

# Gender and Emotion Expression: A Developmental Contextual Perspective

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## Abstract

Small but significant gender differences in emotion expressions have been reported for adults, with women showing greater emotional expressivity, especially for positive emotions and internalizing negative emotions such as sadness. But when, developmentally, do these gender differences emerge? And what developmental and contextual factors influence their emergence? This article describes a developmental bio-psycho-social model of gender differences in emotion expression in childhood. Prior empirical research supporting the model, at least with mostly White middle-class U.S. samples of youth, is presented. Limitations to the extant literature and future directions for research on gender and child emotion are suggested.

## Keywords

childhood, emotion, gender, sex differences

Several research studies and meta-analyses have shown small but significant gender differences in the expression of emotion in adulthood in the US and some Western European countries, with women showing greater emotion expression overall (Brody & Hall, 1993; Kring & Gordon, 1998), and in particular for positive emotions (LaFrance, Hecht, & Levy Paluck, 2003) and internalizing negative emotions such as sadness and anxiety (e.g., Allen & Haccoun, 1976), but with men expressing greater levels of aggression and anger than women, in some contexts (Archer, 2004). Interestingly, although women may be more expressive of most emotions, at least in Western cultures, men show equal or greater levels of physiological arousal, for example with men showing greater blood pressure and cortisol responses to emotionally arousing stressors (e.g., Chaplin, Hong, Bergquist, & Sinha, 2008; Kirschbaum, Kudielka, Gaab, Schommer, & Hellhammer, 1999; but see Stroud, Salovey, & Epel, 2002). This may mean that men are aroused internally, but “keep in” emotions whereas women freely express emotions, as proposed by Buck and others (Buck, 1977, 1984; Levensen, Carstensen, & Gottman, 1994). In addition, women show greater rates of clinical depression and some forms of anxiety disorders than men starting in adolescence, disorders which involve in their etiology and in their description the experience and expression of high levels of internalizing negative emotions

such as sadness, guilt, and fear (Chaplin & Cole, 2005; Keenan & Hipwell, 2005; Zahn-Waxler, Shirtcliff, & Marceau, 2008). In contrast, men show greater rates of antisocial behaviors and alcohol abuse than women (Nolen-Hoeksema & Hilt, 2006), which may involve expressions of anger (Chaplin & Cole, 2005) and have been associated with lower experience and expression of anxiety and sadness (Chaplin et al., 2008).

One key to better understand gender and emotion in adulthood and potential implications of these for psychological well-being is to take a developmental perspective. This article does this by describing general theories of gender and child development and then presenting a bio-psycho-social framework for understanding the development of gender differences (and similarities) in emotion expressions. We draw on recent research findings on emotion expression in children and adolescents of different ages, with a particular focus on meta-analytic findings, to examine potential evidence for this model. Notably, research to date on child emotion expression has focused largely on White middle and upper middle class youth from the United States, Canada, and some Western European countries. Thus, our theoretical model (and several past models) is based largely on data from these cultural groups and may not generalize to other cultures. Thus, after presenting our model, we discuss future directions for research on other cultural

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groups and discuss potential applications of our model to understanding of gender and emotion in childhood in different cultural contexts.

The present article focuses on emotion *expression*, which is what youth show externally in the form of facial, vocal, and postural expressions to communicate (or to mask) their internal emotional states to others. All research that is presented on “emotion expression” examined observed facial, vocal, and/or postural expressions coded by reliable trained observers. The literature on gender and emotion *regulation* is not reviewed, but one can infer that regulation is occurring either consciously or subconsciously if, for example, girls express higher levels of happiness than boys when with a stranger, but not when alone. In this example, girls may be up-regulating happy expressions, perhaps in order to please the stranger or boys may be down-regulating happy expressions in order to appear more “calm and cool.” It is difficult to measure children’s actual regulation strategies as youth may not be aware of their strategies, but we can infer a great deal about real-life regulation by examining observed emotion expression in different situations and through multi-method studies examining a combination of emotion expression, subjective emotion experience, and physiological arousal in youth.

