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## Correlates of Depression in Self-Neglecting Older Adults: A Cross-Sectional Study Examining the Role of Alcohol Abuse and Pain in Increasing Vulnerability

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### Abstract

**Purpose**—Self-neglect among older adults results in increased morbidity and mortality rates. Depression is strongly linked to self-neglect and when untreated severely complicates management of health and functional outcomes. The study aims to identify factors correlated with depression to inform approaches to service recruitment and retention that improve long-term outcomes.

**Methods**—The sample included urban community-dwelling older adults (n=96), 65-years of age and older with Adult Protective Services substantiated self-neglect. All participants completed a range of validated cognitive, functional and self-report demographic and clinical measures around health and mental health functioning.

**Results**—A secondary data analysis using multivariable logistic regression revealed that a positive screen for alcohol abuse, low self-rated health, and higher self-reported pain were associated with significantly higher odds of self-reported depression.

**Implications**—Further research is needed to understand the temporality between these correlates and depression and to inform prevention and intervention practices for self-neglecting older adults.

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## Keywords

Depression; Vulnerable Elders; Adult Protective Services; Self-Neglect

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## Introduction

Late-life depression is the most prevalent psychiatric disorder among older adults living in the United States, affecting approximately 15-20% of individuals 65 and over nationally (Geriatric Mental Health Foundation, 2008). It is a primary predictor of self-neglect in community based populations in addition to cognitive impairment (Abrams, Lachs, McAvay, Keohane, & Bruce, 2002). Despite being commonly treatable with pharmacological and psychosocial therapies (Alexopoulos, 2005; Kessler, 2012), less than half of older adults in need of depression treatment access services (Federal Interagency Forum on Aging Statistics, 2010). Untreated depression is associated with increased disability and healthcare utilization, decreased quality of life, reduced ability to self-manage health and mental health needs, and ultimately early mortality (McKenna, Michaud, Murray & Marks, 2005). Underutilization and acuity of need is especially prevalent among community based older adults who present with self-neglect given their lack of social support and self-management capacity, both of which are at higher rates than general population of older adults (Dyer, Goodwin, Pickens-Pace, Burnett, & Kelly, 2007). Implications of these needs often necessitate support from formal social services such as Adult Protective Services (APS) to intervene in acute cases (Blazer, 2003; Leach, Christensen, Mackinnon, Windsor, & Butterworth, 2008).

Self-neglect is defined as the failure or refusal to address one's own basic physical, emotional, and/or social needs (National Center on Elder Abuse, 2014). Little knowledge exists on factors that complicate the already acute experiences in managing health and mental health needs of self-neglecting older adults experiencing depression (Abrams et al., 2002; Hildebrand, Taylor, & Bradway, 2014; Roepke-Buehler, Simon, & Dong, 2015). Knowledge regarding risk factors that impair this already vulnerable population is needed to inform interventions and supportive services to improve self-management of depression among self-neglecting older adults (Choi, Kim, & Asseff, 2009; Dyer, Pavlik, Murphy, & Hyman, 2000).

## Literature Review

Self-neglect is the most common referral to Adult Protective Services (APS) nationwide (Dyer, Goodwin, Pickens-Pace, Burnett, & Kelly, 2007). In two statewide studies in Connecticut and Texas, neglect accounted for 73% and 80% of all APS cases, respectively. The majority of cases were classified as self-neglect with higher risks of cases in older adults compared to younger populations (Pavlik, Hyman, Festa, & Dyer, 2001). Adults 65-years and older who are economically disadvantaged represent more than half of the substantiated APS cases (Dyer, Pickens, & Burnett, 2007). These vulnerable elders often live alone in the community with little social support and multiple poorly managed or untreated chronic and mental health conditions, including depression (Poitress, Burnett, Naik,

Pickens, & Dyer, 2006). Such factors diminish the ability to self-manage their health, threatening survival (Choi, Kim, & Asseff, 2009). Self-neglecting older adults are often discovered living in squalor and isolation, with poor hygiene, inadequate food and/or water, and mismanaged medications leading to high risk for acute health and mental health needs (BLINDED FOR REVIEW, 2006). Many are reclusive and remain inside their homes for extended periods of time (National Council on Aging, 2014). On average, this population reports suffering from three or more chronic conditions and 90% are non-adherent to their medications (Turner, Hochschild, Burnett, Zulfiqar, & Dyer, 2012). Consequently, elder self-neglect is a significant risk factor for increased mortality independent of cognitive, functional, medical, social and mental health status (Dong et al., 2009; Lachs, Williams, O'Brien, Pillemer, & Charlson, 1998).

