in a sensitive way to their children's distress and who support their children's exploration of the environment have children who are securely attached, whereas caregivers who respond inconsistently to their children's distress have children who are insecurely attached [2, 69]. Further, quality of attachment as measured in infancy predicts the individual's IWM in adulthood [70].

Avoidant attachment is the most common form of insecure attachment in infancy and is thought to result when caregivers reject, ignore, or fail to respond to the infant's distress [2]. Although avoidant infants show physiological signs of experiencing distress during attachment stressors (such as separation from the caregiver), they often avoid or do not express their distress to their caregiver once he or she is physically accessible [65, 66], ostensibly in the service of preserving the rejecting attachment figure's physical and psychological availability [2, 11, 12, 44]. Theorists suggest that despite its hypothesized short-term effectiveness, this inability to acknowledge and express attachment needs can cause problems for the individual later in development [13].

Beginning in middle childhood, attachment is typically measured using semi-structured interviews in which individuals are asked to describe the quality of their childhood relationships with their caregivers, and to provide specific examples that substantiate these descriptions (e.g., Adult Attachment Interview, AAI; [31]; Child Attachment Interview (CAI; [63]). Use of these interviews results in an attachment classification based on the individual's state of mind with respect to his or her childhood relationship with attachment figures. In these interview assessments, a core feature of an avoidant or dismissing attachment classification[1] is the tendency to focus singularly on the positive aspects of one's childhood relationships with caregivers, perceiving one's parents as kind, loving, and typical, while denying vulnerability (e.g., negative emotion, distress, need) in the self [13, 33, 39, 45, 46, 48, 49]. This "positive bias" is thought to be the developmental analogue of the avoidant infant's masking of distress following stressful separations from the caregiver [45]. In this context, the positive bias exhibited by dismissing individuals takes two primary forms: *dismissal*, or denial of vulnerability in the self, and *idealization*, or the tendency to evaluate attachment relationships as positive without providing adequate support for this positive image [33, 45, 46, 49].

However, emerging evidence supports the hypothesis that the positive lens through which dismissing individuals present themselves and their relationships belies an undercurrent of physiological distress [6]. Despite dismissing adults' provision of highly positive responses on attachment interviews, they show greater physiological arousal than secure adults during the interview [24, 60]. Further, dismissing children's cortisol levels decrease more slowly over the course of the CAI compared to secure children [9] and dismissing adolescents show greater cardiovascular reactivity during a conflict interaction task with their mothers [6]. These data suggest a disjunction between what dismissing children and adults say about their experiences with caregivers and what they experience physiologically. Still to be explored, however, is the extent to which other measures suggest positive

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[1] Although termed avoidant attachment in infancy, this attachment pattern is termed "dismissing" in middle childhood and beyond.

biases among dismissing individuals. This study offers the first investigation of positive bias in dismissing children. We expect that compared to secure children, dismissing children will both downplay their own distress in the context of a non-relational physiological task and also perceive their parents in a positive light.

Historically, middle childhood (between the ages of 7 and 12) has been relatively ignored by attachment researchers [35]. More recently, with the advent of assessment tools designed to probe attachment in middle childhood (e.g., [36, 37, 67]), investigators have begun to examine the manifestations and correlates of attachment in this age range [16, 21, 38]. Middle childhood is a particularly important developmental phase in which to examine positive bias. It is customary for children in this age range to harbor positive attitudes towards their caregivers, suggesting that idealization of one's caregivers may be more difficult to disentangle from the normative trend [63]. Therefore, studies validating positive bias are needed to refine our understanding of attachment representations and related emotional processing in this developmental phase.

Positive Bias in the Divergence of Subjective-Physiological Indicators of Emotion

According to attachment theory, secure children should feel more comfortable acknowledging their own distress [13, 45] and thus have greater correspondence between their subjective reports and physiological manifestation of distress. In contrast, admitting distress may be particularly difficult for dismissing children [18, 25, 44, 24], who are thought to adopt a deactivating, minimizing strategy toward all states suggestive of vulnerability [13, 20, 40, 50]. Given that dismissing children should have a vested interest in downplaying their distress, we would expect that they would report less distress than their physiological response would suggest. Indeed, a recent study found that attachment dismissal (a CAI scale closely linked to dismissing attachment) is associated with divergence in 11–15 year-old children's subjective and neural indicators of emotional reaction to simulated peer rejection [71].

In the current study, we explore positive bias by assessing the divergence between subjective and physiological indicators of children's emotional response to a fear-potentiated startle paradigm. The startle reflex is a defensive response that occurs in reaction to intense stimuli with abrupt onset [14]. Measured using the eye blink response, the startle reflex is heightened in the presence of unpleasant stimuli or frightening contexts ([15, 17, 41, 42, 22]). Fear-potentiated startle is measured in children using anticipation of mildly aversive stimuli such as air puffs and enables investigators to assess startle magnitude (a physiological indicator of emotion reactivity) under threat. Previously we reported on startle time course, finding that dismissing children began the startle paradigm with lower startle magnitude but also decreased more slowly over the course of the paradigm [9]. In this study, we approach the data from a different perspective, examining children's startle response to the most stressful portion of the paradigm, the threat condition, for its relation to children's self-reports of distress. To this end, we evaluate the disjuncture between children's reported and physiological emotional response.