## General Theories of Gender Differences in Child Behavior

Several theories have been proposed to explain the emergence of gender differences in behavior, in general, in childhood. Three of the main theoretical models are: biological, social developmental, and social constructionist (although most theorists acknowledge that a combination of these theories most accurately explains child behavior). Below I describe the three models generally. In the next section, they will be described as applied to a bio-psycho-social model of gender differences in *emotion expression*.

Biological theorists propose that girls and boys show innate differences that are related to biological factors, existing either prenatally and/or at birth (e.g., genetic differences existing prenatally that may underlie behaviors that emerge at birth or unfold in later development) or that occur at a later point in development (e.g., differential increases in androgens and estrogens at puberty, activating neural emotional arousal systems). These biologically related differences would then contribute to gender differences in behavior. For example, boys have been shown to have higher levels of arousal than girls in infancy and boys show less language ability and inhibitory control than girls in early childhood (see Brody, 1999). These early gender differences have been found to be strongly influenced by biological factors, such as sex differences in gene expression and the influence of sex hormones (e.g., testosterone) in utero, which lead to brain and body differences between boys and girls (for reviews, see Baron-Cohen, 2002; or Zahn-Waxler et al., 2008). Boys’ lower language and inhibitory control abilities may then lead to difficulty inhibiting the expression of several behaviors, including negative emotions, lower likelihood of using language to

regulate emotion expressions, and greater likelihood of expressing un-modulated negative emotions. Of course, the type of un-modulated negative emotion that is expressed may be due to a biological propensity for boys to show anger or due to socialization factors that are more allowing of anger among males (or due to a combination of biology and socialization).

Psychosocial developmental theorists propose that children learn gender-role-consistent behaviors over time through cognitive learning, socialization, and experience (Liben & Bigler, 2002). Gender schema theory is one social-developmental theory that proposes that boys and girls develop cognitive schemas for gender based on observing their environments (Martin & Halverson, 1981). Such schemas include the behaviors and traits associated with being a boy or girl (such as “boys are active and tough”). With time, children develop a schema for their “own” sex (boy or girl) and proceed to select activities and environments that fit with their own sex schemas (e.g., “I’m a boy, so I am tough. I will play superhero instead of having a tea party”), which further reinforce those schemas. Indeed, boy peer groups have been shown to encourage rough and tumble play, whereas girl peer groups tend to emphasize quiet and cooperative play (Maccoby, 1990; Rose & Rudolph, 2006).

Social learning/socialization theories are another example of psychosocial developmental theories. Social learning theories posit that children are encouraged either through explicit teaching, through modeling, or through subtle encouragement of certain behaviors by socialization agents, to adopt gender-role consistent behaviors (e.g., Bandura, 1969). Then, once gender roles for behaviors are internalized by youth, social learning/socialization theorists propose that gender-role consistent behaviors may be expressed or not expressed depending on the particular situation or environment. For example, mothers may model for girls a pattern of “feminine” emotion expression that involves expressing cheeriness even when it is unfelt and girls may follow this pattern of feminine emotion expression within contexts where it may be adaptive (such as when in front of unfamiliar adults who may expect feminine behavior). As another example, parents may, possibly unknowingly, show greater attention to their child’s gender-role consistent emotions. For example, Chaplin, Cole, and Zahn-Waxler (2005) conducted an observational study of parent–child interactions with primarily White middle-class U.S. preschoolers. They found that fathers (but, interestingly, not mothers) showed greater contingent responses to in-the-moment sadness and anxiety expressions by girls than boys and greater contingent responses to anger and disharmonious emotion expressions by boys than girls. This may have subtly socialized girls to increase sadness expressions but limit anger, at least in some contexts. Chaplin et al. (2005) indeed found that higher father responses to sadness and anxiety expressions at age 4 predicted greater increases in sadness and anxiety expressions by the children during parent–child interactions from age 4 to age 6.