Depression is present in approximately 51% to 62% of older adults who self-neglect (BLINDED FOR REVIEW, 2006). Common symptoms associated with depression in this population are increased apathy, anxiety, hopelessness, isolation (from friends and family), and lowered motivation for self-care (Dyer et al., 2000). With the United States undergoing significant upward shifts in societal aging it is expected that an increasing number of older adults will suffer from both depression and self-neglect (National Center on Elder Abuse, 2014). Correlates of depression in the general population of older adults have been studied extensively in order to identify potential therapeutic targets for treatment and prevention (Alexopoulos, 2005; Katon, 2011). Limited knowledge though exists on factors that increase the risk of depression in substantiated cases of elder self-neglect (BLINDED FOR REVIEW, 2012). Numerous studies show the impact of self-neglect on health outcomes that include mortality, hospitalizations, emergency room visits, functional decline, and becoming victims of other forms of elder abuse such as financial exploitation, caregiver neglect, and physical abuse (Choi, Kim & Asseff, 2009; Dong et al., 2009; Dyer, Pickens, & Burnett, 2009). Ensuring the proper treatment of depression in the self-neglect population could be critical for reducing these negative health outcomes in this population. Dyer et al. (2007) proposed an etiologic model of elder self-neglect with depression representing an important risk factor. The model highlights the general increased impairment of executive dysfunction and capacity for self-care however factors that create variations in the severity of symptoms among this population remain unclear (Turner et al., 2012). Understanding and treating the unique contributors to depression given its provided risk on functioning could effectively help prevent or lessen elder self-neglect and negative outcomes.

Examining the health and mental health needs of the hidden population of self-neglecting older adults in community settings provides insight into differential vulnerabilities for further decline. In doing so, relevant factors where screening and treatment can be targeted will help identify those at increased risk for self-neglecting behaviors and complicated outcomes due to depression (Dong, Simon, Mended de Leon, et al, 2009; Spensley, 2008). Focusing on individual factors associated with vulnerability for self-neglect as outlined by the Risk and Vulnerability Model (Frost & Willette, 1994), the study aims to determine which physical health, cognitive, functional, and social factors, if any, increase vulnerability for complicated outcomes related to depression in older adults with APS substantiated self-neglect. Specifically, the study hypothesizes that self-neglecting older adults will present with increased risk factors for depression with the presence of significant physical and

functional needs more so than cognitive and social factors. Findings will inform appropriate interventions and targeted outreach to those most vulnerable within self-neglecting older adults and help health and social service providers promote long-term functioning and improved quality of life for this population.

## Research Design

Secondary data analysis was performed using data from a case-control study titled The Consortium for Research in Elder Self-Neglect of Texas. The primary study was designed to identify risk factors for nutritional deficiencies associated with self-neglect in older community-dwelling APS clients. A more detailed description of the enrollment and data collection procedures of the parent study has been published elsewhere (Smith et al., 2006). In brief, purposive sampling was used to enroll 100 substantiated APS cases of elder self-neglect who were 65 years of age or older, English speaking, residing in Harris County, TX, and had the ability to provide written and verbal informed consent. The ability to speak English was a criterion due to the measures used in the parent study which were not translated or standardized in other languages at the time of assessment. Referrals were provided by APS case workers who screened participants for inclusion criteria. Prior to enrollment, APS caseworkers obtained signed consent by the participants to release their names to the research team. These individuals were then contacted by the research team to schedule a home-visit where written informed consent to participate in the study was collected. Individuals who were deemed unable to provide consent on their own behalf were not enrolled. A total of 100 individuals enrolled and consented to participate in the parent study however four dropped out due to fatigue during the interview or refusal at time of the scheduled interview. Final cases included in the analysis was n=96.

All participants completed a battery of cognitive, functional, mental health, social and clinical measures providing the opportunity for a full geriatric assessment. All interviews were conducted in the respondent's homes by master education level research nurses and psychologists who were supervised by the study's principal investigator. This study was approved by the XXX, Institutional Review Board and the Center for the Protection of Human Subjects at the XXX University.

