Receipt of Care and Depressive Symptoms in Later Life: The Importance of Self-Perceptions of Aging

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Objectives. This study examines the extent to which self-perceptions of aging and perceived loss of control explain the relationship between the receipt of care and depressive symptoms among older adults.

Methods. The sample consists of individuals aged 51 and older from the 2006, 2008, and 2010 waves of the Health and Retirement Study (n = 5,938). Structural equation modeling was used to test an analytic model that focused on the mediating effects of self-perceptions of aging and perceived loss of control. The respondents’ demographic and health characteristics and depressive symptoms at baseline were included as control variables.

Results. The results indicated that self-perceptions of aging mediated the relationship between receipt of care and depressive symptoms. That is, older adults who received a greater amount of care perceive their aging more negatively, which, in turn, increased depressive symptoms 2 years later. However, perceived loss of control did not significantly mediate the relationship between the receipt of care and depressive symptoms.

Discussion. These findings suggest that the receipt of care may make frail older adults more vulnerable to negative self-perceptions of aging.

Key Words: Care recipient/Depressive symptoms/Loss of control/Self-perceptions of aging

Although most older adults adjust to the aging process (Blazer, 2010), subgroups of older adults are at risk for depression. The prevalence of clinically significant depressive symptoms is approximately 8%–16% among community-dwelling older adults (Blazer, 2003). Existing studies suggest that changes in health are key sources of increased depressive symptoms in later life (Fauth, Gerstorf, Ram, & Malmberg, 2012; Schieman & Plickert, 2007). Increasing dependence on others’ help (Blazer, 2010) resulting from declines in health can be another source of depressive symptoms (Newsom & Schulz, 1998). Despite the fact that receiving care from people with whom they have a close relationship is beneficial for older adults in general, the receipt of care may erode older adults’ sense of independence and competence (Roe, Whattam, Young, & Dimond, 2001), which may increase their risk of depressive symptoms. Several studies have documented care recipients’ negative reactions to being helped (Clark & Stephens, 1996; Newsom & Schulz, 1998; Wolff & Agree, 2004). Care-receiving older adults experience stress because they worry about their caregivers’ health and feel indebted, helpless, and incompetent (Newsom, 1999).

To understand the mechanisms by which the receipt of care among older adults with functional limitations leads to particular psychological outcomes, previous research has focused on the role played by the internal psychological resources of individuals, such as self-esteem and perceived control (Jang, Haley, Small, & Mortimer, 2002; Martire, Stephens, Druley, & Wojno, 2002). Such psychological resources may be associated with how older adults are perceived and judged by others. Research on ageism and stereotypes of older adults suggests that the extent to which older adults internalize stereotypes about aging affects their psychological resources, such as their sense of mastery and control (Nelson, 2002). Moreover, the receipt of care may increase the risk of activating negative stereotypes of older adults, which, in turn, intensifies their negative self-perceptions of aging.

This study focuses on the extent to which self-perceptions of aging explain the relationship between the receipt of care and depressive symptoms among older adults (Nelson, 2002). This study also compares the mediating effect of self-perceptions of aging to that of perceived sense of control. Although it is likely that increasing dependency in later life influences self-perceptions of aging (Rodin & Langer, 1980), there have been few efforts to study how self-perceptions of aging among older adults who need care are related to their mental health. This study contributes to previous literature by assessing two possible mechanisms underlying the relationships linking the receipt of care and depressive symptoms in later life.

