A multi-level perspective on gender differences in the relationship between poverty status and depression among older adults in the United States

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Despite a large body of literature on depression, previous studies have focused on either intra- or interpersonal factors but not multi-level influences, which potentially could buffer depression in late life. The intent of this study was to identify whether the impact of poverty might be moderated by multi-level factors such as sense of control, social support, and neighborhood environment. The results showed that the elderly poor, especially older women, were more likely to be depressed. Support from friends significantly moderated the association between depression and poverty among older women. Implications for critical feminist gerontology and for practice are discussed.

KEYWORDS: Poverty, depression, sense of control, social support, neighborhood environment

Introduction

Researchers consistently find that more older women than older men are depressed although these differences tend to lessen later in life (Barry, Murphy, & Gil, 2011; Blazer, 2003; Fiske et al., 2009; Lin & Wang, 2011; Penninx, 2006; Segal, Qualls, & Smyer, 2011). The reasons underlying these gender differences remain complex, but we know that socioeconomic status and depression are highly associated (Ross & Mirowsky, 2006; Spence, Adkins & Dupre, 2011). Despite the adverse consequences of poverty on older people's physical and mental health, researchers have yet to identify potential buffers or moderating effects that might reduce these effects. In this study, we seek to uncover potential buffers or moderating effects that might mitigate the adverse effects of low socioeconomic status on older women's well-being.

Most experts concur that people have underestimated the potential debilitating effects of depression in late life. It is a major cause of cognitive impairment, disease, and disability in later life. Investigators have found that depression in late life is associated with increased risks for impairments in role functioning and carrying out daily tasks (Abrams et al. 2002; Penninx et al. 1999; Schulz et al. 2000). Older adults who are depressed have twice as many hospital stays for medical reasons as those who are not depressed, and they have higher morbidity rates and slower recovery after surgery (George, 2011; Richardson & Barusch, 2006). Using longitudinal data, Barry, Terrence, and Gill (2011), recently showed that depressive symptoms were a primary determinant of disability outcomes. The adverse consequences of poverty on older person's physical and mental health are now well documented. Those who are impoverished also more often are exposed to stressors and lack access to health care and other protective resources. Not surprisingly, in contrast to their more affluent peers those who have fewer socioeconomic resources experience higher rates of disease and impairment, earlier loss of functioning, and

higher mortality rates (Cummings & Jackson, 2008; Dunlop, Song, Lyons, Manheim, & Change, 2003; Kahn & Fazio, 2005; Lynch, Kaplan, & Shema, 1997; Shuey & Willson, 2008). Given that depression is a treatable disease, we can potentially enhance older people's physical and mental well-being and reduce costs for medical care if experts know more about how they might effectively intervene with depressed older people.

We conceptualize this research within Freixas, Luque, and Reina's (2012) recently articulated critical feminist gerontology framework. These scholars argue that:

> "Critical gerontology analyzes the extent to which political and socioeconomic factors interact to shape the experience of aging, and it regards gender, ethnic background, and social class as variables on which the life course of individuals pivot, insofar as it predetermines their position in the social order; aging is also a component of the class struggle, as Simone de Beauvoir would have put it (Beauvoir, 1970/1977; Cole, Achenbaum, Jakobi, & Kastenbaur, 1993, as cited in Freixas, Luque, & Reina, 2012, pp. 44-45)"

Our investigation is consistent with this perspective in several ways. First, we focus on the effects of socioeconomic influences on older women's depression. Second, we attempt to reveal "the unequal social regulations" that affect the lives of these elderly women," and, "to identify the potential for emancipatory social change" by focusing on "the more complex interpretations" of older women's lives.

