Modern Psychological Studies

Volume 25 | Number 1 Article 10

January 2020

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## Recommended Citation

Carlton, Sara; Harrison, Abbey; Honoré, Sydney; and Goodmon, Leilani B. (2020) "Conceal, Don't Feel: Gender Differences in Implicit and Explicit Expressions of Emotions," *Modern Psychological Studies*: Vol. 25 : No. 1 , Article 10.
Available at: https://scholar.utc.edu/mps/vol25/iss1/10

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# Conceal, Don't Feel: Gender Differences in Implicit and Explicit Expressions of Emotions

Abstract

Previous studies revealed that gender-role conforming men rated themselves lower on emotional scales (Etherton, Lawson, & Graham, 2014) and expressed emotion less freely than women in experimental situations (Brody, Lovas, & Hay, 1995). Further, men with high gender-role stress indicated fear of losing control over emotions (Jakupcak, 2003). The purpose of the current study was to explore if the physiological response to emotional suppression is similar to that associated with fear and anxiety. Gender-role conforming men and women experienced fearful and emotional stimuli. Experimenters recorded explicit and implicit reactions before and after exposure. Results showed females experienced greater changes in response after stimuli exposure compared to males. Implications of this research may indicate that males experience increased stress associated with emotional suppression.

Keywords: gender, emotion, anxiety, fear, gender roles

# Conceal, Don't Feel: Gender Differences in Implicit and Explicit Expressions of Emotions

According to traditional gender roles, women tend to be more expressive of emotions than men (Brody, Lovas, & Hay, 1995; Plant, Hyde, Keltner & Devine, 2000; Barrett & Bliss-Moreau, 2009). Across time, the common belief among the general population is that men are in better control of their emotions, and women have a tendency to let emotions control them (Barrett & Bliss-Moreau, 2009; Brody, Lovas, & Hay, 1995). Men who adhere more closely to traditional gender roles tend to rate themselves lower on emotional scales (Etherton, Lawson, & Graham, 2014; Jakupcak, 2003) and regulate emotional responses more easily than women in experimental situations (Brody et al., 1995; McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008). Differences in emotional expression between men and women are more likely a product of socialization rather than biological differences (Ollendick, King, & Muris, 2002; Garside & Klimes-Dougan, 2002). Garside and Klimes-Dougan (2002) showed in their study that parents tended to punish negative emotions (i.e., sadness, anger, fear) in boys while reinforcing the same emotions in girls. Being punished for expressing negative emotions also lead to psychological issues later in life (Garside & Klimes-Dougan, 2002). Further, research conducted by Jakupcak (2003) revealed that men with high gender-role stress rated themselves more fearful of situations in which control over their emotions could become compromised. That fear is not misguided; social costs for men expressing "non-masculine emotions" (i.e., sadness, submissiveness, vulnerability, etc.) are high and can result in social rejection (Boysen, 2017).

Social ramifications for emotional suppression are compounded by a variety of physiological and mental detriments. The emotions that human beings feel help one effectively communicate with others as well as understand one's own states of being (Waugh & Fredrickson, 2006). Our emotions reflect our own needs and the needs of others; acknowledging these feelings is integral to our survival and well-being. Free expression of our emotions has a multitude of benefits while emotional suppression can lead to negative outcomes (Grichnik, Smeja, & Welpe, 2010; Kaplow, Gipson, Horwitz, Burch, & King, 2014; Low, Overall, Hammond, & Girme, 2017; Stanton et al., 2000). Researchers conducted a study on cancer patients that showed that free emotional processing and expression enhanced self-perceived health status and vitality while lowering adjustment periods and medical visits for cancer-related issues (Stanton et al., 2000). Low and colleagues (2017) showed that both male and female participants who actively expressed emotion were more often successful in achieving personal goals and were more motivated to do so; participants who suppressed their emotions reported lower levels of motivation and perceived support from their significant others. Further, there appears to be a relationship between adverse life events and attempted and successful suicides in adolescents (Kaplow et al., 2014) as well as an increase in susceptibility for heart disease in adults (Gross & Levenson, 1993) when emotions are suppressed. Taking the negative effects of emotional suppression into account, the fact that men restrict themselves from expressing certain non-masculine emotions due to societal pressure has the potential to lead to both mental and physical distress.