Conceptual Model

Identity theory provides a useful framework within which to explore the pathways among the receipt of care,
self-perceptions of aging, perceived loss of control, and depressive symptoms. Identity theory posits that individuals have multiple identities because identities are constructed by meanings attached to the various roles that individuals hold in society (Stets & Turner, 2006). These identities help individuals define themselves as a member of a certain group and distinguish themselves from others and activate a sense of self-worth and awareness of self-identity (Stets & Turner, 2006). Identity theory emphasizes the influence of society on the self in that identities are shaped by society and emerge from the situations and interactions in which individuals are placed (Stets & Turner, 2006). According to identity theory, negative emotions emerge when others do not support a prominent identity of an individual, and that identity is challenged in interactions (Burke, 2006; Burke & Stryker, 2000). In care-receiving situations in Western cultures, such as the United States, where self-reliance and autonomy are viewed as a virtue, older adults who rely on assistance from others may experience negative emotions because they have long maintained their identity as an independent person (Cott & Gignac, 1999; Gignac, Cott, & Badley, 2000; Kaufman, 1994).

Identity theory further suggests that individuals categorize themselves and others to draw meaningful distinctions between people or subgroups (Stryker & Burke, 2000). These categories of people are differentially valued in society (Stryker & Burke, 2000). By internalizing values and attitudes toward certain groups in society, these values and attitudes become a part of the self (Stryker, 2004). With respect to social attitudes toward older people in the United States, there are positive and negative views of older people (Hummert, Garstka, Shaner, & Strahm, 1994). On the one hand, older adults are viewed positively, such as being viewed as friendly and warm. On the other hand, they are often perceived as incompetent in maintaining their own lives and as dependent on others (Stone, 2003). These negative stereotypes and prejudice against older adults are a part of ageism—the discrimination against individuals based on their age, which is widespread in U.S. society (Nelson, 2002).

Moreover, these stereotypes may have been internalized by individuals and then directed toward themselves in their later adulthood (Levy, Slade, Kunkel, & Kasl, 2002). Once individuals have internalized negative stereotypes of older adults, their negative attitudes toward older people can be reflected in their perceptions of their own aging as they become older (Levy et al., 2002). Being sick and dependent is a major theme within stereotypes of older adults in Western society (Nelson, 2002). It is possible that if older adults who have internalized stereotypes of older adults become impaired and need care, they may attribute increasing dependency to their old age (Gignac et al., 2006) and perceive their aging negatively. Negative self-perceptions of aging erode older adults’ psychosocial resources, such as sense of control (Nelson, 2002), which in turn contributes to greater risk for depressive symptoms (Jang et al., 2002).

This study attempts to capture the complex dynamics described earlier in formulating a conceptual model, illustrated in Figure 1, that includes the following linkages: (a) Older adults who receive more care will view their aging more negatively and perceive greater loss of control; (b) older adults who perceive their aging more negatively will be more depressed; (c) older adults who perceive greater loss of control will be more depressed.

These linkages will be discussed in detail in the literature review.

**Receipt of Care Is Related to Self-Perceptions of Aging and Perceived Loss of Control**

When older adults become impaired and need care, they often turn to their families and friends to receive help with daily living (Davey & Patsios, 1999). Although the receipt of help may be necessary, there are negative aspects of

![Figure 1. A conceptual model.](image-url)
being helped. Older adults who receive care may be at risk for developing negative self-perceptions of aging. Self-perceptions of aging refer to an individuals’ evaluation of their own aging, such as feeling less happy or more useless as they get older (Moser, Spagnoli, & Santos-Eggimann, 2011). Such self-perceptions can vary in the extent to which individuals internalize stereotypes of older adults (Levy et al., 2002). Individuals develop negative stereotypes of older adults through media portrayals and daily interactions (Levy & Langer, 1994). When negative stereotypes of aging have been developed over the life span, these stereotypes are more engrained and resistant to change than are positive ones (Cuddy, Norton, & Fiske, 2005). In particular, negative stereotypical beliefs and attitudes toward older adults are focused on older adults who rely on others’ help (Cohen, 1988). For instance, when older adults need assistance from others, this need is viewed more as a reflection of being helpless and more dependent than is the case when their younger counterparts have needs for assistance (Morse & Adams-Price, 2009). Moreover, older adults perceive health declines and the receipt of care as life transitions that affect age identity (Schafer & Shippee, 2010). That is, when older adults experience declines in health and need care, they are more likely to perceive themselves as older persons (Diehl & Wahl, 2010). However, the awareness of having grown older may not be positive because dependency is a trait of negative stereotypes of aging in society. Thus, the receipt of care may activate preexisting stereotypes about aging and facilitate negative self-perceptions of aging.