Positive Bias in Self-reports of Parental Care in Dismissing Adults

Despite extensive theorizing on the topic, only a single study has examined the relationship between adult dismissing attachment on AAI and idealization in retrospective reports of

parental care received during childhood [51].[2] Using the parental bonding instrument (PBI; [56]), a retrospective self-report measure of parental warmth/care [51], Manassis and colleagues found that the scales on the AAI pertaining to inferred parental care, called the experience scales [33, 46, 48], were most highly correlated with the PBI retrospective reports of parental care during childhood for secure individuals. Manassis et al. [51] also documented a positive association between AAI idealization and reports of parental warmth/care, such that the more the speaker idealized his/her childhood relationship with parents (according to an independent rater), the more the speaker characterized his/her caregivers in positive terms on the PBI questionnaire. Based on these adult findings, we expect that dismissing attachment may also be associated with school-aged children's reports of positive parenting.

Current Investigation

In this study we investigate two hypotheses related to dismissing attachment and positive bias in middle childhood. First, we explore the relation between dismissing attachment and *dismissal* in terms of the divergence of subjective and physiological response to a stressor. Here we hypothesize that (1a) dismissing children will show a greater divergence of subjective and physiological indicators of emotional response than will secure children. Specifically, we hypothesize that, compared to secure children, dismissing children will underreport negative emotion relative to the magnitude of their startle response during threat. Further, we hypothesize that (1b) among dismissing children, as physiological indicators of distress increase, subjective reports of distress decrease, whereas among secure children, subjective reports of distress will increase alongside increases in physiological measures of distress. Second, we investigate the link between dismissing attachment and *idealization* of caregiving experiences. Here we hypothesize that (2) dismissing children will report more positive parental care from their mother and father than secure children.

Because of our exclusive interest in the comparison of dismissing and secure children, we restrict our analyses to comparisons between these two attachment groups. This decision was driven in part by practical considerations, given the small sample size of children classified as preoccupied in previous studies (e.g., [19, 64, 5]). Moreover, although we would expect children who are classified as preoccupied to also show evidence of bias in their reports of their emotional experience and parental care, we would expect to find bias in the opposite direction (negative bias; [25, 33, 58]). Thus we opted not to collapse all insecure children into a single group as the differing positive and negative bias tendencies of these two groups may be masked when looking at the mean of the combined group.

Method

Participants

Ninety-seven children between the ages of 8 and 12 participated in this study ($M_{age} = 10.01$, $SD_{age} = 1.52$), which had previously received approval from the

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[2] Patrick et al. [57] also examined the links between adult attachment and reports of parental care among individuals with borderline personality disorder, but did not examine dismissing attachment.

Institutional Review Board. Participants were recruited from the community through a variety of means, including a mass mailing, flyers, and internet postings. The parents of 118 children contacted the research team expressing initial interest in the study; of these, 19 (16 %) did not participate due to a failure to return the team's phone call ($n = 10$), the amount of time required by the study ($n = 5$), lack of desire to participate after learning more about the study ($n = 3$), or scheduling conflicts ($n = 1$). Two additional children were excluded from the study due to having a diagnosed developmental delay.

The resulting sample was drawn from a lower-middle to middle class population from the surrounding New Haven area. Parents consented and children assented to participate in the study. The sample included 56.6 % boys and of 43.3 % girls with a mean age of 10.01 years old (SD = 1.52), with 86.6 % Caucasian, 3.1 % Hispanic, 3.1 % African American, and 7.2 % biracial children. Most of the children ($n = 85$) reported living with two parents and being raised by at least one biologically-related relative ($n = 93$). Data collected on a subset of the sample indicated that the parents of the children in the study were moderately educated ($M = 1.85$, SD = 0.67, where $1 =$ high school education, $2 =$ some college, $3 =$ postgraduate). Experimenters informed children that they could refuse to participate in any part of the study if they wished.

Procedure

This report is part of a larger cross-sectional investigation that involved two 1.5 hour sessions, approximately one week apart. During the first session, participants and their parents completed informed consent, informed assent, and a short demographic form. Children completed an attachment interview. During the second study session, children completed questionnaires regarding parental care. They also completed the startle psychophysiology paradigm, at the conclusion of which they reported on their emotional state. Child participants were paid $10.00 at the completion of each study visit. Children who were raised in single-parent homes and did not have regular contact with their other parent did not complete questionnaires regarding their relationship with the absent parent ($n = 8$). Accordingly, for these participants, data were missing for the absent parent, which in the case of this study was always the father. Further, two subjects failed to attend the second session and hence data were missing for these two children. All other children ($n = 95$) who enrolled in the study completed the assessments included in this report.

