

## **THE WORRIES ADULT CHILDREN AND THEIR PARENTS EXPERIENCE FOR ONE ANOTHER\***

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### **ABSTRACT**

This study examined the worries adults and their parents experience for one another. To date, relatively little research has considered the experience of worry in this relationship. A small number of studies, however, suggest worry is relatively common in this relationship (Boutain, 2001; Cicirelli, 1988; Parker, Call, Dunkle, & Vaitkus, 2002). Furthermore, worrying may be linked with mental and physical health (Beck et al., 2001; Hoyer, Becker, & Roth, 2001). A son or daughter (aged 22 to 49) and mother and father (aged 40 to 84) from 213 families participated. Adult children worried primarily about their parents' health. Interestingly, adult children with older parents were not more likely than adult children with younger parents to worry about their parents' health. In contrast, parents' worries were more diverse than those of adult children and included worries about their adult children's health, safety, relationships, and finances, among others. Furthermore, parents' worries were associated with their perceptions of relationship quality. Notably, parents who worried about their adult children's finances reported having poorer quality relationships with their adult children than parents who experienced other worries (e.g., about safety).

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Relationships between adult children and their parents are characterized by a variety of positive and negative emotional experiences (Clarke, Preston, Raksin, & Bengtson, 1999; Lefkowitz & Fingerman, 2003). One such experience is worry, the experience of negative and intrusive thoughts about possible future events (Borkovec, 1994; Davey, 1994; Scott, Eng, & Heimberg, 2002). Most research has focused on the pathological experience of worry and anxiety disorders (e.g., Dupuy, Beaudoin, Rheume, Ladouceur, & Dugas, 2001). Nonetheless, worry is commonly experienced by individuals without anxiety disorders (Dupuy et al., 2001). Furthermore, worrying is associated with poorer individual health and well-being (Beck et al., 2001; Hoyer, Becker, & Roth, 2001).

Indeed, a small number of studies suggest that adults and their parents commonly worry about one another (Boutain, 2001; Cicirelli, 1988; Hay, Fingerman, & Lefkowitz, 2007; Parker, Call, Dunkle, & Vaitkus, 2002) and that their worries are associated with their positive and negative perceptions of the relationship (Hay et al., 2007; Spitze & Gallant, 2004). Yet, most studies on negative emotional experiences in parent-adult child ties have focused on the experience of conflict and tension (Fingerman, 2001; Fingerman, Hay, & Birditt, 2004; Umberson, 1992). Consequently, gaps remain in scholars' knowledge about the full breadth of negative emotional experiences that occur in this relationship, including the experience of worry.

Notably, to date, few studies have systematically examined the types of worries that adult children and their parents experience for one another. Yet, research on grandparents' worries (Fingerman, 1998) and adult children's problems (e.g., Pillemer & Sutor, 1991, 2002) suggest that the types of worries and problems social partners experience may be associated in different ways with individual and relationship well-being.

In this study, therefore, we attempt to gain a greater understanding of the experience of worry in the parent-adult child tie and how worries fit into the larger context of this relationship. Specifically, we begin by describing the most salient worries that adult children and their parents experience for one another and examine age and generation differences in those worries. Then, we explore whether the types of worries that parents and adult children experience for one another are associated with their perceptions of relationship quality.

### **Generation and Age Differences in the Worries of Adults and Their Parents**

Relatively little is known about what parents and adult children worry about for one another. Research, however, suggests there are strong generation and age differences in how parents and adult children view their ties. For instance, parents tend to view the tie more positively than adult children (Shapiro, 2004). As well, both older adult children and older parents tend to view the relationship more positively than younger adult children and younger parents (Fingerman,

2000; Rossi & Rossi, 1990). Consequently, we anticipated that the types of worries parents and adult children describe (or experience) would reflect their generational standing as well as their ages.

#### *Adult Children's Worries*

Much of the existing research on worry in parent-adult child ties focuses on adults' worries about their parents' health (Cicirelli, 1988; Parker et al., 2002). Both Parker et al. and Cicirelli argue that such worries reflect adult children's concerns over providing care to their aging parents. Indeed, adult children widely endorse norms of filial responsibility, i.e., beliefs that they should care for their parents if necessary (Cicirelli, 1993; Ikkink, van Tilburg, & Knipscheer, 1999; Stein et al., 1998). In addition, other research suggests that adult children are highly sensitive to changes in their parents' health and abilities (Fingerman, Hay, Kamp Dush, Cichy, & Hosterman, 2007; Spitze & Gallant, 2004). Thus, we expected that many adult children would report experiencing worries about their parents' health. Furthermore, in keeping with Cicirelli's theory of filial anxiety (1988) we expected this pattern to be particularly evident in adult children who reported experiencing greater anxiety over the future care of their parents and their ability to meet those care needs.

Little is known about other issues that might generate worries for adult children. However, by midlife, adult children often adopt new responsibilities for parents and may begin to assist their parents in new ways, such as with their finances or household responsibilities (Fingerman et al., 2007). We expected, therefore, that some adult children would report experiencing worries for their parents in domains of life other than health, such as their parents' finances, household responsibilities, and relationships, among other issues.

We also expected age differences in adult children's worries. Specifically, consistent with research by Parker et al. (2002) and increasing age-related health problems (Jette, 1996; Manton, 1997) we expected that adult children with older parents would be more likely to worry about their parents' health than adult children with younger parents. In contrast, we expected that adult children with relatively young parents would be more likely to report having no worries. Indeed, such adult children are themselves likely to be relatively young and Hunt, Wisocki, and Yanko (2002) argue that younger adults tend to experience fewer concerns about other people than older adults do. Furthermore, when adult children are young adults, the parent-adult child tie is still focused largely on the child's needs rather than the parent's (Fingerman, 2000; Silverstein & Bengtson, 1997).

#### *Parents' Worries*

Few studies have considered the worries parents experience for their adult children. Various lines of research, however, led us to expect that parents would

discuss a wider variety of worries compared to adult children. In a small study that considered both adult and minor children, Boutain (2001) found that parents experienced worries about the health and welfare, employment, education, and safety of their children. As well, although parent-child relationships change when children become adults, parents continue to provide affection, support, and nurturance to their adult children (Fingerman et al., 2007; Zarit & Eggebeen, 2002). Indeed, parents provide more support to their adult children than the reverse throughout much of adulthood including financial, instrumental, and emotional support (McGarry & Schoeni, 1997; Zarit & Eggebeen, 2002). Finally, research also shows parents' hopes and goals include that their adult children be healthy and happy, have a satisfying family life, and achieve educational and career success (Ryff, Lee, Essex, & Schmutte, 1994) and parents' perceptions of their adult children's achievements in these domains influence parental well-being (Ryff et al., 1994) and worries (Pickett, Greenley, & Greenberg, 1995). Thus, consistent with the types of social support parents commonly provide their adult children and the hopes and goals they express for their adult children, we anticipated that parents would describe worries about a variety of issues including their adult children's finances, relationships, education, health, and well-being.

Given differences in young- and older-adult children's social contexts, however, we expected parents to experience different types of worries depending on whether their children were young adults or older. Young adulthood is a time when children transition into adult roles (Arnett, 2000) and research shows that young adult children typically receive more parental support than older adult children (Silverstein & Bengtson, 1997). Consistent with the transitions common at this lifestage, we expected parents of young adult children to be more likely to worry about their adult children's financial independence and work and education than parents of older adult children. In contrast, we expected that parents of older adult children would be more likely to worry about their adult children's health or children (i.e., their grandchildren). In keeping with these expectations, Boutain (2001) found younger parents worried about their adult children's work and education, whereas Wisocki (1988) found that older adults commonly worried about close family members becoming ill or having accidents.