Additionally, older adults who have impairments and receive care may be susceptible particularly to the perception of loss of control. The need for help with basic activities of daily living constantly creates situations challenging an individual’s sense of control (Schulz, Heckhausen, & Obrien, 1994). Studies found that older adults who receive care from their families felt obliged to follow their caregiver’s decision about care and complied with the instructions of caregivers to avoid a strained relationship with their caregivers (Beel-Bates, Ingersoll-Dayton, & Nelson, 2007; Pyke, 1999; Ward-Griffin, Bol, & Oudshoorn, 2006). Moreover, older adults who received care tried not to complain and be demanding in the process of care (Cox & Dooley, 1996; Lewinter, 2003; Ward-Griffin et al., 2006). Care recipients’ compliance with decisions made by others and being undemanding of care may decrease their control of the caregiving environment and consequently threaten their sense of control.

**Self-Perceptions of Aging Are Associated With Depressive Symptoms**

Older adults’ perceptions of their own aging are closely related to their mental health outcomes, including their depressive symptoms (Chachamovich, Fleck, Laidlaw, & Power, 2008; Coleman, Aubin, Robinson, Ivani-Chalian, & Briggs, 2004; Lu, Kao, & Hsieh, 2010). Brandtstädter and Greve (1994) suggested that individuals’ assessment and evaluation of their own aging affect their perceptions of losses and gains related to aging and their adaptation to the aging process. Older adults who perceive greater losses as they get older and evaluate their aging negatively are more likely to experience more depressive symptoms (Brandtstädter & Greve, 1994). Brandtstädter, Wentura, and Greve (1993) found that, compared with those with negative aging identity, individuals with positive aging identity were likely to show fewer depressive symptoms as losses related to aging increased. Steverink, Westerhof, Bode, and Dittmann-Kohli (2001) also found that older adults who experienced their aging negatively reported greater negative affect and lower levels of life satisfaction. Moreover, older adults who held negative attitudes toward aging were more likely to believe that depression is a normal consequence of old age and were less likely to seek help or treatment (Law, Laidlwaw, & Peck 2010). Older adults with negative perceptions of aging may be more likely to remain depressed than those with positive perceptions of aging. In sum, older adults who perceive their aging more negatively perceive greater losses related to their aging and experience more depressive symptoms.

**Perceived Loss of Control Is Related to Depressive Symptoms**

Perceived control is defined as the extent to which individuals believe they have the ability to change aspect of their lives and the environment in which they live (Pearlin & Schooler, 1978). Perceived control is a psychological resource that has been found to help people cope with stressful events (Bandura, 1989; Pearlin & Schooler, 1978). If individuals believe they are not able to achieve valued goals and tasks in everyday life, they can feel distressed and depressed. Because belief in one’s inability to achieve desired goals negatively influences self-esteem and sense of security, individuals who perceive a loss of control over their life manifest lower life satisfaction and may experience depressive symptoms (Bandura, 1989). Several studies have demonstrated that older adults who perceive a loss of control in their lives are more likely to feel depressed (Jang et al., 2002; Lachman, 2006; Mirowsky & Ross, 1992).

Drawing on these areas of past research, the present research contributes to our understanding of the care-receiving experiences in later life in several ways. First, this study adds to the previous literature by examining the possible mediating roles of self-perceptions of aging and perceived loss of control in the relationship between the receipt of care and depressive symptoms. In so doing, we shed light on key mechanisms by which the receipt of care is related to depressive symptoms in later life. Second, using a national probability sample of older adults, this study allows us to generalize our findings. Third, we use temporally ordered
measures of our predictors and mediators in a way that strengthens inferences about their relationships with the depressive symptoms outcome.