Fear is one emotion that may have negative consequences when suppressed. Fear is integral to our survival as humans because it allows us to recognize potential sources of danger and avoid those dangers (Fredrikson, Annas, Fischer, & Wik, 1996). However, irrational fears that do not reflect our need to survive can also arise as a consequence of trauma, classical conditioning, or socialization (Fredrikson et al., 1996). While men and women do have similar fears (Allan et al., 2018; Mclean & Anderson, 2009), gender differences do arise in varied circumstances (Fredrikson et al., 1996; Meyer, & Grollman, 2014; Muroff et al., 2014).

Typically, the most fearful situations for both men and women are situations where they have a lack of control (Muroff et al., 2014). Further, men and women seem to be similar regarding social fears and fear of physical threats, though some differences exist regarding fear of specific animals (i.e., spiders, snakes, dogs, etc.) (Mclean & Anderson, 2009). Gender differences become more prevalent with the use of explicit fear measures. Several researchers showed that men, on average, will rate fear levels much lower than women in response to a variety of fearful situations (Etherton et al., 2014; Fredrikson et al., 1996). However, Etherton and colleagues (2014) also discovered that although males on average had a greater physiological response to pain and failed to recover to baseline levels as quickly as females, they gave a lower explicit rating of fear than females. Results like these suggested that men feel as though they must suppress fear, as well as other non-masculine emotions, despite feeling the same or higher levels of distress as women. When taking the social ramifications of men freely expressing emotions into consideration, the emotional suppression, including the suppression of fear, may be out of fear itself.

Although men are more reluctant to express emotion than women (Etherton et al., 2014) and there is a wide discussion of gender differences in fear and phobias (Fredrikson et al., 1996; Mclean & Anderson, 2009), there is still a paucity of research on whether or not the “discomfort” men feel when experiencing non-masculine emotions is actually fear. With research regarding men’s “fear” of emotion (Jakupcak, 2003), measures used to collect fear have been consistently explicit, mainly relying on participant response, which could be ineffective in collecting honest responses in certain situations (Etherton et al., 2014). Researchers also found that emotional suppression is linked with an increase in the sympathetic nervous system, otherwise known as the “fight or flight” response (Gross & Levenson, 1993; Low et al., 2017). A fear response can be measured by evaluating the responses of the sympathetic nervous system in ways such as heart rate, blood pressure, and skin temperature. If this physiological response is triggered by something other than a commonly fearful stimuli, emotional suppression could be the trigger.

The purpose of the current study was to measure the physiological response to emotional suppression, namely if it is similar to the physiological response associated with fear and anxiety. Gender, gender-role conformity, implicit and explicit response to fearful stimuli, and implicit and explicit response to emotional stimuli were the variables observed. We recorded implicit reactions of participants while they were observing either fearful or emotional visual stimuli. The implicit stimuli measured sympathetic cues associated with “fight or flight” response including heart rate, blood pressure, and skin response (Lang, Davis & Öhman, 2000) (data collection method used by Gross & Levenson, 1993). We hypothesized that when exposed to both fearful stimuli (i.e., a situation which evokes anxiety) (Lang et al., 2000) and emotional stimuli (i.e., a situation which evokes “heart-warming” feelings that are difficult to conceal), men would show a more similar implicit response to both conditions than women, given that both types of stimuli (fearful and emotional) should induce anxiety (Etherton et al., 2014; Gross & Levenson, 1993; Low et al., 2017). We also predicted that men with higher conformity to traditional gender roles would show greater signs of distress in response to emotional stimuli than gender role conforming women, given that men with high gender-role stress tend to feel discomfort when unable to conceal certain emotions (Jakupcak, 2003).

# Method

## Design

The experiment formed a 2 x 3 x 2 mixed subjects factorial design with gender (male, female) as the grouping variable and time of response collection (baseline, post-emotional, post-fearful) and type of measure (implicit/physiological, explicit/subjective self-report) as the repeated measures.

## Participants

A total of 43 undergraduate students enrolled at a small liberal arts college in the Southeastern United States participated in the study. The participants received credit for their courses in exchange for participating. The sample was 74.42% female and 25.58% male, and the ethnic makeup of the study was 74.42% White/Caucasian, 6.98% Black/African American, 4.65% Hispanic, 6.98% Asian, and 6.98% Other. The participants ranged in age from 18 to 22 years with an average age of 19.42 years.