### **Worries, Relationship Quality, and Demographic Characteristics**

The worries that parents and their adult children experience for one another occur within the larger context of their relationship and may be associated with individual and relationship characteristics. Indeed, a small number of studies suggest that particular worries are more detrimental to well-being and relationship quality than others. For example, Fingerman (1998) found that grandparents who worried about their grandchildren's personal issues (e.g., personality traits) experienced decreased positive mood, but grandparents whose worries about their

grandchildren reflected global issues (e.g., general safety issues) did not. Furthermore, Talbott (1990) and Pillemer and Sutor (2002) found that when adult children failed to achieve adult statuses such as gaining financial independence or completing college, their mothers held less positive views of their relationship. Similarly, parents and adult children who experience particular types of worries for one another may tend to report reduced relationship quality relative to parents and adult children who experience other types of worries. For example, a parent who worries about their adult child's financial problems may rate their relationship more negatively than a parent who worries about their adult child's health. Given the relative lack of research, we simply explored this issue and did not specify any particular hypotheses.

Finally, we controlled for gender and race in examining parents' and offspring's worries. Regarding gender, studies have found small gender differences in worries (de Roiste, 1996; Hunt et al., 2002). For example, de Roiste found men worried more about their finances and work, and women worried more about their relationships. Indeed, when parent-child dyads are considered, the gender of the social partner may also be important; for example, parents of daughters may experience different worries from parents of sons. Little research exists to base particular hypotheses on, therefore, we simply explored the role of gender in shaping parents' and adult children's worries for one another.

Similarly, few studies have considered whether individuals' worries vary by race or ethnicity. Boutain (2001) and Humphreys (1995) found that African American parents worry about their adult children's experiences of prejudice. As well, ethnic disparities in health and economic status are well established (Browning, Cagney, & Wen, 2003; Thomas & Horton, 1992) and could influence parents' and adult children's worries for one another. Given these possibilities, we explored racial differences in the kinds of worries parents and adult children experience for one another.

In sum, we expected parents and adult children to experience different types of worries for one another. Notably, we anticipated that adult children would focus primarily on worries about their parents' health while parents' worries would be more diverse. We also expected that the worries of parents and adult children would reflect their respective ages. Specifically, we reasoned that middle-aged adult children would worry primarily about their parents' health, particularly when their parents were older. In contrast, we expected that young adult children (who typically have younger parents) would be more likely to experience no worries for their parents. For parents, we expected that the parents of young adult children would be more likely to experience worries about their adult children's work and education than the parents of older adult children. In contrast, we expected that the parents of older adult children would be more likely to worry about their adult children's health, well-being, and wider family issues. Finally, although we did not specify particular hypotheses, we considered whether adults' and their parents' worries for one another were associated with

their gender and the gender of their social partner, their race, and their perceptions of relationship quality.

## METHOD

This study is part of The Adult Family Study (Fingerman, Lefkowitz, & Hay, 2004). The data were collected in 2002-2003 in 5 counties in the Philadelphia area of Pennsylvania, United States (i.e., Bucks, Chester, Delaware, Montgomery, and Philadelphia). This study gathered in-depth data on emotional experiences in parent-adult child ties.

### Sample and Procedures

The sample consists of 639 individuals from 213 family triads consisting of an adult son or daughter ages 22 to 49 and both parents (ages 40 to 84). Most family triads (~80%) were recruited using phone lists purchased from a sampling company (Genesys Sampling Systems) that included all listed phone numbers in the sampled counties and randomly generated numbers. Additional participants were recruited through convenience methods and snowball sampling strategies. We adopted multiple strategies given research by Karney et al. (1995) suggesting it would yield a sample of families with relationships of varied quality.

When households were contacted, we screened individuals aged 22 to 49 to determine if they and their parents were eligible. If a household only contained adults over the age of 50 years, we determined if they and their children were eligible. If an eligible parent had more than one eligible adult child, the adult child with the most recent birthday was invited to participate in the study. Given limited resources and the goal of recruiting adult children and both their parents into the study, once any of the three family members declined participation, we did not pursue consent from other family members. The recruitment strategies we employed are consistent with other studies involving multiple family members and using listed samples (e.g., Carstensen, Gottman, & Levenson, 1995; Plomin, Reiss, Hetherington, & Howe, 1994). For additional information on the sampling and recruitment procedures see Hay et al. (2007).

All participants completed telephone interviews and a subset of family triads also completed in-home questionnaires and participated in videotaped conversations. Throughout the study, parents and adult children answered questions about their background, their family, and individual characteristics. Parents also answered a series of questions about their relationship with the adult child who was participating in the study and adult children answered a series of questions about their relationships with (a) their mother and (b) their father. Whether adult children responded to questions about their mother or father first was randomly determined. For each family triad, therefore, we have four reports: one from each parent on their relationship with the adult child and two from the adult child on their relationships with their parents.

On average, study participants reported having incomes in the range of \$40,001 to \$75,000, which is consistent with Census data on the median household income reported by individuals living in the sampled counties (U.S. Census Bureau, 2003). The sample was somewhat more educated than was typical of this area and the United States overall during the time period data was collected. Specifically 40% of participants in this study had a college education compared to 29% of individuals 25 years of age and older in these 5 counties and 28% of individuals 25 years of age and older in the United States overall (U.S. Census Bureau, 2003).

Given the in-depth nature of the data collection and the resulting restrictions this placed on the sample size, it was not possible to ensure that the sample would be representative of all racial and ethnic groups in the United States. Instead, sampling procedures were used to ensure that a sufficient subsample of African American families was included to allow comparisons of European American and African American parents and adult children. In the final sample, 141 of the family triads were European American and 66 were African American. In 6 family triads the adult children and parents were from different racial groups. Most mothers (98%) and fathers (92%) were the biological parents of the participating adult child and in the majority of the families (86%) the parents of the participating child were married to one another.

## Measures

Data in this study come primarily from the phone interviews. One measure (filial anxiety; see below) was only obtained from the subset of adult children ( $n = 160$ ) who completed the in-home questionnaire.

### *Demographic Characteristics*

Participants reported their age and education in years, and their total 2001 household income. We coded participant race as European American = 0 and African American = 1, and generational status as parent = 0 and adult children = 1. The categorical variable *dyad* indicated whether the relationship under consideration involved mother-daughter, mother-son, father-daughter, or father-son.

The average age of the adult children and parents was 34.3 ( $SD = 7.1$ ) and 61.2 ( $SD = 9.2$ ), respectively. The average years of education for adult children was 15.0 ( $SD = 2.1$ ); for parents it was 13.9 ( $SD = 2.7$ ). The average household income for both parents and adult children was in the range of \$40,001 to \$75,000. The majority of adult children were either married (61%) or single (21%) and worked for pay (82%). The majority of parents (89%) were married (but not always to the participating adult child's *other* parent) and were either working for pay (57%) or retired (30%).

