'That’s Not Just Beautiful—That’s Incredibly Beautiful!'

The Adverse Impact of Inflated Praise on Children With Low Self-Esteem

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“That’s Not Just Beautiful—That’s Incredibly Beautiful!”: The Adverse Impact of Inflated Praise on Children With Low Self-Esteem

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Abstract
In current Western society, children are often lavished with inflated praise (e.g., “You made an incredibly beautiful drawing!”). Inflated praise is often given in an attempt to raise children’s self-esteem. An experiment (Study 1) and naturalistic study (Study 2) found that adults are especially inclined to give inflated praise to children with low self-esteem. This inclination may backfire, however. Inflated praise might convey to children that they should continue to meet very high standards—a message that might discourage children with low self-esteem from taking on challenges. Another experiment (Study 3) found that inflated praise decreases challenge seeking in children with low self-esteem and has the opposite effect on children with high self-esteem. These findings show that inflated praise, although well intended, may cause children with low self-esteem to avoid crucial learning experiences.

Keywords
inflated praise, self-esteem, challenge seeking, late childhood, interpersonal interaction, childhood development, educational psychology, motivation

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“Amazing! You made an incredibly beautiful drawing!” At this moment, parents and teachers all around the Western world are giving such overly positive, inflated praise to children. In self-help books, such as Positive Parenting from A to Z (Joslin, 1994), parents are encouraged to lavish children with inflated praise such as “Wonderful!” “You did an outstanding job!” “You are terrific!” and “Perfect!” (also see McNeil & Hembree-Kigin, 2010). On the widely known poster titled “101 Ways to Praise a Child,” parents and teachers are similarly encouraged to give children inflated praise such as “Fantastic job!” “Excellent!” and “That’s incredible!”

Inflated praise is often given in an attempt to raise children’s self-esteem. Adults may therefore be especially likely to give such praise to children who seem to need it the most—those with low self-esteem. However, there is reason to believe that inflated praise can backfire in children with low self-esteem. We propose that inflated praise might discourage children with low self-esteem from taking on challenges.

How Do Adults Praise Children With Low Self-Esteem?
Adults see low self-esteem in children as a pervasive and worrisome problem (Thomaes, Brummelman, Bushman, Reijntjes, & Orobio de Castro, 2013). Consequently, adults...
are highly motivated to raise children’s low self-esteem, and they believe that praise is an effective means to do so (Brummelman et al., 2013). In fact, 87% of adults agree with the statement that “children need praise in order to feel good about themselves” (Brummelman & Thomaes, 2011). Adults may feel that inflated praise is especially effective in raising self-esteem (Damon, 1995). For example, when a child has low self-esteem, adults might become inclined to praise the child as doing “incredibly well” rather than as merely doing “well.” Indeed, adults may believe that they are more persuasive when they use more extreme language (Hamilton & Hunter, 1998). Thus, when adults want children to feel worthy, they may intentionally inflate their praise.

**How Do Children Respond to Praise?**

Inflated praise has not been empirically studied to date. However, a growing body of research shows that praise is not invariably beneficial to children (Dweck, 2006; Henderlong & Lepper, 2002). For example, ability praise (e.g., “You’re so smart!”), unlike effort praise (e.g., “You worked so hard!”), can cause children to avoid challenges and to withdraw in the face of failure, presumably because it teaches children that ability is a fixed, unchangeable trait (Gunderson et al., 2013; Mueller & Dweck, 1998; Pomerantz & Kemper, 2013). If they try challenging tasks and fail, they might infer that they lack ability. In addition, social-comparison praise (e.g., “You did better than other kids!”), compared with mastery praise (e.g., “You’re getting the hang of it!”), decreases intrinsic motivation, presumably because it teaches children that it is important to outperform others (Corpus, Ogle, & Love-Geiger, 2006). Thus, the impact of praise depends on the message it sends to children.

What message does inflated praise send to children? Praise conveys standards for future performance (Henderlong & Lepper, 2002; Kamins & Dweck, 1999). When children receive inflated praise, they might feel that they should continue to meet very high standards in the future (Henderlong & Lepper, 2002; McKay & Fanning, 2000). When children are praised for doing “incredibly well,” they might infer that they are expected to do incredibly well in the future. Thus, inflated praise contains an implicit demand for continued exceptional performance (Baumeister, Hutton, & Cairns, 1990; Kanouse, Gumpert, & Canavan-Gumpert, 1981; Ryan, 1982).