Questionnaires were administered via computer using a program called Computerized Assessment and Presentation Engine (CAPE; [28]), in which each question was presented individually visually and aurally. This procedure was designed to minimize the impact of reading ability on participants' responses and to minimize data entry errors.

Measures

Attachment Interview

The CAI [63, 68] is a semi-structured interview designed for 8–13 year olds. It consists of 19 questions concerning the child's current and past experiences with primary caregivers and prompts the child to evaluate the qualities of these relationships (e.g., "What is it like to be with your mom/dad?"; "What happens when mom/dad gets upset or angry?"; "Have you ever felt like your parents don't really love you?"). The interview lasts approximately 30–45 min and is both videotaped and transcribed verbatim, with both media utilized in the coding process. Interviews are coded on 8 scales (e.g., idealization of relationship with

mother/father), each of which consists of 9 points (with a score of 1 signifying an absence of the construct being measured and a score of 9 meaning a high level of the construct being measured). Scales are coded across the interview as a whole. The coder also evaluates the child's behavior during the interview, taking into account the child's manner, expressed affective state, stance towards the interviewer, and any behavioral oddities. Generally speaking, a child is classified as secure if he/she is able to discuss both positive and negative aspects of experiences with parents; if the child is emotionally open and provides detailed examples of his/her experiences with parents; if the child is able to discuss times when he/she was hurt, physically ill, and upset; and if the child acknowledges the impact of his/her relationships with parents. In contrast, a child is classified as dismissing if the child states that he/she has limited or no memory of experiences with his or her parents; if the child grossly idealizes his/her relationships with caregivers, but either is unable to support these descriptions or actively contradicts them; if the child denies ever having been upset, hurt, or sick; and if he/she is unable to acknowledge feelings of vulnerability when asked directly (see Table 1 for excerpts from dismissing interviews that contain positive bias).

All interviews in this study were administered by Ph.D. candidates (J.B. and D.D.) and were transcribed verbatim. The interviews were then coded by researchers who had achieved coding reliability on the CAI with the authors of the measure and each other. Both coders were also certified AAI coders. Each interview was coded by one person and difficult cases were discussed and resolved between the two coders ($n = 8$). Interviews were rated on the 9 scales and then were classified into one of four categories: secure, dismissing, preoccupied, and disorganized. Children's attachment to mother and father were rated separately.

The CAI has been used with clinical and non-clinical populations [67]. Reliability of both scale scores and attachment classifications has been shown at three months (α's = 0.74–1.00) and 1 year later (α's = 0.72–0.79). In addition, internal consistency of the scale scores and classifications, interrater reliability, and validity of the measure have been determined with both clinical and normative samples [34, 64, 67]. CAI classification is correlated with the child's attachment security as measured in the Separation Anxiety Test [72], with maternal AAI classification [64, 67], and with measures of social functioning [64]. Security of attachment on the CAI is not associated with age, gender, socioeconomic status, ethnicity, verbal IQ, expressive language ability, or whether the child lives with one or two parents [67]. In this sample, interrater reliability on 20 cases (21 % of sample) was excellent (4-way: K = 0.86, $p < .001$, 3-way: K = 0.83, $p < .001$; narrative coherence scale: $r = 0.97$, $p < .001$).

Physiological Measure of Child Distress

Children completed a fear-potentiated startle paradigm [32]. The complete procedure for this paradigm is reported elsewhere [9, 32]. In brief, children watched pictures appear on a computer screen as headphones delivered auditory probes designed to elicit a startle response [32]. They were told that they may receive a puff of air to the neck (threat condition), delivered through a collar fastened around the neck, when a certain picture is displayed on the computer screen. Participants were also told that when another picture was on the computer screen (safe condition), they would not receive puffs of air. The paradigm consisted of 64 auditory startle probes delivered at different times following the onset of a safety or threat picture (i.e., at 1, 3, 7, and 9 s, the order of which was held constant across participants).

Table 1 Excerpts from interviews transcripts identified as illustrating positive bias

Type of positive bias	Transcript
Idealization of caregiver—failure to support a positive adjective	*Okay, so the last word you gave to describe your relationship with your mother was real fun. Can you tell me about a time when it felt real fun to be with her?* We went to the circus once. I was all jumping around. *When was that?* I can't remember when I went there with her…once. *What was fun about it?* We were like jumping around watching the animals go around. *Your mom was jumping around too or just you?* I was just jumping around actually. Actually I don't think I ever went to the circus with her. *With your mom?* Oh no, I went with my teacher. *Oh, can you think of a time you had fun with your mom?* We went to a fair I was running around like can we go over there? Can we go over there? Come on! Come on! She's like okay, okay. Yay!
Idealization of caregiver—failure to support a positive adjective	*Okay, so the last adjective you gave to describe your relationship with your mom was good. Can you tell me about a time when it felt good to be with her?* Well I guess we don't really fight or anything. *Mm-hmm. Can you think of any one time it felt good?* Not really.
Denial of the negative impact of experiences on the self	*Have you ever been away from your mom for more than a day?* She went to {State 1} once. *Did you stay with your grandmother?* Yeah, Two days. No, she went there for a day and she came back the next day. *What was that like for you? Do you remember?* I didn't really feel like anything. It didn't really matter because she was coming back the next day. *What do you think it was like for mom?* I don't think she really missed us. Cause she knew she was coming back the next day. *What was it like when you saw her again? When she came back.* It felt good when she came back.

