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Does Ethnicity Affect How Older Adults Deal with Stressors at Home?

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Abstract

Numerous studies have examined stress in older adults but little research has examined the specific relationship between ethnicity and home stressors. We used a micro-longitudinal eight day daily diary study to examine reactivity to home stressors in older adults. 42 participants reported on 337 days from the Greater Raleigh Area all between the ages of 60 to 96 representing European-Americans and African-Americans. Participants reported their daily home stressor resolution (resolved or unresolved) and daily physical symptoms (e.g., joint pain, fatigue, headache). We found that European-Americans had a significantly higher number of physical symptoms on days with an unresolved home stressor than that of their African-American counterparts. Findings suggest ethnicity differences in the physical effects of home stressor resolution among older adults. Awareness of disparity is an important first step in closing the health gap and ethnicity should be included in future assessments of home stressors in older adults.

Introduction

Everyone experiences stress, and the older adult population is no exception (Almeida & Horn, 2004). While numerous studies have examined stress in older adults (Seeman & Robbins, 1994; Neupert, Almeida, & Charles, 2007), many studies focus on broad conceptualizations of stress and research is needed that examines the nuances of reactions to specific stressors (Koffer, Ram, Conroy, & Almeida, 2016), specifically little research has studied the relationship between ethnicity and home stressors in older adults. Home stressors refer to any stressor that occurs in the household (e.g., household maintenance, neighborhood concerns, and financial problems). As one of the primary locations where older adults spend their time, it is important to examine the implications of home stressors. Almeida (2005) stated that there are sociodemographic factors that may contribute to how the individual deals with day-to-day stress including age, gender, education, income, marital status and parental status. Although ethnicity was not a sociodemographic factor that was considered, it may be an important factor related to how

reactive individuals are to home stressors. For example Wadsworth and Santiago (2008) found that unlike European Americans, African Americans showed no link between several psychological syndromes and family trouble. Increasingly research is considering the effect that an individual's ethnicity may have on how they handle stress (Cichy, Stawski, & Almeida, 2012).

An unresolved home stressor occurs when an individual continues to experience stress surrounding their home life because the stressor has not been dealt with or resolved on its own. Resolved stressors occur when an individual has figured out a way to deal with the stressor or the stressor disappears by itself. Successfully resolving a home stressor gives older adults experience in successfully managing stress and may allow older adults to become even better at coping (Brennan, Schutte, & Moos, 2006).

Home stressors deal with the responsibilities that occur in the home setting; this can include dealing with family issues, typical homeowner problems, and interpersonal conflicts that take place in the home (Hay & Diehl, 2010). Home stressors may not be the predominant source of stress

for older adults (Almeida & Horn, 2004); however, due to the amount of time older adults spend at home it is important to understand their impact. In older adulthood the close family network becomes more emotionally important and salient as other social relationships may be decreasing, therefore this may be why it remains a source of stress in adulthood (Carstensen, 1992). Home stressors can also include a wide range of other things, including: pet problems, financial problems, scheduling conflicts, having too much to do, neighborhood concerns, and household maintenance (Almeida & Horn, 2004).

Stress-related increases in physical symptoms are one way stress can be effectively measured (Almeida, Wethington, & Kessler, 2002; Neupert et al., 2007). Neupert et al. assessed age differences in young, middle and older adults and found no differences in age on physical reactivity when looking specifically at home stressors. Ethnic differences were not included in their analyses, though, so the current study aims to merge important person-level (i.e., ethnicity) and contextual-level (i.e., home stressors) information to further explore physical reactivity to stressors.

Cichy et al. (2012) looked at differences in ethnicity as they pertain to daily family stressors. Family stressors are different than home stressors in that they are focused on the daily struggles of family life and how these struggles impact relationships in the family regardless of where they occur (Almeida, 2005; Cichy et al.), whereas home stressors focus on stresses that occur solely within the home. Similar to this present study, two ethnicities were represented: European Americans and African Americans. Cichy et al. found European Americans and African Americans were similar in emotional reactivity; however, African Americans were more physically reactive to stressors in that

the reactivity continued to impact the individual the day after the stressor occurred.