Most researchers who have studied late life depression have focused either on individual-level or social-structural factors. We adopt a more integrated approach by considering multi-levels of influence and how they interrelate in this investigation. We simultaneously examine intra- and interpersonal influences, institutional ones, and community variables and consider how

these factors might interact. We also examine possible moderating effects - sense of control, social support, and neighborhood influences - that might contribute to our understanding of associations. Our approach is consistent with ecological models that are based on the assumption that a dynamic interaction occurs between the individual and the environment (Stokols, 1992). We briefly note the conceptual issues and potential risk factors underlying late life depression. Based on previous investigators' findings, we then discuss select influences that might buffer the association between poverty and depression among older women.

Conceptualization of Late Life Depression

Researchers have conceptualized and operationalized depression in late life from diverse perspectives. For example, many clinicians rely on criteria for a Major Depressive Disorder (MDD) outlined in the Diagnostic Statistical Manual (APA, 2000). Social scientists more often focus on depressive symptoms, as we do in this study (Mirowsky & Ross, 2002). However one conceptualizes it, most scholars concur that older adults present a different profile of symptoms than younger adults (Edelstein, Drozdick, & Ciliberti, 2010).

Risk Factors for Depression

Health and Functional Capacities

Although many factors, both alone and through interactions with other factors, contribute to depression among older people, physical illness and disability are major risk factors for depression. Many older people become depressed when illness interferes with their activities of daily living (ADL) and self care. Physical disabilities often prevent people from engaging in leisure activities and seeing friends and family members, sometimes leading to loneliness and social isolation. When impairments in functional capacities are severe, caregivers more often place their loved ones in institutional care, which also increases an older person's risk for

depression. Depression and Alzheimer's disease often co-occur, but depression sometimes exacerbates symptoms associated with Alzheimer's disease (Blazer, 2003).

Poverty/Socioeconomic Status

Substantial evidence links poverty to depression in late life (Dunlop et al. 2003; Kahn & Fazio, 2005; Nicholson et al. 2008). Researchers who have examined the impact of socioeconomic status on depression in late life have found unequivocal results. Those with more income and wealth have less depression than those who are impoverished over the life course (Kahn & Fazio, 2005; Dunlop et al, 2003). According to George (2011), socioeconomic status (SES) is "a fundamental cause of illness" in late life.

Among older adults aged 65 and older, 8.9 percent (3.4 million) were below the poverty line compared to 20.7 percent of children under the age of 18 and 12.9 percent of people aged 18 to 64 (DeNavas-Walt, Proctor, & Smith, 2010). Despite a relatively lower percentage of poverty among the elderly according to the US Census Bureau (2004), a large number of older Americans experience poverty at some point during their later years and women are twice as likely to be poor as men. Although the number and proportion of older Americans living in poverty has diminished, the economic gap between affluent and impoverished older people has increased. In addition, the risk of being poor tends to increase over time due to proximate determinants of economic declines such as retirement, widowhood, unemployment, and disability (Burkhauser & Duncan, 1991; Rank & Hirschl, 1999). The exit probabilities for the elderly in the first three years of a poverty spell are relatively high but after these first three years, the exit probabilities significantly decrease, which indicate that the elderly tend to remain poor if they cannot escape from poverty within three years (Coe, 1988).

Gender

The most consistent association with major depression and depressive symptoms is gender, with women at greater risk than men at all ages, cohorts, and ethnic groups (George, 2011). Experts expect the incidence of depression among older women to increase as the baby boomers age for various reasons. Not only will the sheer numbers increase but women from cohorts approaching the age of 65 now are more aware of depression and presumably will be more inclined to seek help for this condition than previous cohorts of older women. The reasons for these gender differences are complex, but given older women's continued economic disadvantage relative to older men's we argue for an increased attention and in-depth analysis of the association between older women's depression and economic indicators. The feminization of poverty persists for various reasons, including the high cost women encounter as a result of their unpaid caring (Freixas, Luque, & Reina, 2012). Freixas, Luque, and Reina (2012) explain that: "Women are regarded as the fundamental carers of the human species; however, they are carers without compensation" (p. 48). According to proponents of cumulative disadvantage theory (Dannefer, 1987; O'Rand, 1996; Crystal, 2006), as people age the impact of socioeconomic inequalities accumulate over time. Those who had earlier advantages accrue more advantages, whereas those who are disadvantaged earlier experience worsening health, more poverty and greater depression as they grow older. For example, women typically experience greater discontinuity in their work trajectories, moving in and out of the labor force and in and out of part-time jobs. Because of labor market instability, women are less likely to be covered by a pension and to suffer more from financial hardships than are men in later life (Moen, 1995). As risks accumulate over the life course, the development of psychological distress, such as various depressive symptoms, is more likely to occur for women than for men (Ferraro & Nuriddin,