## Comprehensive Geriatric Assessments (CGAs)

CGAs are the standard of clinical practice for assessing the demographic, cognitive, functional, physical, medical and social domains in older adults that has shown to be an effective approach to gathering data with the self-neglect population (Dyer et al., 2007). With the use of the CGA, internal-individual factors relevant to the older adult's vulnerability for self-neglect were assessed (Frost & Willette, 1994). The CGA for each participant included demographics (i.e. age, education, race, gender, monthly income, and marital status) as well as a self-report social and medical history and a manual review of current medications taken by the participant. Instruments used to assess additional health, functional, and social factors that increased vulnerability among the sample included: 15-item Geriatric Depression Scale (GDS-15; Sheikh & Yesavage, 1986); Mini-Mental State Exam (MMSE; Folstein & Folstein, 1975); Physical Performance Test (PPT; Reuben & Siu,

1990); Kohlman Evaluation of Living Skills (KELS; Pickens, Naik, Burnett, Kelly, Gleason, & Dyer, 2007); Self-Rated Health Question (SRH; Idler & Benyamini, 1997); Cut-Annoyed-Guilt-Eye-Opener (CAGE) questionnaire (Dhalla & Kopec, 2006) and the Wong-Baker Pain Rating Scale (WBPRS; Wong & Baker, 1988).

**15-Item Geriatric Depression Scale (GDS-15)**—Depression was assessed using the 15-item geriatric depression scale (GDS-15) with higher scores indicating a positive screen for depressive symptoms (Almeida & Almeida, 1999; Sheikh & Yesavage, 1986). The 15-item GDS has been shown to be a valid measure of depression with self-neglecting older adults providing adequate sensitivity to assess for variations in non-clinical and clinical screening levels (Almeida & Almeida, 1999; de Craen, Heeren, & Gussekloo, 2003; Naik, Burnett, Pickens-Pace, & Dyer, 2008). The GDS-15 presents with good reliability and validity with internal consistency-reliability, sensitivity and specificity of 72-80% (Marc, Raue, & Bruce, 2008).

**Cut-Annoyed-Guilt-Eye-opener (CAGE) Questionnaire**—The CAGE is a brief, easy to use and widely utilized assessment of alcohol use and dependence in diverse populations (Dhalla & Kopec, 2006). It contains four self-report questions assessing heavy and hazardous alcohol consumption, alcohol abuse and alcohol dependence with a score of 2 or greater indicating a clinically significant alcohol problem (Ewing, 1984). The test-retest reliability of the measure ranges from 0.80 to 0.95. The concurrent validity ranges from 0.48 to 0.70 (Dhalla & Kopec, 2007). A 2004 meta-analysis by Aertgeerts, Buntinx, & Kester reported the sensitivity of the CAGE to be 0.60 to 0.87 with a cut-off of 2 and higher sensitivities when moving to a score of 1. In the same study, the specificities ranged from 0.77 to 0.92. No available measures on drug use were present in the primary study from which the secondary analysis is based limiting the assessment of substance abuse to alcohol use only.

**Self-Rated Health (SRH) Question**—SRH is a single item self-reported assessment of self-perceived and subjective morbidity. This question asks, “how do you rate your health?”. The responses are scored on a range from 1 to 5, with 1 representing Excellent, 2 Very good, 3 Good, 4 Fair, or 5 Poor. This measure is frequently used and widely published in epidemiologic and public health studies and has been strongly linked to mortality and other negative health outcomes (Ginneken Van & Groenewold, 2012; Idler & Benyamini, 1997).

**Wong-Baker Pain Rating Scale (WBPRS)**—The WBPRS asks individuals to rate the pain they are currently experiencing by pointing to a facial representation that mostly identifies their level of pain. The scoring range used for the analysis of self-reported pain intensity was 0-5, with a 5 indicating highest pain level. The WBPRS was initially designed to identify the level of pain intensity in children with language difficulties (Wong & Baker, 1988). Subsequent studies demonstrate its appropriateness and effectiveness for measuring pain intensity in cognitively intact elders and elders with mild to severe cognitive impairments (Wynne, Ling, & Remsberg, 2000). Wynne et al. (2000) assessed pain scores in older adults scoring 15 on the MMSE versus those scoring < 15. Study participants with lower MMSE scores were successfully able to complete the measure due to the combination

of verbal, visual analog faces, and word scales used (Wynne et al., 2000). The scale was selected for the presented analysis based on its effectiveness of measuring pain intensity in elders with mild to moderate cognitive impairment (Ware, Epps, Herr, & Packard, 2006; Wynne et al., 2000).