In addition to biological and social developmental models of gender differences in child behavior, social constructionist theories have been proposed (e.g., Shields, 2002). Social constructionist theorists focus on the expression of gender differences in

behavior in the moment. They agree that there may be certain scripts for many types of social interactions that are learned in childhood, similar to ideas stated in the social developmental theories. However, social constructionists propose that behaviors emerge from interactions between the person and their environment (and larger culture) on an ongoing basis and, thus, behaviors are not static but are constantly being constructed in new situations. Social constructionist theorists propose that the expression of gender is influenced by the specific context and by societal expectations for males and females (e.g., Shields, 2002; West & Zimmerman, 1987). One social constructionist-influenced theory that is particularly relevant for emotion expression is Deaux and Major's (1987) gender-in-context theory. This theory states that gender differences in behavior are most likely to be observed in specific environments in which gender is salient. Deaux and Major state that gender differences emerge when "perceivers [others] emit expectancies, targets (selves) negotiate their own identities, and the context in which interaction occurs shapes the resultant behavior" (Deaux & Major, 1987, p. 369).

Social constructionist theories thus hypothesize that emotion isn't something within an individual but is shaped by in-the-moment interactions with the environment. Research in the developmental literature has shown support for this hypothesis. For example, Zeman and Garber (1996) examined children's self-reports of their expression of negative emotion in different interpersonal contexts, in a sample of mostly White middle-class 7–12 year olds in the US. They found that children were more likely to report expressing negative emotions (including sadness and anger) in front of a parent or when alone than when with a peer, which may reflect a process of negotiation between the child and their environment in influencing emotion expression behavior. Children reported that this was because they expected that their parents would respond to their emotions with acceptance whereas peers would respond with rejection. Thus, children were responsive to the expectancies of others in their social interactions.

## **Bio-Psycho-Social Model of Gender Differences in Emotion Expression**

Extending upon the three main theories of gender differences in behaviors, here we propose a bio-psycho-social developmental model of gender and emotion expression, based on the work of Brody (e.g., Brody, 1999) and other theorists (e.g., Fivush & Buckner, 2000). This model proposes that gender differences in emotion expression emerge through a combination of innate biological differences, socialization, and through the influence of in-the-moment social context and societal expectations within a culture.

### *Biology and Socialization Interactions*

In this theory, we first propose that there are gender-related display rules in most cultures for emotion (Brody & Hall, 2008). In the US and in many Western cultures, girls are expected to

display greater levels of most emotions, particularly positive emotions such as happiness, and internalizing negative emotions, including sadness, fear, anxiety, shame, and guilt (Brody & Hall, 2008). Girls are also expected to display more empathy and sympathy than boys (Zahn-Waxler, Cole, & Barrett, 1991; Zahn-Waxler, Schiro, Robinson, Emde, & Schmitz, 2001), which may also be considered internalizing-type emotions, since they involve expressively reflecting others' sorrow (Chaplin & Aldao, 2013). These display rules for internalizing emotions in females are consistent with societal gender roles and stereotypes for females to be more relationally oriented, nurturing, and accommodating than males (Zahn-Waxler et al., 1991). Positive and internalizing emotion expressions facilitate rather than threaten relationships and often promote closeness with others, such as in the case of shared happiness promoting bonding or in the case of sadness expressions eliciting sympathy from others and bringing people together in shared mourning of a loss (Barrett & Campos, 1987; Izard & Ackerman, 2000; Zahn-Waxler & Robinson, 1995).

In contrast to the display rules for girls' emotions, boys, at least in Western cultures, are expected to show less of the "tender" emotions, such as sadness and anxiety, and they are allowed to express externalizing emotions including anger, contempt, and disgust. Anger and contempt function to promote the goal of overcoming obstacles, which can involve the pushing outward, rather than internalizing, of distress (Brody, 1999, 2000; Brody & Hall, 2008). Thus, externalizing emotion expressions are consistent with societal gender roles for males to be assertive, individualistic, independent, and even aggressive, in line with traditional roles for men to protect their families and to overcome dangers that interfere with their ability to provide for their families (Brody, 1999; Eagly & Steffen, 1984).

