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## The caregiver's burden: Psychological distress in the younger adult caregiver

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### Abstract

Research reveals that informal, adult caregivers (25 years of age and older) of chronically ill loved ones incur psychological stress from the caregiving experience. However, there is little research on the psychological impact on the younger adult caregiver (ages 18-24). Therefore, the focus of this study was to explore the psychological effects of being a younger adult caregiver and what factors contribute to, or insulate the younger adult caregiver from the distress of caregiving. The results indicate that younger adult caregivers are unique in that different factors contribute to or insulate them from distress compared to adult caregivers.

### The Caregiver's Burden: Psychological Distress in the Younger Adult Caregiver

Formal caregivers are trained professionals who are paid to provide care (i.e., doctors, nurses, etc.), while informal caregivers include family members or close friends of the patient who provide unpaid support (Berglund, Lytsy, & Westerling, 2015). Research has shown patients suffering from a chronic physical illness experience significant amounts of psychological and physical distress as a result of the illness, (Haverkamp, Torensma, Vergouwen, & Honig, 2015; Mehnert & Koch, 2008; Barakat & Wodka, 2007). Research also reveals that informal caregivers also experience physical and psychological distress as a result of the patient's illness (Eelen, Bauwens, Baillon, Distelmans, Jacobs, & Verzelen, 2014; Berrios, Joffres, & Wang, 2015; Berglund et al., 2015; Hiel, Beenackers, Renders, Robroek, Burdorf, & Croezen, 2015).

Data from a national public health survey in Sweden revealed that caregivers ( $n = 9,000$ ) reported more days in a month with poor physical and mental health compared to non-caregivers (Berglund et al., 2015). Furthermore, the data from the Survey of Health, Ageing, and Retirement in Europe (SHARE) also suggests in addition to poor physical health, about 20% of respondents indicated depression (Hiel et al., 2015). Finally, 21% of caregivers of a loved one who survived a stay in the Intensive Care Unit (ICU) exhibited at least one symptom of PTSD (Van den Born-Van Zanten, Dongelmans, Dettling-Ihnenfeldt, Vink, & van der Schaaf, 2016).

The distress that informal caregivers experience is not limited to physical and psychological distress. For example, according to another survey of over 2,000 adults about their caregiving role (Butterworth, Pymont, Rodgers, Windsor, & Anstey, 2010), caregivers reported more financial distress and more household responsibilities. This link between caregiving and more financial distress and greater responsibility among caregivers could explain their decreased

mental health compared to non-caregivers (Butterworth, Pymont, Rodgers, Windsor, & Anstey, 2010). In support of the findings regarding financial stress, the National Alliance for Caregiving (2009), in collaboration with the American Association for Retired Persons (AARP), revealed that 27% of adult caregivers reported moderate to high financial burden as a result of their caregiving experience (Cohen, Cook, Kelley, Sando, & Bell, 2015).

While research on informal caregivers has increased, younger adult caregivers have been consistently underrepresented in the research literature. Furthermore, the small set of studies that have focused on younger adult caregivers were conducted outside of the United States and were more qualitative in nature (Becker & Becker, 2008a; Becker & Becker, 2008b). The Social Exclusion Unit in London, England reported that public services tend to focus on adults or children yet "...there are relatively few examples of public services that address the specific needs of 16-25 year olds" (Becker & Becker, 2008b, p. 21). In reflection of this emphasis in the public service arena, research on younger caregivers tends to focus on child caregivers (under 18 years old) instead of younger adult caregivers between the ages of 18 and 24 (i.e., typical college age). As a result, younger adult caregivers are left without any age-specific resources and they are unaware of any adult-caregiving organizations because they do not advertise their services to university populations (Becker & Becker, 2008a).