Prior to the experimental phase of the study, 259 individuals in the participant pool completed the Bem Sex Role Inventory (BSRI). From this sample, we invited back individuals who scored in the top quartile of gender conformity scores to their gender (i.e., males with high masculinity scores and females with high femininity scores) to participate in the experimental portion of the study ($n$ = 105). We conducted this pre-screening measure in order to create a sample where the males adhered to stereotypically “male” roles and the females adhered to stereotypically “female” roles. We believed based on past research (Brody et al., 1995; Jakupcak, 2003) that participants with strict gender roles (as opposed to androgynous individuals), would feel greater pressure to preserve traditional gender roles associated with emotional expression and thus experience more of a discrepancy between explicit and implicit expression of emotion.

## Materials

**Gender role conformity scale.** The BSRI (Bem, 1974) was used as the pre-screening questionnaire to determine the participants' level of gender-role conformity (masculinity, femininity). The questionnaire has a total of 60 items including 20 masculine items (e.g.,"Aggressive", "Competitive", and "Makes decisions easily"), 20 feminine items (e.g., "Affectionate", "Does not use harsh language", and "Gullible"), and 20 neutral items (e.g., "Adaptable", "Jealous", and "Solemn"). The participants rated each item on how well each item described themselves, ranging from "1" ("Never True") and "7" ("Always True"). The reported internal consistency (Cronbach's $\alpha$) of the BSRI was 0.86 for masculinity and 0.80-0.82 for femininity based on the results in the Stanford sample (Masculinity $\alpha = 0.86$; Femininity $\alpha = 0.80$) and in the Foothill sample (Masculinity $\alpha = 0.86$; Femininity $\alpha = 0.82$) (Bem, 1974). The reported correlation with related measures (i.e., validity) such as California Psychological Inventory was 0.42 to 0.25 for masculinity and was 0.25 to 0.27 for femininity (Bem, 1974).

**Measure of explicit response.** The Profile of Mood States (POMS) (Grove & Prapavessis, 1992) was used to measure explicit, subjective reports of emotional state. Experimenters assessed the participants' mood and arousal before and after exposure to visual stimuli using the POMS. The POMS consisted of 40 adjectives, and participants described how they felt about each adjective on a scale of "0" ("Not at all") to "4" ("Extremely"). There was a total of seven subscales on the questionnaire: Tension (e.g., "Anxious" and"Nervous" ), Anger (e.g., "Annoyed" and "Bitter"), Fatigue (e.g., "Exhausted" and "Worn Out"), Depression subscale (e.g., "Sad" and "Hopeless"), Esteem-related Affect (e.g., "Satisfied" and "Competent"), Vigor (e.g., "Active" and "Energetic"), and Confusion (e.g., "Can't Concentrate" and "Forgetful"). The reported internal consistency (Cronbach's $\alpha$) of the POMS was 0.66-0.95; validity was examined by comparing the mood states of winners and losers, and all subscales except “Fatigue” produced significant differences between the groups (Grove & Prapavessis, 1992).

**Measures of implicit responses.** The measures of implicit response apparatus used in this study were a pulse oximeter, blood pressure gage, and Biodots. The pulse oximeter measured the participants’ heart rate and blood oxygen levels, and the blood pressure gage measured the participants’ blood pressure. Participants placed a finger on the Biodot to record skin reactivity in relation to temperature.

**Visual stimuli.** Participants experienced approximately three minutes of each visual stimulus: fearful, emotional, and neutral. The fearful visual stimulus (a situation that evokes anxiety) was a video of a suspenseful scene from the film *Don’t Breathe*. The emotional stimulus (a situation where emotions cannot be controlled) was a video of a baby hearing for the first time. The neutral visual stimulus (a situation that is not meant to provoke an intense emotion) was a video of natural scenery.

**Desensitization stimuli.** The experimenter exposed participants to 90 positive pictures and three minutes of music during the desensitization phase of the study. The experimenters found it necessary to desensitize the participants given that the experimental stimuli presented was intended to induce an emotional discomfort in some participants. The positive pictures were in color with a yellow background. The experimenters presented all pictures individually to the participants at a rate of two seconds per picture for a total presentation time of 180 seconds. Examples of the positive pictures included happy faces, smiling babies, etc. Upbeat, positive music was played while the pictures were shown. Music consisted of Mozart’s Sonata for Two Pianos in D Major, K. 488. The music was played through computer speakers. Goodmon, Bacharz, Parisi, & Osborn (2018) showed that the combination of these pictures and music was effective at elevating mood-arousal levels of participants.