2006). In a recent test of cumulative disadvantage theory using a large, representative sample, Kim and Richardson (2012) found evidence that socioeconomic disadvantages among subgroups, especially older women, worsened over time and these groups suffered more rapid declines in physical functioning than their more affluent peers. Despite these findings, previous researchers and practitioners inadequately understand how poverty and depression interact among older women and men. Although we know that SES leads to depression and that depression in late life is associated with increased morbidity and mortality, we lack information on potential buffers to the effects of poverty on depression. In this investigation, we focus on the possible moderating effects of sense of control, social support, and neighborhood effects, all of which are known to influence late life depression, on the association between poverty and depression among older persons.

The Moderating Effects of Sense of Control, Social Support, and Neighborhood Influences

Sense of Control: According to George (2011), a person's feeling of mastery or sense of control is one of the strongest predictors of depression in late life. Sense of control, or what some experts refer to as self-efficacy, refers to whether an individual feels in control of or has mastery over life; one feels competent to manipulate one's environment regardless of whether life events are negative or positive (Skinner & Zimmer-Gembeck, 2011). Sense of control includes both the capability to maintain control over one's life and to change or reframe one's view of life when necessary (Blazer, 2003). In this respect sense of control resembles Bandura's concept of self-efficacy, which is an individual's assessment of their effectiveness or competency to perform a specific behavior successfully (Bandura, 1977). Many studies have shown a relationship between health and sense of control. For example, those who feel in control become sick and depressed less often, and they recover better and more rapidly from

illness and injury than people who feel their lives are out of their control (Grembowski et al, 1993). When older people lose self-maintenance skills because of physical illness they often become depressed (Richardson & Barusch, 2006). Sense of control can also act as a buffer to adverse events and losses that often occur in later life. Several investigators, for example, Hays et al. (1997), Lachman and Weaver (1998), and Lachman, Neupert, and Agrigoraei (2011), have found that one's sense of control can moderate the effects of poor health on depression by reducing one's reactivity to physiological and psychological effects. Arnstein, Caudill, Mandle, Norris, and Beasley (1999) similarly found that self-efficacy had a mediating effect on the association between depression and chronic pain. Sense of control can act as a primary or secondary influence on depression, but it is one of the most important psychological influences that can buffer the adverse effects of SES in late life.

Social Support: In addition to sense of control, social support is another potential buffer to the effects of poverty on depression (George, 2011). Despite no explicit conceptual definition of social support, most researchers concur that social support refers to the presence or absence of psychosocial support resources from significant others such as family, friends, and the larger community (Kaplan, Cassel, & Gore, 1977; Lin, Dean, & Ensel, 1981). Marital status is an example of a social support that is inversely related to depression (Adams et al., 2004). On the other hand, lack of emotional support is a positive risk factor for depression in late life (Arean & Reynolds, 2005; Tyler & Hoyt, 2000). What matters most is how people subjectively perceive their supports, such as how they view the quality and availability of their support from family and friends (George, 2011). Bothell et al. (1999) found, for example, that social support was one of the most powerful predictors of reducing depression among residents living in a low-income senior housing complex.