We predict that such a message could hinder children with low self-esteem but benefit children with high self-esteem. People with high self-esteem are self-promoting, whereas people with low self-esteem are self-protecting (for reviews, see Baumeister, Tice, & Hutton, 1989; Crocker & Park, 2004). People with high self-esteem are relatively unconcerned with failure, and seek out opportunities to demonstrate their worth and ability. They may interpret inflated praise as an encouragement, and seek challenges to display that they can meet the high standards set for them. In contrast, people with low self-esteem are relatively concerned with failure, and avoid situations that may reveal their worthlessness and low ability. They may cherish inflated praise but avoid challenges because they are afraid that they will be unable to meet the high standards set for them. Thus, paradoxically, inflated praise may backfire in children with low self-esteem and discourage them from taking on challenges.

Although direct evidence for this hypothesis is lacking, indirect evidence is consistent with it. One study found that praise directed at one’s worth as a person (e.g., “You’re great!”) causes children, especially those with low self-esteem, to feel ashamed after failure (Brummelman et al., 2013). Shame, in turn, may compel them to avoid challenges (Pekrun, Elliot, & Maier, 2009). Another study found that very positive performance feedback (e.g., very high test scores) backfires in people with low self-esteem by causing them to fear future failure (Wood, Heimpel, Newby-Clark, & Ross, 2005). Fear of failure can discourage challenge seeking (Dweck, 2006).

**Overview of the Present Studies**

The present research tested two hypotheses. First, we tested whether adults are more likely to give inflated praise to children with low self-esteem than to children with high self-esteem, both inside (Study 1) and outside (Study 2) the laboratory. Second, we tested whether inflated praise decreases challenge seeking in children with low self-esteem and increases challenge seeking in children with high self-esteem (Study 3). For all three studies, we defined praise as written or spoken positive evaluations of the child’s characteristics, actions, or products (Henderlong & Lepper, 2002; Kanouse et al., 1981). Praise was considered inflated when it contained an adverb (e.g., *incredibly*) or adjective (e.g., *perfect*) signaling a very positive evaluation.

We studied children in late childhood, for two main reasons. First, although young children have a rudimentary sense of “goodness” or “badness” (Burhans & Dweck, 1995; Davis-Kean & Sandler, 2001), only from late childhood can children form and express self-esteem (Harter, 2012). Second, children this age, more so than younger children, tend to internalize performance feedback, such as praise, as a standard for future performance (Parsons & Ruble, 1977). Late childhood therefore is a key developmental phase to study the impact of inflated praise on children with differential levels of self-esteem.
Study 1

Study 1 examined whether adults are inclined to direct inflated praise at children with low self-esteem.

Method

Participants. Participants were 712 adults (95% women, 5% men; 94% of Dutch origin), ages 18 to 65 (M = 41.44, SD = 6.14), recruited by means of online advertisements (87% parents, 11% teachers, and 2% other).

Procedure. Participants read six short descriptions of hypothetical children—three with high self-esteem (e.g., “Lisa usually likes the kind of person she is”) and three with low self-esteem (e.g., “Sarah is often unhappy with herself”)—each followed by a description of the child’s performance (i.e., making a drawing, solving a mathematics problem, or playing piano). Participants wrote down the praise they would give the child (Brummelman et al., 2013).

Two independent trained coders, blind to variation in self-esteem, classified participants’ praise as either inflated or noninflated; intercoder agreement was high (Cohen’s κ = .97). Discrepancies were resolved through discussion. The most common inflated-praise statements were “Very well done!” “You made an excellent drawing!” “Very good that you solved these problems!” “You played the piano very well!” and “That sounded magnificent!” The most common noninflated-praise statements were “Good!” “Well done!” “You made a nice drawing!” “Good that you solved these problems!” and “You played the piano well!”

