

Perceptions of Participation in Trauma Research Among Older Adults

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The need for rigorous research on the risk and consequences of older adult abuse, neglect, and financial exploitation—especially from the perspectives of older adults themselves—has become more imperative as the population in the United States rapidly ages. Researchers have previously demonstrated that trauma-focused research can be conducted ethically; however, researchers have not directly assessed perceived benefits and costs of trauma-focused research among older adult participants. The current study addresses the gap in the literature by examining perceived benefit-to-cost ratios related to participating in a trauma-focused research protocol in a community sample of adults over the age of 60. The sample included 99 ethnically diverse older adults (aged 60–86, mean age = 69.8). Participants' ratings on the Response to Research Participation Questionnaire (RRPQ) documented a positive benefit-to-cost ratio, demonstrating that older adults' perceptions of benefits of participating in research outweighed the costs; effect sizes were large. When examining the relationship between symptom distress and perceptions of research participation, PTSD and depressive symptoms were associated with greater emotional reactions. Overall, the findings of the current study demonstrate that, within the context of mindful interview and screening procedures, asking older adults about trauma and maltreatment may be conducted within a favorable benefit-to-cost ratio. Implications for research and practice are discussed.

Keywords: older adults, research ethics, responses to research participation, trauma

More than one in 10 older adults reported experiencing some type of abuse (e.g., emotional, physical, sexual) or potential neglect in the previous year in a randomly selected, national sample (Acierno et al., 2010). As the public health and criminal justice costs of older adult abuse, neglect, and financial exploitation have increasingly garnered public attention, more trauma-focused research involving older adults will be needed to investigate causes, consequences, and potential intervention responses (Cooper, Selwood, & Livingston, 2008; Daly, Merchant, & Jogerst, 2011). Researchers have begun work to identify associated risk and protective factors as well as mental and physical health consequences (e.g., depression, chronic pain). A burgeoning literature using nationally representative community samples, administrative data, and case reviews, reveals complex and interrelated risk factors for abuse, neglect, and exploitation, including shared living arrangements, social isolation, poor health, cognitive deficits, dementia, and relationships with abusers having specific characteristics (e.g., mental illness, alcohol dependence; Bonnie & Wallace, 2003; Comijs, Pot, Smit, Bouter, & Jonker, 1998; Laumann, Leitsch, & Waite,

2008). Very limited research to date focuses on the physical and mental health consequences of older adult abuse and neglect from the perspective of the older adult who has been a victim of abuse, neglect, or exploitation; the research that does exist finds that victims of elder abuse are at risk for depression, helplessness, alienation, posttraumatic stress disorder (PTSD), guilt, and denial (e.g., Wolf, 1997).

As the U.S. population rapidly ages (Ortman, Velkoff, & Hogan, 2014), the need for rigorous research on the risk for, as well as consequences of, older adult abuse, neglect, and financial exploitation becomes ever more urgent. Conducting research to gather the perceptions of older adults themselves will be essential to identifying points of prevention as well as mediators of outcomes; however, questions are likely to emerge about the ethics of conducting trauma-focused research with older adults. Indeed, as trauma-focused research has expanded over the last two decades with other groups (e.g., college students, healthy adults, treatment-seeking adults, youth), institutional review boards have raised concerns about the ethics of such research.

Reasoning about the ethics of research requires consideration of both the potential benefits and costs to participants. A growing body of empirical literature has demonstrated that participants in trauma-focused research generally rate participation in the research as having greater perceived benefits than costs. Studies evaluating participants' perceptions have included clinical and medical samples (Carlson et al., 2003; Griffin, Resick, Waldrop, & Mechanic, 2003; Newman, Walker, & Gefland, 1999; Weitlauf, Ruzek, Westrup, Lee, & Keller, 2007), community samples (Chu & DePrince, 2013; DePrince & Chu, 2008; Hebenstreit & DePrince, 2012), refugee samples (Dyregrov et al., 2000), college samples (Cromer,

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Freyd, Binder, DePrince, & Becker-Blease, 2006; DePrince & Freyd, 2006; Edwards, Kearns, Calhoun, & Gidycz, 2009), and vulnerable populations such as children (Chu, DePrince, & Weinzierl, 2008), and have demonstrated positive benefit-to-cost ratios across all studies. Research to date, however, has not directly assessed perceived benefits and costs of trauma-focused research with older adults.