Research has shown that individuals with a lower socioeconomic status are likely to have more chronic stress than individuals who have a higher status (Turner et al., 1995). It is also assumed that due to more chronic stress, individuals of a lesser status will report more stressful events than those of the higher status (Turner et al., 1995). Grzywacz, Almeida, Neupert, and Ettner (2004) found that the more education an individual had, the more stressors the individual reported. Although higher education was associated with more stressors, people with less education had a more severe response to stressors whenever a stressor did occur (Grzywacz et al., 2004). Given that ethnic minorities tend to have lower SES than ethnic majorities in the US (Crimmins, Hayward, & Seeman, 2004), an important question for the current study is whether the SES differences found in previous studies are similar to or different than ethnicity differences in the stress process. A strength of the current study is that there were no significant differences in income across ethnicity.

We are unaware of any studies that have looked at the possible role that an individual's ethnicity may have when assessing home stressors and physical symptoms. Although one study explored race/ethnicity differences as it pertains to family stressors and did not find any differences in emotional reactivity (Cichy et al., 2012) we were interested in focusing on two ethnic groups (European Americans and African Americans) and the potential association between unresolved home stressors and daily physical health. Older adults are likely to feel the physical wear of everyday home stressors, and as Almeida (2005) pointed out, some individuals may be in a better position to deal with the stressors than others. It may be that

an individual's ethnicity is one sociodemographic factor that contributes to how reactive the individual is to the home stressor, especially in regards to a greater risk for physical symptoms.

Present Study

A micro-longitudinal eight day daily diary study was conducted to address whether the ethnicity of older adults (aged 60-96) is associated with more or less physical symptoms in response to resolved and unresolved home stressors. There are many benefits to using the daily diary method (Almeida, 2005). Daily stressors are crucial to look at because they are the everyday worries and troubles that plague an individual's life. The daily diary method allows for an in-depth understanding of an individual's everyday troubles and worries (Almeida, 2005). Since participants are able to report daily occurrences in a more detailed fashioned as they occur rather than having to think back on past experiences (Bolger, Davis, & Rafaeli, 2003) the method has more external validity (Almeida, 2005; Bolger, Davis, & Rafaeli, 2003). Similar to previous findings examining SES, we hypothesize that European Americans will have more stressors than African Americans. However, we also hypothesize that when unresolved home stressors occur African Americans will be more reactive.

Methods

Participants & Procedures

Participants were part of a larger study, the Anticipatory Coping Every Day study (ACED, Neupert, Ennis, Ramsey, & Gall, 2016) that occurred in 2011 in the Greater Raleigh Area. In the current analyses, 42 adults aged 60-96 years old, with the mean age being 74.74 years, were assessed. African Americans represented 52.4% ($n=22$) of the participants while European Americans represented 47.6% ($n=20$) of the participants.

In order to be eligible to participate, participants were screened for cognitive impairments which was done using the Short Blessed Test (Katzman et al., 1983). Any participant that received an eight or lower on the test was deemed cognitively able to participate. The participants completed a demographics questionnaire on Day 1 as well as other information that became referred to as the baseline data. This information included the participant's age, ethnicity, education, etc. Education ranged from some high school to graduate degrees. The mode education was a high school degree, while the average education was some college. There were no ethnic differences in education. Income was evaluated at \$10,000 intervals with the lower range being \$0-\$19,999 and the highest \$100,000 or more. The median range was from \$20,000 to \$29,999. There were no significant difference in income across ethnicity. Following the initial baseline data, the participants completed eight (consecutive) daily diaries. The participants filled out the diaries in the comfort and privacy of their own homes lending to the external validity of the study. Compensation for time was also given; participants that completed five or more days received a \$20 gift card and participants that completed four or fewer days received a \$10 gift card.

Measures

Home Stressors

Home stressors were evaluated using the Daily Inventory of Stressful Events (DISE; Almeida et al., 2002). The participants were asked if, in the past 24 hours, anything occurred at home that most people would consider to be stressful. If the participant marked no, no further questions were asked. However, if they marked yes, they indicated who was involved, what was the main source of the stressor, and if the issue was resolved or unresolved. Home stressors included: pet

problems, financial problems, scheduling conflicts, having too much to do, neighborhood concerns, and household maintenance. Only data from days where people marked yes to having a home stressor were included in the study.

Physical Symptoms

Each participant completed a physical symptoms inventory which was taken from the Larsen and Kasimatis' (1991) physical symptom checklist. The participants were asked if in the past 24 hours they had experienced any of the physical symptoms that were listed and if so to check all that applied for that day. Examples of symptoms included: headache, backache, chest pains, shortness of breath or difficulty breathing, etc. A daily composite was created by summing the number of affirmative responses.