Results and discussion

On average, 25% of praise was inflated. As hypothesized, adults gave more inflated praise to children with low self-esteem (33%) than to those with high self-esteem (18%), paired t(711) = 12.35, p < .001, d = 0.46. This effect was not moderated by participants’ age, gender, years of education, or role (i.e., parent, teacher, or other), ps > .077.

Given that Study 1 used an experimental design, causal inferences can be made: Low self-esteem in children led adults to give more inflated praise. However, an important unanswered question was whether the findings could be replicated in naturalistic adult-child interactions. Study 2 addressed this question.

Study 2

In Study 2, we attempted to replicate the findings of Study 1 in in-home observations of parent-child interactions.

Method

Participants. Participants were 114 parents, ages 30 to 62 (M = 43.40, SD = 4.15), who were the primary caregivers (88% mothers, 12% fathers; 95% of Dutch origin), and each parent’s child, ages 7 to 11 (M = 8.86, SD = 0.85; 51% girls, 49% boys; 87% of Dutch origin). They were recruited through public elementary schools serving lower- to upper-middle-class communities in The Netherlands. Of all parents who were contacted, 56% provided consent for themselves and for their children and participated in the study. All the children gave their consent.

Procedure. Several days before the in-home observation, children completed a standard measure of self-esteem—the six-item Global Self-Worth subscale (e.g., “Some kids are happy with themselves as a person”) of the Self-Perception Profile for Children (Harter, 1985). The children rated these items on 4-point scales (0 = I am not like these kids at all, 3 = I am exactly like these kids). Responses were averaged across items (M = 2.11, SD = 0.61, Cronbach’s α = .78).

During the in-home observations, each parent administered 12 math exercises to his or her child (i.e., Exercises 5–16 from the Arithmetic subtest of the Wechsler Intelligence Scale for Children–III; Wechsler, 1991). Parents were given a stopwatch and a score sheet and judged whether the children correctly completed each exercise within 30 s (mean number of correct answers = 11.09, SD = 1.04). Research assistants left the room until the exercises were completed, which took about 5 min. The sessions were videotaped. Two independent trained coders, blind to variation in self-esteem, counted the number of times parents praised their child and classified the praise as either inflated or noninflated; intercoder agreement was high (Cohen’s κ = .98). Discrepancies were resolved through discussion. The most common inflated-praise statements were “Very good!” “Extremely good!” “You answered very fast!” “Super good!” and “Fantastic!” The most common noninflated-praise statements were “Well done!” “Good!” “You’re fast!” “You’re doing well!” and “You’re good at this!”

Results and discussion

On average, parents praised their children 6.31 (SD = 3.95) times during the session, and 25% of praise was inflated (i.e., the same percentage as in Study 1). Children with lower self-esteem answered fewer questions correctly, r(112) = .23, p = .015.

The results were consistent with the hypothesis. Children with lower self-esteem received more inflated praise, r(112) = −.23, p = .015. Self-esteem was unrelated to frequency of noninflated praise, r(112) = −.14, p = .142.
For a more stringent test of the hypothesis, we regressed frequency of inflated praise on self-esteem while controlling for number of correct answers and frequency of non-inflated praise. Again, lower levels of self-esteem predicted more inflated praise, $b = -0.86$, $SE = 0.34$, $t(110) = -2.55$, $p = .012$, $\beta = -0.25$. Number of correct answers, gender of parent, age of parent, gender of child, and age of child were unrelated to frequency of inflated praise, $ps > .332$, and did not moderate its link with self-esteem, $ps > .108$.

**Study 3**

Study 3 examined how inflated praise influences children’s challenge seeking. First, children completed a self-esteem measure. Then, they made a drawing and received inflated, noninflated, or no praise from a “professional painter.” Next, challenge seeking was measured. We hypothesized that inflated praise would decrease challenge seeking in children with low self-esteem but would increase challenge seeking in children with high self-esteem.

This study also addressed alternative explanations. We tested whether children with low self-esteem feel discouraged by inflated praise because they perceive it as insincere (e.g., “Actually, my painting is far from perfect”; Sherif & Hovland, 1961; Swann, 2012) or as a cue of low ability (e.g., “When you give me such praise, you must think I can’t do much better”; Meyer, 1992).