Interviewer questions/comments included in italics

Electromyographic (EMG) activity of the left orbicularis oculi muscle was recorded via two miniature (contact area < 4 mm) Ag/AgCl electrodes filled with Grass electrode cream. Because the paradigm is designed to elicit the strongest physiological responses during the threat condition, for the purposes of this investigation, we consider children's mean startle magnitude during the threat condition as our physiological indicator of distress.

Subjective Measure of Child Distress

The Positive and Negative Affect Scale (PANAS-C; [43]) is a 30-item self-report measure of affect for children between the ages of 8 and 13. Children rate the degree to which they feel negative and positive emotion words (e.g., "nervous") on a scale of 1–5, with a score

of 1 signifying "very slightly or not at all" and a score of 5 signifying "extremely." Reliability and validity data for the measure suggest that it is an appropriate measure for state affect in children [43]. In the current investigation, children were asked to rate how they felt "right now" (immediately after completion of the startle paradigm). Here we report their negative emotion scale scores, for which Cronbach's α was 0.90.

Child-Report of Parental Care

For the purposes of this investigation, the PBI [55, 56], a retrospective measure of parental care for adults, was adapted for use with children (Parental Bonding Instrument for Children, PBI-C). The PBI most closely approximates attachment-based elements of parental care and no similar instrument for children existed prior to this study. Measure modification focused on two aspects of the PBI; specifically, modification involved making alterations to time references and word choice. These modifications were made based on consultation with three developmental psychologists. Subsequent piloting with a small group of school-aged children increased researcher confidence in the measure. The format of the traditional PBI questions was changed into present tense (e.g., from "Spoke to me with a warm and friendly voice" to "Speaks to me with a warm and friendly voice") and the instructions for the questionnaire prompted children to focus on their parents' behavior during the past year. Additionally, items including language deemed to be too complicated or abstract for children were altered to preserve the intended meaning of the item but to make it more understandable for this age range (e.g., "Seems emotionally cold to me" became "Seems cold to me"). We present the modified PBI-C in the Appendix.

Like the PBI, the PBI-C aims to assess the quality of parent–child relationships and consists of 25 statements that are broken down into 2 scales, one measuring parental warmth/care (e.g., "Can make me feel better when I'm upset," "Is affectionate towards me," "Understands my problems and worries"), and one measuring parental overinvolvement (e.g., "Wants me to need his/her help more than I do"). Children rate each item on a four-point scale, with a score of 4 meaning "very true" and a score of 1 meaning "not true". The current investigation only utilized the warmth/care scale because it was thought to be most relevant to dismissing attachment. In this sample, the internal consistency/reliability of the items in this sample was adequate, with α's of 0.78 for mother warmth/care and 0.67 for father warmth/care.

Data Analytic Plan

Hypotheses 1a and 2 were evaluated by way of a series of Analyses of Covariance (ANCOVAs) with attachment classification as the independent variable. Hypothesis 1b was evaluated using bivariate correlations to examine the association between startle response and distress among dismissing children. Similar to previous studies documenting high concordance in child attachment with respect to mother and father (e.g., [64]), 95 % of children in this sample were classified in the same attachment category with respect to both parents in the 4-way attachment categorization system. Classification with respect to mother was used in analyses examining reports of maternal care, whereas classification with respect to father was used in analyses involving reports of paternal care. Given the small number of children who had different classifications for mother and father, attachment classifications with respect to mother were used for the analysis examining subjective-physiological response divergence in this report. As mentioned above, in light of

Table 2 Means (SD) of parental care and divergence of subjective-physiological response by attachment classification

Measures	Total $N = 73$	Ds[a] $n = 30$	F[a] $n = 43$
PBI-C mother			
Warmth/care	25.73(3.45)	27.20 (3.26)	24.61 (3.20)
PBI-C father			
Warmth/care	26.52 (3.42)	27.98 (3.76)	25.40 (2.69)
Divergence	−0.08 (1.26)	0.19 (1.64)	−0.27 (0.90)

[a] *Ds* dismissing, *F* secure

our specific focus on differences between dismissing and secure children, we only utilized children classified as either dismissing ($n = 30$) or secure ($n = 43$) in the analyses.[3]

Results

Descriptives

Table 2 reports means and standard deviations for all primary study variables by attachment classification. With respect to attachment for mother, 30 children (30.9 %) were classified as dismissing, 43 children (44 %) as secure, 6 children (6.2 %) as preoccupied, and 18 children (18.5 %) as disorganized. With respect to attachment for father, 32 (33 %) children were dismissing, 42 (43.3 %) were secure, 5 (5.2 %) were preoccupied, and 18 (18.5 %) were disorganized. The results of an ANOVA indicated significant attachment group differences in age, $F = 3.64$, $p < .05$, with the results of Least Significant Differences post hoc tests indicating that preoccupied children were older than secure, dismissing, and disorganized children. The results of an independent samples t test revealed the absence of age differences between dismissing and secure children. A Chi-square test of independence indicated the absence of gender differences in 4-way attachment classification. We utilized child age and gender as covariates in subsequent data analyses. Further, as mentioned above, because we were specifically interested in reporting differences between dismissing and secure children, we restricted all analyses to the children classified in one of these two categories ($n = 73$).