Results

Home stressors occurred on 12.50% of days, for a total of 42 instances. Frequency distributions showed the other people involved included: no one 28.6% (n=12), spouse 26.2% (n=11), grandchild 16.7% (n=7), child 11.9% (n=5), another family member 4.8% (n=2), friend 2.4% (n=1), neighbor 2.4% (n=1), and other person not specified 7.2% (n=3). Frequency distributions for main topics of the stressors revealed that the main topic of the stressor were: health 21.4% (n=9), schedule issues 16.7% (n=7), household maintenance 16.7% (n=7), having too much to do 11.9% (n=5), pet related issues 4.8% (n=2), finance 2.4% (n=1), and other topic not specified 26.4% (n=11). In regards to resolution, 75% of the home stressors were resolved leaving 25% unresolved. Consistent with our hypothesis, results of an independent t-test showed that European Americans ($M = 0.17$, $SD = 0.37$) had more daily home stressors than African

Americans ($M = 0.09$, $SD = 0.29$): $t = -1.98$, $p = .049$, $d = -0.21$, $r = 0.10$.

We used a multilevel model (Raudenbush & Bryk, 2002) to predict the number of physical symptoms on a daily basis as a result of home stressors and whether those stressors were resolved or unresolved. Multilevel modeling was chosen because it examines both between-person differences (i.e., ethnicity) and the daily within-person fluctuations (i.e., stressors and physical symptoms).

First an unconditional model was run in order to assess whether there was significance between-person (Level 2) and within-person (Level 1) in the variance of daily physical symptoms. Significant variance was found at both the between person ($\tau_{00} = 1.87$ (0.46), $t=4.08$, $p < .001$) and within person ($\sigma^2 = 1.40$ (0.12), $t=11.77$, $p < .001$) level. Results from the intraclass correlation coefficient (Raudenbush & Bryk, 2002) revealed that 57% of the variance in daily physical health symptoms was at the between person level and 43% was at the within person level. These results indicate that there is sufficient variance at both levels to continue with subsequent analyses. To address our hypotheses the following multilevel model was tested:

Level 1: Physical Symptoms_{it} = β_{0it} + β_{1it} (Stressor Resolution) + r_{it}

Level 2: $\beta_0 = \gamma_{00} + \gamma_{01}$ (Ethnicity) + u_{0i}

$\beta_1 = \gamma_{10} + \gamma_{11}$ (Ethnicity) + u_{1i}

There was a significant main effect of ethnicity, $\gamma_{01} = 3.03$ (0.69), $t=4.41$ $p=.001$, with European Americans reporting more physical symptoms than African Americans. This main effect was qualified by a significant interaction between ethnicity and resolution of home stressor, $\gamma_{11} = -1.80$ (0.86), $t=-2.08$, $p=.04$ (see Figure 1). European Americans had significantly more physical symptoms than African Americans when the home

stressor was unresolved. This model explained 58% of the between-person variance and 6% of the within-person variance in daily physical symptoms.

The interaction was decomposed by conducting separate models for each ethnic group. The slope for European American participants was significant, slope = -1.33 (0.65), $t=-2.05$, $p=.05$, meaning that European Americans experienced a significant decrease in physical symptoms when home stressors were resolved whereas African Americans reported a similar low level of physical symptoms when home stressors were resolved or unresolved. The test of contrast for unresolved stressors was significant, difference = 2.97 (0.93), $t=3.19$ $p=.004$, suggesting that European Americans had more physical symptoms when home stressors were unresolved than African Americans.

A chi square test was performed in reference to the follow-up questions that were asked of each participant upon them marking "yes" to having had a stressor occur. The participants indicated who was involved in the stressor and what the main topic of the stressor was. The chi square test did not reveal any significant differences in stressor resolution by the person involved in the stressor or by main topic of stressor, except for health-related stressors, $\chi^2(1) = 6.07$, $p = .01$. A negative correlation was found between stressor resolution and health topic showing that home stressor involving a health problem were less likely to be resolved. However there was not a significant correlation or chi-square for having a health-related stressor in the home and number of physical symptoms on a particular day. Because of the significant effects for stressor resolution, total daily physical health symptoms were added into the multilevel model as a control, however, it did not impact

the results or contribute unique significant variance; thus, for the model we present this variable was removed.