**Methods**

**Sample**

This study relies on a sample that examines the 2006, 2008, and 2010 waves of the Health and Retirement Study (HRS). The HRS is a national longitudinal study that conducts surveys every 2 years on more than 22,000 older adults and their spouses, and the psychosocial Leave-Behind questionnaire was given to half of the noninstitutionalized respondents, who were randomly preselected for an enhanced face-to-face interview at each wave. This enhanced face-to-face interview was conducted in order to collect information related to physical performance, biomarkers, and psychosocial topics in addition to the core survey.

In this study, the 2006, 2008, and 2010 HRS surveys are referred to as Time 1, Time 2, and Time 3, respectively. The analytic sample used in this study consists of 6,576 people who have completed the 2008 HRS psychosocial Leave-Behind questionnaires. From this original sample, 234 cases were dropped because the respondents' age was less than 51 years at Time 1. In addition, 404 cases who died by Time 3 were excluded from the analytic sample; 5,938 respondents were included in the final analysis.

**Measures**

*The receipt of care* was measured as the amount of time that older adults had received assistance related to activities of daily living (ADL) or instrumental activities of daily living (IADL) from others in the past month at Time 1 (2006). Care-receiving hours were assessed by ascertaining how many days and how many hours of care the helpers provided to older adults during those days. Care-receiving hours over that past month were calculated by multiplying the number of days by the number of hours each day. If older adults had multiple helpers, the hours received by each helper were added together. Care-receiving hours were significantly skewed; so we generated a categorization used in previous studies (Brown et al., 2009) with these data: 0 hr of care per month, 1–32 hr of care, or 32 or more hours of care with 32 hr of care per month as the median value of care hours among those who received any care (Brown et al., 2009).

*Self-perceptions of aging* were measured with five items (alpha = .72) collected at Time 2 (2008), using the Attitude Toward Own Aging subscale of the Philadelphia Geriatric Center Morale Scale (Lawton, 1975). These items are based on the following questions: “Things keep getting worse as I get older”; “I have as much pep as I did last year”; “The older I get, the more useless I feel”; “I am as happy now as I was when I was younger”; “As I get older, things are better than I thought they would be.” These items used a 6-point scale from 1 (strongly disagree) to 6 (strongly agree). By reverse coding items related to positive attitudes, higher scores in all of the items represent more negative perceptions of one’s own aging.

*Perceived loss of control* was measured by five items related to perceived constraints on personal control (alpha = .86) collected at Time 2 (2008; Pearlin & Schooler, 1978). Using a 6-point scale from 1 (strongly disagree) to 6 (strongly agree), the items included the following: “I often feel helpless in dealing with the problems of life”; “Other people determine most of what I can and cannot do”; “What happens in my life is often beyond my control”; “I have little control over the things that happen to me”; and “There is really no way I can solve the problems I have.” Higher scores represent higher levels of perceived loss of control.

*Depressive symptoms* were measured by eight items from the shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) at Time 1 (2006) and Time 3 (2010; alpha = .81 for both waves). Six of the 8 indicators measure whether the respondent experienced the following negative sentiments all or most of the time: depression, everything being an effort, restless sleep, feeling alone, feeling sad, and feeling unable to get going. The other two indicators measure positive feelings, such as whether the respondent felt happy and enjoyed life, all or most of the time. The indicators of positive feelings were reverse coded. The eight items were summed to form a depressive symptom score, ranging from 0 to 8. A higher score indicates greater depressive symptoms.

*Functional impairment, health conditions, and cognitive health at Time 1 (2006) and changes in physical and cognitive health between Time 1 and Time 3 (2010)* were included to control for respondents’ health characteristics that affect latent constructs in the analytic model. First, we assess functional impairment by using two indicators—ADL score and IADL score at Time 1 (2006) and Time 3 (2010). The ADL and IADL scores were based on the number of areas in which an older adult had difficulties. The ADL items included whether or not the respondent had difficulties in (a) bathing, (b) eating, (c) dressing, (d) walking across a room, (e) getting in or out of bed, and (f) using the toilet. The IADL items included whether or not the respondent had difficulties in (a) using the phone, (b) managing money, (c) taking medications, (d) shopping for groceries, and (e) preparing hot meals. These 11 items are added up to construct a functional impairment score, ranging from 0 to 11 with higher scores representing more difficulties.