Researchers in previous studies with samples that include a wider range of ages have found variability with regard to perceptions of research. Among other individual factors (e.g., preexisting distress, history of multiple traumas, social vulnerability, and greater physical injury), older age has been linked with experiencing unexpected distress and more negative emotional reactions during trauma-focused research, as well as poorer evaluations of the importance of the research (DePrince & Chu, 2008; Newman & Kaloupek, 2004). Additionally, older age was related to greater perceived benefits of research participation in a sample of adults with a mean age of 42.6 (DePrince & Chu, 2008). Collectively, these findings highlight the need for, and importance of, research evaluating the benefits and costs of research participation in older adult participants. As these findings demonstrate, adults of older age may represent a particularly vulnerable subpopulation that experiences different benefit-to-cost ratios of participating in trauma-focused research. Evaluating the benefits and costs of research participation in older adults may reveal a need for specific research protocols when working with an older adult population.

Investigators have also focused on predictors of distress related to research participation, such as trauma-related symptoms; however, findings have been mixed. PTSD symptoms have been inconsistently associated with unexpected negative emotional reactions to participation in trauma-focused research; some studies have found an increase in unexpected negative emotional reactions (e.g., Carlson et al., 2003), whereas others have found no significant associations (e.g., Griffin et al., 2003). PTSD symptoms have also been associated with greater perceptions of drawbacks (e.g., inconvenience of participation) and poorer global evaluations (e.g., beliefs about the importance of research), in addition to greater perceived benefits (DePrince & Chu, 2008). Unfortunately researchers have not examined the associations between PTSD symptoms and perceptions to research participation in an older adult population. Furthermore, researchers have not examined the influence of other symptom distress (e.g., depression) to perceptions of research participation.

Current Study

Although the current body of ethics work can inform investigators pursuing trauma-focused research with older adults, some questions can and should be asked directly in samples of older adults participating in trauma-focused research. In the current study, we aimed to address this gap in the literature by assessing benefit-to-cost ratios related to participating in comprehensive trauma interviews as part of a larger community study of adults over the age of 60. We also examined contributions of PTSD symptoms and depressive symptoms to participants' perceptions of the research process. The findings from the current study will inform research practices regarding how to ask older adults about trauma exposure ethically.

Method

Participants

Before data collection, study procedures were approved by a university Institutional Review Board. Ninety-nine adults over the age of 60 were recruited to participate in a larger project on Older Adult Resources and Stress that examined links between trauma exposure and health as well as service use and needs of older adults. The project involved a partnership with a community-based, multidisciplinary group convened to focus on the problem of older adult abuse, neglect, and financial exploitation in this urban community. As part of the partnership, agencies participating in the community-based program played an active role in recruitment by making flyers available to clients; thus, flyers were distributed through local criminal justice (e.g., City Attorney's Office) and community-based organizations, including (but not limited to) agencies such as adult protective services and care management agencies. Older adults also referred friends and neighbors to the study. Recruitment materials did not mention abuse, neglect, and/or exploitation, though did state that the goal of the project was to learn about "(a) Older adults' experiences of stress, and (b) The impact of stress on health, well-being, and service needs."

Participants were required to speak and read/write in English, although they could be bilingual. Participants were excluded from the study if they presented with apparent incoherence, disorientation, or significantly impaired mental status at time of recruitment or during the consent process; or apparent drug or alcohol intoxication or other problems in mental state resulting in apparent inability to provide informed consent. The ability to provide informed consent was assessed with each potential participant through the use of a "consent quiz." The quiz included questions about key consent elements (e.g., voluntary nature of the research, focus of the research). To be considered able to consent to the study, older adults had to answer all consent questions correctly; they could make errors on first administration of the questions, but following provision of corrective information, they had to answer correctly on the second administration. One older adult failed the consent quiz and was not enrolled in the study; 99 older adults passed the consent quiz and were enrolled.