To assess the effects of being a younger adult caregiver in the United States using a quantitative approach, we conducted a pilot study on a sample of undergraduate psychology students from a small, liberal arts college in the southeastern United States ( $n = 37$ , 18-24 years old, Mean age = 19 yrs). The purpose of the pilot study was to investigate the mental health differences between American college students that had acted as caregivers of a chronically ill loved one and those who had not. The informal caregiver group (i.e., experimental group) was

chosen using a pre-screening survey, while the non-caregiver group (i.e., control group) was selected from the remaining experimental participation pool. The participants completed an online survey using *SurveyMonkey*, which included a series of demographic questions (e.g., age, gender, financial security, etc.) and two scales; the Depression Anxiety Stress Scale (DASS-21) (Lovibond & Lovibond, 1995) and the Impact of Events Scale – Revised (IES-R) (Horowitz, Wilner, & Alvarez, 1979; Weiss, 2007). We asked the caregivers to respond to the survey with their caregiving experience in mind, and we asked the non-caregivers to respond to the survey with a stressful time in their life in mind. As a result of the pilot study, we found that the younger adult, informal caregivers were at a higher risk for PTSD (as measured by the IES-R) compared to age-equivalent non-caregivers. Furthermore, caregivers were more likely to be depressed (as measured in the DASS-21) compared to non-caregivers. These pilot study results suggest that younger adult caregivers in the United States suffer psychologically (i.e., higher risk of PTSD and depression), perhaps from their caregiving experience.

These results provide support for the claim that younger adult, informal caregivers suffer psychologically from their caregiving experience. However, the pilot study did not focus on other characteristics of the younger adult caregiver that may or may not insulate them from psychological distress, including, level of financial insecurity/support, level of caregiving support, social support, and prior history of mental illness. The results of the pilot study did provide some support for the link between financial security of the caregiver and their psychological distress. Specifically, caregivers were more likely to report being financially insecure than non-caregivers on a dichotomous scale (“*Yes I am financially secure,*” “*No I am not financial secure*”). This result on financial insecurity is consistent with other studies reporting financial stress as an added burden for adult caregivers (Butterworth et al., 2010;

Cohen et al., 2015). However, the dichotomous nature of the financial insecurity response set in our pilot study limited interpretation regarding how the level or degree of financial insecurity (i.e., degree of stress related to financial support in care of loved one) could explain the level of psychological distress experienced by the younger adult caregiver. Thus, we included a subjective rating of stress related to financial insecurity from the care of a chronically ill loved one (e.g., 1 = *Not at all stressed about my family's financial situation* to 6 = *Very stressed about my family's financial situation*) in the present study. With this more direct assessment of financial stress, we hoped to better determine any relationships with other distress measures.

A related factor to financial support in the caregiving experience is the level of caregiving support (i.e., how involved the caregiver is with their loved one's health care). In the pilot study, we found that caregivers were at a higher risk for developing PTSD and depression compared to non-caregivers, which is consistent with previous studies on the relationship between level of caregiving support and psychological stress levels (Berglund et al., 2015; Hiel et al., 2015). Of interest, however, is how that risk level might differ depending on their level of caregiving support, therefore another purpose of the present study was to examine the relationship between level of caregiving support (i.e., 1 = *Very low caregiving support* to 5 = *Very high caregiving support*) and level of the caregivers' psychological distress.

In addition to level or degree of financial support and caregiving support, lack of social support could also be related to the stress of caregiving, with more social support serving to insulate the younger adult caregiver from the psychological distress of the caregiving experience. In support of the importance of social support in the caregiving experience, Teixeira and Pereira (2012) reported that female adult caregivers with poor social support were more likely to experience distress and PTSD symptoms. Furthermore, their results indicated that social support

could be a partial mediator between psychological distress and caregiver burden (Teixeira & Pereira, 2012). Additional support for the importance of social support in mediating distress comes from a study by Manne, Duhamel, and Redd (2000). They found that mothers of pediatric patients were at a lower risk for PTSD if they felt comfortable talking about their caregiving experience and if they felt a sense of belonging. Thus, there is some evidence that in addition to financial insecurity, lack of social support is an important factor in the relationship between the caregiving experience of the younger adult caregiver and the psychological distress that may result. Thus, a measure of social support was included in the present study.

In addition to financial insecurity and lack of social support, a history of mental health issues could also contribute to higher amounts of psychological distress in the younger adult caregiver. There is no published research on how the caregiver's mental health history affects the amount of caregiver burden, however, there is extensive research on the effects of caring for a loved one with a mental illness (Imran et al., 2010; Iseselo, Kajula, Yahya-Malima, 2016). The lack of research in this area makes it difficult to determine how previous mental illness issues are related to the psychological distress of younger adult caregivers. Therefore, an additional purpose of the present study was to include a dichotomous assessment of prior mental illness unrelated to the caregiving experience ("*Yes, I have a history*" or "*No, I do not have a history*") was included in the new survey.