Hypothesis One: Attachment and Divergence of Subjective-Physiological Response

For this analysis we evaluated the association between attachment and divergence of subjective-physiological response in two ways. We first examined the hypothesis that dismissing children would show a greater divergence of response compared to secure children. We then examined whether each attachment group (secure and dismissing)

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[3] In recent years some (e.g., [59]) have argued that attachment classifications are distributed continuously and are therefore best represented as dimensional constructs, although most attachment research has focused on categories as the unit of analysis. Therefore, as an additional, conservative check on our findings, we retested our hypotheses using CAI scale scores associated with dismissing attachment (idealization and dismissal). We found that both attachment dismissal and idealization are associated with greater reports of maternal and paternal warmth/care. Further, we found that attachment dismissal (but not idealization) is associated with subjective-physiological divergence, such that greater dismissal on the CAI is associated with greater physiological response relative to subjective response. Readers interested in learning more about these supplemental continuous analyses are encouraged to contact the corresponding author for additional information.

Table 3 Analysis of covariance for attachment and divergence of response

Source	df	F	η^2
Gender	1	2.25	0.03
Age	1	11.21***	0.17
Attachment	1	3.17*	0.05

Standardized subjective-physiological response divergence score

* $p < .05$
*** $p < .001$

demonstrated the expected pattern of response (i.e., that among dismissing children, subjective reports of distress decrease as physiological response increases, whereas among secure children, subjective reports of distress increase along with physiological response).

To accomplish our first goal, we created a variable signifying the divergence of physiological-subjective response. In order to be consistent with the use of this type of variable, we first confirmed that the two original variables were not significantly associated with one another, $r = 0.11$, $p = ns$. We then computed a measure of divergence of physiological response and self-reported negative emotion by z-standardizing each dimension before subtracting the latter from the former (see [3, 8, 54, 71], for examples and descriptions of this methodology). By design, high scores on the divergence scale reflect the tendency to have startle magnitude suggesting higher distress than indicated by self-report ("underreporting distress"); the converse is implied by low scores.

We then conducted an ANCOVA utilizing a two-category attachment variable (secure, dismissing), with child age and gender included as covariates and the divergence variable as the dependent variable. Age and attachment classification emerged as statistically significant predictors in the model (see Table 3). Dismissing attachment and younger age were associated with higher divergence scores (i.e., more underreporting of distress). As an additional check on these findings, we created a model in which we evaluated the interaction between child age and attachment classification, but the interaction was nonsignificant.

In order to evaluate Hypothesis 1b, that among dismissing children, subjective ratings of distress would decrease as physiological indicators of distress increased, we conducted bivariate correlations of startle response and self-reported distress within each attachment group. Results indicated that among dismissing children, there was not a significant association between physiological and subjective response, $r = -0.06$, $p = ns$, but that among secure children, the two were significantly associated, $r = 0.38$, $p < .05$. In other words, for dismissing children, there was no relationship between subjective and physiological indicators of distress, whereas for secure children, self-reported distress increased along with physiological indicators of distress. This pattern of findings held when controlling for child age and gender in a linear regression model, but for the sake of clarity, we present the simple correlations here.

Hypothesis Two: Attachment and Child-Reports of Parental Warmth/Care

In order to evaluate whether dismissing children characterize their caregivers as warmer/more caring than secure children, we conducted ANCOVAs to evaluate if attachment group classification was related to differences in child-report of parental care on the PBI-C questionnaire. We used a two-level categorical attachment variable (secure, dismissing) as the independent variable and included age and gender as covariates in the models. With respect to child-reported mother warmth/care, age and gender were not statistically

Fig. 1 Ratings of maternal warmth/care by dismissing and secure children (**a** $N = 74$), Ratings of paternal warmth/care by dismissing and secure children (**b** $N = 74$). *Error bars* represent SE
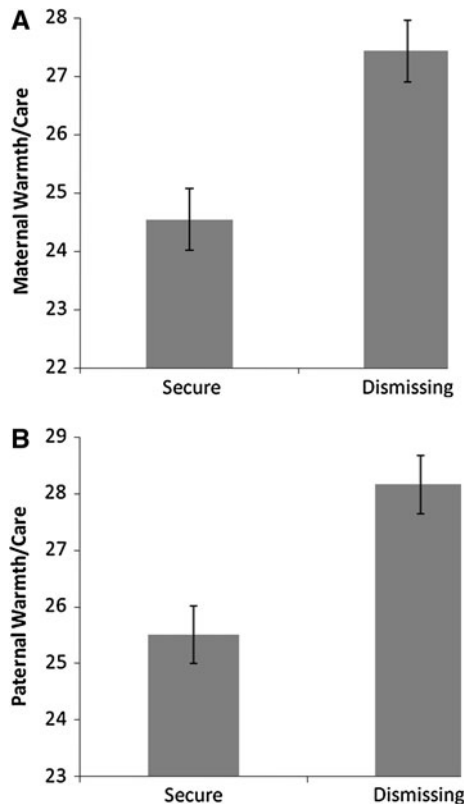