### Statistical Analyses

Descriptive statistics were used to characterize the overall sample and assess the distributional and mean differences for discrete and continuous variables. The sample was dichotomized based on participant scores on the 15-item Geriatric Depression Scale (GDS). Scores of 5 or greater meet published criterion as positive indicators of depression (Leshner & Berryhill, 1994; Sheikh & Yesavage, 1986) and thus, the sample was divided into two groups (GDS-15  $\geq$  5 and GDS-15 < 5).

Bivariate analyses in the form of Chi-square and independent samples t-tests were used to screen both continuous (SRH, MMSE, CAGE, WBPRS, KELS, PPT, age and monthly income) and discrete (gender, ethnicity, living situation) variables for statistically significant associations with depression. This analysis guided the selection of covariates included in the multiple logistic regression. Because these variables are not measured without error, we chose to include only covariates in the model with unadjusted bivariate significance levels  $\leq 0.10$  (Grobbee & Hoes, 2015). In including only significant variables in the model, issues around statistical power were also tempered given the sample size. A multiple logistic regression, using depression as the binary dependent variable and scored as GDS-15  $\geq$  5 = 1 and GDS-15 < 5 = 0, was conducted to obtain the adjusted odds ratios and 95% confidence intervals for the individual covariate predictors.

### Results

One hundred participants were enrolled in the study and 96% completed the research interview (n=96). Table 1 characterizes the demographics for the sample. Descriptive analysis reveals that the majority of the sample was female (66%), had a mean age of 76 years (S.D. = 7.2), and an average monthly income of \$775 (S.D. = 652.1). Of the 96 participants who completed the assessment, 49(51%) screened positive for depression as defined by a GDS-15 score of 5 or greater (de Craen et al., 2003; Yesavage et al., 1982). The majority of the full sample self-reported racial identity as African-American (54%, n=54) and 46% reported as Caucasian (Non-Hispanic White, n=39, Hispanic-White, n=7). Between groups analysis by race demonstrated no statistically significant differences in socio-demographic characteristics. However there was a significant difference between African-Americans and Caucasians in the sample on reporting as depressed, with Caucasians presenting with higher rates of depression. There were no other differences between depressed and non-depressed individuals in the sample at the bivariate level.

Of all independent CGA variables initially assessed plus age, race, gender, income, self-reported education level, and living status, only the CAGE (alcohol abuse screen), self-reported pain intensity (Wong-Baker Pain Rating Scale), and self-rated health provided statistically significant bivariate associations with depression (Table 1). Depressed participants had statistically significantly higher mean scores on the CAGE 1.04 (SD=1.3;

p=0.01) compared to non-depressed individuals in the sample. The depressed sub-sample also reported higher mean pain scores 2.2(SD=2.1; p=.005) and lower self-rated health 4.0(SD=0.9; p=.003).

In the multiple logistic regression model, all three CGA related variables significant at the bivariate level maintained as predictors of depression status (Table 2). The adjusted odds ratio for the CAGE indicates that individuals with higher CAGE (alcohol abuse screen) scores were 2.95 times more likely to screen positive for depression (beta = 1.07; adjusted OR = 2.95, 95% CI = 1.49 - 5.85, p = .002). Individuals with lower perception of self-rated health (beta = 0.42; adjusted OR = 1.53, 95% CI = 1.02 – 2.3, p =.041) as well as those with higher levels of self-reported pain (beta = 0.32; adjusted OR = 1.37 95% CI = 1.07-1.77, p = .013) were 53% and 37% more likely to screen positive for depression, respectively. Racial identity did not maintain as a significant predictor of depression in the regression level analysis.