*Types of Worries*

To obtain information on the types of worries that adult children and their parents experienced for one another adult children were asked to describe their biggest worry for their mother and father (separately for each) and parents were asked to describe their biggest worry for their adult child. We used this approach given previous research showing that when individuals are presented with structured assessments (e.g., lists of worries) they tend to over-report uncommon and infrequent worries (Laberge, Fournier, Freeston, Ladouceur, & Provencher, 2000) and that structured assessments do not reflect worries that are equally salient to members of different racial groups (Scott et al., 2002). Thus, in an effort to capture the most salient worries of parents and adult children without introducing any response bias, we simply asked parents and adult children to describe their biggest worry for the other party. This approach allowed us to obtain descriptively rich data of their most salient worries

In order to test our hypotheses regarding the types of worries parents and adult children reported, we categorized their open-ended descriptions into the types of worries they represented, such as being about health, finances, etc. To begin this process, we developed a preliminary coding scheme with 16 categories based on research on parent-adult child relationships (e.g., Clarke et al., 1999; Ryff et al., 1994), research on self-concerns (e.g., Babcock, Laguna, Laguna, & Urusky, 2000; Tallis, Eysenck, & Matthews, 1992), and by an initial read-through of the participants' responses. In the early stages of data coding, the coding scheme was refined to more appropriately reflect the data. In particular, certain categories were merged as it became clear that participants talked about the categories in inseparable ways. Notably, the mental and physical health categories were merged as were categories for work and work-family demands. Other types of worries were mentioned so infrequently that they were coded into an "other" category (e.g., worries about religious salvation, pets). Ultimately, each worry was coded into one of the following eight categories: health, relationships, work and work/family, finances, personal characteristics, safety, other worries, or no worries.

All cases were coded independently by three research assistants and Cohen's kappa statistics (Cohen, 1960) were computed to determine how reliable the coders were when they coded the cases independently from one another. Average kappas ranged from a low of 0.59 for personal characteristics to a high of 0.91 for no worries (*Mean kappa* = .76, *SD* = .11). Two kappas were below 0.70, but Bakeman, Quera, McArthur, and Robinson (1997) argue that lower kappas are acceptable for dichotomous codes. In order to analyze the data it was necessary for each worry to be coded into only one category, however. Consequently, all cases that coders disagreed upon were discussed at weekly meetings until consensus was achieved on what the most appropriate code for the worry was.



### Health

Parents and adult children rated their current physical health on a 5-point scale from 1 (*excellent*) to 5 (*poor*). Self-ratings of health are associated with physical and mental health and mortality (Hays, Schoenfeld, & Blazer, 1996; Idler & Kasl, 1991). We reverse coded the item so that higher scores indicate better health. On average, parents reported being in good to very good health ( $M = 3.3$ ,  $SD = 1.0$ ) and adult children reported being in very good health ( $M = 3.7$ ,  $SD = 0.8$ ).

### Relationship Quality

Participants responded to the Parent-Adult Relationship Quality Scale, a measure developed for this study by adapting Newsom, Nishishiba, Morgan, and Rook's (2000) measure of social exchanges (Pitzer, Fingerman, & Lefkowitz, 2008). Items were reworded to refer to the parent-adult child relationship and the time frame was adapted to the past 12 months. The measure asks how often a respondent's mother/father/adult child engaged in 6 positive (e.g., was thoughtful) and 8 negative actions (e.g., made you feel inferior). Possible responses ranged from 1 (*never*) to 5 (*always*). Items were summed to create a positive subscale and a negative subscale score (positive  $\alpha = .84$ ; negative  $\alpha = .82$ ). Parents and adult children reported high positive relationship quality (mothers:  $M = 25.3$ ,  $SD = 3.8$ ; fathers:  $M = 24.7$ ,  $SD = 3.8$ ; adult children about mothers:  $M = 25.8$ ,  $SD = 3.8$ ; and adult children about fathers:  $M = 24.5$ ,  $SD = 4.6$ ) and low negative relationship quality (mothers:  $M = 13.6$ ,  $SD = 4.8$ ; fathers:  $M = 12.9$ ,  $SD = 3.9$ ; adult children about mothers:  $M = 13.7$ ,  $SD = 4.5$ ; and adult children about fathers:  $M = 13.1$ ,  $SD = 4.5$ ).

### Filial Anxiety

The 160 adult children who participated in the in-home portion of the study also completed Cicirelli's (1988) filial anxiety measure, which includes a 7-item subscale assessing adult children's anxiety over providing care for parents and a 6-item subscale assessing their concerns over their parents' welfare. Participants rate items from 1 (*strongly disagree*) to 5 (*strongly agree*). In keeping with standard procedures for this instrument, participants completed this measure for parents in general, rather than specifically for mothers or fathers. The internal consistency of both subscales was  $\alpha = 0.80$ . Adult children experienced low levels of anxiety over providing future care ( $M = 16.3$ ,  $SD = 6.3$ ) and their parents' welfare ( $M = 20.0$ ,  $SD = 5.1$ ).

## RESULTS

First, we compared families of adult children who completed the filial anxiety measure in the in-home phase of the study ( $n = 160$  triads) with families

of adult children who only completed the phone interviews ( $n = 53$  triads) on all sociodemographic variables and study variables. No systematic differences existed between the 2 groups; we note when analyses were based on the subsample.

### **Common Themes and Generational Differences in Descriptions of Worries**

Figure 1 shows the frequency that each of the types of worries was discussed by parents and adult children. To examine whether the generational differences shown in Figure 1 were statistically significant we used McNemar's tests (Conover, 1980), a nonparametric statistic that allows paired comparisons within a  $2 \times 2$  contingency table and can handle very low frequency events. To take into consideration the non-independence of the data (i.e., that family members' reports are likely to be associated) we considered (a) mother-adult child dyads and (b) father-adult child dyads separately. The findings of these tests are presented with examples of the parents' and adult children's responses underlying the quantitative data. All significant effects discussed were significant at  $p < .05$ .

Overall, generational differences in worries were as expected. First, adult children were more likely to discuss worries about health than were parents. Indeed, 64% of adult children's worries concerned parents' health, whereas only 18% of parents' worries concerned adult children's health. Parents and adult children alike tended to discuss specific health problems. For example, a son said "His health. My father suffers from prostate cancer." Similarly, a mother said "Um, her health. Well, she has a chronic lung condition. . . . I sometimes worry that she won't have a long life."

Mothers and fathers discussed almost all other worries more frequently than adult children did. Notably, parents were approximately four times more likely to discuss worries about safety. Such worries commonly involved dangerous neighborhoods. For example, a mother said, "If [he] has to catch public transportation to work, to school, to social events, and with today's environment that always worries me. Because we're not living in a safe society anymore where people value lives." Other safety concerns were about dangerous work environments. A father said, "Well he's an ironworker so he has to, uh, he's outdoors, up high in one of those buildings in construction and that's dangerous work. . . . The danger that's involved with the work."

Parents also discussed relationship concerns more often than adult children did. Interestingly, parents' responses often focused on relationships their adult children lacked. One mother said, ". . . he's 33 and he's not married and he's getting old. He don't have a wife and kids and who's gonna take care of him when he's old if he don't have a wife and kids?" Adult children also expressed concerns about how a remaining parent would cope if the other became ill or