Measures

With the exception of the measure on benefits and costs of research participation, all other measures below were administered in interview format. The measure on benefits and costs of research participation was administered as a paper questionnaire.

Sample characteristics. Demographic information was collected regarding age, race/ethnicity, marital status, education, and occupation.

Lifetime maltreatment. Exposure to lifetime maltreatment was assessed following procedures used in national studies on the prevalence of elder maltreatment (Acerno et al., 2010; Laumann et al., 2008). Measured maltreatment categories included emotional, physical, and sexual abuse; financial exploitation; and neglect. Examples of questions included: "Has anyone ever verbally attacked, scolded, or yelled at you so that you felt afraid for your safety, threatened or intimidated?" (emotional abuse); "Has any-

one ever physically hurt you so that you suffered some degree of injury, including cuts, bruises, or other marks?" (physical abuse); "Has anyone ever made you have sex or oral sex by using force or threatening to harm you or someone close to you?" (sexual abuse); "Has anyone you are close to ever stolen your money or taken your things for themselves, their friends, or to sell?" (financial exploitation); and "Do you need someone to help you get out of bed, get showered, or get dressed? If yes, is there a time when that need was not met?" (neglect). Participants were asked whether they experienced any of these forms of maltreatment in their lifetimes; if they answered in the affirmative, they were then asked when the most recent time occurred.

PTSD symptoms. PTSD symptoms were assessed using the Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997). The symptom section of the PDS assesses for the presence of 17 PTSD symptoms using *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*) criteria (e.g., "Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to"). Participants responded using a 4-point scale (0 = *not at all or only one time* to 3 = *5 or more times a week/almost always*). Scores on the PDS were summed. Greater scores indicate greater PTSD symptom severity. The PDS has been demonstrated to have adequate validity (Foa et al., 1997). For the current sample, Cronbach's alpha was .90.

Depressive symptoms. Depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001). The PHQ-9 is a brief, nine-item self-report measure used to assess depressive symptoms and severity using *DSM-IV* criteria (e.g., "Feeling down, depressed, hopeless"). The PHQ-9 has been proven to be an effective brief screening tool for assessing depressive symptoms related to diagnostic criteria and for determining depression severity in geriatric populations in primary care settings (Phelan et al., 2010). Participants respond using a 4-point scale (0 = *not at all* to 3 = *nearly every day*). Scores on the PHQ-9 were summed. Greater scores indicate greater depressive symptom severity. The PHQ-9 has demonstrated adequate validity (Kroenke et al., 2001). For the current sample, Cronbach's alpha was .85.

Benefits and costs of research participation. Participants' responses to research participation were assessed using the Response to Research Participation Questionnaire (RRPQ; Newman & Kaloupek, 2001, 2004). The RRPQ is a 23-item self-report questionnaire that measures both positive and negative aspects of participating in research. Three factors (Personal Benefits, Global Evaluation, Participation) measure benefits to research participation. Specifically, the Personal Benefits scale measures gains in individual insight and meaning by participating (e.g., "I found participating in the study personally meaningful."). The Global Evaluation scale measures beliefs about the importance of research and the integrity of the research process (e.g., "I was treated with respect and dignity."). The Participation scale measures perceptions of the value of trauma-related research and beliefs about being able to stop the research at anytime (e.g., "I felt I could stop participating at any time."). Additionally, two factors (Emotional Reactions, Perceived Drawbacks) measure costs to research participation. The Emotional Reactions scale measures unexpected and negative emotions experienced during participation (e.g., "The research raised emotional issues for me that I had not expected.").

The Perceived Drawbacks scale measures regret and negative perceptions about the research procedures (e.g., "Participating in this study was inconvenient for me."). We calculated average scores for each of the five subscales. Cronbach's alphas for these scales were acceptable: Personal Benefits = .80; Global Evaluation = .67; Participation = .66; Emotional Reactions = .81; Perceived Drawbacks = .70.