Gender differences in emotion expressions in the proposed bio-psycho-social model, then, are hypothesized to develop based on a combination of biological gender differences and socialization into the cultural gender roles described above. Then, the expression of gender-role consistent emotions is influenced by contextual factors, including the immediate social context and the larger cultural context(s). In terms of biological factors, Brody (1999) and others have argued that as infants boys have higher activity and arousal levels, and lower language ability and inhibitory control than girls. All of these are likely to be biologically based. Because of these early differences between boys and girls, theorists have proposed that boys are less likely to inhibit or down-regulate negative emotions and more likely to express negative emotions than girls in infancy (Brody, 1999; Weinberg, Tronick, Cohn, & Olson, 1999) and that parents, at least in Western cultures, then respond to boys in ways that dampen their expressiveness; encouraging boys to limit emotions as a means of down-regulating their high arousal and activity levels. Consistent with this idea, Buck (1977) found that boys' observed emotion expressions decreased with age from age 4 to 6 years whereas girls' did not, in a sample of U.S. youth. He attributed this finding to socialization agents dampening boys' expressivity. In contrast to the situation for boys, the bio-psycho-social model proposes that parents are likely to respond to their girls' biologically based lower arousal and

larger vocabularies by talking to them about emotions and otherwise encouraging emotion expression in young girls. Indeed, observational research has shown that parents do use more emotion words when talking with daughters than sons, in particular happiness- and sadness-related words, at least in White U.S. samples (Adams, Kuebli, Boyle, & Fivush, 1995; Fivush, 1989). This combination of biological factors and socialization should lead to increases in girls' expressions of emotions and boys' decreased expressions of emotions over time from infancy into childhood. In terms of type of emotion, given gender roles for girls to show greater positive and internalizing emotions than boys, we would expect that gender differences, with girls > boys in positive and internalizing emotions would increase from infancy into childhood. In terms of externalizing emotions, although boys may be encouraged to limit emotion displays in general (for example, according to Buck's theory), the one type of emotion display that they may be allowed to continue would be externalizing emotions such as anger. These would be allowed because socialization agents would encourage anger in boys to be consistent with gender roles for greater acceptance of externalizing emotion expressions in boys than girls.

What is the empirical evidence for this bio-psychosocially driven increase in gender differences from infancy to childhood and adolescence? In terms of positive emotions, there are four relevant meta-analyses suggesting age-related emergence of gender differences in positive emotion. In the first, Hall and Halberstadt (1986) did not find a significant gender difference in smiling behavior in 2 to 12 year olds, using mainly studies of White U.S. youth. In the second, LaFrance et al. (2003) found significant gender differences (females > males) in smiling behavior, with a medium effect size ( $d = -.41$ ), in adolescents and adults aged 13 and over, with primarily (but not entirely) White U.S. samples. In the third, Chaplin and Aldao (2013), in their meta-analytic review of primarily (but not entirely) White U.S. children and adolescents aged 0–17, did not find significant gender differences in positive emotion expressions in infancy or the toddler/preschool period, but did find small but significant gender differences (girls > boys) in positive expressions in middle childhood ( $g = -.20$ ) and adolescence ( $g = -.28$ ). In the fourth, Else-Quest, Hyde, Goldsmith, and van Hulle's (2006) meta-analysis of children aged 3 months to 13 years who were likely primarily White U.S. children (although ethnicity and country were not specified), found a trend for a gender difference (girls > boys) in smiling behavior to emerge with increasing age. Taken together, these studies support that gender differences in positive emotion expressions are not found in early childhood, but may be seen in middle childhood and are clearly seen by adolescence and adulthood. This may support biological and socialization theories that girls start off with biologically based lower arousal and better emotion vocabulary and they are socialized over time to enhance expression of emotion and, in particular, socialized to adopt the female gender role to express more "relational" positive emotions.

In terms of internalizing emotions like sadness and fear/anxiety, there have been two relevant meta-analyses. In the first, Else-Quest et al. (2006) found a small but significant gender difference (girls > boys) in "fearfulness" (including observed