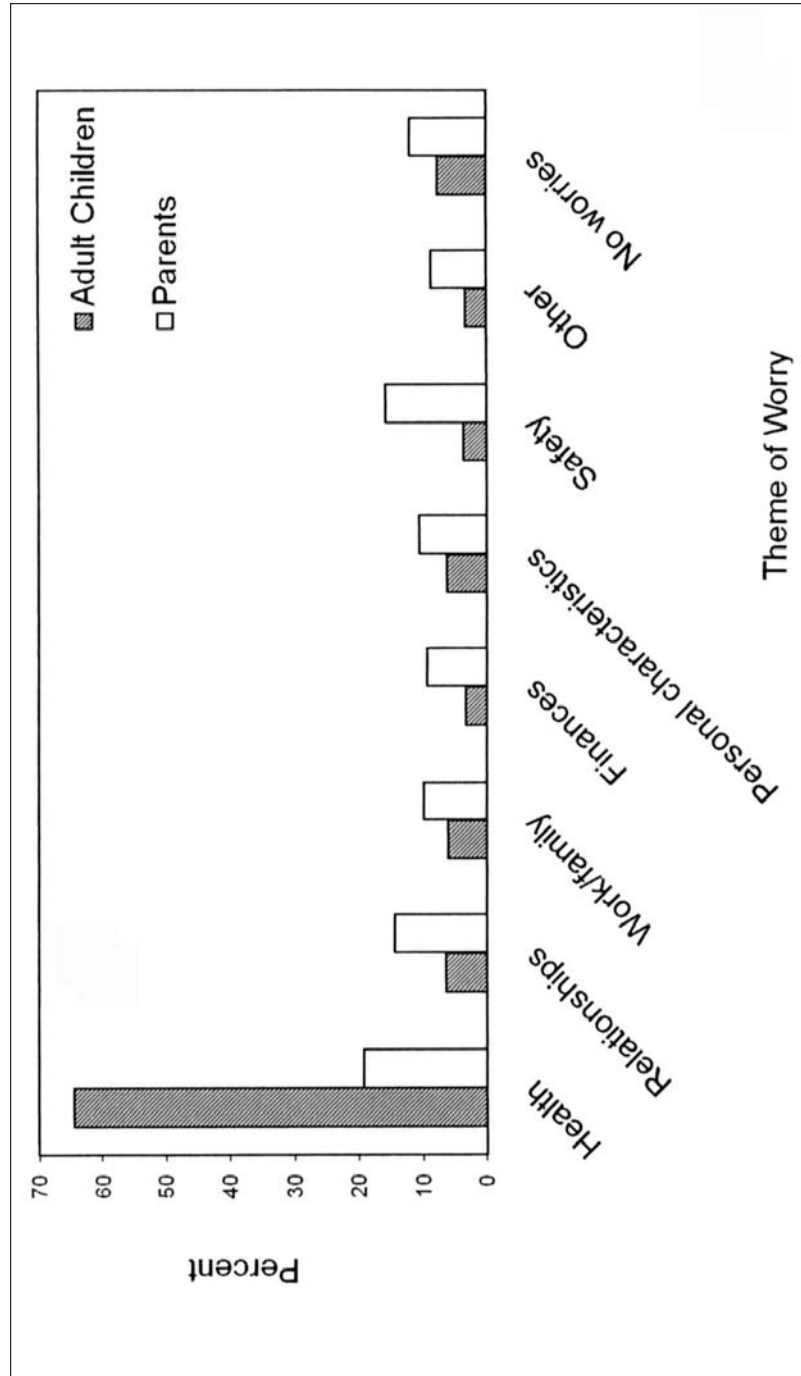


Figure 1. Percentage of adult children's and parents' worries that fit each theme.

died. For example, a daughter said about her mother, "She would be lost without my father . . . the two couldn't live without each other, even though they can't stand each other." Thus, worries about a lack, or loss, of particular relationships is one kind of relationship worry that both parents and adult children appear to experience for one another. When discussing worries about relationships, parents and adult children also discussed concerns about the wider family, particularly the adult children's children. For example, a mother said about her daughter, "Oh, um, what worries me is that, um, she is the type of mother that would let other people abuse her kids . . . when she gets friends, they boss the kids around like they've known them a long time. . . ."

Parents also discussed worries about their adult children's financial concerns more frequently than adult children. Such worries were often about adult children not being able to meet their own needs. For example, one father said, "His finances. Well, he just seems to live beyond his means sometimes" and another father said, "He overspends what he makes and he is never out of debt. He always has money problems." Adult children's financial worries included both concerns about their parents' future financial issues (e.g., retirement) and current problems. For example, one son said, "Their retirement investments have been hurt by current trends . . . concern about retirement income."

Parents also discussed "other worries" with greater frequency than adult children. These worries included a variety of issues and, thus, we do not present specific examples. Nonetheless, this finding further emphasizes the greater diversity in parents' worries compared to those of adult children.

Smaller generational differences were found for worries about personal characteristics, work and work/family issues, and also the likelihood of having no worries for the other party. Fathers were more likely than adult children to discuss worries about the other person's personality characteristics. For example, one father's biggest worry for his daughter was that she was "very stubborn." No such generational difference was found for mother-adult child dyads.

Regarding work worries, mothers mentioned such worries more frequently than did adult children. Mothers who experienced such worries often discussed the stresses of balancing work with family. One mother said, ". . . he tries to do too much. . . . If a child has a game, he will come home, go to the game, then have to drive back to work and make up the time lost." Adult children who discussed work concerns about their mothers focused primarily on work rather than work *and* family. For example, two daughters said about their mothers, "She works too much. She works seven days a week" and "The fact that she works too hard."

Finally, there were small generational differences in the likelihood of expressing no worries for the other party. Specifically, fathers were more likely to state they had no worries for their adult children. No such differences were found for mother-adult child dyads.

### **Mixed Models and Variability in Parents' and Adult Children's Responses**

Next, we examined the role of age, race, and gender in adult children's and parents' reports of worries. Given the non-independence of the data, we used general linear mixed models to examine these associations (Laird & Ware, 1982; Littell, Milliken, Stroup, & Wolfinger, 1996). Because the adult children focused primarily on health concerns, we examined parents' and adult children's reports separately. In all of the models we used a family variable to identify the nested structure of the data (Singer, 1998). Thus, in the model examining adult children's worries this variable identified the two reports (i.e., about mother and father) that were nested within a particular adult child. In the models examining parents' worries, this variable identified responses from mothers and fathers from the same family. These models take into account the fact that the responses from one adult child (or those from a mother and father from the same family) are likely to be correlated with one another, while the responses from individuals from different families are not.

The resulting models, therefore, separate the variance in dependent variables into between- and within-family variance and consider whether the variables of interest are systematically associated with that variance. Within-family variance reflects how reports of worry differ within families, for instance how adult children's worries might differ for their mothers versus their fathers. In contrast, between family variance reflects how reports of worry differ between families, for instance how the worries of African American adult children might differ from those of European American adult children.

Given that the parents and adult children from a small number of families ( $n = 6$ ) reported being of different races, we examined whether findings differed if we considered race to be a within-family variable rather than a between-family variable. The findings were the same and consistent with the fact that in 97% of our families the race of the parents and the adult children was the same, we included race in our models as a between-family variable. In the 6 families where parents and adult children indicated they were of different races, for simplicity, we used the adult child's race as the family race.

For adult children, given the emphasis on health worries, we estimated one logistic mixed model examining how likely adult children were to discuss health concerns compared to *all* other worries (worry about health = 1, other worry = 0). Within family predictors included in the model were dyad type (i.e., specifying if the relationship being discussed was mother/daughter, father/son, etc.), the parent's self-reported health and age. The between family predictors included in the model were race and the offspring's filial anxiety. Thus, this analysis included 320 worries from the subset of 160 adult children who completed the filial anxiety measure. Note that when analyzing categorical variables, by default the statistical package (SAS; SAS Institute Inc., 2000) used the highest coded

category as the reference category. Therefore, using race as an example, because European American = 0 and African American = 1, the estimates provided are for European Americans compared to African Americans. When an outcome is more likely to occur for European Americans, the estimate ( $B$ ) is positive and the exponentiated estimate ( $e^B$ ) is larger than one. When an outcome is more likely to occur for African Americans, the estimate ( $B$ ) is negative and the exponentiated estimate ( $e^B$ ) is smaller than one. In general it is easier to interpret exponentiated estimates greater than 1, thus when these estimates were smaller than 1, we divided the exponentiated estimate by 1. Doing so indicates how much more likely the outcome is to occur for the *other* category (i.e., an outcome that is 0.25 times as likely to occur for European Americans as African Americans can be reinterpreted as an outcome that is four times more likely to occur for African Americans as for European Americans).