## Discussion

The study aimed to identify correlates of depression in a sample of vulnerable community-living older adults with APS substantiated self-neglect. Statistically reliable associations between depression and a positive screen for alcohol abuse, lower self-rated health, and higher self-reported pain intensity scores were identified, supporting the study hypothesis of increased risk related to physical and functional characteristics. Findings suggest that older adults who present with self-neglect and depression may have unique clinical needs related to pain and alcohol abuse compared to non-depressed self-neglecting older adults. Thus formal care providers may benefit from improved insight into patient clinical needs by assessing for these factors in conjunction with screening for depression. Although the causality of these factors cannot be established in this study, the presence of significant association suggests that formal care providers should also be prepared to address possible health and mental health needs complicated by depression. This effort can prevent increased functional and cognitive impairments that may prolong self-neglecting behaviors and increase the likelihood of negative outcomes (Choi, Kim & Haseroff, 2009; Hildebrand, Taylor & Bradway, 2012).

The strongest correlate of depression in the sample was related to alcohol abuse which nearly tripled reported rates of depression even with mild increases in the CAGE screening scale. The presence of alcohol abuse in self-neglecting older adults is common (Blanco et al., 2012; Merrick et al., 2008) and among those within the APS system it is predictive of higher recidivism rates (Blondell, 2000; Choi & Mayer, 2000; Spensley, 2008). Co-occurrence of alcohol abuse and depression is also common (Blanco et al., 2012; Merrick et al., 2008) and frequently seen as an impetus for self-neglecting behaviors in older adults (Choi & Mayer, 2000). The presented findings strengthen this understanding through controlling for multiple functional risk factors while still maintaining the concurrent relationship between depression, self-neglect, and alcohol abuse. Given causality cannot be established in this study, additional research is needed to better understand the causal pathways between alcohol abuse, depression, self-neglect, and complicated outcomes for this population.

Self-rated health was also significantly correlated with depression. This finding is consistent with earlier studies in geriatric populations (Blondell, 2000; Han & Jylha, 2006; Sneed, Kasen, & Cohen, 2007; St. John, Blandford, & Strain) where older adults with greater depression more often reported fair to poor health status compared to non-depressed older adults. Self-rated health is highly associated with decisions about accessing formal care for health and mental health needs, even more so than evaluated needs by medical professionals (Areán et al., 2002). With lower self-perceived health and capacity for self-care, it is important to note that self-neglect populations may struggle more so with motivation due to depression. This makes management of multiple health and social service needs, medication adherence, and functional well-being more complicated (Han & Jylha, 2006; Turner, Hochschild, Burnett, Zulfiqar, & Dyer, 2012). Given this understanding, care providers should examine client's motivation for accepting support and self-perceptions of need for care and health. Such an understanding provides insight into the older adult's ability to actualize care plans and manage needs on an ongoing basis. In doing so, recurrent episodes of depression, unstable management of care, and recidivism rates in the APS system of care can be better managed (Choi, Kim, & Asseff, 2009).

The association reported between pain and depression in the sample of self-neglecting older adults is supported by previous research citing higher rates of reported pain compared to controls due to negative complications in emotional regulation and social isolation (BLINDED FOR REVIEW., 2007; Pickens, Burnett, Naik, Homes, & Dyer, 2007). Berna et al., 2010 suggests that the presence of pain disrupts the ability for the mind to manage emotions that become heightened with pain, increasing the probability of experiencing depressive symptoms. Study findings emphasize the importance of screening for and treating pain in order to help integrate pain management and medication adherence practices. Both approaches can increase self-care and coping in vulnerable elders with depression who self-neglect. Further, due to the experienced pain, this population is less likely to feel motivated and able to reach out for support creating increased feelings of loneliness, exacerbating experienced depression (Pickens et al., 2007). Addressing support and pain management fosters long-term improved physical and psychological functioning for this population avoiding complicated functional outcomes.

Appropriate treatment of depression could be facilitated by deconstructing the factors associated with depression in self-neglect populations considering the negative interrelated effects of alcohol abuse, pain, and poorly perceived self-rated health (Idler & Benyamini, 1997; Miller & Wolinsky, 2007). Comprehensive interventions are needed to fully remediate the effects of self-neglecting behaviors in depressed older adults. Integrated and collaborative care approaches are successful in general depressed older adult populations, especially minority populations managing multiple co-morbidities including chronic disease, addictions, and depression (Fuentes & Aranda, 2012). Providing a patient centered behavioral approach to care allows for practitioners to consider various treatment modalities, health and mental health, and intervene appropriately. Though providing such services for self-neglecting older adults is challenging due to characteristics specific to self-neglecting behaviors (i.e. mental health disorders, isolation, poor medical compliance, reduced activities of daily living etc.) (BLINDED FOR REVIEW, 2012; Dyer et al., 2000; Poythress et al., 2006; Turner et al., 2012) evidence suggests it can improve function, cognition, self-



rated health, depression, and executive functioning (BLINDED FOR REVIEW, 2010). Moreover, a recent double-blind randomized controlled trial recently completed but unpublished by the authors suggests significant reductions in medical self-neglect for older adults receiving medical team plus social service support compared to social service support alone (BLINDED FOR REVIEW, 2011).