The purpose of the present study was to include assessments of the factors related to the younger adult, informal caregiver (i.e., financial support, amount of social support, previous mental illness) that could contribute to or insulate younger adult caregivers from the psychological distress that stems from the caregiving experience using a larger sample in order to increase power to detect significant trends. Lastly, instead of using the DASS-21 and IES-R, we

used the K10 Psychological Distress Scale (Kessler et al., 2002) to measure general psychological distress in the present study. Unlike the DASS-21 and IES-R, which measure specific types of distress (i.e., depression, anxiety, PTSD risk, etc.), the K-10 measures general psychological distress and has been found to be comparable to other well-known health surveys, such as the General Health Questionnaire (GHQ) and the SF-12, a quality of life measurement (Andrews & Slade, 2001).

Because involved caregivers frequently report not having enough time for themselves as they balance their care responsibilities, academics, and other commitments (Becker & Becker, 2008a), it was hypothesized that there would be a positive correlation between the amount of care the patient required and the amount of psychological distress reported by the informal caregiver. Based on research showing that increased financial support of the patient led to poorer mental health (Becker & Becker, 2008a; Butterworth, et al., 2010; Cohen, et al., 2015), it was also hypothesized that caregivers who were financially involved in the patient's care would report greater psychological distress than those who were not financially involved. Based on previous research on the role of social support in caregiving as an adult (Teixeira & Pereira, 2013), it was hypothesized that younger adult caregivers with higher amounts of social support would exhibit less psychological distress. Lastly, based on research showing that individuals with poorer mental health are less likely to use effective coping strategies (Aldwin & Revenson, 1987; Felton & Revenson, 1984), it was hypothesized that those with a history of mental illness would exhibit higher amounts of psychological distress compared to those without a history of mental illness.

## Method

### Participants

A total of 44 younger adult, informal caregivers participated in this study: 38 females (86%) and 6 males (14%). All the participants were 18 to 24 years of age and enrolled in college. The racial breakdown of the sample was 88% Caucasian, 6% Asian, 4% Hispanic, and 2% African American. A majority of the participants were recruited through the psychology department at a small, liberal arts college in southeastern United States, however, some of the participants found the survey link through social media sites (i.e., Facebook and Twitter). The participants received no compensation for their participation.

In terms of the caregivers' relationships with their loved ones, 52% cared for a parent, 25% cared for a grandparent, 7% cared for another family member (e.g., sibling, aunt/uncle, etc.), and 16% cared for someone who was not a family member (i.e., a close friend). Furthermore, 41% of the patients were male and 59% of the patients were female. Participant demographics are shown in Table 1 (Appendix A).

### Measures and Materials

The data was collected through *Qualtrics*, an online survey platform. The survey included an informed consent page, a psychological distress scale, a perceived social support scale, a series of demographic questions, and a debriefing page. The demographic questions included questions designed to assess level of caregiving support, mental health history, and level of financial insecurity/support.

To assess financial support, the participants were asked if they, or their immediate family members, were financially involved in the patient's care ("yes" or "no"). If the participant responded "yes", they were then asked about their degree/level of financial insecurity on a 7-

point scale (from 0 = *Not at all stressed about my family's financial situation* to 6 = *Very stressed about my family's financial situation*). The participant's level of caregiving support was assessed using a 6-point scale (from 0 = *Very low level of support* to 5 = *Very high level of support*).

The 12-item Multidimensional Scale of Perceived Social Support was used to assess level of social support (Zimet, Dahelm, Zimet, & Farley, 1988). The statements in this questionnaire ask about support from family members (e.g., "*I can talk about my problems with my family*"), friends (e.g., "*My friends really try to help me*"), and significant others (e.g., "*There is a special person in my life who cares about my feelings*"). Participants respond to each statement using a 7-point scale (from 1 = *very strongly disagree* to 7 = *very strongly agree*). This scale has been proven to be internally reliable ( $\alpha = 0.88$ ) and valid, with a moderate inverse relationship with depression and anxiety levels  $r = -.25, p < .01$  (Zimet et al., 1988).