**Procedure**

This experiment took place in a computer lab. The participants read and filled out the informed consent form before experimenters measured the baseline implicit biological functions (i.e., heart-rate, blood oxygen, blood pressure, skin reactivity). Then participants completed the POMS before exposure to any videos as an explicit, subjective baseline of mood-arousal. The participants were then randomly assigned to the order of exposure to the videos (fearful first or emotional first). Before given any stimuli, participants were informed by the researcher that they would be viewing a series of videos "*intended to incite intense emotions, including fear.*" Participants were also given the ability to end the study at any point if they became uncomfortable ("*we will pause the video and you will be free to leave without any consequences*").

After viewing the first presented stimuli (emotional or fearful), explicit and implicit responses were collected again by experimenters. Participants were then exposed to neutral stimuli in order to bring mood-arousal levels and physiological response back to baseline. After neutral stimuli, participants were then presented with the second stimuli (emotional or fearful) and explicit and implicit responses were collected again. In order to negate any emotional discomfort caused by the stimuli used in our study, participants also experienced a brief desensitization procedure. The experimenters desensitized the participants by simultaneously playing a presentation of positive images accompanied by a Mozart Sonata for Two Pianos in D Major to elevate mood-arousal from a negative state (Goodmon et al., 2018; Thompson, Schellenberg, & Husain, 2001).

**Results**

**Mood Manipulation Check**

A 2 x 3 mixed-subjects factorial ANOVA was conducted with gender (female, male) as the between-subjects factor and test of mood-arousal following exposure to the experimental videos (baseline, posttest emotional, posttest fearful) as the repeated measure. As seen in *Figure 1*, there was a significant effect of testing on mood-arousal scores, $F(2, 84) = 6.33$, $p = .003$. Subsequent pairwise comparisons revealed that mood-arousal was greater after exposure to emotional stimuli ($M = 3.10$, $SD = 0.36$) compared to mood-arousal at baseline ($M = 2.95$ , $SD = 0.31$), $p = .013$, and mood-arousal after exposure to fearful stimuli ($M = 2.92$ , $SD = 0.34$), $p = .003$. Gender was not related to mood-arousal scores, $F(1, 42) = 2.23$, $ps = .14$. In addition, there was no significant difference between mood-arousal at baseline and mood-arousal after exposure to fearful stimuli, $ps = 0.30$.

There was no significant interaction between gender and test of mood-arousal following exposure to the experimental videos, $F < 1$. Subsequent pairwise comparisons revealed that for females there was a significant increase in mood-arousal from baseline ($M = 2.90$, $SD = 0.32$, $SE = 0.06$) to after exposure to emotional stimuli ($M = 3.08$, $SD = 0.36$, $SE = 0.06$), $t(32) = -4.13$, $p < .001$. Additionally, females reported higher levels of mood-arousal after exposure to emotional stimuli compared to after fearful stimuli ($M = 2.88$, $SD = 0.36$, $SE = 0.06$), $t(32) = 3.77$, $p = .001$. However, for females, there was no significant change in mood-arousal from baseline to after fearful stimuli, $t(32) = .43$, $p = .67$. For males, there was no significant change in mood-arousal across any of the stimuli conditions, $ps > .17$.

To summarize, there was no significant interaction between gender and stimuli type (emotional video, fearful video) on participant mood-arousal. However, females did experience an increase in mood-arousal after exposure to emotional stimuli compared to baseline and after exposure to fearful stimuli. Males reported no change across any of the three video conditions.

**[INSERT FIGURE 1 HERE]**

## Relationship Between Gender, Stimuli Type, and Heart Rate

A 2 x 3 mixed-subjects factorial ANOVA was conducted with gender (female, male) as the between-subjects factor and test of heart rate after stimuli type exposure (baseline, posttest emotional, posttest fearful) as the repeated measure. As seen in *Figure 2*, there was no significant effect of stimuli type on heart rate, $F < 1$. Subsequent pairwise comparisons revealed that there was no significant difference in heart rate across any of the stimuli conditions, $ps > .47$. The relationship between gender and heart rate approached significance, $F(1, 42) = 3.95$, $p = .054$. Females had a marginally higher heart rate ($M = 75.41$, $SD = 13.24$) than males ($M = 67.27$, $SD = 10.71$). There was no significant interaction between gender and heart rate after stimuli exposure, $F < 1$. Subsequent pairwise comparisons revealed that for both males and females, there was no significant change in heart rate across the three stimuli exposure conditions, $ps > .33$. To summarize, neither gender nor condition was related to the heart rate of participants. Both males and females had similar heart rates at baseline, after exposure to emotional stimuli, and after exposure to fearful stimuli.

