Age and Gender Differences in Adults’ Descriptions of Emotional Reactions to Interpersonal Problems

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This study examines age and gender differences in descriptions of emotional reactions and reports of the intensity and duration of those emotional responses to interpersonal tensions. As part of a larger study, 185 (85 male and 100 female) participants aged 13 to 99 described the last time they were upset with members of their social networks. Participants then described how they felt and rated the intensity and duration of their distress. Participants’ reported emotions were grouped by use of theoretically derived categories and empirically derived post hoc categories. Three emotion categories were examined: anger, sadness, and nonspecific negative emotions. Adolescents and young adults were more likely than older adults to describe anger. Adolescents and young adults also reported more intense aversive responses than older adults. Women rated their distress as more intense than men. With the exception of middle-aged and oldest-old adults, women reported that they experienced distress for a longer duration than men. Findings are interpreted in terms of theories regarding age and gender differences in emotion regulation and interpersonal tensions.

INTERPERSONAL problems vary as a function of age and gender in adulthood. Researchers have examined several aspects of these age and gender differences, including the number of personal problems reported (Okun & Keith, 1998; Rook, 1984), the degree of stress incurred (Almeida & Kessler, 1998; Mroczek & Kolarz, 1998; Thomas, 1995), and the behaviors used to handle conflicts (Blanchard-Fields, Jahnke, & Camp, 1995; Fingerman, 1998). There has been scant attention, however, to variation in the types of emotions and the severity of emotion that individuals report in reaction to interpersonal problems. It seems likely that men and women of different ages may report different emotional reactions to such problems.

Emotional reactions include physiological experiences, behavioral responses, and subjective descriptions or ratings (Larsen & Fredrickson, 1999). We examined self-reported descriptions of emotional experience in response to interpersonal problems. Self-report provides information regarding how people subjectively construe experiences. In addition, the use of descriptions, as opposed to forced choice ratings, allows participants to report the full range of emotions that they experienced.

Socioemotional selectivity theory suggests that there will be age differences in emotional reactions to interpersonal tensions. As people grow older, they become increasingly concerned with the maintenance of emotionally close relationships (Carstensen & Charles, 1998; Carstensen, Isaacowitz, & Charles, 1999). Thus, older people are more likely than younger people to behave in ways that decrease the experience of negative emotions (Carstensen et al., 1999). Further, adults of different ages may tend to describe particular types of emotions more than others (e.g., anger, sadness, or anxiety) when asked to recall interpersonal problems.

Gender differences in descriptions of emotional reactions to interpersonal problems may also be associated with variation in the desire to maintain close interpersonal relationships. Indeed, theorists have argued that women tend to value emotional intimacy more than men (Belle, 1991; Gilligan, 1982). Thus, women may report less destructive emotional reactions to interpersonal problems than do men. At the same time, women expend more energy maintaining social ties than do men (Antonucci, 2001; Belle, 1991), and they may convey increased feelings of distress for a longer duration when problems do arise.

We examined age and gender differences in individuals’ descriptions of emotional reactions to interpersonal tensions. In particular, individuals described how they felt in response to interpersonal problems and reported the duration and intensity of their distress.

A Typology of Emotions

To understand the diversity of negative emotions that adults report, we used Lazarus’s (1991) appraisal theory of emotion. Lazarus postulated that there are six basic negative emotions: anger, fright-anxiety, guilt-shame, sadness, envy-jealousy, and disgust. Each negative emotion serves as a prototype for a family of similar emotions. For example, sadness includes being sad, blue, and melancholy. According to Lazarus (1991), negative emotions are characterized by an appraisal of goal incongruence. However, emotions differ in whether they involve an attribution of blame and whether blame is directed at the self or other. Anger involves the appraisal that someone other than the self is at fault for the goal blockage; guilt is characterized by blaming the self; and sadness does not involve fault. Anger is the only negative emotion that involves blaming another individual for the blockage of a goal (Lazarus, 1991).