**Method**

**Participants.** Participants were 240 children (57% girls, 43% boys; 88% of Dutch origin), ages 8 to 12 ($M = 9.85$, $SD = 1.32$), who visited Science Center NEMO, the largest science museum in The Netherlands. This research was part of Science Live, the innovative research program of Science Center NEMO that enables scientists to use NEMO visitors as participants. All participants received active parental consent and gave their assent.

**Procedure.** Participants first completed the six-item Global Self-Worth subscale of the Self-Perception Profile for Children (Harter, 1985; $M = 2.40$, $SD = 0.40$, Cronbach’s $\alpha = .64$). Next, participants drew a famous painting (i.e., *Wild Roses* by Vincent van Gogh) and were told that a professional painter, who in reality did not exist, would examine their drawing. The “painter” introduced himself in a video message. After participants had finished their drawing, the experimenter brought the drawing to the painter, who was ostensibly working in another room. After 2 min, the experimenter returned with a handwritten note from the painter. In the inflated-praise condition, the painter wrote, “You made an incredibly beautiful drawing!” In the noninflated-praise condition, the painter wrote, “You made a beautiful drawing!” In the no-praise condition, the painter wrote nothing about the drawing. In all conditions, the painter wrote that he would keep the child’s drawing at his studio. Children were randomly assigned to conditions, and the experimenter was blind to both condition and variation in self-esteem.

Next, to index challenge seeking, we told participants that they were going to draw other pictures but that they could choose which ones to draw (procedure based on Mueller & Dweck, 1998). They were presented with four pairs of figures. We created four complex and four simple versions of the Rey-Osterrieth Complex Figure (Osterrieth, 1944); a different simple and complex version was used for each pair. Participants were told that “if you choose to draw these difficult pictures [the experimenter pointed to the complex figures], you might make many mistakes, but you’ll definitely learn a lot too”; and “if you choose to draw these easy pictures [the experimenter pointed to the simple figures], you won’t make many mistakes, but you won’t learn much either.” Challenge seeking was computed as the number of complex figures that children selected to draw ($M = 2.07$, $SD = 1.22$, median = 2, range = 0–4).

Then, participants used 4-point scales (0 = *not at all true*, 4 = *completely true*) to rate the perceived sincerity of the painter’s written note (i.e., how honest, serious, credible, and sincere it was; $M = 2.68$, $SD = 0.82$, Cronbach’s $\alpha = .70$) and their impression of the painter’s ability inferences (“The painter thinks that . . .”—“I am good at drawing,” “I have talent for drawing,” and “I can draw well”; $M = 2.25$, $SD = 0.83$, Cronbach’s $\alpha = .89$). A debriefing followed.

**Results and discussion**

**Preliminary analyses.** Self-esteem, gender, and age did not differ between conditions, $p = .180$, which indicates successful random assignment. Higher age predicted more challenge seeking, $r(238) = .33$, $p < .001$, but controlling for age did not affect the results. Neither gender nor age interacted with condition or self-esteem in predicting challenge seeking, $ps > .113$. Neither inflated nor noninflated praise caused children to think that the painter thought they had low ability, regardless of children’s level of self-esteem, $ps > .276$. Children perceived inflated praise, noninflated praise, and no praise as equally sincere, regardless of their level of self-esteem, $ps > .215$.

**Primary analyses.** Data were analyzed using a general linear model with challenge seeking as the dependent variable. Self-esteem (centered), praise (inflated, noninflated, or none), and their interaction were entered as
predictors. Although there were no main effects of praise or self-esteem, $F_s < 1, p > .384$, there was an interaction between praise and self-esteem, $F(2, 234) = 4.49, p = .012, \eta^2_p = .04$. Simple-slopes analysis showed that, as hypothesized, children with lower self-esteem sought fewer challenges after inflated praise, $b = 0.65, t(236) = 2.08, p = .039, \beta = 0.22$, but sought more challenges after noninflated praise, $b = -0.72, t(236) = -2.10, p = .037, \beta = -0.24$. Self-esteem was unrelated to challenge seeking when children received no praise, $b = -0.17, t(236) = -0.46, p = .645, \beta = -0.06$. The interaction was followed-up further using region-of-significance analysis (Preacher, Curran, & Bauer, 2006; $\alpha = .05$, two-tailed; Fig. 1).