The participants were asked if they have a history of mental health issues unrelated to the caregiving experience ("yes" or "no"). They were also asked to complete a questionnaire regarding psychological distress levels using the 10-item K10 Psychological Distress Scale (Kessler et al., 2002). The scale measures how often the participant feels symptoms of distress (i.e., "how often did you feel nervous?", "how often did you feel worthless?", etc.) on a 5-point scale ("none of the time" to "all of the time"). The K10 is internally reliable ( $\alpha = 0.91$ ) and has a good predictive validity of .81 in terms of detecting psychiatric disorders (Cornelius, Groothoff, van der Klink, & Brouwer, 2013).

## **Procedure**

The participants completed the *Qualtrics* survey via an online link. The first page, following the informed consent page, asked for the participant's age and if they have been

previously diagnosed with a mental illness. If the participant's age was outside the range of 18-24 years, they were then directly taken to the debriefing screen. Participants in the correct age group moved on to the following two pages, which included the K10 Psychological Distress Scale (Kessler et al., 2002) and the Multidimensional Scale of Perceived Social Support (Zimet, Dahelm, Zimet, & Farley, 1988). After completing those scales, the participants answered a series of demographic questions about themselves and their caregiving experience (i.e., level of caregiver support, level of education, their social involvement with their community, etc.). Lastly, the participants were shown a debriefing page that briefly explained the purpose of the study and thanked them for their participation. On average, it took each participant 15 minutes to complete the survey.

## Results

### Level of Caregiving Support and Psychological Distress

Descriptive statistics of psychological distress and financial stress scores as a function of the level of caregiving, financial and social support, and history of mental illness are shown in Table 2 (Appendix B). The correlations between psychological distress, level of caregiving support, and level of financial support are shown in Table 3 (Appendix C). The caregiving support Likert scale responses were divided into three categories, low (a score of "1" or "2"), moderate (a score of "3"), and high (a score of "4" or "5"). We conducted a univariate ANOVA with level of caregiving support (low level of support, moderate level of support, and high level of support) as the between-subjects factor and K10 Psychological Distress Scale (Kessler et al., 2002) score as the dependent measure. Although level of caregiving support was not significantly related to the level of psychological distress,  $F(2, 29) = 0.61, p = 0.55, \text{Partial } \eta^2 = 0.04$ , the average distress score for the highly involved caregivers ( $M = 22.07, SE = 3.34$ ) was

lower than the low involved caregivers ( $M = 26.50$ ,  $SE = 3.17$ ) and the moderately involved caregivers ( $M = 26.28$ ,  $SE = 2.57$ ) (See Appendix B).

### **Financial Support and Level of Stress Associated with Financial Support**

To determine the relationship between level of financial support and psychological distress levels, we conducted a univariate ANOVA with financial support (yes, no) as the between subjects factor and psychological distress score as the dependent measure and found that caregivers who provided financial support for their loved one ( $M = 27.32$ ,  $SD = 9.43$ ) reported significantly higher distress scores than caregivers who were not financially supporting their loved one ( $M = 21.71$ ,  $SD = 4.75$ ),  $F(1, 43) = 5.19$ ,  $p = 0.03$ , *Partial*  $\eta^2 = 0.11$ .

Furthermore, we crossed caregiving support (low, moderate, high) with financial support (yes, no) to determine the relationship between these two factors and psychological distress (see Appendix B). Among those who provided low levels of caregiving support, there was not a significant difference in distress scores between those who financially supported the patient ( $M = 26.00$ ,  $SD = 9.17$ ) and those who did not ( $M = 21.80$ ,  $SD = 5.45$ ),  $t(9) = 0.90$ ,  $p = 0.39$ , Cohen's  $d = 0.55$ . However, Cohen's effect size value ( $d = .55$ ) suggested a moderate practical significance. Similarly, for those who were provided moderate levels of caregiving support, there was no difference in distress scores between those who financially supported the patient ( $M = 27.73$ ,  $SD = 11.08$ ) and those who did not ( $M = 23.38$ ,  $SD = 4.57$ ),  $t(17) = 1.04$ ,  $p = 0.31$ ,  $d = 0.51$ , and Cohen's effect size value ( $d = .51$ ) suggested a moderate practical significance. However, for those who provided high levels of caregiving support, there was a marginally significant difference in psychological distress scores between those who financially supported the patient and those who did not,  $t(13) = 2.09$ ,  $p = 0.06$ ,  $d = 1.46$ . Cohen's effect size value ( $d = 1.46$ ) suggested a large practical significance. Those who provided high levels of caregiving support