Neighborhood Environment: Neighborhoods also affect depression among its residents, but few investigators have included neighborhood effects in their analysis of depression. Over the last few years, increasing numbers of researchers have recognized the importance of environmental contributions to depression, which is especially important among older persons who more often live in neighborhoods with lower SES than younger persons (Lang et al., 2008; George, 2011; Chen, Howard, & Brooks-Gunn, 2011). When neighborhoods are disorderly, depressive symptoms among residents often increase. For example, Echeverria, Diez-Roux, Shea, Borrell, and Jackson (2008) revealed that elders living in neighborhoods with many problems and limited cohesion reported more depressive symptoms compared to those living in neighborhoods with few problems and stronger cohesiveness. Ross (2000) found more depression among residents living in high crime areas especially if many buildings were abandoned or had a lot of graffiti on them. Schieman and Meersman (2004) also observed a significant association between depression and neighborhood factors. Latkin and Curry (2003) reported that chronic stressors from neighborhood disorder such as crime, vandalism, and burglary significantly predicted depression among an inner-city population.

Both individual-level and aggregate-level factors contribute to depression in late life. Although many investigators have analyzed the effects of poverty on late life depression, few have examined how gender influences these effects. We hypothesize first that, consistent with previous research on older persons, poverty will be a significant predictor of depression; and second, that the potential moderating effects of sense of control, social support, and neighborhood influences on the association between poverty and depression will differ for men and for women.

Methods

Data

We used data from the Health and Retirement Study (HRS), which is a national panel survey of individuals over age 50 and their spouses. Of the 18,469 respondents who participated in the 2006 HRS core interview, 8,566 were eligible to complete the HRS leave-behind lifestyle questionnaire. Of these 8,566, we only included respondents who were aged 65 or older and excluded those who had incomplete or missing data in moderating variables (e.g., sense of control, social support, and neighborhood environment), which led to our final sample size of 2,614.

Measurement

Independent Variables

The household income from the last calendar year (2005) was compared to the U.S. census poverty thresholds for the year prior to the interview year to determine the samples' poverty status (Rand, 2009). Poverty status was dichotomously measured, coded zero for people whose income was above the poverty threshold and one for those who were below the poverty threshold.

Dependent Variables

We focus on depressive symptoms as measured by the Center for Epidemiological Studies – Depression Scale (CES-D) given that it has become the "near universal measure of depressive symptoms," and it is appropriate to use with older adults (Edelstein & Segal, 2011; George, 2011; Radloff, 1977). Respondents were administered 8 of the 20 items in the CES-D scale. Depressive symptoms in the past seven days including feeling depressed, feeling as though everything is an effort, having restless sleep, having the inability to get going, feeling lonely,

feeling sad, enjoying life, and feeling happy were measured (coded dichotomously with 0 = no and 1 = yes). Two positive indicators such as enjoyed life and feeling happy were reverse coded to calculate the sum of total depression scores. The scores range from a minimum of 0 to a maximum of 8, with higher scores indicating more depressive symptoms. The estimate of internal consistency of this depression scale was .77.

Moderating Variables

First, participants' sense of control was measured based on the Midlife Development Inventory (MIDI) (Leachman & Weaver, 1998; Pearlin & Schooler, 1978). The scale was composed of five items for constraints or hassles and another five items for mastery based on 6 likert-type scales (1 = strongly disagree, 2 = somewhat disagree, 3 = slightly disagree, 4 = slightly agree, 5 = somewhat agree, and 6 = strongly agree). For example, one question regarding constraints was "I often feel helpless in dealing with the problems of life." An example of a mastery question was "I can do just about anything I really set my mind to." Items from one to five regarding constraints were reverse coded to interpret this instrument in a consistent pattern, with higher scores indicating higher levels of sense of control.

Second, social support included measures about social integration or number of social ties but also the quality of interaction with these social ties, which is considered the key aspect of social support (George, 2011). Separate questions were asked about spouse/partner, children, and friends. For each relationship category there were three positively worded items (items a-c) and four negatively worded items (items d-g). For example positive social support included such questions as: how much do they really understand the way you feel about things? how much can you rely on them if you have a serious problem? how much can you open up to them if you need to talk about your worries? Three questions about negative social support also were asked, such

as: how often do they make too many demands on you? how much do they criticize you? how much do they let you down when you are counting on them? how much do they get on your nerves? These were coded with 1 = a lot, 2 = some, 3 = a little, 4 = not at all. We reverse coded a, b, c, to compute the total scores of social support, with higher scores indicating more social support.