As hypothesized, compared with noninflated praise, inflated praise decreased challenge seeking in children who scored 1.30 $SD$ or more below the mean on self-esteem but increased challenge seeking in children who scored 0.51 $SD$ or more above the mean on self-esteem.

**General Discussion**

The present research investigated, for the first time, causes and consequences of inflated praise. We found that adults are more likely to give inflated praise to children with low self-esteem than to children with high self-esteem, both inside (Study 1) and outside (Study 2) the laboratory. This inclination may backfire, however. We found that inflated praise decreases challenge seeking in children with low self-esteem and increases challenge seeking in children with high self-esteem (Study 3).

Fig. 1. Results from Study 3: challenge seeking as a function of self-esteem in children who received inflated praise, noninflated praise, or no praise.

Attesting to the subtlety of this process, the difference between inflated and noninflated praise in Study 3 was only a single word—"incredibly". Although small to an outside observer, this single word may feel quite large to children with low self-esteem, who fear that they might not be able to perform "incredibly" well in the future. Thus, inflated praise can cause children with low self-esteem to avoid crucial learning experiences—a process that may eventually undermine their learning and performance.

**Theoretical implications**

What psychological mechanisms underlie our findings? Inflated praise may convey to children that they should continue to meet very high standards (Henderlong & Lepper, 2002; McKay & Fanning, 2000). Building on the self-presentation literature (Baumeister et al., 1989; Crocker & Park, 2004), our findings suggest that inflated praise triggers self-protection motives in children with low self-esteem (e.g., "I want to avoid revealing my deficiencies") and self-promotion motives in children with high self-esteem (e.g., "I want to demonstrate my capacities"). Noninflated praise, by contrast, may acknowledge and value children’s performance without setting very high standards for them. People with low self-esteem, more so than those with high self-esteem, take on difficult tasks in “safe” contexts (e.g., when they are confident that they will meet the standards set for them; Wood, Giordano-Beech, Taylor, Michela, & Gaus, 1994). Accordingly, noninflated praise might reduce fear of failure for children with low self-esteem and thus foster their challenge seeking, but it might fail to provide sufficient impetus to seek challenges for children with high self-esteem.

Our results address alternative explanations. One theory (Meyer, 1992) suggests that children with low self-esteem infer from inflated praise that the provider of the praise thinks they have low ability, and thus the children feel discouraged. Our results show, however, that children with low self-esteem did not make such inferences. Another theory (Sherif & Hovland, 1961; Swann, 2012) suggests that children with low self-esteem find inflated praise insincere, and therefore discouraging, because it mismatches their preexisting views of themselves. Yet our results show that children, even those with low self-esteem, found inflated praise as sincere as noninflated praise.

Our research builds on previous work by examining how praise affects children’s willingness to take on challenges (Gunderson et al., 2013; Mueller & Dweck, 1998; Pomerantz & Kempner, 2013) but extends this work in three ways. First, our research identified a novel dimension of praise—"inflated praise"—and showed that this form of praise is not only common (i.e., accounting for
25% of all praise) but also consequential for children’s motivation levels. Second, whereas past literature focused mostly on main effects of praise (Henderlong & Lepper, 2002), our research shows that the effects of praise depend on characteristics of the children receiving the praise. In fact, inflated praise can backfire in the children who seem to need it the most: those with low self-esteem. Third, our research indicates that, paradoxically, children’s low self-esteem can lead adults to administer more inflated praise. Common sense, it seems, can misguide adults in their attempts to support children with low self-esteem.

**Practical implications**

Our studies were designed to test theory-based hypotheses but also have practical implications. Praise is a popular motivational tool—and, unlike most other such tools, praise can be used an infinite number of times. Self-help books often encourage parents and teachers to lavish children with inflated praise (Joslin, 1994; McNeil & Hembree-Kigin, 2010). Our findings, however, lead us to recommend a more considered approach. Inflated praise discourages children with low self-esteem from taking on challenges. However, the opposite holds for children with high self-esteem: Rather than discouraging them, inflated praise gives them an impetus to seek out challenges. Adults might therefore be advised to resist the temptation to target inflated praise at children with low self-esteem and to target such praise at children with high self-esteem instead.