Table 4 Analysis of covariance for attachment and child-reports of parental warmth/care

Source	df	F	η^2
Child-reported maternal warmth-care[a]			
Age	1	0.18	0.00
Gender	1	1.15	0.02
Attachment/mother	1	11.60***	0.13
Child-reported paternal warmth-care[b]			
Age	1	5.89*	0.10
Gender	1	0.53	0.01
Attachment/father	1	9.65***	0.15

* $p < .05$

** $p < .01$

*** $p < .001$

[a] $n = 73$

[b] $n = 64$

significant, but attachment organization with mother emerged as a statistically significant main effect in the model (see Table 4). Dismissing children characterized their mothers as warmer/more caring than secure children (see Fig. 1, panel a).

With respect to child-reports of paternal warmth/care, results revealed that age and attachment organization with father, but not gender, were significant main effects in the model (see Table 4). Older age and a dismissing classification were associated with greater reports of paternal warmth/care (see Fig. 1, panel b). Therefore, our results supported Hypothesis 2—children classified as dismissing on the CAI characterized their mothers and

fathers as warmer/more caring on the PBI-C than secure children. In a follow-up analysis, we created a model in which we evaluated the interaction between child age and attachment classification in the prediction of paternal warmth/care, but the interaction was non-significant.

Discussion

Theory and research suggest that dismissing adults demonstrate a positive bias about perceived caregiving experiences. In terms of attachment experiences and personal vulnerability, these individuals tend to portray their experiences in an overly favorable light (e.g., [25, 45, 49]). Prior to this report, positive bias had only been examined once in youth with respect to their performance on a simulated peer social exclusion paradigm [71]. Here we show that, relative to secure children, dismissing children show positive bias in two ways. First, dismissing children report less distress in response to a threat paradigm than their startle response would suggest, indicating that dismissing children's positive bias (*dismissal*) extends to their subjectively-reported emotional response on a non-relational task. Second, dismissing children characterize their parents as warmer and more caring on a questionnaire assessment, which provides evidence of parent-related positive bias (*idealization*) on a measure other than the CAI.

We examined whether dismissing children show a greater divergence between their reported subjective emotional state and their physiologically-manifest emotional state. The direction of the subjective-physiological divergence observed here matched our theoretically-grounded hypotheses (cf. [33]). Specifically, children classified as dismissing had greater startle magnitude relative to their self-reported distress. We also examined the correlation of subjective-physiological response within each attachment grouping, hypothesizing that among dismissing children, self-reported distress would decrease as physiological indicators of distress increased, whereas we anticipated finding the opposite pattern among secure children. Surprisingly, we did not find the hypothesized negative association between subjective and physiological response in dismissing children—within this group, there was no significant association between physiological and subjective response. However, among secure children, we found that as physiological response increased, so did subjective indicators of distress. We interpret this to suggest that secure children's subjective responses to distress correspond with their physiological responses, whereas for dismissing children, there is no such link. An interpretation of this result that is consistent with the attachment framework suggests that this occurs because secure children are more accurate perceivers of their physiological distress or are more comfortable expressing their distress compared to dismissing children [45].

The concept of deactivation bears relevance for the discussion of dismissing individuals' coping style. Deactivation refers to the tendency to turn one's attention away from attachment-related information. On attachment interviews, this results in the tendency to downplay the negative impact of adverse experiences, selectively focusing on positive experiences with caregivers, and devaluing the importance of relationships overall [12, 24, 39, 46, 47]. Bowlby [11] argued that dismissing individuals use deactivation to cope with their own distress, which initially develops in the service of preserving the caregiver's attentiveness and becomes an internalized, habitual pattern of responding. Importantly, this outward dismissal belies an undercurrent of physiological distress despite the positivity dismissing individuals demonstrate when discussing childhood relationships with caregivers [6, 11, 24, 60].

Our study helps to advance the notion that dismissing children show dismissal in contexts other than attachment interviews [71]. Importantly, we found a subjective-physiological divergence in response to a threat paradigm (i.e., a paradigm designed to evoke fear reactions), which is consistent with the belief that the attachment system is activated- and that differences in regulation based on attachment therefore emerge- under threatening or distressing conditions (e.g., [1]). Further, unlike White and colleagues' [71] study, which used frank social rejections, we report evidence for divergence in response to a non-relational paradigm. This suggests that dismissing children's tendency to underreport distress may extend beyond interpersonal contexts; in other words, dismissing children underreport distress in contexts beyond those directly associated with attachment relationships.