Procedure

Interested participants called a confidential project telephone line and were given additional information about the research project, including the fact that they would be asked about "stressful life experiences" they may have had "recently or earlier in life," as well as "health and well-being." If they were interested in participating, a 2-hr interview appointment was scheduled at a location of the older adult's choosing that offered privacy (e.g., private room at a public library). Interviews could be completed in one 2-hr session or two 1-hr sessions and were conducted by trained graduate-level interviewers. At the beginning of the interview, participants were provided consent information in both written and oral formats. During the consent process, participants were specifically informed that they would be asked about "stressful events" including "abuse, neglect, and financial exploitation," as well as "physical and mental health." They were also informed that they had the opportunity to skip any question they did not feel comfortable answering, stop the interview, or withdraw from the study at any time. Participants were then asked to complete a brief consent quiz (as described above). Following consent and enrollment in the study, participants completed an interview or interviews in the aforementioned format. At the end of the interview (i.e., when interview questions had been completed or allotted time had elapsed), participants were asked to complete the paper questionnaire on benefits and costs of research participation.

Analytic Approach

Descriptive statistics and reliability estimates were computed for all study variables. Outliers were identified and addressed as follows: one PDS sum score (score >38) was winsorized to 3 standard deviation units from the mean. One-sample *t* tests, paired samples *t* tests, and bivariate correlations were conducted to examine the benefits and costs of research participation using the Statistical Package for Social Sciences (SPSS) version 22.

Results

Sample Characteristics and History of Maltreatment

Following a consent process during which they learned that they would be asked about "stressful events" including "abuse, neglect, and financial exploitation" as well as "physical and mental health," none of the older adults declined participation; furthermore, none of the older adults stopped the interview or withdrew from the study.

Demographic information for the 99 participants reveals a diverse sample in terms of race/ethnicity, education, and marital status (see Table 1). Specifically, participants' ages ranged from 60–86, with an average age of 69.8 (*SD* = 6.9). The majority of

Table 1
Sample Characteristics

Characteristic	<i>M</i>	<i>SD</i>
Age	69.8	6.9
Gender, %		
Female	88	
Race/ethnicity, % ^a		
White/Caucasian	33	
Black or African American	67	
Pacific Islander	1	
American Indian or Alaskan Native	9	
Other	8	
Hispanic or Latino origin	11	
Education, %		
Less than high school	10	
High school graduate	18	
Some college or associate's degree	47	
College graduate or more	23	
Other (trade school, specialized training)	2	
Work status, %		
Retired	66	
Working part or full time	13	
Unemployed	18	
Other (homemaker, seasonal, other)	3	
Relationship status, %		
Married	17	
Separated or divorced	33	
Widowed	33	
Single, and never married	11	
Other	6	
Lifetime maltreatment history, %		
Emotional abuse	80	
Physical abuse	59	
Sexual abuse	34	
Financial abuse	48	
Neglect	61	

^a Participants endorsed multiple racial and ethnic categories where applicable. Percentages do not total to 100% because of rounding.

participants were women (88%). Participants reported their racial and ethnic backgrounds to be 33% White/Caucasian, 67% African American, 1% Pacific Islander, 9% Native American or Alaskan Native, 8% other, and 11% Hispanic or Latino. Across all categories, 77% identified as belonging to one or more racial and/or ethnic minority groups. Participants reported their highest level of education as follows: 10% less than high school, 18% high school graduate, 47% some college or associate's degree, 23% college graduate or more, and 2% other (e.g., trade school, specialized training). More than half of the sample (66%) reported being retired, 13% reported working part or full-time, 18% reported being unemployed, and 3% reported some other type of work. Participants described their current relationship status as follows: 17% married, 33% separated or divorced, 33% widowed, 11% single and never married, and 6% other.

Participants were asked about exposure to maltreatment within their lifetimes. Responses indicated that a large proportion of the sample had experienced at least one category of maltreatment (i.e., emotional, physical, or sexual abuse; financial exploitation; or neglect). Most of the participants reported experiencing some type of emotional abuse within their lifetimes. See Table 1 for percentages of lifetime maltreatment exposure.