and also provided financial support to the patient exhibited marginally greater levels of psychological distress ( $M = 27.64$ ,  $SD = 8.61$ ) compared to those who provided high levels of caregiving support but did not financially support the patient ( $M = 18.25$ ,  $SD = 2.99$ ).

Although participants who were highly involved in caregiving support reported the highest level of financial stress ( $M = 4.60$ ,  $SD = 1.17$ ), compared to those who were moderately involved in caregiving support ( $M = 3.73$ ,  $SD = 1.79$ ) and those who were minimally involved in caregiving support ( $M = 4.40$ ,  $SD = .89$ ), there was no significant relationship between level of caregiving support and financial distress related to caregiving,  $F(2, 23) = 1.02$ ,  $p = .28$ , *Partial*  $\eta^2 = .08$ . These findings were corroborated by a lack of correlation between level of caregiving support and financial stress related to the caregiving,  $r = .08$ ,  $p = .69$ ,  $n = 26$ . Furthermore, there was no significant correlation between level of caregiving support and psychological distress,  $r = .08$ ,  $p = .60$ ,  $n = 45$ , or between financial distress and psychological distress,  $r = .05$ ,  $p = .82$ ,  $n = 26$  (See Appendix B).

### **Social Support and Psychological Distress**

The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) was used to determine the relationship between levels of social support, caregiving, and psychological distress. The responses to the social support scale were split into three categories: high (the highest third responses), moderate (the middle third responses), and low (the lowest third responses). We conducted a univariate ANOVA with levels of social support (low, moderate, high) as the between-subjects factor and psychological distress score as the dependent measure and found that the amount of perceived social support was not significantly related to the caregivers' reported psychological distress scores,  $F(2, 21) = 0.24$ ,  $p = 0.80$ , *Partial*  $\eta^2 = 0.02$ . There was no significant difference in psychological distress scores for those with low levels of

social support ( $M = 26.25$ ,  $SE = 2.60$ ), moderate levels of social support ( $M = 24.40$ ,  $SE = 2.71$ ), and high levels of social support ( $M = 23.80$ ,  $SE = 2.68$ ). Consistent with this lack of relationship between level of social support and psychological distress in the analysis of variance, the negative correlation between degree of social support and psychological distress ( $r = -.05$ ) was also not significant,  $p = .74$ ,  $n = 45$ . Similarly, amount of campus involvement (i.e., number of campus organizations that the participant reported being involved in) was not significantly related to their perceived levels of social support,  $F(5,34) = 0.70$ ,  $p = 0.63$ , *Partial*  $\eta^2 = 0.09$ . Furthermore, we conducted a univariate ANOVA with campus involvement (0 campus groups, 1-2 groups, 3-4 groups, and 5 or more groups) as the between subjects factor and psychological distress score as the dependent measure and found that campus involvement was also not significantly related to reported psychological distress levels,  $F(3,34) = 0.44$ ,  $p = 0.73$ , *Partial*  $\eta^2 = 0.04$  (See Appendix B).

### **Prior History of Mental Illness**

We conducted a univariate ANOVA with history of mental illness unrelated to the caregiving experience (prior history of mental illness, no prior history of mental illness) as the between-subjects factor and K10 score as the dependent measure and found that caregivers with a history of mental illness ( $M = 29.36$ ,  $SD = 7.45$ ) had significantly higher distress scores compared to those who did not have a history of mental illness ( $M = 23.32$ ,  $SD = 8.22$ ),  $F(1,38) = 5.50$ ,  $p = 0.02$ , *Partial*  $\eta^2 = 0.11$  (See Appendix B).