We also found that dismissing children characterize their parental care in positive terms. Compared to secure children, dismissing children rated their mothers and fathers as significantly warmer and more caring. Given that observational data indicate that the parents of avoidant (dismissing) children provide less optimal parental care [2, 23, 26, 47], one might argue that even comparable ratings of warm and caring parenting between the dismissing and secure groups would suggest positive bias on the part of the dismissing children. Our findings suggest that dismissing children evaluate their parents even more positively than secure children and that they do so when answering a self-report questionnaire. This is important insofar as it suggests that dismissing children characterize parents positively in a relatively private or non-relational mode of assessment. Specifically, it is one thing to present parents in a positive light when discussing one's relationships with an unknown adult interviewer (as on the CAI), but it is another thing to provide positive reports of caregiving on a questionnaire, which ostensibly should seem more private and less relational. Does this imply that dismissing children perceive their parents in a more positive light and that this perception exists irrespective of the child's awareness of an audience? Future research may examine this issue, perhaps by assessing dismissing children's reporting tendencies regarding relationships with parents in a variety of settings (i.e., with a known adult, an unknown adult, a known peer, an unknown peer, on questionnaires, on anonymous internet forums, etc.).

At the same time, we should note that the construal of dismissing children's positive parental care ratings as biased is speculative. Our study did not include an objective assessment of parental care, leaving open the possibility that the parents of dismissing children are warmer and more caring than the parents of secure children, or, alternatively, that secure children underreport their parents' warmth and caring. Future research could include objective assessments of parental behavior to test these possibilities or could further modify child-reports of parental care to evaluate the validity of children's claims (for example, by having children provide an example of each type of behavior rated on the PBI-C).

Age emerged as a significant predictor of positive bias in this sample. Specifically, younger age was associated with our measure of dismissal, the underreporting of subjective distress relative to our physiological distress indicator. However, older age was associated with our measure of idealization, or the tendency to report warmer and more loving caregiving from fathers. While the meaning of these potential age differences warrants further study, our follow-up analyses suggest that age did not interact with dismissing attachment in the prediction of dismissal or idealization. Specifically, the observed link between dismissing attachment and positive bias does not appear to be driven by younger dismissing children. Moreover, dismissing and secure children were comparable in age, strengthening our confidence that the observed attachment and age effects are distinct. While children's emotional understanding generally improves with age (e.g., [61]), we do not know how the synchrony of emotional experience (subjective and physiological) might

develop with age. Further, although others have noted there is a general trend to describe one's parents in positive terms in middle childhood [63], our results suggest that this tendency is greater among older children within this age range. Future research could document normative developmental trends in both idealization and dismissal, particularly to identify whether dismissal is more common among younger school-aged children and whether idealization is more common among older school-aged children.

Finally, we should note that our interpretation of positive bias as detrimental to mental health remains speculative. Attachment and developmental theorists alike may argue that although the ability to downplay one's distress may portend psychological difficulty in the long-run, it may be highly adaptive in the short-term in that it is more likely to elicit a positive response from the environment [2, 13, 19, 53]. For instance, given a caregiver with a reactive personality, a child who disengages from her negative emotion may elicit more responsive caregiving [53]. Further, some argue that positive bias may not portend difficulties even over the long-term, and in fact, that it may be adaptive in certain circumstances. For example, highly avoidant adults[4] cope well in the short-term with relational stressors and other types of losses [8, 29]. However, there is also evidence that highly avoidant adults do more poorly following divorce [7]. Dismissing individuals who are able to successfully deactivate the attachment system following significant life stressors (e.g., by avoiding their attachment-related thoughts and distress—in essence, by exhibiting positive bias) may not be at heightened risk for maladjustment even over the long term, but when this attempt to deactivate fails, they may experience negative repercussions [29, 52]. Recent studies examining deactivation using physiological measures provide preliminary support for this argument [27, 62], but subsequent work will need to further address the long-term benefits or consequences of positive bias.

Study Limitations

Several qualifications of the study design deserve consideration. First, our correlational study design does not allow for causal inferences. We cannot conclude that dismissing attachment causes children to view themselves and their caregivers in a positive light, nor can we conclude that the type of caregiving associated with avoidant (dismissing) attachment in infancy causes the child to develop this type of perceptual pattern. Second, our data were collected during two sessions approximately 1 week apart, providing a limited window into the interrelations of attachment, child-reported parental care, and emotion. Third, this study examined a low-risk, predominantly Caucasian, normative sample. Findings may be less generalizable to clinical samples, those experiencing greater adversity, or those reflecting different socio-economic and/or ethnic backgrounds. Replication with diverse samples is clearly needed. A fourth point pertains to the specificity or generality of dismissing children's positive bias toward a range of relationships. Our study did not include dismissing children's reports of other relationships or other aspects of their social experiences, though in combination with the results from White et al. [71], our study adds to the accumulating evidence that dismissing children show positive bias across diverse domains.