fear expressions and parent-reports of child fear experiences and expressions;  $d = -.12$ ) for children aged 3 months to 13 years and did not find moderation by age. For sadness, Else-Quest and colleagues found no significant gender differences in "sadness" (including observed sadness expressions and parent-reported sadness experiences and expressions). In the second meta-analysis, Chaplin and Aldao (2013) found significant gender differences (girls > boys) in internalizing expressions (including sadness and fear) in infancy ( $g = -.14$ ), the toddler/preschool years ( $g = -.09$ ), and in middle childhood ( $g = -.12$ ), and a non-significant pattern of girls > boys in internalizing expressions in adolescence ( $g = -.06$ ), with no moderation by age. Interestingly, when Chaplin and Aldao (2013) divided their findings on internalizing expressions into the specific emotions that made up that composite, the strongest gender differences (girls > boys) were found for fear ( $g = -.10$ ), shame ( $g = -.56$ ), and sympathy ( $g = -.13$ ) and no significant gender difference was found for sadness ( $g = -.06$ , *ns*). Taken together, these findings suggest that, at least for primarily White U.S. and Western European samples, girls may express greater fear and other internalizing emotions than boys (but possibly not greater sadness) and that this begins early (in infancy) and does not change over time with age. In terms of the bio-psycho-social model, this suggests that internalizing emotions are not as affected by socialization or unfolding of biological mechanisms over time, perhaps suggesting that gender differences in some internalizing emotions, including fear, are biologically based (or based on *very* early socialization, starting in infancy). The course of gender differences in sympathy and shame are a bit less clear, since these emotions do not actually emerge for youth until after infancy and so they did not likely influence Chaplin and Aldao's findings for internalizing emotion expressions in infancy. More research should be done on the developmental course of gender differences in "social" emotions such as sympathy and shame expressions. The literature on self-reported sympathy and empathy experience (conducted mostly in U.S. and Western European samples) suggests that gender differences in empathic concern may become stronger from childhood to middle adolescence (Michalska, Kinzler, & Decety, 2013; van der Graaff et al., 2014), although gender differences in self-reported empathy may not be reflected in studies of observed empathy or in physiological indicators of empathy (Michalska et al., 2013).

In terms of gender differences in externalizing emotions, there have been at least two relevant reviews. Maccoby and Jacklin (1974) found in their classic narrative review of gender differences in behavior that gender differences (with boys > girls) in mostly observed "frustration reactions" (which included expressions of externalizing emotions) were not found in infancy, but emerged in the toddler period. Consistent with this, Chaplin and Aldao (2013) found that boys and girls were not significantly different in observed externalizing emotion expressions in infancy, but gender differences were significant (boys > girls) at toddler/preschool age ( $g = .17$ ) and in middle childhood ( $g = .13$ ). After middle childhood, however, unexpectedly, the direction of gender differences in externalizing emotion expressions changed direction in adolescence, with boys showing *less*

externalizing emotion than girls in adolescence ( $g = -.27$ )—although this was based on relatively few studies of adolescents (number of studies = 11). Also consistent with a strengthening of gender differences in externalizing emotion expressions over time from infancy to childhood is Keenan and Shaw's (1997) review of behavior problems (primarily parent-reported, primarily in U.S. and Western European samples), problems which are often characterized by anger expression. Keenan and Shaw found no gender differences in behavior problems in infancy, but emerging gender differences (boys > girls) in the preschool period. Taken together, these developmental data suggests that gender differences in externalizing emotions are not present in infancy, but develop (potentially due to socialization factors) in the toddler/preschool period and continue into childhood, although perhaps not through adolescence. This may suggest either a biological unfolding of gender differences in externalizing expressions in the preschool period and/or increasing socialization pressures for boys to show externalizing emotions and girls to limit these displays as parents get their children ready to enter school. The unexpected finding that girls showed greater externalizing expressions in adolescence may be due to increases in depression and accompanying irritability in adolescence for girls, or may be due to changing gender roles for teen-aged girls' expressions of anger in recent years (Brown, 1999), with anger becoming more acceptable for teenaged girls.