**Strengths, limitations, and future directions**

Our research has several methodological strengths, including its timing in a critical stage of development, its use of naturalistic-observational and experimental methods, and its focus on both antecedents and consequences of inflated praise. Our research also has limitations, and addressing them may yield interesting avenues for future research. First, our findings suggest that inflated praise undermines challenge seeking in children with low self-esteem by arousing self-protection motives, but we did not actually measure these motives. Future research should test this possible mediating process directly. Second, the studies were conducted in The Netherlands, a Western country. Although we defined inflated praise on the basis of linguistic content alone, the extent to which praise “feels” inflated may differ between cultures. For example, “wonderful” might feel more inflated in non-Western than in Western cultures; in the latter, people may be more used to giving and receiving such praise.

Third, Study 3 examined the impact of just a single phrase of inflated praise—“You made an incredibly beautiful drawing!” Repeated praise may have even larger and more persistent consequences. Praise may have addictive qualities (Baumeister & Vohs, 2001), and therefore, the effects of repeated praise may accumulate over time. Previous work has shown that many young adults would rather receive praise than engage in their favorite sexual activity, drink their favorite alcoholic beverage, eat their favorite food, receive a paycheck, or see their best friend (Bushman, Moeller, & Crocker, 2011). Given that children with low self-esteem receive inflated praise relatively frequently, an interesting question is whether they may become addicted to such praise and crave it despite its adverse consequences.

Our findings also identify novel research directions. An important question is how inflated praise affects children’s academic performance. Previous studies have not typically found correlations between frequency of teachers’ praise and students’ achievement (Hattie & Timperley, 2007), but these studies measured neither whether the teachers’ praise was inflated nor students’ level of self-esteem. Our findings suggest that inflated praise may undermine academic performance in children with low self-esteem by making them avoid challenges. When children avoid challenges, they tend to perform poorly in school (Blackwell, Trzesniewski, & Dweck, 2007). Research into these topics would be an important step before one can draw strong educational implications from our findings.

Another relevant question is whether inflated praise induces contingencies of self-worth. When children receive inflated praise, they might infer that they should meet very high standards to be valuable as a person (e.g., “If I don’t excel, I won’t be valued”; cf. Kamins & Dweck, 1999). Children with low self-esteem are especially inclined to form such contingencies (Baldwin, 1997; Brummelman et al., 2013). Thus, children with low self-esteem might view inflated praise as controlling (Ryan, 1982) and feel pressured rather than intrinsically motivated to meet the high standards set for them. Another research direction involves the impact of inflated praise during different developmental phases. Young children typically hold unrealistically positive expectations for future performance (Schneider, 1998). When they receive inflated praise, they might feel able to meet the high standards set for them, and thus seek more challenges. However, once children reach late childhood, they hold more realistic performance expectations, and they can form and express self-esteem (Harter, 2012). Thus, from this age, inflated praise can backfire in children with low self-esteem. Over the course of adulthood, however, people tend to become less affected by external evaluations such as praise (Crocker & Wolfe, 2001).
Consequently, inflated praise might become gradually less influential throughout adulthood. Testing these possibilities will shed light on the developmental boundary conditions under which inflated praise exerts its effects.

**Conclusions**

In current Western society, everyday life is replete with instances of inflated praise—such as “Perfect!” or “That’s incredibly beautiful!” Our research is the first empirical study of inflated praise. Our findings show that adults are inclined to give inflated praise to children with low self-esteem. Unfortunately, inflated praise may cause children with low self-esteem to avoid challenges that might lead to failure. These findings show that inflated praise, although well intended, may cause children with low self-esteem to avoid crucial learning experiences.

**Author Contributions**

E. Brummelman and S. Thomaes developed the study concept. All authors contributed to the study design. E. Brummelman oversaw data collection. E. Brummelman and B. J. Bushman analyzed the data, and all authors interpreted the data. E. Brummelman drafted the manuscript, and S. Thomaes, B. Orobio de Castro, G. Overbeek, and B. J. Bushman provided critical revisions. All authors approved the final version of the manuscript for submission.

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The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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**References**