Although we examined a range of negative emotions, a primary interest of this study involved age and gender differences in descriptions of anger. Given the attribution of blame with regard to anger, Lazarus (1996) theorized that it is particularly important to control anger because it is potentially harmful for social relationships. Indeed, anger and blame are more strongly associated with dissatisfaction and animosity in close relationships than are self-blame or distress (Kubany, Bauer, Muraoka, Richard, & Read, 1995; Kubany, Bauer, Pangilinan, Muraoka, & Enríquez, 1995).
Age Differences in Emotional Reactions

There is little empirical work examining the types of negative emotions that adults of different ages describe in reaction to interpersonal tensions. Older adults are less likely to describe negative emotions in general than are younger adults (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). In particular, Gross and his colleagues (1997) found that, compared with younger adults, older adults were less likely to report anger, sadness, and fear and more likely to report happiness.

We expected that, as a means of protecting their relationships, older adults may be less likely to describe negative emotions associated with increased interpersonal tensions, particularly anger. Although older adults report less sadness and fear than younger adults in general (Gross et al., 1997), these age differences may not extend to the interpersonal arena; fear and sadness have not been associated with lower quality social ties (Kubany, Bauer, Muraoka, et al., 1995; Kubany, Bauer, Pangilinan, et al., 1995).

In addition to considering the types of emotions individuals describe, it is important to consider self-reports of the severity of these aversive reactions. We predicted that older people would report less intense aversive reactions to interpersonal tensions than younger people. Some investigators have found that, as people age, they report less intense emotional experiences (Diener, Sandvik, & Larsen, 1985; Lawton, Kleban, Rajagopal, & Dean, 1992), whereas other researchers have not found age differences in ratings of intensity (Carstensen et al., 2000; Levenson, Carstensen, Friesen, & Ekman, 1991; Levine & Bluck, 1997; Malatesta & Kalnok, 1984). To our knowledge, researchers have not specifically examined ratings of distress in reaction to interpersonal problems, however. In their efforts to maintain close social ties, older adults may attempt to regulate their emotions in ways that minimize the intensity of problems (Carstensen et al., 1999).

Similarly, older adults may report aversive reactions of a shorter duration than younger adults. Older participants indicate that they experience negative emotion for a shorter duration than younger participants in general (Barrick, Hutchinson, & Deckers, 1989; Carstensen et al., 2000), and these reactions may extend to the interpersonal domain.

Gender Differences in Emotional Reactions

Women may attempt to avoid anger when they are upset with their social partners, whereas men may not (Thomas, 1995; Timmers, Fischer, & Manstead, 1998). Men and women approach interpersonal problems with different goals; women tend to have more relational goals when interacting with others, whereas men tend to be more power oriented (Timmers et al., 1998). Thus, we expected women to report less anger than men.

We also expected to find gender differences in reports of the duration and intensity of aversive reactions to interpersonal problems. In general, women describe more intense emotions than men (Diener et al., 1985; Fischer & Manstead, 2000; Fujita, Diener, & Sandvik, 1991). Because women typically feel more responsible for the maintenance of harmonious relationships (Antonacci, 2001), this gender difference may be even more extreme in the interpersonal domain. In addition, women usually report experiencing negative emotions for a longer duration than men (Fischer & Manstead, 2000). Theorists have argued that women are more likely than men to ruminate regarding chronic strains in their social relationships (Nolen-Hoeksema, Larson, & Grayson, 1999). Thus, we expected that women would report more intense distress for a longer duration than men.

Relationship Context and Emotion

Theorists have suggested that individuals’ behavioral reactions to interpersonal tensions vary depending on their investment in a given relationship. According to socioemotional selectivity theory, people behave in ways that decrease the experience of negative emotions when concerned with the maintenance of close social ties (Carstensen & Charles, 1998; Carstensen et al., 1999). Rusbult and her colleagues have also found that people who are highly invested in relationships are unlikely to behave in ways that are destructive (Rusbult, 1980; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991).