Second, health conditions at Time 1 (2006) and Time 3 (2010) were measured by summing separately for each wave indicators of whether a physician had ever told the respondent that he or she had any of eight diseases: high blood pressure, diabetes, cancer, lung disease, heart disease,
stroke, psychiatric problems, and arthritis. Higher scores represent a greater number of diseases.

Last, cognitive health at Time 1 (2006) and Time 3 (2010) was measured by the sum of immediate and delayed word recall scores (Fisher, Hassan, Rodgers, & Weir, 2012; McArdle, Fisher, & Kadlec, 2007). In the immediate word recall test, ranging from 0 to 10, the interviewer reads 10 words to the respondent and then asks the respondent to recall as many words as possible from the list in any order. In the delayed word recall test, the interviewer asks the respondents to recall the word list as they did in the immediate word recall test approximately 5 min ago. The total word recall score is created based on number of words recalled correctly, ranging from 0 to 20. Higher scores indicate higher levels of cognitive functioning.

Demographic variables included as control variables were age, gender (0 = male, 1 = female), race (0 = non-White, 1 = White), and years of education. These four demographic variables have been found to be related to self-perceptions of aging, perceived loss of control, and depressive symptoms (Blazer, 2003; Levy et al., 2002).

Analytic Plan

The structural equation modeling analysis in this study was conducted in two steps (Bollen, 1989). First, we tested a measurement model to examine the relationships between observed variables and latent constructs. The measurement model was tested by confirmatory factor analyses (CFA) using MPLUS. This step helps to assess the adequacy of the measurement model (Bollen, 1989). To improve the measurement model fit, the initial measurement model was revised by incorporating three pairs of correlated measurement errors (Liang & Bollen, 1983). Second, the structural relationships among latent variables presented in the conceptual model of this study were analyzed after controlling for demographic variables (i.e., age, gender, race, and education level), physical and cognitive health at Time 1 and changes in physical and cognitive health between Time 1 and 3, and levels of depressive symptoms at Time 1.

In order to evaluate the magnitude and significance of mediated effects, the significance test of indirect effects was conducted by using the Sobel test (Preacher & Hayes, 2008). This study investigates the following: (a) the indirect effects of self-perceptions of aging at Time 2 in the pathway from the receipt of care at Time 1 to depressive symptoms at Time 3 and (b) an indirect effect of perceived loss of control at Time 2 in the relationships among the receipt of care at Time 1 and depressive symptoms at Time 3. Because the analytic model included multiple mediators, this study used the product-of-coefficients approach suggested by Preachers and Hayes (2008). The significance of each of the specific indirect effects was also tested using Mplus (Preacher & Hayes, 2008).

Two criteria were used to assess the model fit of the structural model: the Comparative Fit Index (CFI) and the root mean square error of approximation (RMSEA). CFI values greater than .9 indicate an acceptable fit, as do RMSEA values less than .06 (Kline, 2011). Although generally used as a primary standard by which to assess the model fit, the $\chi^2$ goodness-of-fit test is sensitive to sample size (Kline, 2011), so we used CFI and RMSEA.