**[INSERT FIGURE 2 HERE]**

## Relationship Between Gender, Stimuli Type, and Skin Temperature

A 2 x 3 mixed-subjects factorial ANOVA was conducted with gender (female, male) as the between-subjects factor and test of skin temperature after stimuli type exposure (baseline, posttest emotional, posttest fearful) as the repeated measure. As seen in *Figure 3*, there was a significant effect of stimuli type on skin temperature, $F(2, 84) = 5.87$, $p = .004$. Subsequent pairwise comparisons revealed that there was a significant increase in skin temperature from baseline (*M* = 47.78 %, *SD* = 32.67%) to after exposure to fearful stimuli (*M* = 65.00%, *SD* = 28.78%), *p* = .002. Additionally, there was no significant change in skin temperature between exposure to fearful and exposure to emotional stimuli (*M* = 58.11%, *SD* = 30.22%), *p* = .14.

There was no significant interaction between gender and skin temperature after stimuli exposure, *F* < 1. However, subsequent pairwise comparisons revealed significant differences across stimuli type as a function of gender. For females, there was a significant increase in skin temperature from baseline to after exposure to fearful stimuli, *t*(32) = 2.32, *p* = .03. For females, there was no significant increase in skin temperature from baseline to after exposure to emotional stimuli, *t*(32) = 1.06, *p* = .30, nor was there a significant change between exposure to emotional and fearful stimuli, *t*(32) = 1.21, *p* = .24. Like females, males also exhibited an increase in skin temperature from baseline to after exposure to fearful stimuli. However, this difference only approached significance, *t*(10) = 2.16, *p* = .06. This marginally significant finding could be due to a small sample size of male participants. Unlike females, males exhibited an increase in skin temperature from baseline to after exposure to emotional stimuli that approached significance, *t*(10) = 1.97, *p* = .08. Like females, there was no significant change in skin temperature in exposure to emotional stimuli and exposure to fearful stimuli, *p* = .43.

To summarize, participants' skin temperature increased from baseline to after exposure to fearful stimuli, but not after exposure to emotional stimuli. Females had a significant increase in skin temperature from baseline compared to post-fearful stimuli, but skin temperature for males only had a marginal increase. There was no change in skin temperature from baseline to post-emotional stimuli, or from post-emotional to post-fearful stimuli, in both males and females.

**[INSERT FIGURE 3 HERE]**

**Relationship Between Gender, Stimuli Type, and Blood Oxygen**

A 2 x 3 mixed-subjects factorial ANOVA was conducted with gender (female, male) as the between-subjects factor and test of blood oxygen levels after stimuli type exposure (baseline, posttest emotional, posttest fearful) as the repeated measure. As seen in *Table 1*, there was no significant effect of stimuli type on blood oxygen levels, $F(2,84) = 1.01$, $p = .37$. Subsequent pairwise comparisons revealed that there was no significant difference in blood oxygen levels across any of the stimuli conditions, $ps > .25$. The relationship between gender and blood oxygen was not significant, $F < 1$.

There was no significant interaction between gender and blood oxygen levels after stimuli exposure, $F(2,84) = 1.68$, $p = .19$. Subsequent pairwise comparisons revealed that for both males and females, there was no significant change in blood oxygen levels across any of the stimuli conditions, $ps > .25$.

To summarize, neither gender nor condition was related to the blood oxygen levels of participants. Both males and females had similar blood oxygen levels at baseline, after exposure to emotional stimuli, and after exposure to fearful stimuli.

**[INSERT TABLE 1 HERE]**

**Relationship Between Gender, Stimuli Type, and Systolic Blood Pressure**

A 2 x 3 mixed-subjects factorial ANOVA was conducted with gender (female, male) as the between-subjects factor and test of systolic blood pressure after stimuli type exposure (baseline, posttest emotional, posttest fearful) as the repeated measure. As seen in *Figure 4*, there was no significant effect of stimuli type on systolic blood pressure, $F(2,84) = 2.16$, $p = .12$. Subsequent pairwise comparisons revealed that there was no significant difference in systolic blood pressure across the three stimuli exposure conditions, *ps* > .01. The relationship between gender and systolic blood pressure approached significance, $F(1,42) = 2.76$, $p = .10$.