Discussion

This study has contributed to the understanding of ethnicity, daily home stressors, and daily physical health symptoms. We evaluated home stressor resolution (unresolved or resolved) in terms of two ethnic groups, European Americans and African Americans, and evaluated differences in reactivity in terms of physical symptoms. Our findings suggested a significant difference in reactivity by ethnicity. The experience of home stressors may differ by ethnic group. Our findings partially supported our original hypothesis since European Americans did end up having more home stressors than did African Americans; however, it was European Americans, not African Americans, who tended to be more reactive to unresolved home stressors, resulting in more daily physical symptoms.

Almeida (2005) noted that daily diary studies can look at sociodemographic information like age, gender, and marital status, factors that could create differences in how the individual deals with stress. Cichy et al. (2012) included race/ethnicity as a sociodemographic factor in their study and found that African Americans were more physically reactive a day after the stressor had occurred than European Americans, but found no ethnicity differences in emotional reactivity to the family stressor (Cichy et al.). It is important to assess how ethnicity may impact the appraisal of stressors in different ways. The present study emphasizes the idea that ethnicity should continue to be a sociodemographic factor that is considered because it may impact how an individual handles home stressors.

One possibility for the difference between European American and African Americans when it comes to unresolved home stressors may have to do with culture. There could be some fundamental differences in how stress is handled amongst ethnicities based on their culture and values (Kuo, 2011). The two ethnic groups may react to home stressors differently based on how important they view the problem causing the stressor to be. The focus of the daily diary method is to bring attention to the everyday struggles and stresses of an individual's life (Almeida, 2005) and this study focused specifically on those stressors that occurred in the context of the home. Future research is necessary to try to understand whether cultural differences may play a role in the importance or perception of home stressors.

This paper found that European Americans have more physical symptoms when a home stressor is unresolved than African Americans. This information has the potential to help older adults living in the United States to better understand themselves and how potential stress may affect them. European Americans and African Americans can benefit from understanding how their ethnicity may impact the physical symptoms they endure due to unresolved home stressors. If older adults realize that unresolved home stressors can have an influence on how many physical symptoms they have then they may try to resolve the unresolved issue causing them stress. Older adults can benefit from resolving a stressor because it may result in even better future coping (Brennan, Schutte, & Moos, 2006).

Limitations and Future Directions

While this study has contributed to the current understanding of ethnicity and home stressor reactivity in the older adult population there were some limitations. This study was limited in only being able to

compare home stressor reactivity with two ethnic groups. It would be interesting to see how other groups of people compare with each other. This research study also had 93% female participants. Gender differences have been found for other stressors (Almeida, 2005). Almeida found that men had more work and school stressors and women had more network stressors. Future research should continue to look at ethnicity as a sociodemographic factor that can affect how an individual reacts to home stressors, as well as exploring whether it affects other sorts of stressors like network and work stressors. Future researchers can also take a look at gender differences across ethnicities to explore whether men and women within ethnicity groups experience similarities or differences in stress reactivity. Researchers can continue to explore ethnicity differences among European Americans and African Americans in other age groups. The field can move forward by exploring the impact and importance that ethnicity may have on understanding how each individual deals with stressors.

Conclusion

This study set out to explore ethnicity differences in home stressors among older adults. We found that European Americans tended to be more reactive than African Americans to unresolved home stressors which leads to them experiencing more physical symptoms on a day-to-day basis. We have shown that ethnicity is an important sociodemographic factor that should be taken into account when assessing the individual differences in older adults' reactivity to daily home stressors.

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Appendix

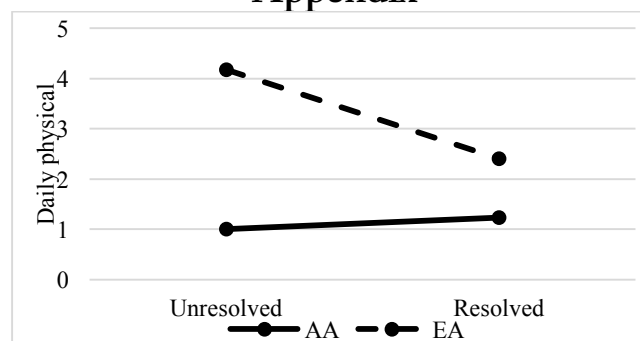


Figure 1: Ethnicity differences (AA: African American; EA: European American) in physical reactivity to home stressor resolution. Reactivity is operationalized as the within-person association between home stressor resolution and daily physical symptoms.