Third, consistent with previous researchers' conceptualization of the neighborhood environment (e.g., Kim, 2008) we measured two dimensions of the neighborhood context: (1) physical disorder ("vandalism, rubbish, vacant/deserted house, crime"); and (2) social cohesion/social trust ("I feel part of this area, trust people, people are friendly, people will help you"). Respondents answered using a seven point scale, in which 1 = extremely negative vs. 7 = extremely positive, with higher scores indicating more positive perception about the neighborhood environment.

Control Variables

Age was included to statistically control for age variations among participants. Gender was coded as zero for males and one for females, and race was divided into non-Hispanic Whites (reference group), non-Hispanic Blacks, Hispanics, and others and dichotomously coded (0 = no, 1 = yes). Education was also controlled because previous researchers have consistently shown that people with a higher level of education are less likely to be depressed over the life course compared to people with a lower level of education. Also these gaps tend to widen with age (Koster et al., 2006; Miech & Shanahan, 2000; Mojtabai & Olfson, 2004). The level of education was measured by the number of years of formal schooling completed, with higher scores indicating higher level of education. Marital status was dichotomously coded into not married (reference group), married but living alone, and married.

In addition, we controlled for individuals' physical health conditions given that physical illness and functional impairment are strongly associated with a lack of psychological well-being in older adults. Older adults with disabilities or functional limitations are more likely to have higher depressive symptoms and lower life satisfaction or quality of life levels (Blazer, Burchett, Service, & George, 1991; Blazer, Hughes, & George, 1992; Newsom & Schulz, 1996). Physical health was based on participants' self-rated health and activities of daily living (ADL) scores. First, self-rated health status, which is a valid and reliable indicator of morbidity and mortality (Bergner & Rothman, 1987; Leventhal, Amora, & Howard, 2006; Idler & Benyamini, 1997), was measured in five categories, with higher scores indicating worse self-rated health (poor-5, fair-4, good-3, very good-2, and excellent-1). Second, activities of daily living (ADLs) were used to measure the physical functioning of older adults. Respondents were asked if they had difficulties with any of the five basic ADLs including walking across a room, bathing, eating, dressing, and getting into and out of bed (coded dichotomously with 0 = no difficulty and 1 = some difficulty) (Rand, 2009; Wallace & Herzog, 1995). A total score of functional disability was calculated by summing the five basic ADLs ranging from 0 to 5, with higher scores indicating more functional limitations.

Statistical Analysis

The statistical analysis was conducted in two parts. First, a descriptive analysis was carried out to examine differences in key variables including demographics, socioeconomic status, sense of control, social support, neighborhood environment, and depression between the older women and men. Second, hierarchical multiple regression was used to examine the association between poverty and depression, while controlling for socioeconomic and health status. Finally, individual's sense of control, social support, and neighborhood environment

variables and their interactions with poverty were added to the regression analysis to identify potential buffering effects. All data analyses were conducted using SPSS 19.0 version.

Results

Descriptive statistics

[Table 1 about here]

The characteristics of participants are shown in Table 1. The sample included more older men than older women, and most participants were non-Hispanic Whites, married, and lived above the poverty line.

[Table 2 about here]

Bivariate Analyses

Gender differences were tested on main variables, the results of which are shown in Table 2. As expected, more older women than men were depressed and lived in poverty. In addition we found gender differences with respect to education levels, living arrangements, and social supports. Compared to elderly men, more older women lived alone, had less education, less control, and less support from spouses. On the other hand, the older women perceived the neighborhood more negatively, but demonstrated more support from friends and children than older men.