The interaction between gender and systolic blood pressure after stimuli exposure approached significance, $F(2,84) = 2.73$, $p = .07$. Subsequent pairwise comparisons revealed that for females there was a significant decrease in systolic blood pressure from baseline ($M$ = 120.76, $SD$ = 15.00) to after exposure to emotional stimuli ($M$ = 113.97, $SD$ = 13.91), $t(32)$ = 3.91, $p < 0.001$. Females also exhibited a significant decrease in systolic blood pressure from baseline to after fearful stimuli ($M$ = 115.42, $SD$ = 14.69), $t(32) = 2.70$, $p = .001$. There was no change in blood pressure in females between exposure of emotional and fearful stimuli, $t(32)$ = -1.16, $p = .26$. For males, there was no significant change in systolic blood pressure across any of the stimuli conditions, *ps* > .54.

To summarize, stimuli type had no effect on systolic blood pressure of participants. However, there was a marginally significant interaction of gender and stimuli type on systolic blood pressure. Females exhibited a decrease in systolic blood pressure after exposure to emotional stimuli compared to baseline. However, males did not experience any change in systolic blood pressure across any of the conditions.

**[INSERT FIGURE 4 HERE]**

## Discussion

The purpose of this study was to objectively identify a fear response in gender conforming men by comparing the implicit reactions to both fearful and emotional stimuli while looking for emotional suppression through the explicit responses. Men have a tendency to be less emotional than women (Brody et al., 1995; McRae et al., 2008), however this lack of emotionality is most likely due to emotional suppression (Ollendick et al., 2002). Men are also less likely to admit to feeling non-masculine emotions, despite implicit measures revealing an elevated physiological response (Brody et al., 1995; Etherton et al., 2014). Further, research showed that men experience significant “discomfort” in response to emotionally compromising situations (Jakupcak, 2003). Despite previous research indicating a tendency for men to withhold an explicit emotional response in certain situations, there has been no research observing whether or not elevated implicit response is similar to a fear response. This project hoped to fill that gap.

Results provided partial support for our hypotheses. In the case of explicit, subjective mood-arousal and systolic blood pressure, females did exhibit significantly different reactions when compared to males. For females, mood-arousal elevated after exposure to emotional stimuli and systolic blood pressure decreased. For males, there were no differences in reactions across any of the conditions. These results may indicate that females did experience less stress after exposure to emotional stimuli when compared to men who had no change in physiological response. Additionally, considering that men had higher physiological response at baseline when compared to females, they may have already been exhibiting elevated stress in response to the knowledge that we would be testing their reactions to emotionally evoking stimuli. The thought of being observed (especially by a female researcher) might have caused men to be more stressed than females at baseline, which would explain why their reactions did not differ between conditions. This inference would be consistent with previous research indicating that gender-role conforming men experience stress when considering situations in which they may be emotionally compromised (Jakupcak, 2003). However, the low sample size of males may also be to blame for the lack of significant change. Future studies would attempt to have a more balanced male to female participant ratio in order to observe a more significant difference between men and women.

The one measure that did indicate a significant difference between conditions in both males and females was skin temperature as indicated by the Biodots. Both males and females exhibited an increase in skin temperature after exposure to fearful stimuli. No other differences were observed. These results are incongruent with previous research that has found that a decrease in temperature is more closely associated with an anxiety response (Sorg & Whitney, 1992). Because participants' skin temperature appeared to have an increase after fearful stimuli, this may indicate that the fearful stimuli used in our study was not effective enough at inciting a fear response. The ineffectiveness of the fearful stimuli is also denoted by the lack of decrease in explicit mood-arousal of the participants after exposure. Considering that the stimuli was not effective enough at inciting a "fight or flight" response, this may indicate why we failed to see significant differences in males across any of the conditions. Future studies would need to utilize more effective fearful stimuli in order to create an adequate physiological response that may then be compared to response after exposure to emotional stimuli.

Although precautions were put into place in order to limit extraneous variables, a number of confounding variables may have altered the results of the study. Firstly, the sample size used in this study was nearly half as small as expected and predominantly female. The small sample lowered our statistical power and increase our margin of error. The low number of males that participated most likely prevented us from finding significant differences between conditions when compared to the larger number of females. Additionally, the room utilized in the study was not soundproof, and noise from adjacent classrooms may have interfered in proper mood induction. Further, the equipment used did not collect physiological data as stimuli was administered, and the delay between stimuli exposure and response collection may have altered results. Lastly, physiological response may not be the most robust measure of implicit emotional states available. The use of physiological measures as an indicator of implicit emotional response should be reexamined and supplemented by other collection methods in future research. Continuation of this study should strive to address the limitations mentioned here.