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[4] The studies described in this section measure attachment via self-reported attachment style (e.g., the Experiences in Close Relationships Scale [30])—in this research tradition, the dismissing style is characterized by high levels of self-reported attachment avoidance, and therefore the terminology is different (e.g., highly avoidant versus dismissing).

Implications

This study has several important implications for understanding children with a dismissing attachment classification. Our findings suggest that these children, compared to their secure age mates, may paint a rosier picture of their relationships with caregivers and that they may subjectively report distress that does not correspond to physiological indicators of distress. One potential implication of this self-presentation style may be that dismissing children receive less attention from adults when they are struggling because (a) they may not perceive themselves as distressed in the first place, or (b) even if they do perceive themselves as distressed, they may not feel comfortable disclosing this to another person. Failure of the dismissing child to share his or her distress with others may result in a failure of others to reach out to the child, ultimately confirming a core assumption of the dismissing child—that others are unconcerned about their internal state. This dynamic is concerning because it may mean that dismissing children's distress gets overlooked until it has progressed to a greater level of severity.

Further, this self-presentation style may also have implications for response to treatment among dismissing children experiencing clinically-significant distress. As has been found with adults [4, 10], dismissing children may show the poorest response to relationship- or attachment-based treatment, since formation of close bonds with the therapist and the disclosure of painful emotions are important elements of treatment. Similarly, it may be helpful for clinicians to be aware that dismissing children have the tendency to downplay their distress—for example, if a clinician gets the impression that a child client has a vested interest in portraying his/her parents in a positive light, the clinician may then want to assume that this child would also be less likely to report his or her distress. Future research could examine dismissing children's positive bias across the course of therapy, as well as identify techniques clinicians can use to work most effectively with dismissing children. It remains unclear whether the positive bias is ultimately helpful or unhelpful; future research should explore the benefits and costs of this perceptual outlook based on the child's multiple contexts (e.g., caregiving, school; cf. [53]).

Summary

This study represents a preliminary attempt to evaluate positive bias in dismissing children, a developmental phase where construct validity research is sorely needed [35]. The findings add to a growing literature providing cross-method validation of distinct patterns of emotion regulation for individuals of varying attachment classifications on interview assessments of attachment (e.g., [60]). We provide preliminary evidence that the tendency to characterize one's parents and oneself in a more favorable, less negative light is present in school-aged children as well as in adults [24, 40, 51, 58] across measurement modalities, which strengthens confidence in the validity of attachment classifications in this age range. Although the normative trend in middle childhood is to provide positive descriptions of parents, children classified as dismissing show evidence of greater dismissal of self-distress in a non-relational context and positivity in questionnaire-assessment of their relationship with parents.

Our findings also raise several questions for future attachment research. For example, future studies should examine how early positive bias develops in dismissing children. Further, research should evaluate whether the two aspects of positive bias (the idealization of one's parents and the denial of vulnerability in the self) emerge simultaneously or

whether one precedes the other. Finally, the process through which positive bias occurs remains unclear—are dismissing children aware of the way in which they positively slant information, or as [11] Bowlby suggested, does the process of positive bias transpire out of conscious awareness and therefore become reflected only in physiological processing? The answers to such questions present an exciting new frontier in attachment research.

Appendix Parental bonding instrument for children (PBI-C)

PBI-C

This questionnaire asks about attitudes and behaviors of your parents. Please answer how true this is for your _____'s behavior during the past year.

	Very true	True	Somewhat not true	Not true
1. Speaks to me with a warm and friendly voice	( )	( )	( )	( )
2. Does not help me as much as I wanted	( )	( )	( )	( )
3. Lets me do the things I like to do	( )	( )	( )	( )
4. Seems cold to me	( )	( )	( )	( )
5. Understands my problems and worries	( )	( )	( )	( )
6. Is affectionate to me	( )	( )	( )	( )
7. Likes me to make my own choices	( )	( )	( )	( )
8. Does not want me to grow up	( )	( )	( )	( )
9. Tries to control everything I do	( )	( )	( )	( )
10. Invades my privacy	( )	( )	( )	( )
11. Enjoys talking things over with me	( )	( )	( )	( )
12. Smiles a lot at me	( )	( )	( )	( )
13. Babies me at times	( )	( )	( )	( )
14. Doesn't seem to understand what I need or want	( )	( )	( )	( )
15. Lets me decide things on my own	( )	( )	( )	( )
16. Makes me feel I'm not wanted	( )	( )	( )	( )
17. Can make me feel better when I'm upset	( )	( )	( )	( )
18. Doesn't talk with me very much	( )	( )	( )	( )
19. Wants me to need his/her help more than I do	( )	( )	( )	( )
20. Feels good when I can't take care of myself	( )	( )	( )	( )
21. Lets me do whatever I want whenever I want	( )	( )	( )	( )
22. Lets me go out whenever I want	( )	( )	( )	( )
23. Is too protective of me	( )	( )	( )	( )
24. Doesn't compliment me	( )	( )	( )	( )
25. Lets me wear the clothes I want to wear	( )	( )	( )	( )

Adapted from [53]

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