As expected, adult children were more likely to discuss health worries when their parents were in poorer health and when they experienced higher levels of anxiety about their parents' welfare (see Table 1). Contrary to expectations, adult

Table 1. Logistic Mixed Model Examining the Likelihood of Adult Children Reporting Their Biggest Worry for Their Mother or Father is Health-Related

	$B$	$SE B$	$e^B$
Intercept	-0.62	0.34	
Race <sup>a</sup>	0.70	0.30	
Dyad: Mother-daughter	-0.45	0.38	
Dyad: Mother-son	-1.05**	0.35	0.35
Dyad: Father-daughter	-0.27	0.38	
Dyad: Father-son	—	—	
Filial anxiety (future care) <sup>b</sup>	0.03	0.02	
Filial anxiety (welfare) <sup>b</sup>	0.06*	0.03	1.06
Parents' health <sup>b</sup>	-0.44**	0.14	0.65
Parents' age	0.01	0.02	
Estimated parameters	12		
Deviance	1449.7		

**Note:**  $n = 320$  reports from 160 adult children.  $e^B =$  exponentiated  $B$ .

<sup>a</sup>0 = European American, 1 = African American. <sup>b</sup>Higher scores indicate greater anxiety/better health.

\* $p < .05$ . \*\* $p < .01$ .

children's scores on the subscale assessing anxiety over their parents' future care needs were unrelated to the likelihood of adult children reporting health worries. Gender differences were evident. By taking the inverse of the exponentiated estimate, we found that sons were 2.8 times as likely to discuss concerns about their fathers' health as their mothers' health. Surprisingly, adult children were not more likely to discuss worries about their parents' health when their parents were older. In separate models we examined whether parental age was a significant predictor of the likelihood of adult children reporting worries about their parents' health when parental health was not included in the models; it was not and the findings are not reported.

Next, we considered parents' worries. Parents' responses were more variable; each type of worry was discussed by at least 8% of parents. Consequently, we estimated six logistic mixed models. At the within-family level, each model examined whether the likelihood of parents discussing a particular worry depended upon the dyad type. At the between-family level the models included the adult child's age and race. We also included the adult child's self-reported health as an additional between-family variable in the model examining parents' health worries.

Differences in whether similar variables are between- or within-family in the models examining parents' worries versus those examining adult children's worries reflect that in the parent models the two within-family reports come from different people (i.e., the mother and father from a family) but in the models examining adult children's worries the two within-family reports come from the same person (i.e., the adult child) talking about two different relationships (i.e., one with their mother and one with their father). Thus, in the model examining parents' worries, the variable "adult child's age" is a constant for both parents in a family and is, therefore, a between-family variable. In contrast, in the model examining adult children's worries, the variable "parent's age" differs for mothers and fathers and is, therefore, a within-family variable.

Significant effects were found in the models examining the likelihood that parents discussed worries about: health, work, safety, and no worries (see Table 2). The findings reveal that parents were more likely to mention health worries when their adult child's health was worse. The adult child's age was unrelated to the likelihood of parents discussing worries about their health. Again, we estimated a separate model to determine whether the effect of the adult child's age became significant if the adult child's health was not included in the models. It was not and the findings are not presented.

The findings also show that parents of older adult children were less likely to discuss safety concerns, whereas parents of older adult children were more likely to say they had no worries about their adult children. Racial differences were also evident. Specifically, European American parents were 0.37 times as likely as African American parents to discuss worries about their adult children's safety (i.e., African American parents were almost three times as

Table 2. Summary of Logistic Mixed Models Examining the Likelihood of Parents Reporting Various Worries

Predictor	Health			Work			Safety			No worries		
	B	SE B	e <sup>B</sup>	B	SE B	e <sup>B</sup>	B	SE B	e <sup>B</sup>	B	SE B	e <sup>B</sup>
Intercept	-1.96	0.50		-1.81	0.59		-1.77	0.51		-1.00	0.52	
Race <sup>a</sup>	0.64*	0.32	1.90	0.49	0.40		-0.99**	0.28	0.37	-0.08	0.34	
Dyad: Mother-daughter	0.45	0.36		-1.07*	0.52	0.34	-0.42	0.39		-0.22	0.44	
Dyad: Mother-son	0.30	0.35		-0.13	0.39		-0.29	0.38		-0.19	0.46	
Dyad: Father-daughter	0.21	0.38		-0.91	0.47		-0.06	0.37		0.45	0.42	
Dyad: Father-son	—	—		—	—		—	—		—	—	
Adult children's age	0.01	0.02		0.02	0.02		-0.5*	0.02	0.95	0.06**	0.02	1.82
Adult children's health <sup>b</sup>	-0.49**	0.16	.61	—	—		—	—		—	—	
Estimated parameters	10			9			9			9		
Deviance	2030.1			2275.5			2120.1			2203.0		

**Note:**  $n = 423$  reports from 213 dyads (mothers and fathers).  $e^B =$  exponentiated  $B$ .

<sup>a</sup>0 = European American, 1 = African American. <sup>b</sup>Higher scores indicate better health. This variable was only included in the model examining health worries.

\* $p < .05$ . \*\* $p < .01$ .



likely as European American parents to discuss such worries). As well, European American parents were more likely to mention health worries than African American parents. Finally, one gender difference was evident with respect to worries about work suggesting mothers of daughters were less likely to discuss work concerns than other parents. This finding was not robust, however, and follow-up Tukey's post-hoc tests did not reveal any significant pairwise differences.

### **Adult Children's and Parents' Worries and Relationship Quality**

Last, we considered whether the type of worry that adult children and parents identified as their biggest worry was associated with their perceptions of relationship quality. Again, we examined parents' and adult children's reports in separate models and used mixed models to take into account the non-independence of the data.

Regarding adult children's worries, we considered whether adult children who worried about their parents' health reported different positive and negative relationship quality than adult children who experienced other worries. Given known dyadic differences in relationship quality (Rossi & Rossi, 1990), we included dyad type as a within-family covariate. Findings were not significant and are not shown.

Next, we examined whether parents' worries were associated with their perceptions of positive and negative relationship quality. In both models, the type of worry the parents discussed (health, relationships, personal characteristics, finances, safety, work, or no worry) was represented by a series of dummy variables. Again, we included dyad type as a within-family covariate.

These models revealed that the type of worry parents experienced was associated with their perceptions of relationship quality (see Table 3). Using Tukey's follow-up tests we examined all pairwise comparisons; the adjusted mean positive and negative relationship quality for parents reporting each type of worry are presented in Table 3. These comparisons revealed that parents who experienced worries about their adult children's finances reported less positive relationships than parents who worried about their adult children's safety. Furthermore, parents who experienced no worries for their adult children reported lower negative relationship qualities than parents who experienced worries about their adult children's health, relationships, or financial situations.