Similarly, the types of emotions people describe in reaction to interpersonal problems and the reports of severity of these reactions may vary as a function of their investment in a social tie. In close, high-quality relationships, individuals may regulate emotions in ways that maximize the rewards they receive from those ties. We considered two aspects of interpersonal context: a rating of the quality of the relationship and a classification of the tie as close versus problematic. We predicted that participants would report more anger when they described tensions in social ties that were of lower quality and not considered close. We also predicted that individuals would report more intense aversive reactions for a longer duration in such relationships.

METHODS

Participants

As part of a larger study of interpersonal problems in adulthood (e.g., Fingerman & Birditt, 2003), 187 (86 male and 101 female) volunteers participated in this study. The sample was reduced to 185 (85 male and 100 female) volunteers; one 80-year-old man was excluded because he did not recall having any problems with his social partners, and one 43-year-old woman was excluded as a result of errors in the interview process. Participants ranged in age from 13 to 99 years (M = 45.43; SD = 25.68) and were divided across five age groups: ages 13 to 16 (n = 39), 20 to 29 (n = 40), 40 to 49 (n = 33), 60 to 69 (n = 39), and older than 80 (n = 34). These age groups were selected to reflect theoretically relevant and distinct groups: adolescence, young adulthood, middle adulthood, young-old adulthood, and oldest-old adulthood. Researchers who have included the intermediate ages, such as participants in their 30s and 50s, have not found different patterns of results (Blanchard-Fields et al., 1995; Labouvie-Vief, Hakim-Larson, & Hobart, 1987). There were approximately equal numbers of male and female participants in each age group.

Participants were recruited by means of newspaper advertisements, word of mouth, community organizations, and individuals attending football games at a large state university. The majority of participants were Caucasian (93%). Chi-square analyses estimated separately for each age group revealed gender differences in marital status. All but two men over the age of 80 were married, whereas all women in this group were
widowed. Two 2 × 5 (Gender × Age) between-subjects analyses of variance were conducted to examine whether self-rated health and education varied by gender or age. No significant age or gender differences were found for health, that is, $F(9,176) = 1.64$, $MSE = 1.50$, and $p > .05$. Not including adolescents, a significant interaction effect was found for education. Men reported higher levels of education than women in all age groups with the exception of participants in their 20s, that is, $F(3,139) = 6.62$, $MSE = 9.51$, and $p < .001$.

**Procedure**

Participants completed a structured interview individually in their homes or at the study site. They completed a demographic questionnaire, followed by diagrams of their close and problematic social networks, and then they described recent problematic situations with members of their networks and their emotional reactions to these situations. Interviews lasted from 1 to 3 hr. Interviews were audiotaped and transcribed. Participants received 15 dollars.

**Measures**

*Background information.*—Participants reported their age, education, marital status, and ethnicity. They also rated their health on a 5-point scale that ranged from poor to excellent. In addition, they indicated the highest level of education they had received: 1 = grade school to 7 = advanced degree.

*Emotional reactions to tense situations.*—Participants reported the emotions they felt during difficult situations with their close and problematic social partners. First, we used Kahn and Antonucci’s social network assessment (Kahn & Antonucci, 1980). This questionnaire consists of a diagram of three concentric circles; participants place their social ties in these circles representing varying degrees of psychological closeness (Antonucci & Akiyama, 1987). Participants also completed the assessment for problematic relationships; participants placed people who irritate them most in the first circle, and they placed less irritating people in the second and third circles (Fingerman & Birditt, 2003).

After completing the diagrams, participants described the last upsetting situation they had encountered with the three closest people and the three most problematic. The interviewer asked, “Think back to a recent time when you were irritated, hurt, or annoyed with ____. Can you tell me a little about what happened and why you were upset?” Participants listed any number of emotions. In addition, participants rated how upset they were by the situation (emotional intensity) with a 5-point Likert scale ranging from 1 = not at all upset to 5 = extremely upset. They also indicated for how long they were upset (emotional duration) with a 6-point Likert scale ranging from 1 = just upset at the time to 6 = I have been upset since it happened.