### *Social Context Influence*

Our bio-psycho-social model (and Brody's [1999] model) also proposes an important role for social context, consistent with social constructionist theories. We propose that gender roles for emotion expression, once internalized, may be exacerbated or blunted depending on interactions with the in-the-moment social environment and also with the larger societal/cultural context. Emotion expressions are inherently social in nature—they typically are used as ways to signal one's needs and desires to others in the environment. Individuals express emotions within particular situations or contexts and, at a more global level, within a society and culture and within a subculture (e.g., ethnicity, etc.). Thus, it is necessary to study emotion expression in the context of social interactions. One important contextual factor influencing gender differences in child emotion expressions is the interpersonal context in which one expresses emotion. It has been hypothesized, based on social-constructionist-informed theories, that fewer gender differences in emotion expression will be found when people are with someone they trust and know well (such as when a child is with his/her parent) or when they are alone than when they are with an unfamiliar person (e.g., an experimenter; Hall & Halberstadt, 1986; LaFrance et al., 2003) or with a peer (Zeman & Garber, 1996). This is because children will be more likely to behave in a "socially acceptable" manner with persons they do not know well and, therefore, are more likely to adhere to gender roles. In contrast, they may feel more comfortable when alone or with familiar others (e.g., parents) and thus be more likely to express a full range of emotions, even those that are not consistent with gender roles.

What is the empirical evidence for a role of in-the-moment interpersonal context? For positive emotions, LaFrance et al.'s (2003) meta-analysis found that gender differences (females > males) in positive emotion expressions in adolescents and adults were stronger when with an unfamiliar person than when with a familiar person. Chaplin and Aldao's (2013) meta-analysis also found that gender differences in positive expressions in 0–17 year olds were strongest when with an unfamiliar adult ( $g = -.12$ ) and were *not significant* when with a parent, when alone, or when with a peer. Taken together, this is strong evidence that context matters and that gender differences in positive emotion may emerge based on an interaction between a gender role or script (or possibly a biological propensity) for girls to show high positive emotion and the demands of an environment. One explanation for girls' tendency to express positive emotions when with unfamiliar others is that girls perceive that the observer is less open to seeing gender-role inconsistent emotions. Another explanation is that girls are socialized (and/or innately predisposed) to try to please others and maintain harmony and thus are more likely to smile when with an unfamiliar other in order to "please" an adult experimenter or in order to reduce social tension in interactions with strangers. Consistent with this, Hall and Halberstadt's (1986) meta-analysis of 2–12 year olds found that gender differences in smiling (girls > boys) were stronger in socially tense situations (and also, to a lesser extent, in situations with unfamiliar others). In either case, it is clear that the social context matters for the end outcome of emotion expressive behavior.

For externalizing emotion expressions, similarly, Chaplin and Aldao (2013) also found social context influences, such that gender differences were stronger in the presence of peers (and, oddly, when alone) than when with parents or other adults, suggesting that the peer group may influence/elicite gender-role consistent displays of anger or aggression. The story for internalizing emotions was not as clear cut, with Chaplin and Aldao finding that gender differences for these emotions were actually strongest when with parents and when with unfamiliar adults and were attenuated with peers or alone, which does not line up with the hypothesis that gender differences should emerge in situations with relatively unfamiliar others (such as with peers) and not when with familiar others (like parents).

### *Culture and Ethnicity as Contexts*

An additional important context for gender differences in the bio-psycho-social model is cultural context. Gender roles for emotion expression and social context factors may be different for children growing up within different socio-economic settings, different cultural backgrounds, different ethnicities, different countries/societies, or in different time periods. For example, in working-class or low-income U.S. settings, girls may be encouraged to appear "tough" in order to protect themselves in potentially dangerous neighborhoods, and thus these girls may not face strong socialization pressures to limit anger expressions (Brown, 1999; Eisenberg, 1999; Miller & Sperry, 1987). In addition, different ethnic groups may have different display rules for emotion, and potentially for gender and emotion. For example, Matsumoto (1993) found, in a U.S. sample,

that Caucasian adults rated displays of fear as more appropriate than Hispanic adults and sadness as more appropriate than African Americans and Asian Americans. This could mean that Caucasian parents in the US may be more likely to encourage sadness expressions among girls, whereas African American parents may be more likely to discourage sadness expressions, possibly for both boys and girls.