The current study finds that alcohol abuse, pain, and self-reported health distinguish depressed self-neglecters from non-depressed self-neglecters suggesting the need for comprehensive assessments to increase the accuracy of diagnosis and effectiveness of care in this population (BLINDED FOR REVIEW, 2011; BLINDED FOR REVIEW, 2008). Identifying these relevant factors for higher risks of depression provides opportunities to uncover hidden needs and move towards optimal care with beneficial sustainable outcomes for self-neglecting older adults (Choi, Kim & Haseroff, 2009; Spensely, 2008). Healthcare and social service providers should utilize a patient-centered perspective in assessments as opposed to the more traditional medical model in order to meet patient self-identified and evaluated care priorities. Further this knowledge can assist in focusing treatment on specific triggers that exacerbate behaviors associated with self-neglect. Given self-neglect is an anticipated increasing issue among a growing older adult population, a change is needed in current approaches to care that emphasize short-term and broad approaches to supporting resource and safety needs. Programs that address the underlying pervasive behavioral influences to this public health problem can support more preventative and long-term sustainable outcomes (National Center on Elder Abuse, 2014). Consequences if not addressed are poor individual outcomes and financial burdens with rampant recidivism rates and drains on the already over stretched state run APS programs (Dong et al., 2009; Naik, Burnett, & Pickens, et al., 2008). With a person-centered approach to care and targeting individual motivators for change, elders who self-neglect are more likely to engage in services that improves their circumstance (Connolly, 2008; Hildebrand, Taylor & Bradway, 2014; National Committees of Academies of National Statistics, 2010). Behavioral interventions incorporate many of these components while promoting increased self-efficacy and providing intensive follow-up support that fosters a treatable approach to self-neglect and the associated health and mental health needs, including depression (Fulmer, Paveza, VandeWeerd, Fairchild, Guadagno, Bolton-Blatt, & Norman, 2005). Depression is highly treatable when diagnosed and addressed appropriately however when ignored leads to higher rates of physical impairment, low adherence to medical care, and ultimate increased mortality in older adults (Blazer, 2003; Kessler, 2012).

The study results should to be considered in light of several limitations. First, this study was cross-sectional and thus, causal pathways between the predictors and the outcome variables cannot be established. Further, given the sample was non-representative of ethnically-racially diverse older adult populations common in many urban cities, future research should utilize purposive sampling strategies to assure diverse samples are included in studies examining increased risk factors for self-neglect. Second, hidden populations such as extreme self-neglecters often remain isolated and refuse social services, making them less likely to be reported to state protective agencies or participate in research. Therefore, participants in this study may not represent the more extreme cases of elder self-neglect. Third, in order to fully protect vulnerable older adults a rigorous 3-step consent process was

used to exclude self-neglecters without capacity or those with cognitive impairments potentially caused by major depressive disorder or some other psychiatric disorder. With this the sample may only represent a limited sample of depressed self-neglecters. Likewise, selecting from reported cases of elder self-neglect may also limit generalizability. Finally, depression was assessed by one examiner using one tool and the assessment was not corroborated by a formal psychiatric diagnosis. Important co-morbidities such as screens for anxiety and other possible mental health needs were omitted giving a limited picture of contributing risk factors for self-neglect. Authors recognize also that issues presented around alcohol use and pain management can have reciprocal causation on self-neglect behaviors. Further given that drug use was omitted from the study limits the understanding of substance abuse in the role of self-neglect in this population. However, the study findings highlights issues that heighten the risks for complications of health and mental health needs of this population therefore results should be considered as relevant to treatment planning and interventions for the self-neglecting older adults.