## **DISCUSSION**

This study provides a descriptive overview of the worries that adults and their parents experience for one another. Most adult children viewed the health of their parents as their most salient worry. Parents' worries were more diverse and included worries about their adult children's health, finances, personal

Table 3. Summary of Logistic Mixed Models Examining Parents' Worries and Perceptions of Relationship Quality

Predictor	Positive relationship qualities			Negative relationship qualities		
	<i>B</i>	<i>SE B</i>	Adjusted Mean	<i>B</i>	<i>SE B</i>	Adjusted Mean
Intercept	24.70	0.62		11.01	0.67	
Dyad: Mother-daughter	1.69*	0.55		0.88	0.62	
Dyad: Mother-son	0.40	0.43		0.16	0.48	
Dyad: Father-daughter	0.64	0.56		0.01	0.60	
Dyad: Father-son	—	—		—	—	
Worry theme: Health	-0.73	0.64	24.7	2.49***	0.72	13.8
Worry theme: Safety	0.45	0.66	25.8	1.60*	0.74	12.9
Worry theme: Relationships	-0.24	0.68	25.1	2.93***	0.79	14.2
Worry theme: Personal characteristics	-0.15	0.75	25.2	2.48**	0.85	13.8
Worry theme: Work and work/family	0.03	0.75	25.4	1.40	0.85	12.7
Worry theme: Finances	-2.02*	0.78	23.4	2.81***	0.88	14.1
Worry theme: No worry	—	—	25.4	—	—	11.3
Estimated parameters	13			13		
Deviance	2080.3			2167.9		

**Note:**  $n = 423$  reports from 213 dyads (mothers and fathers).  $e^B$  = exponentiated  $B$ .

<sup>a</sup>Race is coded 0 = European American, 1 = African American.

\* $p < .05$ . \*\* $p < .01$ .

relationships, and safety. Indeed, adult children reported having no worry for their mother or father only 7% of the time, while mothers and fathers reported having no worries only 12% of the time, suggesting that worry is a common experience in this relationship.

Although parents and adult children differed in how frequently they discussed particular worries, when they discussed worries in the same area (e.g., health), the issues they raised tended to be similar and often focused on specific health issues and illnesses (e.g., diabetes). In this sense, many of the worries parents and adult children discussed appeared to be well founded. Indeed, parents' and adult children's ratings of subjective health were associated with the likelihood of the other party worrying about their health. As well, as illustrated by the examples in the results section, parents and adult children also discussed problems in particular relationships (e.g., abusive relationships), specific financial problems (e.g., debt), and so forth, rather than simply mentioning such issues in general. Thus, the issues that parents and adult children raised appear to be grounded in the objective circumstances of their lives rather than prompted by study demands.

### **Generational and Age Differences in the Worries of Adults and Their Parents**

The main generational difference we found reflected adult children's preoccupation with parents' health. Contrary to previous research by Parker et al. (2002), however, adult children with older parents did not discuss health concerns more than adult children with younger parents. This finding may reflect that the parents in this study were approximately a decade younger than those in Parker et al.'s study. As well, we only considered what parents and adult children worried about, not how much they worried about those issues. Perhaps adult children worry about their parents' health at all ages; however, as parents get older they worry *more* about their parents' health.

Nonetheless, the finding that adult children with older parents were not more likely to mention health concerns than adult children with younger parents is notable. Troll (1986) argued that as adult children enter midlife they become increasingly aware of their parents' health. This study indicates, however, that adults do not *begin* to worry about their parents' health as they enter midlife. Rather, even young adults with relatively young parents worry about their parents' health. This finding is particularly interesting given that adult children were asked about their biggest worry. This pattern suggests that even among young adults with relatively healthy parents, worries about parental health are highly salient. Furthermore, our findings regarding filial anxiety suggest that adult children's worries about their parents' health are driven primarily out of concern for their parents' welfare rather than anxiety over providing care to their parents.

Indeed, it is possible that in the absence of other objective issues to worry about, health simply comes to the fore of people's concerns about other people. The

participants in this study were relatively well educated and, in terms of their income, could be described as middle class. Perhaps among less advantaged parents and adult children there might be fewer concerns about health and more concerns about other more immediate issues.

Our findings also failed to support Hunt et al.'s (2002) suggestion that younger adults harbor fewer worries about their social partners than do older adults. Indeed, parents, particularly fathers, were more likely to report having no worries for their adult children than the reverse. This was especially true when their adult children were older. This finding could reflect that older adult children may be more settled in numerous areas of their lives (e.g., careers, families, education). Alternatively, it could reflect that the parents of these adult children are themselves older and may worry less in general (Babcock et al., 2000; Hunt et al., 2002).

Like adult children, parents worried about their adult children's health, particularly when their adult children rated their subjective health more poorly. The majority of parents discussed worries about issues other than health, however. Because younger adults tend to be in relatively good health, parents may only worry about their adult child's health when it is compromised. Indeed, many parents discussed worries similar to those identified by Boutain (2001) such as safety, and work/family responsibilities. This study, however, identified additional worries including worries about adult children's relationships, personal characteristics, and finances. Given the history of this relationship, parents may be in the habit of watching out for their adult children and providing them support in many domains of their lives. For example, concerns about safety may be a natural continuation of the history of the parent-adult child tie, i.e., when children are young, the parenting role involves keeping them safe. The parents of younger adult children were also more likely to worry about their adult children's safety than the parents of older adult children. This finding likely reflects real age differences in the risk of accidents (National Safety Council, 2006) and victimization (Perkins, 1997).

The fact that parents are more likely to worry about their adult children's financial problems than the reverse may reflect a number of issues. First, it is relatively common for parents to provide financial support to their adult children (McGarry & Schoeni, 1997; Zarit & Eggebeen, 2002). Consequently, parents may pay attention to their adult children's financial problems because they have already given them financial aid, or because they believe they may have to. Financial independence also appears to be one way parents judge how their children have turned out and Pillemer and Suitor (2002) found that mothers experienced more mixed emotions toward their adult children when they were not financially independent.

When discussing worries about relationships, parents and adult children often talked about issues involving the wider family (e.g., the adult children's children, siblings, etc.). The greater tendency for parents to raise relationship

issues, however, is consistent with gerontologists' assertions that older adults' conceptions of family are more expansive than those of younger adults (Bedford & Blieszner, 1997; Fingerman, 2000). Adult children tend to view their relationships with their parents in a more insular way—as a dyad rather than part of a web of family relationships. As a result, adult children may be less likely to experience worries about their parents' *other* relationships and harbor fewer relationship worries overall.

Parents may also harbor more relationship worries than adult children because their adult children are more likely to be establishing relationships such as marriages and having children of their own. Indeed, some parents discussed worries about their adult child's lack of such relationships. It is notable that no adult child discussed worrying about a relationship that their parent *did not have*, although some adult children worried that their parents might lose an important relationship. Future research might consider whether adult children experience more worries about their parents lacking particular relationships if their parents are widowed.

In sum, consistent with expectations, adult children focused almost exclusively on their parents' health, whereas parents' worries were more diverse. The diversity of parents' worries could reflect a continuation of the parental role that is established when children are young and is in keeping with the possibility that the hopes and goals parents harbor for their children such as having happy families, achieving career and academic success, and being healthy (Ryff et al., 1994) translate into worries.

### **Gender and Race Differences in the Worries of Adults and Their Parents**

Few gender differences were found in the types of worries that parents and adults experienced for one another. Sons were more likely to worry about their father's health than their mother's. This finding could reflect Troll's (1986) suggestion that adults worry about their parents' health as they become aware of their own mortality and sons may identify more strongly with their fathers in this respect.

Racial differences indicate that European American parents were more likely to worry about their adult children's health than African American parents. The fact that European American parents were more likely to discuss health worries is curious considering racial disparities in health (Browning et al., 2003). This counterintuitive finding may stem from our focus on the biggest worries experienced by adults and their parents. Coupled with the finding that African American parents were three times more likely than European American parents to talk about safety concerns, it seems plausible that safety concerns are simply more salient to African American parents than health concerns.