There is, unfortunately, little data on ethnicity effects on gender differences in observed emotion expression due to the fact that the majority of research on child emotion expression has been conducted with White middle-class children. LaFrance et al.'s (2003) meta-analysis with adolescents and adults did include some studies of ethnic minority youth and adults and they found that ethnicity significantly moderated gender differences in positive emotion expressions, such that Caucasian samples showed a larger sex difference, with females > males, in smiling than other ethnic groups, including African American and Asian groups, suggesting an important role of ethnic culture as a context for emotion expression. In addition, some recent research has begun to explore gender differences in emotion in low-income and ethnic minority children and adolescents. For example, Hubbard (2001) examined observed happiness, sadness, and anger expressions in U.S. low to low-middle class African American youth at age 8 and found that boys showed greater anger expressions than girls, but there were not significant gender differences in happiness and sadness expressions. Panjwani, Mayes, and Chaplin (2014) examined observed happiness, sadness, anger, fear, contempt, and embarrassment expressions in low-income mostly African American U.S. adolescents. They found that girls expressed higher levels of happiness and embarrassment than boys ( $d = .36-.42$ ), consistent with Western gender roles. But, these girls also showed higher levels of contempt than boys ( $d = -.37$ ) and were not different from boys in anger, fear, or sadness expressions. These findings are consistent with LaFrance and colleague's finding that gender differences in emotion expressions (perhaps depending on the type of emotion) may disappear or be attenuated in non-Caucasian groups. Overall, there is emerging evidence that gender differences in emotion expressions may depend on ethnicity and cultural context, although much more research is needed.

## Summary and Future Research Directions

In sum, here we presented a bio-psycho-social contextual model of the development of gender differences in emotion expression in childhood and adolescence and examined empirical findings related to this model. Specifically, the model proposes that there may be small biologically related gender differences in behaviors present at birth, such as boys' greater reactivity and energy level and girls' greater language skills, and that these elicit and are affected by socialization pressures from adults (and peers) to channel these differences into gender-role-consistent gender differences in emotion expressions as youth develop from infancy into the toddler/preschool period and childhood. In addition, there are contextual forces at work, shaping when and

whether children express emotions according to gender roles depending on an interaction between their (biologically and/or socialization-influenced) tendency to express gender-role-consistent emotions and the particular social environment and larger cultural context in which they are found.

Empirical findings, drawn primarily (but not entirely) from studies of White, middle-class U.S., Canadian, and Western European samples, support: (a) the slow emergence of gender differences in emotion, at least for positive and externalizing emotions, suggesting that these are formed through interactions between unfolding of biologically based traits and socialization influences over time in childhood, as suggested in the model and (b) the strong influence of in-the-moment interpersonal environment on whether gender-role-consistent emotions are expressed, with these expressions more likely when youth are with unfamiliar adults or with peers than when with parents, at least for positive and externalizing emotions.

Overall, then, the empirical literature provides support for a bio-psycho-social model, but more work is necessary to fully understand the development of gender and emotion expression in childhood and adolescence. First, to the extent that gender differences in emotion expression exist in certain contexts, it is important to study the consequences of them for children. Early gender-related emotion expression patterns may predispose youth for the development of psychopathology. Girls who show an exaggerated "female" pattern of coping with stressors by expressing high sadness, anxiety, and empathy, unfelt cheeriness, and by suppressing anger displays, may be at risk for internalizing distress and developing depression and anxiety (Keenan & Hipwell, 2005; Zahn-Waxler et al., 1991). Boys who show an exaggerated pattern of expressing un-modulated anger and by suppressing sadness and anxiety may be at risk for developing behavior problems and possibly substance use (Chaplin & Cole, 2005; Nolen-Hoeksema & Hilt, 2006). Future research should examine whether gender differences in emotion expression in particular contexts are linked with risk for disorders, to inform gender-sensitive interventions that can be aimed at particular contexts or interpersonal relationships.

A second limitation in the literature is that most of the studies reviewed here were with White middle-income children in North America and Western Europe. Future studies should examine emotion expression in youth from diverse cultural backgrounds. This is important for several reasons. One reason is that understanding whether cultural context influences gender differences will inform our models of why and when gender differences occur (or don't occur). Another reason is that understanding cultural influences on gender differences in emotion might suggest culturally sensitive interventions for emotion-related psychological disorders and physical health problems. A third future direction for research is in conducting integrated bio-psycho-social studies to examine gender and observed emotion expression together with emotion experience and emotion-related physiological arousal as these relate to outcomes for youth. By integrating these perspectives, we may better understand the role of gender in emotion expression, how emotion experience and expression is regulated, and potential

consequences of these processes for child adaptive and maladaptive development.

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