### Discussion

While there is limited research on younger adult caregivers, previous studies on adult caregivers have found that financial support, caregiving support, and amount of social support could be related to the amount of psychological distress experienced by the caregiver. Therefore, the hypotheses for the current study were based on the results from studies on adult caregivers.

We did not find evidence to support our first hypothesis, which was that as the patient required more care, the amount of psychological distress reported by the caregiver would increase. We found that highly involved caregivers actually reported less psychological distress than less involved caregivers. This result is inconsistent with previous research reporting a positive correlation between level of support and distress in younger adult caregivers in the United Kingdom (Becker & Becker, 2008a). However, one possible explanation for the inconsistency between the current research on younger adult caregivers and previous research on adult caregivers is that a sense of control may mediate the relationship between level of support and psychological distress. Perhaps highly involved caregivers feel that they have more control in terms of helping their loved one compared to caregivers who are less involved. Having greater feelings of control may serve to alleviate some of the distress that younger adult caregivers experience. This explanation is consistent with the findings of Molloy and colleagues (2008) who looked at the factors that contribute distress in older adult caregivers. When they applied the demand-control model of job strain to informal caregiving, they found that less of a sense of control was related to higher caregiver distress (Molloy et al., 2008). Furthermore, older adult caregivers have more job and family obligations than younger adult caregivers so it is possible that older adult caregivers experience more distress when they are highly involved in the caregiving because their mental and physical resources are more likely to be divided between

work, family, and caregiving obligations compared to younger adult caregivers who are less likely to have started a family and/or career yet.

We did find support for our second hypothesis, which was that, overall, caregivers who are financially involved in the patient's care would have higher psychological distress than those who are not financially involved. This finding is consistent with previous research on older adult caregivers (Butterworth et al., 2010; Cohen et al., 2015). However, when we looked at how caregiving support plays in the relationship between financial support and psychological distress, we found that there was only a significant benefit to not providing financial support when the caregiver was also highly involved in caregiving support. Perhaps caregivers who are highly involved in the care of their loved one suffer when they are also financially involved because they must divide their energy and resources between the daily physical, medical, and psychological needs of the loved one and paying for those resources that are needed to care for the loved one. This might be especially burdensome for younger adult caregivers who may not have the financial resources to properly care for a sick loved one.

Results failed to support our third hypothesis that younger adult caregivers with higher amounts of social support would exhibit less psychological distress. In fact, our results showed no significant relationship between amount of social support and levels of psychological distress, which is inconsistent with previous research (Teixeira & Pereira, 2012; Manne, Duhamel, & Redd, 2000). One possible explanation for this is that those with low social support and high social support both experience distress but for different reasons. For instance, those with low social support may feel more distress because they do not have someone that they can talk to about their experience (Manne, Duhamel, & Redd, 2000). On the other hand, Becker and Becker (2008) found that, due to the burden of maturity, younger adult caregivers with high social

support can also experience distress because as they become more immersed in their loved one's care, they find it more and more difficult to maintain their larger network of social relationships.

We found support for the final hypothesis, which was that those with a history of mental illness would exhibit higher amounts of psychological distress compared to those without a history of mental illness. Based on previous findings that individuals with poorer mental health are less likely to use effective coping strategies (Aldwin & Revenson, 1987; Felton & Revenson, 1984), it is likely that participants in this study who had a history of mental illness exhibited higher amounts of psychological distress scores due to having less effective coping strategies. Future research might include measure of coping style and strategies to determine how type and frequency of use mediates the relationship between prior mental illness and psychological distress from caregiving.

### **Limitations**

There are some potential limitations of this study. Despite efforts to obtain more participants, the sample size was still under 50 for both the pilot and follow-up study. While we still found some significant results with this sample size, it is possible that we could have achieved significance in other categories (i.e., amount of social support) with a higher sample size. Also in order to more accurately compare younger to older adult groups, future research should include older and younger adult caregivers in the same study. Furthermore, it is important to note that all of the participants in this study were college students. Due to lack of access to less privileged populations, younger adult caregivers who have had to sacrifice their education for their caregiving role were not included in the present study. Thus, future research should focus on recruiting younger adult caregivers in places other than college campuses.