The proposed research was novel in that it explored the similarities between implicit physiological responses to both fearful stimuli and emotional suppression in participants. Although only marginal differences were seen between men and women, the implications of men suppressing traditionally non-masculine emotions (i.e., sadness, submissiveness, vulnerability, etc.) out of fear of expressing these emotions should be discussed further. There is a wide discussion of the negative psychological and physical effects of fear and anxiety, which may indicate that gender role conforming men may be at higher risk of suffering from these negative consequences than their female counterparts. Despite only partial support of the hypotheses, the results of this study serve to benefit ongoing investigation into toxic masculinity and the detriments it may have on society. Further, the results may have the ability to combat erroneous belief that men are naturally less emotional than females, which may prove to be beneficial in allowing the next generation of men to feel more comfortable freely expressing emotion and lowering their risk of experiencing negative effects associated with emotional suppression.

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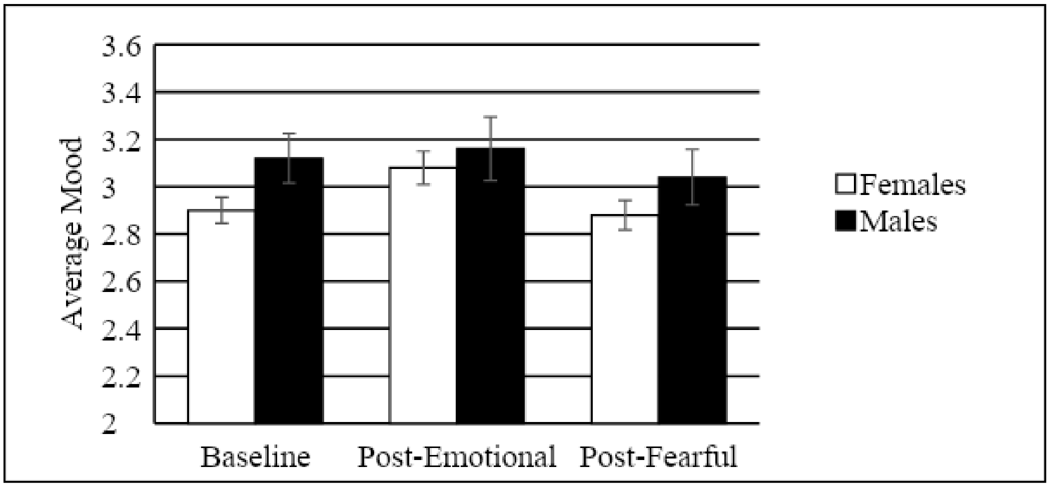


*Figure 1.* Average mood-arousal level as a function of gender at baseline, post- emotional, and post-fearful stimuli

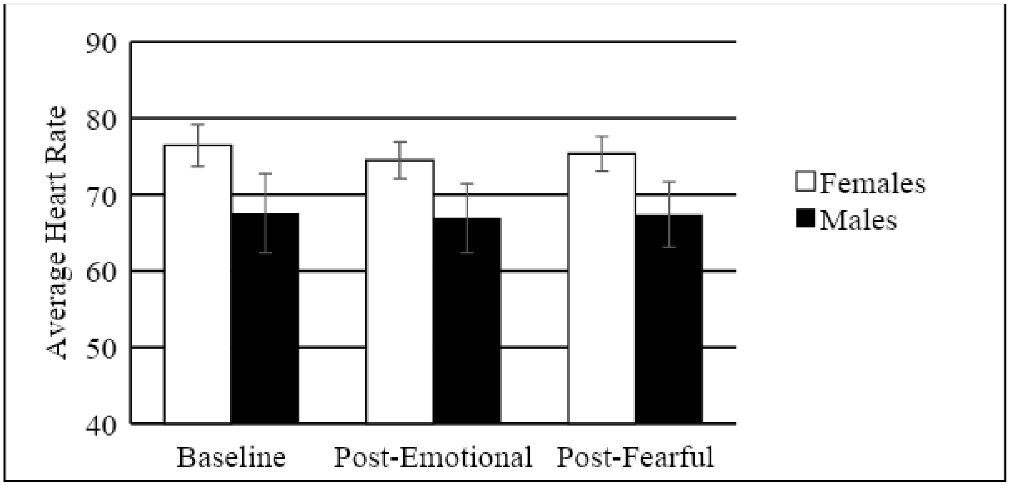


*Figure 2.* Average heart rate as a function of gender at baseline, post-emotional, and post-fearful stimuli.