*Relationship context.*—Participants provided additional information about the three closest and three most problematic relationships in their diagrams. They rated the quality of these social ties on a scale ranging from 1 = poor to 7 = outstanding. In addition, on the basis of other work with this data set, we speculated that placement in the close network (whether solely in the close network or in both the close and problematic networks) indicated that the relationship involved psychological closeness, whereas placement solely in the problematic network indicated a distinctly negative social tie (Fingerman, Hay, & Birditt, 2001). Social partners who were listed solely in the close network or in both networks were given a 1 (close), and relationships listed only in the problematic network were given a 0 (not close).

**Coding of Types of Emotions**

Participants provided a total of 1,271 emotion terms or phrases in response to the question regarding how they felt during the interpersonal tension. Of those responses, 725 are included in analyses in this article. Reasons for inclusion and exclusion of responses are as follows.

Coding of emotions involved two steps: first, the identification of emotion words; and second, the categorization of those words into broader categories (e.g., anger or sadness). First, two undergraduate research assistants read through all transcripts and generated an inclusive list of 130 emotion words. Then, they used the word search function in QSR NUD*IST to identify cases that included those emotion words (Qualitative Solutions, 1997).

Next, the 130 emotion words were categorized into larger groups. First, we used Lazarus’s (1991) list of emotion words to group the emotions. Because only 30 of the emotion words were identical to the terms in Lazarus’s theory, we asked two emotion researchers to sort the 130 emotions. The researchers were instructed to classify the emotions into the six larger categories in Lazarus’s theory and to create additional emotion categories for any emotions that were not theoretically consistent. The emotion researchers generated four additional emotion categories (Table 1), including having positive feelings, being surprised, feeling devalued, and having nonspecific negative feelings.

In establishing the emotion categories, we excluded participants’ descriptions of emotions for two reasons. First, we excluded participant responses involving idiosyncratic phrases (e.g., “I realized I shouldn’t have taken the coins”) or indicating a lack of emotion (e.g., “I didn’t really care that much” or “Nothing”). Five percent of descriptions ($n = 59$) were excluded for these reasons. Then, 43 emotion words were excluded because they did not fit Lazarus’s theory and the emotion researchers did not agree regarding how they should be categorized. For example, the words abandoned, alone, powerless, and insecure were excluded. Because we excluded emotion words that the researchers did not agree upon, each emotion category had perfect interrater reliability.
Next, we focused on the emotion categories to use in the analyses. We only examined three of the emotion categories (sadness, anger, and nonspecific negative feelings). We excluded the other emotion categories because these categories each encapsulated fewer than 5% of participant responses. Those categories included jealousy, disgust, shame, anxiety, feeling devalued, having positive feelings, and being surprised. Consequently, we examined three categories of emotions: anger, sadness, and nonspecific negative emotions. Dichotomous variables were created for each group of negative emotions. A score of 1 indicated that the participant mentioned an emotion that belonged in the emotion category, and a score of 0 indicated that the participant did not mention an emotion that fit in the emotion category. Anger, sadness, and general negative affect are major categories of interest in the emotion literature (e.g., Gross et al., 1997; Mroczek & Kolarz, 1998). Furthermore, 83% of participants' responses included at least one emotion term that fit into these three negative emotion categories. Because participants often listed more than one emotion for each problematic situation, a total of 42% of participant responses included at least one emotion that was excluded.

**RESULTS**

**Overview of Analysis Strategy**

_Multilevel models._—We used multilevel modeling to account for the hierarchical structure of the data. Multilevel modeling accounts for unequal numbers of lower level units (social network members) nested within upper level units (study participants; Singer, 1998).

_PROC MIXED _in SAS was used to analyze these multilevel data (Littell, Milliken, Stroup, & Wolfinger, 1996; Singer, 1998). PROC MIXED allows the researcher to develop linear and nonlinear models that include upper and lower level units as independent variables in the same equation.