[Table 3 about here]

Multivariate Analyses

We conducted two separate hierarchical linear regression analyses for older women and for older men, which allowed us to examine within group differences in more depth. The results from these analyses are shown for older women and older men in Table 3 and Table 4, respectively. When the control variables were entered only education was statistically

significant and explained little of the variance for both subgroups (10% for older women and 7% for older men). However the health variables added in Model 2 contributed substantially to the total variance. For example, functional capacities ($b = .517$, $p < .001$) was the most significant predictor for depression among older men. However, when poverty was entered into the equation in Model 3 it became the most important contributor of depression among older women ($b = .701$, $p = .003$), but it was not statistically significant among older men. In both models when sense of control, support, and neighborhood variables were entered into the equation in Model 4, sense of control and support from spouse were significant for both older men and older women, but no neighborhood variables emerged as significant in any model. Support from children also was significant for older men but not for older women. We tested for possible moderating effects between poverty and depression by entering interaction terms in Model 5. For older women, social support, especially from friends ($b = .119$, $p = .047$) significantly mitigated the negative impact of poverty on depression, indicating that support from friends was the important buffer against depression among older impoverished women. Despite no significant impact of poverty status, social support from spouse significantly buffered the relationship between poverty and depression for older men. The amount of variance explained in these models was 28% for women and 29% for men, respectively.

[Table 4 about here]

Conclusion

We expected that the association between poverty and depression would be statistically significant given findings from previous research, but our results suggest this association is more complex than we previously assumed. First, our hypothesis proposing a significant association between poverty and depression was supported among older women. Second, other significant

main effects on depression that emerged included education, health, sense of control, and support from spouse. Third, neighborhood influences were not statistically significant in any model. Finally, the results from the analyses that included the interaction effects were revealing. Impoverished women with strong support from friends were less likely to be depressed than impoverished women without this friendship support. These findings contribute new knowledge to our understanding of depression among poor women and have important implications for practitioners.

Our results showing a significant association between poverty and depression among older women concur with previous studies that have found that lack of economic resources and financial difficulties are risk factors for depression in late life (Dunlop et al., 2003; Kahn & Fazio, 2005; Nicholson et al., 2008). They concur with George's (2011) recent conclusion about the fundamental influence of socioeconomic status on older people's physical and mental well-being (George, 2011; Miech & Shanahan, 2000; Mojtabai & Olfson, 2004). Finally, the significant association between depression and sense of control found for both men and women is consistent with many previous studies showing how mastery and control substantially affect older people's depression (Lachman & Weaver, 1998; Richardson & Barusch, 2006). In addition, social support typically emerges as a crucial factor associated with well-being in studies of older people (Arean & Reynolds, 2005; Bothell et al., 1999; Tyler & Hoyt, 2000). The lack of statistical significance of neighborhood characteristics was surprising. Our findings suggest that these environmental influences are less important than individual-level factors, such as health and sense of control, social supports, and economic indices, specifically poverty. This result was consistent with Hybels's multilevel study of neighborhood impact on depression (2006) which

showed that the majority of the variance in depressive symptoms among older adults was explained not by neighborhood contexts but by individual predictors.

Our results lend support to Freixas, Luque, and Reina's (2012) conceptualization of critical feminist gerontology in several respects. They underscore the importance of socioeconomic factors and social class as critical influences on women's well-being throughout the life course, and, in particular, for late life depression. Despite the similarities between older men and older women in our findings from this study, we also uncover important gender differences. These differences support Frexias, Luque, and Reina's (2012) comment that, "In current society, the process of aging is not the same for a woman as for a man…" (p. 46). The critical feminist gerontology perspective that Freixas, Luque, and Reina articulates takes us further than previous conceptualizations of this framework by calling for the illumination of intervening processes that interact with socio-cultural and socioeconomic forces. For example, in this study we show how women's friendships can empower and help poor older women contend with challenges they face at this time. According to Freixas, Luque, and Reina (2012), friendships provide "spaces of support and solidarity" to older women's lives and "provide an invaluable framework of support both in difficult situations and when they face the loss that tend to come with the passage of years" (p. 50). Many previous scholars have emphasized the importance of informal ties, but especially friendships during the later years. The quality of friendship is often related to well-being, and more often has been associated with less depression especially for older women (Adam, Bliesner, & de vries, 2000; Friori, Antonucci, & Cortina, 2006). Friends are based on similarities between peers, which according to socioemotional selectivity, is one reason they become especially important later in life. According to Lang and Carstensen (1994), people choose their interactions and associations more carefully as they age