Next, analyses were conducted to examine missing data. About 5% of respondents (287 individuals) had missing values for receipt of care; 110 individuals with functional limitations at Time 1 had missing data on care hours because there was missing information on helpers, and 178 and 299 individuals had missing values on the measures of physical health at Time 1 and Time 3, respectively, or did not respond to the survey at Time 1 or Time 3. About 6% of respondents (331 individuals) had missing data on the measure of cognitive health at Time 1, and 9% (515 individuals) had missing data at Time 3. Four percent ($n = 226$) had missing data on at least one of the indicators for the self-perceptions of aging scale, and 3% ($n = 187$) had missing values on at least one of the indicators for the perceived loss of control scale. Five percent of respondents ($n = 276$) at Time 1 and 8% ($n = 486$) at Time 3 were missing information about depressive symptoms. Instead of deleting observations with missing values, multiple imputation was used. Missing values were imputed by using conditioned multivariate regression models, as implemented in Mplus (Enders, 2010; Muthén & Muthén, 1998–2010). Five imputed data sets were generated. The results presented here are based on these imputed data. In addition, HRS has a complex sampling design. Sampling weights at Time 1 were included in these analyses to correct for oversampling of African Americans, Hispanics, and Floridians.

Last, to further examine potential reverse causality in the relationships between the receipt of care and depressive symptoms, additional analyses were conducted. A cross-lagged model (Gollub & Reichardt, 1991; Lin & Wu, 2011) that included the path from depressive symptoms at Time 1 to the receipt of care at Time 3 via self-perceptions of aging or perceived loss of control was tested. However, the indirect effects of those reverse relationships were not significant. Therefore, the original model proposed in this study was selected as the final model and is reported here.

Results

Table 1 displays demographic and health characteristics of the sample. Table 2 presents descriptive statistics of the sample, including means, standard errors, and correlations among the study variables in the conceptual model. Correlations are based on one of five imputed data sets. In the analytic sample of 5,938 individuals, 56% were women, 87% were White/Caucasian, 13% were Black/African American, or were categorized as other race. The average age of the sample was 64.55 at Time 1, with ages ranging from 51 to 98. The average years of education were 13.01.
19.1% and 24.4% had functional limitations in at least one area of activities of daily living or instrumental activities of daily living at Time 1 and Time 3, and the mean number of functional limitations was 0.41 and 0.64, respectively. Mean numbers of health problems at Time 1 and Time 3 were 1.82 and 2.32, respectively. The cognitive functioning scores were 10.47 at Time 1 and 9.69 at Time 3. Those who received care at Time 1 comprised 10.25% of the sample, and the mean of care-receiving hours per month was 7.34 hr (range 0–992 hr). The median of care-receiving hours per month among care recipients was 32 hr.

**Testing the Measurement Model**

Confirmatory factor analysis was conducted to assess the measurement model using Mplus 6.1. Factor loadings for the latent constructs displayed in Table 3 were statistically significant (ranging from $\lambda = .447$ to $\lambda = .785$, $p < .001$). The estimated measurement model indicated an acceptable fit to the data: $\chi^2 (31, N = 5,938) = 468.079$, $p < .001$; CFI = .961; RMSEA = .049. Therefore, this measurement model was used in testing the full structural model.

**Testing the Structural Model**

The overall conceptual model was tested and showed a good fit to the data: $\chi^2 (144, N = 5,983) = 1847.201$, $p < .001$; CFI = .905; RMSEA = .045. Figure 2 and Table 4 present the standardized path coefficients in the final model. The results indicated that older adults who received greater amounts of care at Time 1 perceived their aging more negatively 2 years later ($\beta = .110$, $p < .05$). However, greater amounts of received care at Time 1 did not predict higher levels of perceived loss of control at Time 2 ($\beta = .035$, $p > .05$). Higher levels of negative self-perceptions of aging at Time 2 were related to greater depressive symptoms at Time 3 after controlling for depressive symptoms at Time 1 ($\beta = .199$, $p < .001$). Older adults who perceived greater loss of control at Time 2 were more likely to experience more depressive symptoms 2 years later after controlling for levels of depressive symptoms at baseline ($\beta = .093$, $p < .001$). This model explained 39.7% of the variance of negative self-perceptions of aging at Time 2, 23.6% of the variance of depressive symptoms at Time 3, and 19.4% of the variance of care-receiving hours per month at Time 3.
variance of perceived loss of control at Time 2, and 44.1% of the variance of depressive symptoms at Time 3.