**Independent variables.**—We examined whether reports of emotional experience varied with age, gender (upper level variables), and relationship context (lower level variable). Age was entered as a categorical variable that ranged from 1 to 5 (adolescents, young adults, middle-aged adults, young-old adults, and oldest-old adults). Because the age groups were sampled to reflect different stages of the life span, it is more theoretically meaningful to assess emotional reactions as a function of age categories (Blanchard-Fields et al., 1995; Labouvie-Vief et al., 1987). Gender was entered as a dummy variable (1 = male and 0 = female gender). We also included the interaction term for age and gender. To assess whether reports varied with relationship context, we entered ratings of relationship quality and whether the relationship was close–ambivalent (close = 1) or problematic only (not close = 0) as lower level predictors.

**Control variables.**—We controlled for four variables in our analyses. Many of the participants described fewer than six situations and therefore listed fewer negative emotions. Participants also listed anywhere from one to five different emotions for each situation. Thus, we controlled for the number of problems (upper level control) and the number of emotions that participants listed (lower level control). We also controlled for how long ago each problematic situation occurred (lower level control), because researchers have found that reports of emotional reactions vary depending on how long ago events occurred (Levine & Bluck, 1997). In addition, because education varied with age and gender, we included education (upper level control) as a control variable. However, there was no variability in the level of education for adolescents. Thus, we ran separate sets of analyses controlling for education and excluding adolescents; these are presented separately from the main analyses.
Categories of Negative Emotions

We first considered the categories of emotions that individuals of different age and gender groups described (Table 2). We hypothesized that there would be age and gender differences in the likelihood of reporting anger, and we did not expect age and gender differences for other categories of emotion. We also predicted that participants would be less likely to report anger in response to tensions in higher quality or close social ties as compared with tensions in lower quality relationships or relationships not considered close.

We used PROC MIXED to estimate models for each category of emotion with dichotomous variables as the outcome: 1 = participant reported an emotion in that group and 0 = participant did not report an emotion in that group. Because the dependent variables were dichotomous, we used nonlinear multilevel analyses in which we specified that the error distribution was binomial. Three analyses were conducted, one for each emotion category. In addition, an analysis was conducted to assess whether there were variations in the likelihood of reporting excluded emotions. Age, gender, and the interaction between age and gender were entered as upper level predictor variables. We entered whether the social tie was close and the quality of the relationship as lower level predictor variables. We controlled for number of problems, number of emotions, and how recently the situation occurred.

Table 3 provides information about the analyses for anger and nonspecific negative emotions. As expected, we found a significant age effect for anger. Tukey–Kramer post hoc analyses indicated that the oldest-old and the young-old participants were less likely to report anger than the adolescents. The oldest-old participants were also less likely than the young adults to describe anger. Further, as expected, participants were less likely to report anger in response to tensions in close relationships.

There was a significant Age × Gender interaction for the likelihood of reporting emotions in the nonspecific negative category. Middle-aged men were significantly more likely than middle-aged women to report emotions in the nonspecific negative category. This gender difference reversed among the oldest-old adults; oldest-old women were more likely than oldest-old men to report emotions in the nonspecific negative category.

There was a significant age difference in the likelihood of reporting excluded emotions. Tukey post hoc comparisons revealed that adolescents were less likely than young-old and oldest-old participants to report excluded emotions. We did not find significant age or gender differences in the likelihood of reporting sadness.

Significant effects were also found for the control variables. The longer ago the situation occurred, the more likely the participants were to report sadness and nonspecific negative emotions and the less likely they were to report anger. Not surprisingly, participants who listed more emotions were more likely to state emotions that fit in each category.

We conducted these analyses again, controlling for education and excluding the adolescents. We generally found the same results regarding age and gender differences in anger, sadness, and excluded emotions. Anger varied with age ($F = 4.65; p < .01$), and there were no age or gender effects for sadness and the excluded emotions. Excluded emotions no longer varied with age because adolescents were removed from the analysis. However, education was predictive of nonspecific negative emotions. People who were more educated were less likely to report emotions in the nonspecific negative category (estimate = $-0.24, SE = 0.12, F = 3.96$, and $p < .05$). There was still an interaction between age and gender when nonspecific negative emotions were predicted ($F = 3.74$ and $p < .05$); however, there was no longer a gender difference among the oldest-old adults. Thus, we only discuss the gender difference among middle-aged participants that remained significant when education was added to the model.