devoting more time and energy to selective relationships that are supportive and mutually satisfying. This selectivity can be interpreted as an indication of resilience, because it influences how older women, and, in particular, poor older women, can acquire personal resources that can support them at this time (Hooyman & Kiyak, 2011). Numerous studies have shown that emotional support from friends is more highly associated to emotional well-being, especially among older women, than similar support from family members, (Carr, 2011).

The findings have important implications for health professionals. First, and most importantly, they speak to the continuing adverse effects associated with social inequalities, showing that educational, health, and other socioeconomic advantages, which typically begin early in life, continue to negatively impact people throughout the life course. Second, they shed light on interventions that practitioners might strengthen to enhance poor older women's well-being. Although many gerontologists underscore the role of social support in strengthening people's physical and mental health, we show that older women's friendships are especially important for preventing late life depression. If practitioners can help older women maintain contact with friends when illness or transportation interfere with these interactions, they might prevent many older women from becoming depressed and becoming increasingly ill. Practitioners also might help older women find and develop new friends when they encounter those who are lonely, and professionals working in health care facilities should encourage social interaction to prevent older residents from becoming depressed and socially isolated. Our results speak to the value of support groups within older persons' communities or institutions that can facilitate friendship formation.

The cross-sectional research design used in this research prevents us from making inferences about causality. We know that the association between health and depression is

dynamic and while many factors, including poor health and economic impoverishment, increase people's risk for late life depression, we also recognize that depression often precedes and might precipitate many physical and mental health conditions, which, in turn, influence how people interact with friends, family members, and others in their environments. Although more longitudinal research on depression is growing, we need more panel studies on depression that follow older women and men's life trajectories independently and that incorporate multi-level analyses that consider the individual-level, interpersonal, and socio-structural influences on older adults' well-being. Most importantly, these studies should examine interaction effects among these multiple determinants to enhance our knowledge of the nuances, complexities, and the moderating influences of different factors on depression.

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Table 1. Sample Characteristics (n=2,615)

Age	
Mean (*SD*)	73.07 (6.26)
Range	65 – 97
Education (Years)	
Mean (*SD*)	12.57 (3.02)
Range	0 - 17
Gender	
Male	1,420 (54.3%)
Female	1,194 (45.7%)
Race	
Non-Hispanic White	2,177(83.3%)
Non-Hispanic Black	242(9.2%)
Hispanic	165(6.3%)
Others	31(1.2%)
Marital Status	
Married	2,423 (92.7%)
Married but living alone	185 (7.1%)
Not married	6 (0.2%)
Poverty Status	
Above poverty threshold	2,512(96.1%)
Below poverty threshold	102(3.9%)
Household Income ($)	
Mean (*SD*)	60,336 (64089)
Range	0 – 772,263