### **Implications**

The purpose of the current study was to investigate what factors contribute to or insulate younger adult caregivers from the psychological distress of caring for a chronically ill loved one. There is limited research on the effects of caregiving for a chronically ill loved one on younger adults, especially in the United States. Therefore, the current research fills a gap in the research in that it more directly examines the impact of caregiving on this special population and it also addresses the role of prior mental health on psychological distress. The fact that our findings were not fully consistent with the findings of previous studies on adult caregivers shows that younger adult caregivers are uniquely affected by their caregiving experience. As with adult caregivers, being financially involved in the patient's care significantly contributes to the younger caregiver's distress. However unlike adult caregivers, also being highly involved in the patient's care leads to less psychological distress compared to being less involved. Thus our results indicate that if the younger adult is involved financially in the caregiving, they suffer less distress if they are also highly involved in the care. Our results also indicate that higher amounts of social support may have less of a benefit for younger adult caregivers compare to older adult caregivers. Our findings are unique in that we also found that a lack of prior mental illness can insulate the younger adult caregiver from some of the psychological distress. However, interpretation here is limited because we cannot compare the impact of prior mental illness to an adult sample due to lack of research on the role of prior mental illness in the adult caregiver population.

There are some clinical implications of this research in that the entire family of a chronically ill patient may need psychological support services. Having such interventions might improve the family's psychological health so that they can provide more support for the patient that might also improve the patient's medical outcomes. Screening for previous mental health

issues and receiving psychological support shortly after the time of diagnosis could alleviate the amount of distress felt by the caregiver thus potentially preventing the development of PTSD.

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## Appendix A

Table 1. Participant Demographics Frequencies and Percentages

		<i>n</i>	%
Gender	Female	38	86
	Male	6	14
Race	White	39	89
	Black	1	2
	Hispanic	1	2
	Asian	3	7
Class Standing	Freshman	13	29
	Sophomore	7	16
	Junior	14	32
	Senior	10	23
Number of Siblings	None	11	25
	One	18	41
	Two	9	20
	Three or more	6	14
Greek Affiliation	Affiliated	19	43
	Not affiliated	25	57
Athletic Affiliation	Affiliated	8	18
	Not affiliated	36	82
Campus Involvement Level	No organizations	7	16
	1 – 2 organizations	22	50
	3 – 4 organizations	11	25
	5 or more organizations	4	9
Relation to Patient	Child	23	52
	Grandchild	11	25
	Other family member	3	7
	Not a family member	7	16
Therapy History	Currently in therapy	4	9
	Intend to go in the future	2	5
	Went to therapy in the past	13	29
	Has not gone to therapy at all and has no intention to go in the future	25	57

**Appendix B***Table 2.* Psychological Distress and Financial Stress Scores as a Function of Caregiving, Financial and Social Support Category, and History of Mental Illness

		Amount of Psychological Distress		Amount of Financial Stress	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Level of Caregiving Support	Low	26.50	3.17	4.40	0.89
	Moderate	26.28	2.57	3.73	1.79
	High	22.07	3.34	4.60	1.17
Financial Support	Yes	27.32	9.43	4.19	1.44
	No	21.71	4.75	-	-
Level of Social Support	Low	26.25	2.65	4.71	0.76
	Moderate	24.40	2.71	4.40	1.43
	High	23.80	1.68	3.56	1.74
Prior Mental Illness	Yes	29.36	7.45	4.63	1.30
	No	23.32	8.22	4.00	1.50

## Appendix C

Table 3. Correlations between Psychological Distress, Caregiving Support, Financial Support, and Social Support.

	Psychological Distress	Caregiving Support	Financial Support	Social Support
Psychological Distress	---			
Caregiving Support	$r = 0.08$ $p = 0.60$ $n = 44$	---		
Financial Support	$r = 0.05$ $p = 0.82$ $n = 26$	$r = 0.08$ $p = 0.69$ $n = 26$	---	
Social Support	$r = -0.05$ $p = 0.74$ $n = 44$	$r = -0.09$ $p = 0.54$ $n = 44$	$r = -0.01$ $p = 0.95$ $n = 44$	---