### **Adult Children's and Parents' Worries and Relationship Quality**

The worries that parents and their adult children experienced for one another were not strongly linked with relationship quality. Nonetheless some interesting findings emerged. First, parents who had no worries for their adult children reported having less negative relationships than parents who worried about their adult children's health, relationships, or financial situations. This finding could reflect that individuals who are generally negative tend to worry more and also rate their relationships more negatively. Alternately, parents may be more satisfied with adult children who do not evoke worries because these adult children have successfully achieved markers of adulthood. Other findings support the latter possibility. For example, parents who experienced financial worries for their adult children rated their relationships less positively than parents who worried about their adult children's safety. Consistent with this finding, Pillemer and Suito (2002) found mothers felt more ambivalence toward their adult children when the adult children were not financially independent. As the examples in the results section suggest, many of the financial worries that parents discussed reflected behaviors that the adult children could presumably change, e.g., overspending, not saving. In comparison, safety worries were less about behaviors of the adult child that they presumably could change or control. As Pillemer and Suito argue regarding parents' perceptions of their adult children's problems, when parents worry about situations they believe their adult children are responsible for creating or exacerbating, their worries may be linked with reduced relationship quality.

Indeed, elsewhere we found that how much parents and adult children worried about one another was associated with their perceptions of relationship quality (Hay et al., 2007). It is possible, therefore, that both the type and amount of worry play a role in how worries are associated with parents' and adult children's perceptions of relationship quality.

### **Study Limitations**

The main limitations of this study are the select sample, the focus on the biggest worry experienced by parents and adult children, and the cross-sectional research design. Clearly, this study is not representative of the population of parents and adult children in the United States and future studies are required to determine whether the types of worries experienced by other parents and adult children in the United States are similar. Despite this limitation, this study is consistent with prior studies of intergenerational ties focusing on a single geographic area (Pillemer & Suito, 2002; Rossi & Rossi, 1990; Spitze & Logan, 1990) and the parents and adult children in this study described their relationships as being highly positive, a pattern that is consistent with previous research on this tie (Rossi & Rossi, 1990; Umberson, 1992).

A second limitation of this study was the focus on the biggest worry experienced by adult children and their parents. This focus was deliberate and was done to ensure that the worries participants discussed were their most salient worries rather than minor or infrequent worries. Nonetheless, parents and adult children may experience many worries and assessing multiple worries could reveal even greater diversity in worries, particularly for adult children.

Finally, all cross-sectional research suffers from the problem of determining causality. Yet, given the relative lack of research on worry in parent-adult child ties, this research contributes to our basic understanding of this topic. Indeed, researchers can draw upon such cross-sectional work to inform future longitudinal studies.

Overall, this study reveals that parents and adult children experience many kinds of worries for one another and these worries appear to reflect their respective roles in this relationship. Future studies could build on this research in many ways. For example, the types of worries identified here could be used to develop measures of worries that parents and adult children commonly experience for one another. Future research should also explore the association between relationship quality and worries in greater depth to determine what factors, such as perceptions of responsibility, underlie this association.

## REFERENCES

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469-480.
- Babcock, R. L., Laguna, L. B., Laguna, K. D., & Urusky, D. A. (2000). Age differences in the experience of worry. *Journal of Mental Health and Aging, 6*, 227-235.
- Bakeman, R., Quera, V., McArthur, D., & Robinson, B. (1997). Detecting sequential patterns and determining their reliability with fallible observers. *Psychological Methods, 2*, 357-370.
- Beck, J. G., Perkins, S. T., Holder, R., Robbins, M., Gray, M., & Allison, S. H. (2001). The cognitive and emotional phenomenology of depression and anxiety: Are worry and hopelessness the cognitive correlates of NA and PA? *Cognitive Therapy and Research, 25*, 819-827.
- Bedford, V. H., & Blieszner, R. (1997). Personal relationships in later life families. In S. Duck (Ed.), *Handbook of personal relationships* (2nd ed.) New York: Wiley.
- Borkovec, T. D. (1994). The nature, functions, and origins of worry. In G. Davey & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment and treatment. Wiley series in clinical psychology* (pp. 5-34). Oxford, England: John Wiley & Sons.
- Boutain, D. M. (2001). Discourses of worry, stress, and high blood pressure in rural South Louisiana. *Journal of Nursing Scholarship, 33*, 225-230.
- Browning, C. R., Cagney, K. A., & Wen, M. (2003). Explaining variation in health status across space and time: Implications for racial and ethnic disparities in self-rated health. *Social Science and Medicine, 57*, 1221-1235.
- Carstensen, L. L., Gottman, J. M., & Levenson, R. W. (1995). Emotional behavior in long-term marriage. *Psychology and Aging, 10*, 140-149.

- Cicirelli, V. G. (1988). A measure of filial anxiety regarding anticipated care of elderly parents. *The Gerontologist*, 28, 478-482
- Cicirelli, V. G. (1993). Attachment and obligation as daughter's motives for caregiving behavior and subsequent effect on subjective burden. *Psychology and Aging*, 8, 144-155.
- Clarke, E. J., Preston, M., Raksin, J., & Bengtson, V. L. (1999). Types of conflicts and tensions between older parents and adult children. *The Gerontologist*, 39, 261-270.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- Conover, W. J. (1980). *Practical nonparametric statistics* (2nd ed.). New York: Wiley.
- Davey, G. C. (1994). Pathological worrying as exacerbated problem-solving. In G. C. Davey & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment, and treatment. Wiley series in clinical psychology* (pp. 35-59). Oxford, England: Wiley.
- de Roiste, A. (1996). Sources of worry and happiness in Ireland. *The Irish Journal of Psychology*, 17, 193-212.
- Dupuy, J. B., Beaudoin, S., Rheume, J., Ladouceur, R., & Dugas, M. J. (2001). Worry: Daily self-report in clinical and non-clinical populations. *Behavior Research and Therapy*, 39, 1249-1255.
- Fingerman, K. L. (1998). The good, the bad, and the worrisome: Complexities in grandparents' relationships with individual grandchildren. *Family Relations*, 47, 403-414.
- Fingerman, K. L. (2000). "We had a nice little chat": Age and generational differences in mothers' and daughters' descriptions of enjoyable visits. *Journal of Gerontology: Psychological Sciences*, 55, 95-106.
- Fingerman, K. L. (2001). *Aging mothers and their adult daughters: A study in mixed emotions*. New York: Springer.
- Fingerman, K. L., Hay, E. L., & Birditt, K. S. (2004). The best of ties, the worst of ties: Close, problematic, and ambivalent relationships across the lifespan. *Journal of Marriage and Family*, 66, 792-808.
- Fingerman, K. L., Hay, E. L., Kamp Dush, C. M., Cichy, K. E., & Hosterman, S. (2007). Parents' and offspring's perceptions of change and continuity when parents experience the transition to old age. In T. J. Owens (Series Ed.) & T. J. Owens & J. J. Sutor (Vol. Eds.), *Advances in life course research: Vol. 12. Interpersonal relations across the life course* (pp. 275-306). Oxford, UK: Elsevier.
- Fingerman, K. L., Lefkowitz, E. S., & Hay, E. L. (2004). *The adult family study*. West Lafayette, IN: Purdue University.
- Hay, E. L., Fingerman, K. L., & Lefkowitz, E. S. (2007). The experience of worry in parent-adult offspring relationships. *Personal Relationships*, 14, 605-622.
- Hays, J. C., Schoenfeld, D. E., & Blazer, D. G. (1996). Determinants of poor self-rated health in late life. *American Journal of Geriatric Psychiatry*, 4, 188-196.
- Hoyer, J., Becker, E. S., & Roth, W. T. (2001). Characteristics of worry in GAD patients, social phobics, and controls. *Depression and Anxiety*, 13, 89-96.
- Humphreys, J. (1995). The work of worrying: Battered women and their children. *Scholarly Inquiry for Nursing Practice: An International Journal*, 9, 127-145.