Emotional Intensity and Duration

Table 4 contains means and standard deviations of the ratings of intensity and duration of distress by age and gender. We hypothesized that older people would report less intense aversive reactions for a shorter duration than younger people and that men would describe less intense distress for a shorter duration than women. Further, we predicted that people would report less intense aversive reactions for a shorter duration when recalling tensions in close and higher quality relationships. To assess these hypotheses, we used PROC MIXED to estimate two separate models; one used duration as the dependent variable and one used intensity as the dependent variable. Independent variables were entered in the manner previously described. We controlled for how long ago the situation occurred.

Table 5 contains results from these models. Ratings of intensity varied significantly with age. Tukey–Kramer post hoc comparisons revealed that the oldest-old participants reported significantly less intense aversive reactions than adolescent and young-adult participants. Young-old participants also rated their distress as less intense than young-adult participants. Furthermore, men reported less intense distress than women. Participants also reported less intense aversive reactions in
higher quality relationships. Participants rated their aversive reactions as more intense in response to tensions that occurred longer ago. As for participants’ ratings of how long they were upset, gender, age, and the interaction between age and gender were significantly associated with reports of the duration of emotion. Women reported emotions with a longer duration than men in adolescence, young adulthood, and young-old adulthood. However, this gender difference reversed among the oldest-old adults, with men reporting emotions of a longer duration than women. Participants also stated that their aversive reactions lasted longer in relationships of lower quality and relationships that were not close. Participants reported that their emotions lasted longer in tensions that had occurred longer ago.

We conducted the analyses for intensity and duration again, controlling for education and excluding adolescents. Overall, we found the same age and gender differences. Intensity varied with age ($F = 7.13; p < .001$) and gender ($F = 4.45; p < .05$) and there was a significant Age $\times$ Gender interaction ($F = 3.43; p < .05$) when duration was predicted. However, some of the post hoc comparisons between the age groups changed. Oldest-old participants reported less intense distress than middle-aged participants. In addition, there was no longer a gender difference in the duration of distress among the oldest-old participants. Only the comparisons that remained significant when education was added to the models are discussed.

**DISCUSSION**

The findings regarding reports of negative emotions may be important for understanding interpersonal tensions. Older participants were less likely to describe anger than young adults and adolescents. Older people reported less intense aversive responses than younger people and men described less intense distress than women. Furthermore, in general, men reported experiencing distress for a shorter duration than women.

Reports of emotion varied with the interpersonal context. Participants were less likely to describe anger in response to tensions in close relationships. In addition, participants reported less intense aversive reactions for a shorter duration when describing tensions in emotionally close or positively regarded relationships.

**Age Differences in Emotional Reactions to Interpersonal Problems**

Our finding with regard to age differences in reports of anger is consistent with socioemotional selectivity theory. According to socioemotional selectivity theory, older people are more concerned with the maintenance of emotionally close relationships than younger people (Carstensen & Charles, 1998; Carstensen et al., 1999). Older adults may have been less likely to describe anger in response to interpersonal tensions because anger involves blaming another individual for the blockage of a goal, which is potentially damaging to social relationships (Lazarus, 1991, 1996).

Indeed, the finding that older adults are less likely to report anger indicates that researchers may need to examine variations within the broader category of negative emotion. Researchers have typically examined negative affect in general and have found that older adults report less negative affect that younger adults (Mroczek & Kolarz, 1998). However, it appears that particular types of negative emotions vary with age.

We also found that middle-aged men were more likely than middle-aged women to report nonspecific negative emotions. The words included in this category may be specific to cohort and gender. For example, middle-aged men may have been exposed to particular media influences in which words such as upset and crappy are more likely to be used. However, it is also possible that there were peculiarities in the sample that might not exist in the larger population.

In addition, older participants were more likely to describe excluded emotions than younger participants. It is possible that older adults choose to describe emotions that are more difficult to define rather than anger as a means of maintaining relationships. Excluded emotions are most likely more difficult to identify as involving blame.