Benefits and Costs of Research Participation

To assess perceived benefits and costs of participating in research, we first computed the mean of each scale and compared that score to 3, the neutral point on the scale (1 = *strongly disagree*, 5 = *strongly agree*) using one-sample *t* tests (see Table 2 for descriptives of each scale). Scores on the three positive scales (Personal Benefits, Global Evaluation, Participation) were significantly greater than 3 (neutral point), indicating general agreement with the benefits of participating in research (e.g., personal meaningfulness, importance of trauma-research, being treated with respect): $t(93) = 17.40, p < .001$; $t(92) = 40.86, p < .001$; $t(92) = 26.04, p < .001$, respectively. Scores on the negative scales (Emotional Reactions, Perceived Drawbacks) were both significantly below 3, indicating general disagreement with the costs of participating in research (e.g., unexpected negative reactions, inconveniences): $t(93) = -2.86, p = .005$; $t(93) = -22.40, p < .001$, respectively.

Benefit-to-cost ratios were then calculated to further analyze the benefits of participating in the research relative to the costs (DePrince & Chu, 2008). To calculate the benefit-to-cost ratios, we used paired sample *t* tests, comparing the positive scale scores (Personal Benefits, Global Evaluation, Participation) to the negative scale scores (Emotional Reactions, Perceived Drawbacks). The Personal Benefits, Global Evaluation, and Participation scales were each significantly greater than both the Emotional Reactions scale, $t(93) = 12.63, p < .001$, Cohen's $d = 1.30$; $t(92) = 16.02, p < .001$, Cohen's $d = 1.66$; $t(92) = 13.63, p < .001$, Cohen's $d = 1.41$; respectively) and the Drawbacks scale, $t(93) = 23.96, p < .001$, Cohen's $d = 2.47$; $t(92) = 33.09, p < .001$, Cohen's $d = 3.43$; $t(92) = 27.37, p < .001$, Cohen's $d = 2.84$; respectively). These results indicate that the benefit-to-cost ratios were positive, and thus that the benefits of participating in the research significantly outweighed the costs.

To examine the relationship of age and symptoms at time of interview (e.g., PTSD symptoms, depressive symptoms) to RRPQ scale scores, we present bivariate correlations in Table 3. Of note, age was not significantly related to any RRPQ scale scores. Greater trauma and depression symptoms were linked with higher scores on the RRPQ Emotional Reactions scale.

Discussion

Results of the current study provide information about older adults' reactions to in-depth, trauma-focused interviews. Older adults represent a population for which sparse literature exists to

Table 2
Mean (*SD*) Scores for Scales on the RRPQ

Scale	<i>M</i>	<i>SD</i>
RRPQ positive scales		
Personal benefit	4.26	0.71
Global evaluation	4.70	0.40
Participation	4.56	0.58
RRPQ negative scales		
Emotional reactions	2.66	1.15
Perceived drawbacks	1.59	0.61

Note. 1 = *strongly disagree*, 3 = *neutral*, 5 = *strongly agree*.

Table 3
Bivariate Correlations Among Age, Symptoms, and RRPQ Scale Scores

Measure	1	2	3	4	5	6	7
1. Age	—						
2. Depressive symptoms	.06	—					
3. Trauma symptoms	-.06	.63**	—				
4. Personal benefits	.16	.13	.01	—			
5. Global evaluation	-.08	.06	.03	.62**	—		
6. Participation	-.11	.12	.05	.42**	.67**	—	
7. Emotional reactions	.18	.41**	.34**	.19	-.00	-.09	—
8. Perceived drawbacks	.12	.18	.00	-.35**	-.58**	-.54**	.28**

Note. Depressive Symptoms = PHQ-9; Trauma Symptoms = PDS.

** $p < .01$.

inform concerns that may arise among researchers and Institutional Review Boards (IRBs) about including older adults in trauma-focused research. The findings reported here demonstrate that trauma-focused research can be conducted with older adults within a positive benefit-to-cost ratio. Several procedures in this study are worth noting, given their focus on ensuring informed consent at multiple points, use of established standardized measures related to trauma, and the willingness to directly assess multiple domains of participants' responses to the research activities. Participants, for example, were informed about the trauma-focus of the research on first contact, in the consent form and discussion, and through the consent quiz. Of interest to IRBs, none of the older adults declined participation after learning that they would be asked about these forms of maltreatment, and none of the older adults stopped the interview or withdrew from the study.