- Hunt, S., Wisocki, P., & Yanko, J. (2002). Worry and use of coping strategies among older and younger adults. *Anxiety Disorders, 434*, 1-14.
- Idler, E. L., & Kasl, S. (1991). Health perceptions and survival: Do global evaluations of health status really predict mortality? *Journals of Gerontology, 46*, 55-65.
- Ikkink, K. K., van Tilburg, T., & Knipscheer, K. C. P. M. (1999). Perceived instrumental support exchanges in relationships between elderly parents and their adult children: Normative and structural explanations. *Journal of Marriage and the Family, 61*, 831-844.
- Jette, A. M. (1996). Disability trends and transitions. In R. H. Binstock & L. K. George (Eds.), *Handbook of aging and the social sciences* (4th ed., pp. 94-116). San Diego, CA: Academic Press.
- Karney B. K., Davila, J., Cohan, C. L., Sullivan, K. T., Johnson, M. D., & Bradbury, T. N. (1995). An empirical investigation of sampling strategies in marital research. *Journal of Marriage and the Family, 57*, 909-920.
- Laberge, M., Fournier, S., Freeston, M. H., Ladouceur, R., & Provencher, M. D. (2000). Structured and free-recall measures of worry themes: Effect of order of presentation on worry report. *Journal of Anxiety Disorders, 14*, 429-436.
- Laird, N., & Ware, J. (1982). Random effects models for longitudinal data. *Biometrics, 38*, 963-974.
- Lefkowitz, E. S., & Fingerman, K. L. (2003). Positive and negative emotional feelings and behaviors in mother-daughter ties in late life. *Journal of Family Psychology, 17*, 607-617.
- Littell, R. C., Milliken, G. A., Stroup, W. W., & Wolfinger, R. D. (1996). *SAS system for mixed models*. North Carolina: SAS Institute Inc.
- Manton, K. G. (1997). Chronic morbidity and disability in the U.S. elderly populations: Recent trends and population implications. In D. I. Mostofsky & J. Lomranz (Eds.), *Handbook of pain and aging. The Plenum series in adult development and aging* (pp. 37-67). New York: Plenum Press.
- McGarry, K., & Schoeni, R. F. (1997). Transfer behavior within the family: Results from the asset and health dynamics study. *Journals of Gerontology, 52B*, 83-92.
- National Safety Council (2006). *Injury facts (2005-2006 ed.)*. Itasca, IL: Author.
- Newsom, J. T., Nishishiba, M., Morgan, D. L., & Rook, K. S. (2000, November). *Development of new comparable measures of negative and positive social exchanges*. Paper presented at the Annual Scientific Meeting of the Gerontological Society of America, Washington, DC.
- Parker, M. W., Call, V. R. A., Dunkle, R., & Vaitkus, M. (2002). "Out of sight" but not "out of mind": Parent contact and worry among senior ranking male officers in the military who live long distances from parents. *Military Psychology, 14*, 257-277.
- Perkins, C. (1997). *Bureau of Justice statistics special report: Age patterns of victims of serious violent crime*. Retrieved March 30, 2006 from <http://www.ojp.usdoj.gov/bjs/abstract/apvsvc.htm>
- Pickett, S. A., Greenley, J. R., & Greenberg, J. S. (1995). Off-timedness as a contributor to subjective burden for parents of offspring with severe mental illness. *Family Relations, 44*, 195-201.

- Pillemer, K., & Suitor, J. J. (1991). Will I ever escape my child's problems? Effects of adults children's problems on elderly parents. *Journal of Marriage and the Family*, 53, 585-594.
- Pillemer, K., & Suitor, J. J. (2002). Explaining mothers' ambivalence toward their adult children. *Journal of Marriage and the Family*, 64, 602-613.
- Pitzer, L. M., Fingerman, K. L., & Lefkowitz, E. S. (2008). Support and negativity in the adult parent child tie: Development of the Parent Adult Relationship Questionnaire (PARQ). Manuscript submitted for publication.
- Plomin, R., Reiss, D., Hetherington, E. M., & Howe, G. W. (1994). Nature and nurture: Genetic contributions to measures of the shared family environment. *Developmental Psychology*, 30, 32-43.
- Rossi, A. S., & Rossi, P. H. (1990). *Of human bonding: Parent-child relations across the life course*. Hawthorne, NY: Aldine de Gruyter.
- Ryff, C. D., Lee, Y. H., Essex, M. J., & Schmutte, P. S. (1994). My children and me: Midlife evaluations of grown children and of self. *Psychology and Aging*, 9, 195-205.
- SAS Institute Inc. (2000). SAS Version 9.1 [Computer Software]. Cary, NC: SAS Institute Inc.
- Scott, E. L., Eng, W., & Heimberg, R. G. (2002). Ethnic differences in worry in a nonclinical population. *Depression and Anxiety*, 15, 79-82.
- Shapiro, A. (2004). Revisiting the generation gap: Exploring the relationships of parent/adult-child dyads. *International Journal of Aging and Human Development*, 58, 127-146.
- Silverstein, M., & Bengtson, V. L. (1997). Intergenerational solidarity and the structure of adult child-parent relationships in American families. *American Journal of Sociology*, 103, 429-460.
- Singer, J. D. (1998). Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *Journal of Educational & Behavioral Statistics*, 23, 323-355.
- Spitze, G., & Gallant, M. P. (2004). "The bitter with the sweet": Older adults strategies for handling ambivalence in their relationships with their adult children. *Research on Aging*, 26, 387-412.
- Spitze, G., & Logan, J. (1990). Sons, daughters, and intergenerational social support. *Journal of Marriage and the Family*, 52, 420-430.
- Stein, C. H., Wemmerus, V. A., Ward, M., Gaines, M. E., Freeburg, A. L., & Jewell, T. C. (1998). "Because they're my parents": An intergenerational study of felt obligation and parental caregiving. *Journal of Marriage and the Family*, 60, 611-622.
- Talbott, M. M. (1990). The negative side of the relationship between older widows and their adult children: The mother's perspective. *The Gerontologist*, 30, 595-603.
- Tallis, F., Eysenck, M., & Matthews, A. (1992). A questionnaire for the measurement of nonpathological worry. *Personality and Individual Differences*, 13, 161-168.
- Thomas, M. E., & Horton, H. D. (1992). Race, class, and family structure: The case of family income. *Sociological Perspectives*, 35, 433-450.
- Troll, L. E. (1986). Parents and children in later life. *Generations: Journal of the American Society on Aging*, 10, 23-25.
- Umberson, D. (1992). Relationships between adult children and their parents: Psychological consequences for both generations. *Journal of Marriage and the Family*, 54, 664-674.

- U.S. Census Bureau. (2003). *State and county quick facts: Bucks, Chester, Delaware, Montgomery, Philadelphia counties in Pennsylvania*. Retrieved November 3, 2003 from <http://quickfacts.census.gov/qfd/states/42000.html>
- Wisocki, P. A. (1988). Worry as a phenomenon relevant to the elderly. *Behavior Therapy, 19*, 369-379.
- Zarit, S. H., & Eggebeen, D. (2002). Parent-child relationships in adulthood and later years. In M. H. Bornstein (Ed.), *Handbook of parenting* (2nd ed., pp. 135-161). Mahwah, NJ: Lawrence Erlbaum.

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