As expected, older adults reported less intense distress than younger adults. This finding is consistent with socioemotional selectivity theory in that we predicted that older adults would be more concerned with maintaining harmonious relationships and thus would describe less intense aversive reactions to interpersonal tensions (Carstensen & Charles, 1998; Carstensen

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**Table 3. The Categories of Emotions Mentioned as a Function of Age, Gender, and the Interpersonal Context**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>SE</th>
<th>ndf</th>
<th>ddf</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>Intercept</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>Age</td>
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<td>1</td>
<td>176</td>
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<tr>
<td></td>
<td>Gender</td>
<td>0.51</td>
<td>0.84</td>
<td>1</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Gender $\times$ Age</td>
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<td>176</td>
</tr>
<tr>
<td>Close rel.</td>
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<td>632</td>
</tr>
<tr>
<td>Relationship quality</td>
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<td>0.05</td>
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<td>632</td>
</tr>
<tr>
<td>Time since event</td>
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<td>-0.22</td>
<td>0.05</td>
<td>1</td>
<td>632</td>
</tr>
<tr>
<td>No. of emotions</td>
<td></td>
<td>0.41</td>
<td>0.11</td>
<td>1</td>
<td>632</td>
</tr>
<tr>
<td>No. of problems</td>
<td></td>
<td>-0.07</td>
<td>0.08</td>
<td>1</td>
<td>632</td>
</tr>
<tr>
<td>Nonspecific negative</td>
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<td>0.84</td>
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<td></td>
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<tr>
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<td>Gender</td>
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<td>0.51</td>
<td>4</td>
<td>176</td>
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<tr>
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<td>Gender $\times$ Age</td>
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<td>0.23</td>
<td>1</td>
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<tr>
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<td>0.12</td>
<td>1</td>
<td>632</td>
</tr>
<tr>
<td></td>
<td>No. of problems</td>
<td>0.20</td>
<td>0.11</td>
<td>1</td>
<td>632</td>
</tr>
</tbody>
</table>

*Note: Blank cells are from dummy variables; $F$ tests are calculated based on an average of the estimates.

*p < .05; **p < .01; ***p < .001.

**Table 4. Means and Standard Deviations for the Intensity and Duration of Emotion by Gender and Age Group**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Intensity</th>
<th>Durations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescents</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td></td>
<td>3.35 (1.09)</td>
<td>3.56 (1.26)</td>
</tr>
<tr>
<td>Young adults</td>
<td>3.54 (1.11)</td>
<td>3.81 (1.08)</td>
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<tr>
<td>Middle-aged adults</td>
<td>3.07 (1.03)</td>
<td>3.67 (1.02)</td>
</tr>
<tr>
<td>Young-old adults</td>
<td>3.16 (1.03)</td>
<td>3.47 (1.15)</td>
</tr>
<tr>
<td>Oldest-old adults</td>
<td>3.19 (1.26)</td>
<td>2.98 (1.08)</td>
</tr>
</tbody>
</table>

*Note: Standard deviations are given in parentheses.
et al., 1999). Indeed, further research is needed in order to understand whether older adults report less intense distress as a means of maintaining relationships or whether they describe less intense reactions to noninterpersonal stressors as well.

Older people also reported experiencing aversive reactions for a shorter duration than younger people, which was consistent with previous research (Barrick et al., 1989; Carstensen & Charles, 1998). However, this age difference was only found for women; older women described shorter aversive reactions than younger women. This finding is discussed further in the section regarding gender.

How long ago the situation occurred was also associated with particular emotional responses. Participants were more likely to report nonspecific negative emotions and sadness and less likely to report anger in response to situations that occurred longer ago. Further, participants reported more intense aversive reactions that lasted for a longer time when they were describing tensions that occurred longer ago. It is possible that people are more likely to remember tensions that are more intense and that lasted longer, especially when they are recalling tensions that may have occurred some time ago. However, they are less able to remember the specific types of emotions experienced.