Table 2. Bivariate Relationships by Gender

	Women	Men	*t*_value and χ^2 (df)
Age	73.62	73.44	*t* (2586) = 3.37**
Education	12.39	12.72	*t* (2609) = 2.81**
Race			χ^2 (3) = 4.09
Non-Hispanic White	984(82.4%)	1,193(84%)	
Non-Hispanic Black	124(10.4%)	117(8.2%)	
Hispanic	74(6.2%)	91(6.4%)	
Others	12(1%)	19(1.3%)	
Marital Status			χ^2 (2) = 24.06***
Married	1,075(90%)	1,348(94.9%)	
Married but living alone	114(9.5%)	71(5%)	
Not married	5(0.4%)	1(0.1%)	
Household Income ($)	56,648	63,437	*t* (2612) = 2.70**
Poverty Status			χ^2 (1) = 4.46*
Above poverty threshold	1,137 (95.2%)	1,375(96.8%)	
Below poverty threshold	57(4.8%)	45 (3.2%)	
Health			
Self-rated health	2.79	2.82	*t* (2612) = 0.84
ADLs	0.25	0.25	*t* (2612) = -0.06
Depression	1.32	0.97	*t* (2312) = -5.29***
Sense of control	46.98	47.95	*t* (2612) = 2.62**
Social support			
Support from spouse	21.77	23.07	*t* (2261) = 7.98***
Support from child	23.54	23.09	*t* (2612) = -3.04**
Support from friends	23.69	22.75	*t* (2416) = -7.01***
Neighborhood			
Physical disorder	21.82	22.12	*t* (2612) = 1.46*
Social cohesion	22.77	22.28	*t* (2612) = -2.30

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 3. Multiple Regression Analysis (Older Women)

	Model 1	Model 2	Model 3	Model 4	Model 5
Age	0.01	-0.003	-0.002	-0.01	-0.01
Education	-0.16***	-0.10***	-0.09***	-0.07***	-0.08***
Race					
Non-Hispanic Black	0.28	-0.10	-0.17	-0.23	-0.25
Hispanic	0.40	0.18	0.09	0.04	-0.07
Others	0.53	0.51	0.49	0.31	0.23
Marital Status					
Married	-0.56	-0.43	-0.40	-.34	-0.35
Married but living alone	0.20	0.16	0.11	0.05	0.05
Health					
Self-rated health		0.52***	0.51***	0.43***	0.43***
ADLs		0.43***	0.42***	0.40***	0.41***
Poverty status			0.70**	0.48*	-1.95
Efficacy/Sense of control				-0.03***	-0.02***
Social support					
Support from spouse				-0.05***	-0.06***
Support from child				-0.02	-0.02
Support from friends				0.02	0.01
Neighborhood					
Physical disorder				0.01	0.01
Social cohesion				-0.01	-0.01
Interaction terms					
Poverty*Efficacy					-0.02
Poverty*Spouse support					0.08
Poverty*Child support					-0.06
Poverty*Friends support					0.12*
Poverty*Physical disorder					-0.02
Poverty*Social cohesion					0.03
R^2	0.10	0.23	0.24	0.28	0.28

*** p < .001, ** p < .01, * p < .05

Table 4. Multiple Regression Analysis (Older Men)

	Model 1	Model 2	Model 3	Model 4	Model 5
Age	0.01	-0.01	-0.01	-0.01	-0.01
Education	-0.08***	-0.04**	-0.03**	-0.03*	-0.03*
Race					
Non-Hispanic Black	0.36*	0.13	0.11	0.15	0.02
Hispanic	0.15	0.02	-0.02	-0.06	-0.09
Others	0.61	0.67*	0.68	0.51	0.50
Marital Status					
Married	0.54	0.21	0.53	0.50	1.02
Married but living alone	1.54	1.17	1.45	1.32	1.87
Health					
Self-rated health		0.40***	0.40***	0.34***	0.40***
ADLs		0.52***	0.52***	0.46***	0.44***
Poverty status			0.35	0.25	0.44
Efficacy/Sense of control				-0.02***	-0.02***
Social support					
Support from spouse				-0.05***	-0.05***
Support from child				-0.05***	-0.05***
Support from friends				0.01	0.01
Neighborhood					
Physical disorder				-0.002	0.000
Social cohesion				-0.000	-0.002
Interaction terms					
Poverty*Efficacy					-0.03
Poverty*Spouse support					0.11*
Poverty*Child support					-0.01
Poverty*Friends support					-0.05
Poverty*Physical disorder					-0.04
Poverty*Social cohesion					0.04
R^2	0.07	0.23	0.23	0.29	0.29

*** p < .001, ** p < .01, * p < .05