The positive benefit-to-cost ratio was documented in the context of a sample that was quite diverse with regard to race/ethnicity, education, and marital status. A large proportion of the sample reported experiencing at least one category of maltreatment (emotional, physical, or sexual abuse, financial exploitation, or neglect), and most participants reported experiencing some type of emotional abuse within their lifetimes. When asked about their experiences with interviewing, older adult participants reported generally positive benefit-to-cost ratios across the board. Specifically, all positive scale scores were significantly greater than the neutral point; all negative scale scores were significantly lower than the neutral point; and each positive scale score was significantly greater than each negative scale score. Findings from the current study are congruent with above-cited prior studies on trauma research with other populations. They suggest that a diverse sample of older adults, many of whom reported experiences of lifetime maltreatment and emotional abuse, can ethically and safely be asked about their history of maltreatment and trauma and related symptoms. The one caution is that participants with elevated depressive symptoms and PTSD symptoms did report higher scores on the negative Emotional Reactions scale of the RRPQ. This points to the importance of thoughtfully considering current mental health symptoms and using well-trained research interviewers who are prepared to be responsive to older adults (e.g., including making referrals as needed). Within the current study, none of the participants asked for assistance with direct referrals; however, our procedures included giving all participants a local resource guide to community services for older adults, including mental health services.

Implications for Research and Practice

The current study offers important implications for research and practice. The findings are especially timely and relevant amid growing urgency to identify risk factors for abuse, neglect, and financial exploitation, as well as associated physical and mental health consequences, among older adults. In terms of other research protocols, findings from the current study suggest that trauma-focused research protocols with older adults can be designed in ways that ensure that the costs of participating do not outweigh the benefits, and may even confer significantly greater benefits than costs. Findings that indicate minimal costs of participating in trauma-focused research for older adults reveal the positive obligation researchers may have to include older adults in trauma-focused research (or at least not exclude older adults on the basis of concerns regarding the ethics of doing trauma-focused research).

In addition to considering benefits relative to costs of participation, researchers must also consider autonomy and take into account the "wishes of those who are competent to make choices" and protect "those with impaired abilities" (Newman & Kaloupek, 2009). By agreeing to participate in the current research project after receiving thorough and comprehensive information regarding the nature and scope of questions, and by passing the consent quiz, this sample of older adults demonstrated ability and agency in their choices to participate (Becker-Blease & Freyd, 2006). Denying these (or other) older adults the opportunity to participate in trauma-focused research based on concerns about conducting trauma-focused research with this age group may violate the principle of autonomy and unfairly undermine their capacity to join other voices in scientific research on maltreatment and trauma.

In terms of practice, the findings offer a potentially useful lens for practitioners seeking to understand and think through the ethical dimensions of asking about trauma and maltreatment with older adults. Although service providers and practitioners from diverse health care fields are already encouraged to assess for trauma history, research suggests that fewer than half of providers from community-wide health centers consistently screen patients/clients for trauma exposure (Allen, Lehrner, Mattison, Miles, & Russell, 2007). With the expansion of mandatory elder abuse reporting laws across the U.S. and the concomitant need for increased and better screening of older adult trauma and maltreatment across a variety of service and provider settings (Daly, Jogerst, Brinig, & Dawson, 2003; Fulmer, Guadagno, Bitondo Dyer, & Connolly,

2004), ethical consideration of asking about trauma and maltreatment is mandatory. Findings from the current study suggest that, in the context of careful and compassionate interview and screening procedures, asking older adults about trauma and maltreatment may be conducted with expectations of positive benefit-to-cost ratios.