## Conclusion

Future studies should aim to understand the causal pathways between depression, alcohol abuse, pain, and self-rated health in elder self-neglecters. This is especially important given the growing demand for comprehensive and sustainable care approaches that help older adults remain in the community as they age (Chee, Schiamberg, & von Heydrich, 2012; Culberson et al., 2011; Institute of Medicine, 2012; Jogerst, Daly, Galloway, Zheng, & Xu, 2012; Memmott, 2003) and the increase of APS substantiated cases of self-neglect across the country (Teaster et al., 2004). There is an imperative need for longitudinal studies that will establish the direction and temporality among noted risk factors for self-neglect and depression. Information collected through qualitative questionnaires or case history reviews would also help to determine the most appropriate person centered interventions and understanding of how individual priorities for care are determined in the effort to remediate self-neglect when complicated by depression and alcohol use.

This study provides preliminary evidence that depressed older adults who present with self-neglecting behaviors require an interdisciplinary approach to care to manage both their multiple co-morbidities and acute social service needs. Accounting for the unique physical and mental health needs of this population compared to non-depressed self-neglecting older adults can be effective in improving factors related to quality of life. Understanding the complexity of the experience of an older adult who experiences self-neglect can inform development of intervention and prevention programs that allow for improved long-term outcomes and treatment retention and adherence rates for this population who currently remain underserved.

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**Table 1**

Demographics and assessment characteristics of depressed and Non-depressed older adults with substantiated medical, physical and/or environmental neglect (n=96)

	Total Sample	Depressed N=49	Non-Depressed N=47	Bivariate P-Value
<i>Demographics</i>				
<b>Age (M,SD)</b>	76.5 (7.2)	76.9 (6.9)	75.3 (7.2)	0.290
<b>Race (N, %)</b>				0.040
African-American	54 (54)	21 (41.2%)	30 (58.8)	
Caucasian	46 (46)	28 (62.2%)	17 (37.8)	
<b>Gender (N, %)</b>				0.248
Female	(66%)	30(46.9)	34(51.3)	
<b>Years of Education (M,SD)</b>	10.8 (3.3)	10.5 (3.2)	11.1 (3.1)	0.361
<b>Monthly Reported Income (M,SD)</b>	\$775.19 (652.1)	864 (740)	654 (523)	0.112
<b>Number in Household (M,SD)</b>	0.83 (1.4)	0.71 (0.92)	0.96 (1.8)	0.397
<b>Number of Medications Currently Taking (M,SD)</b>	6.5 (4.75)	7.4 (5.0)	5.9 (4.3)	0.120
<i>Home Assessments</i>				
<b>Physical Performance Test (M,SD)</b>	14.53(5.2)	14.2 (4.9)	15.1 (5.1)	0.377
<b>Kohlman Evaluation of Living Skills (M,SD)</b>	5.9(2.7)	5.8 (2.5)	5.7 (2.5)	0.814
<b>Mini-mental State Exam (M,SD)</b>	23.9(4.6)	23.6 (4.1)	24.2 (5.0)	0.597
<b>Self-Rated Health (M,SD)</b>	3.3 (1.3)	3.70 (1.24)	2.9 (1.2)	0.003
<b>Activities of Daily Living (M,SD)</b>	35.0 (11.9)	34.2 (10.3)	36.4 (12.9)	0.349
<b>Cut-Annoyed-Guilt-Eye-Opener (M,SD)</b>	0.66 (1.0)	1.04 (1.24)	0.28 (0.58)	0.000
<b>Wong-Baker Pain Rating Scale (M,SD)</b>	1.63 (2.0)	2.20 (2.1)	1.1 (1.8)	0.005

**Table 2**

Regression analysis examining the role of race, pain management and alcohol use on reported depression by a community sample of self-neglecting older adults (n=96)

	<b>Beta</b>	<b>Std. Error</b>	<b>Df</b>	<b>P-value</b>	<b>OR</b>	<b>95% CI</b>
<b>Race</b>	-1.15	0.51	1	0.026	0.32	0.12 - 0.87
<b>Self-Rated Health</b>	0.42	0.21	1	0.041	1.53	1.02 - 2.3
<b>Reported Alcohol Abuse (CAGE)</b>	1.08	0.35	1	0.002	2.95	1.49 - 5.85
<b>Self-Reported Pain (Wong-Baker Pain Rating Scale)</b>	0.32	0.13	1	0.013	1.37	1.07 - 1.77

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