Further, people with less education were more likely to report emotions in the nonspecific negative emotion category. This is most likely because the words in the nonspecific negative category were somewhat less sophisticated (e.g., crappy, bad, and crummy).

Gender Differences in Emotional Reactions

Inconsistent with our hypothesis and previous research, we did not find a gender difference in reports of the experience of anger (Thomas, 1995; Timmers et al., 1998). It is important to note that descriptions of the experience of anger were assessed and not reports of the expression of anger. It is possible that women and men are equally likely to report the experience of anger, but they may not be equally likely to describe the expression of anger.

As predicted, women reported more intense emotions than men (Diener et al., 1985; Fischer & Manstead, 2000; Fujita et al., 1991). Women may have described higher levels of intensity than men because they perceive there is more at stake when they experience problems in their social relationships (Antonucci, 2001; Belle, 1991). It is also possible that women’s social interactions are more distressing because people are more likely to consider women confidants than men. Further, women may be more upset by the problems of others than men (Antonucci, 2001).

Table 5. Intensity and Duration of Aversive Response as a Function of Age, Gender, and the Interpersonal Context

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>SE</th>
<th>ndf</th>
<th>ddf</th>
<th>F</th>
</tr>
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<tbody>
<tr>
<td><strong>Intensity</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<td>0.26</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Age</td>
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<td>0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.83</td>
<td>0.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender × Age</td>
<td>0.13</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close rel.</td>
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<td>0.15</td>
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<tr>
<td>Relationship quality</td>
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<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time since event</td>
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<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Duration</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<td>0.39</td>
<td></td>
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</tr>
<tr>
<td>Age</td>
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<td>0.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.83</td>
<td>0.37</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender × Age</td>
<td>0.13</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship quality</td>
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<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time since event</td>
<td>0.47</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Blank cells are from dummy variables; F tests are calculated based on an average of the estimates.

* p < .05; ** p < .01; *** p < .001.

Variation in Emotional Reactions as a Function of the Relationship Context

Our findings regarding variations in reports of anger and ratings of the intensity and duration of distress as a function of the interpersonal context were generally supportive of socioemotional selectivity theory and Rusbult’s investment theory (Carstensen et al., 1999; Rusbult, 1980; Rusbult et al., 1991). According to these theories, people are more likely to regulate their emotions in relationships in which they are highly invested. We found that participants were less likely to describe anger in response to tensions in close interpersonal relationships. Furthermore, people stated that their distress lasted for a shorter period in social ties that they identified as emotionally close. Participants also reported having shorter and less intense aversive reactions when experiencing tensions within higher quality relationships.

Directions for Future Research

There are several limitations to the current study that must be examined in future research. The sample was predominantly White and highly educated. Emotional experience is often a function of socialization and culture (Fischer & Manstead, 2000; Markus & Kitayama, 1994). For example, anger is less socially acceptable in collectivistic societies than in individualistic societies because anger may threaten interdependence (Markus & Kitayama, 1994). Furthermore, it is possible that the age differences reflect cohort effects in how people choose to describe emotions. Older people may have been less likely to report anger than younger people because the expression of intense negative emotion may have been less socially acceptable during their lifetime.

It is also important to note that the findings in this study are based on self-report. The strength of self-report is that it allows researchers to understand how adults subjectively experience emotion (Larsen & Fredrickson, 1999). However, errors may be introduced because participants are asked to recall events that may have occurred some time ago (Levine & Bluck, 1997).
Further, people may not report particularly negative emotional experiences because of their need to appear socially acceptable (Larsen & Fredrickson, 1999). Future research should include both self-report and physiological assessments in order to fully understand whether there are age differences in anger.

In sum, we found that there is a great deal of variation in the negative emotions that people describe, and we found age differences in reports of anger and age and gender differences in reports of the intensity and duration of aversive reactions. These findings indicate that we need to examine variations in the broad category of negative emotion.

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REFERENCES


Singer, J. D. (1998). Using SAS PROC MIXED to fit multilevel models,


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