The indirect effect of the receipt of care at Time 1 on depressive symptoms at Time 3 that was mediated through negative self-perceptions of aging (not shown in table) was significant (b = .032, p < .05). However, the indirect path from the receipt of care at Time 1 to depressive symptoms at Time 3 via perceived loss of control was not significant (b = .005, p > .05). Taken together, these findings highlight the negative consequences of the receipt of care and the key mediating role of self-perceptions of aging. That is, greater amounts of care were associated with more depressive symptoms via increases in negative self-perceptions of aging.

The data in Table 4 suggested that some of the control variables were significantly associated with dependent variables in the model. As expected, higher levels of functional impairment and the greater number of health conditions at Time 1 were significantly associated with greater amount of care at Time 1 (β = .564, p < .001; β = .086, p < .01, respectively), higher levels of negative perceptions of aging at Time 2 (β = .106, p < .01; β = .171, p < .001, respectively), higher levels of perceived loss of control at Time 2 (β = .113, p < .001; β = .037, p < .05, respectively), and more depressive symptoms at Time 3 (β = .063, p < .01; β = .071, p < .001, respectively). Higher levels of cognitive health predicted less care (β = −.067, p < .05), lower levels of negative self-perceptions of aging (β = −.091, p < .001), and lower levels of perceived loss of control (β = −.145, p < .001). Educational attainment was found to be related to favorable outcomes regarding the amount of care (β = −.054, p < .05), negative self-perceptions of aging (β = −.077, p < .001), and perceived loss of control (β = −.114, p < .001). Most of the results with respect to the demographic variables were consistent with previous studies (Blazer, 2003; Heikkinen & Kauppinen, 2004; Levy et al., 2002; Mavandadi, Rook, & Newsom, 2007). The results related to age, however, uncover some new findings about the relationship between aging and mental health. Age was significantly related to more negative perceptions of aging (β = .038, p < .05), but more advanced age was associated with fewer depressive symptoms at Time 3 (β = −.072, p < .001).

**Discussion**

Using a nationally representative sample, this article investigated how the receipt of care is associated with self-perceptions of aging and perceived loss of control, and how self-perceptions of aging and perceived loss of control are related to depressive symptoms among older adults. Findings from this study contribute to the previous literature in two key ways. First, the findings highlight the importance of considering negative aspects of receiving

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**Table 3. Factor Loadings and Measurement Error Terms for Multiple Item Measures (N = 5,938)**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor loadinga</th>
<th>Measurement errorb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived loss of control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpless in dealing with problem</td>
<td>0.704</td>
<td>0.505</td>
</tr>
<tr>
<td>Others determine what I can/not do</td>
<td>0.652</td>
<td>0.574</td>
</tr>
<tr>
<td>Life is beyond my control</td>
<td>0.775</td>
<td>0.399</td>
</tr>
<tr>
<td>Little control over things</td>
<td>0.780</td>
<td>0.392</td>
</tr>
<tr>
<td>No way I can solve my problem</td>
<td>0.785</td>
<td>0.384</td>
</tr>
<tr>
<td>Negative perception of aging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get worse as I get older</td>
<td>0.627</td>
<td>0.607</td>
</tr>
<tr>
<td>Same pep as last yearc</td>
<td>0.447</td>
<td>0.800</td>
</tr>
<tr>
<td>Get useless as I get older</td>
<td>0.631</td>
<td>0.601</td>
</tr>
<tr>
<td>Happy as when youngerc</td>
<td>0.561</td>
<td>0.685</td>
</tr>
<tr>
<td>Better than I thoughtd</td>
<td>0.554</td>
<td>0.693</td>
</tr>
</tbody>
</table>

*Note. Factor loadings are standardized. Measurement error terms are standardized, and all measurement error terms are significant at the 0.001 level. These items were reverse coded.*

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![Figure 2. Structural equation model. All coefficients are standardized. *p < .05 and ***p < .001.](image-url)
care. Second, results from this study support the notion that self-perceptions of aging, which have been known to reflect self-stereotyping of aging, play a pivotal role in the relationship between the receipt of care and depressive symptoms. More specifically, the results revealed that older adults who received greater amounts of care perceived their aging more negatively even after controlling for their physical and cognitive health status. Additionally, older adults who perceived their aging negatively experienced increased levels of depressive symptoms 2 years later. However, perceived loss of control did not mediate the relationship between the receipt of care and depressive symptoms.