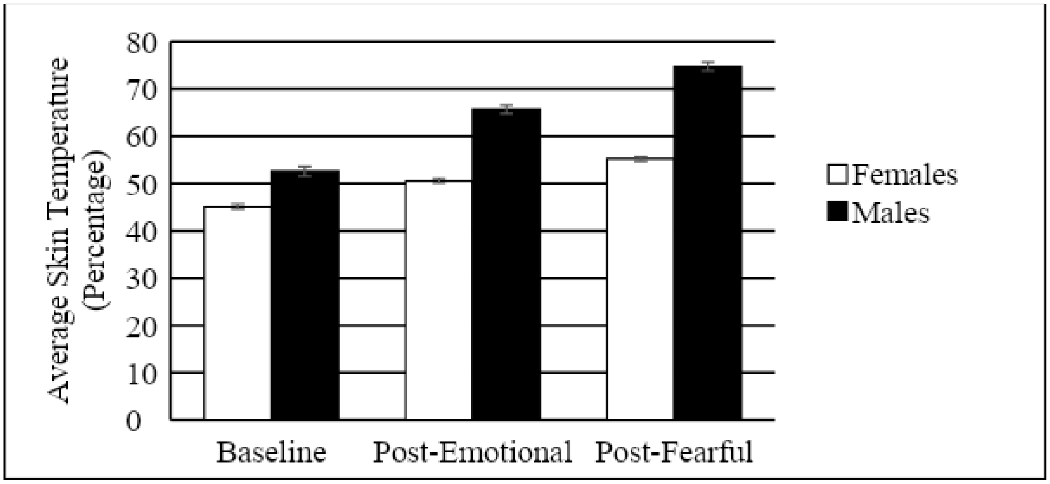


*Figure 3.* Average skin temperature as a function of gender at baseline, post-emotional, and post-fearful stimuli

Table 1
*Average blood oxygen levels for males and females at baseline, after exposure to emotional stimuli, and after exposure to fearful stimuli.*

| Time of Collection | Female *M (SD)* | Male *M (SD)* |
|---|---|---|
| Baseline | 98.42 (1.00) | 97.73 (1.79) |
| Post-Emotional | 98.27 (0.67) | 98.36 (0.67) |
| Post-Fearful | 98.36 (1.43) | 98.50 (0.63) |

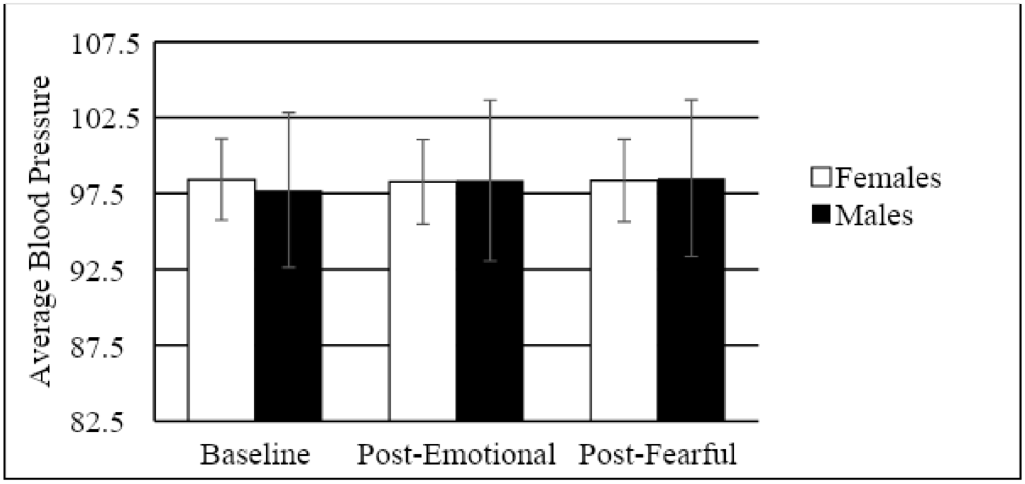


*Figure 4.* Average blood pressure (systolic) as a function of gender at baseline, post-emotional, and post-fearful stimuli.