Limitations

Several limitations should be considered when interpreting this research. The current study involved a relatively small sample, with 99 participants. Despite power implications for the sample size, we documented large effect sizes when comparing participants' perceptions of benefits relative to costs of research participation. We also relied on a convenience community sample rather than clinical sample of older adults, which may raise questions about differences in severity of trauma exposure in other samples, such as treatment-seeking samples. This concern is tempered by the fact that the majority of the sample reported exposure to at least one form of maltreatment (i.e., emotional, physical, or sexual abuse; financial exploitation; or neglect), which suggests some (even if limited) generalizability to other older adult populations, including treatment-seeking populations. We used a well-established measure of maltreatment exposure that relied on behaviorally defined items rather than using terms such as abuse; however, this measure shares the limitations of many screening procedures where detailed information is not collected on incidents. For example, there is a risk that older adults' reports of neglect, defined by a time when a need was not met, might not rise to the level of what adult protective service agencies and/or trauma researchers might consider neglect. Whereas this article focuses on older adults' perceptions of being asked about maltreatment, future researchers should "count" the presence of different forms of maltreatment when using screening measures.

As with any convenience sample, self-selection biases must also be carefully considered in interpreting data. Older adults, for example, in this sample may have reported less negative and more positive responses to the trauma-focused research protocol than their peers who did not participate would have, as these older adults self-selected in to the study. We sought to minimize self-selection as it related specifically to the topic of trauma by not using terms such as trauma, abuse, neglect, and exploitation in recruitment flyers; however, we did make older adults aware that the study focused on "stress" in flyers. This concern is lessened as the sample includes older adults from the community rather than exclusively service- or treatment-seeking individuals.

Finally, issues of generalizability must be considered carefully, because of the convenience sampling as well as the exclusion criteria, which limited the sample to only older adults who spoke and read/wrote in English. The sample is not representative of the general older adult population, particularly those who are not English speaking. Further, demographic data suggest that this sample is not representative of older adults in the community from which the sample was drawn, as illustrated by the overrepresentation of African Americans in the sample (67%) relative to the community from which participants were recruited (5%) and relative to national population data (according to the census only 20% of the older adult population identifies with an ethnic/racial minority group; Ortman et al., 2014). The current sample is, however,

representative of older adults in the U.S. with regard to education attainment and current work status (Administration on Aging, Administration on Community Living, U.S. Department of Health and Human Services, 2012). Despite issues of racial/ethnic representation, this sample makes a potentially important contribution to the literature because of strong engagement with the African American community. Previous researchers examining the ethics of trauma-focused research have raised concerns that participants who are from marginalized groups, including ethnic minority groups, may have more negative experiences as research participants (Newman, Risch, & Kassam-Adams, 2006). The findings from this sample address this concern by illustrating positive benefit-to-cost perceptions in a largely ethnic minority sample. Nonetheless, it will be important for future researchers to measure the benefits and costs of research participation in older adult samples that are not exclusively English speaking and in samples that better represent the larger community from which they are drawn, with attention to factors such as race/ethnicity.

In terms of response limitations, social desirability concerns may have influenced participant responses on the measure of benefits and costs of research participation. We attempted to minimize the effect of social desirability by administering the measure in paper form for participants to complete by themselves, rather than as part of the interview process. Given the somewhat arbitrary nature of metrics in psychological measures (Blanton & Jaccard, 2006), we cannot know with certainty that participants interpreted units of measurement on the negative scales as equal to the units on the positive scales on the measure of benefits and costs of research participation. We attempted to constrain this limitation by first considering responses on the positive and negative scales separately, and then in relation to the neutral point on the scale. The current study also focused on group-level perceptions rather than individual-level perceptions. Some prior work on individual perceptions has reported negative reactions to research participation, including feeling compelled to participate in the research study (e.g., Hebenstreit & DePrince, 2012; Ruzek & Zatzick, 2000).

Future Directions

The implications and limitations described above point to several possible avenues for future research. Additional research is needed in treatment-seeking samples, given the importance of service-use related research with older adults. Further, future studies could compare methodological approaches to identify procedures that maximize benefits and minimize costs (see DePrince & Chu, 2008; Schwerdtfeger, 2009). Expanding research to service settings would additionally provide greater understanding of benefit-to-cost ratios of disclosing trauma and maltreatment history in diverse settings and with different providers.

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