The study findings highlight the negative consequences of the receipt of care on self-perceptions of aging. Although receiving care can be a source of support that buffers adverse effects of stressful events, such as illness and disabilities, it also can trigger negative perceptions of the self as an older person. Because the aged adults are widely stereotyped as being sick and dependent on others in Western society (Cohen, 1988; Nelson, 2002), older adults who have been exposed to these stereotypes may experience challenges to their sense of self. Our study shows that when older adults receive care, they may become particularly vulnerable to experiencing negative perceptions of their own aging.

This study also identified negative self-perceptions of aging as a key mechanism, which helps account for the relationship between the receipt of care and depression among older adults. Interestingly, although perceived loss of control was related to depression, it did not play a similar role in accounting for the relationship between care receipt and depression. Instead, our findings, which are bolstered by the observations of practitioners who work with older people, point to the important link between receiving help and aging-related identity. For example, as a clinical social worker, Lustbader (1991, p. 17) observes that, despite the good intentions of caregivers, it is difficult to provide help “…to the right extent, at the right time, for the right reason, and in the right way.” Older adults often experience considerable ambivalence resulting from the receipt of care, including feelings of guilt and resentment as well as gratitude (Cahill, Lewis, Barg, & Bogner, 2009; Ward-Griffin et al., 2006). It may be that this constellation of feelings contributes to a negative identity as an aging person rather than to a perceived loss of control. In sum, this study builds upon the existing literature by identifying negative age-related identity as an explanatory factor in understanding the relationship between the receipt of care and depressive symptoms.

Despite significant indirect effects of the receipt of care on depressive symptoms, this finding should be interpreted with caution. The magnitude of the effects of the receipt of care is relatively small compared with the direct effect of physical health status on depressive symptoms. Deterioration in physical health has harmful effects on various areas in life (Bisschop, Kriegsman, Beekman, & Deeg, 2004; Yang, 2006), so it is not surprising that the direct effects of physical health on depressive symptoms are much larger than the specific indirect effects of the receipt of care. Nonetheless, one of the contributions made by this study is to show that the receipt of care itself has indirect effects on depressive symptoms via self-perceptions of aging in spite of the great impact of physical health.

Findings concerning the effects of demographic factors on key study variables indicate that age appears to be a particularly significant factor that predicts the dependent variables. These findings indicate that older adults are likely to have more negative self-perceptions of aging as they become older. At advanced old age, adults often become more aware of age-related challenges, so they experience increasing negative perceptions of their own aging.
experiences for older adults. Because older adults who receive greater amounts of care are more likely to perceive their aging negatively, practitioners should focus on the effects that receiving care has on older adults’ sense of the aging self. Practitioners can implement interventions that may reduce older adults’ negative assessment of their own aging while receiving care. For example, using life review or reminiscence therapy, practitioners may help older adults reframe meanings of negative life events, such as increasing dependency, and reinterpret those events, which may lead to developing a new set of positive beliefs of the self (Bohlmieijer, Roemer, Cuijpers, & Smit, 2007). In addition, by reviewing their lives with the help of a practitioner, older adults identify sources of self-worth and maintain continuity of their personal identity while going through changes in physical health. By achieving more positive attitudes toward the aging self, older adults can experience improvement in other dimensions of mental health, such as depression. Last, future research that addresses the issues that have emerged from this study will be fruitful in expanding our understanding of psychological well-being in older adulthood.

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