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Research Report

# Generativity and Social Well-Being in Older Women: Expectations Regarding Aging Matter

Mona Moieni, PhD,[1] Teresa E. Seeman, PhD,[2] Theodore F. Robles, PhD,[1] Matthew D. Lieberman, PhD,[1] Stephanie Okimoto, BA,[3] Clara Lengacher, BS,[1] Michael R. Irwin, MD,[4,●] and Naomi I. Eisenberger, PhD[1,*]

[1]Department of Psychology, University of California, Los Angeles. [2]Department of Medicine, Division of Geriatrics, David Geffen School of Medicine, University of California, Los Angeles. [3]UCLA Clinical and Translational Research Center, David Geffen School of Medicine, University of California, Los Angeles. [4]Semel Institute for Neuroscience and Human Behavior, Cousins Center for Psychoneuroimmunology, University of California, Los Angeles.

*Address correspondence to: Naomi I. Eisenberger, PhD, Department of Psychology, University of California, Los Angeles, 5514 Franz Hall, Los Angeles, CA 90095. E-mail: neisenbe@ucla.edu

## Abstract

**Objectives:** Beliefs about aging can contribute to health and well-being in older adults. Feeling generative, or that one is caring for and contributing to the well-being of others, can also impact health and well-being. In this study, we hypothesized that those with more positive expectations regarding aging (ERA) in the mental health domain would report greater levels of perceived social support (PSS) and lower levels of loneliness in response to a generativity intervention (vs control condition).

**Method:** Participants in this study (*n* = 73, 100% female) were randomly assigned to a 6-week generativity condition, which involved writing about life experiences and sharing advice with others, or to a control condition, which involved writing about neutral topics. Pre- and postintervention, PSS, and feelings of loneliness were measured.

**Results:** Those in the generativity condition with more positive ERA in the mental health domain reported greater PSS and lower loneliness postintervention.

**Discussion:** These results highlight the importance of psychological factors, such as ERA, in moderating the efficacy of interventions to promote social well-being in older adults.

**Keywords:** Beliefs, Social psychology of aging, Social support

I hate that word [anti-aging]! It should be something positive, like pro-aging.

— Julia Louis-Dreyfus, actress

Beliefs about aging are an important contributor to behavioral and health outcomes in older adults. For example, more positive beliefs about aging are linked with better health and well-being, including increased longevity (Levy, Slade, Kunkel, & Kasl, 2002; Warmoth, Tarrant, Abraham, & Lang, 2016). Beliefs about aging can also impact social well-being. Expecting to be lonelier as a function of age and stereotyping old age as a time of loneliness is associated with feeling lonelier almost a decade later (Pikhartova, Bowling, & Victor, 2016). Older adults with more positive expectations regarding aging (ERA) are also more likely to increase social engagement in the future (Menkin, Robles, Gruenewald, Tanner, & Seeman, 2016). Together, these findings suggest that having more positive ERA may play an

important role in shaping older adults' social well-being. In this study, we examined whether ERA influenced the effects of an intervention aimed at increasing social well-being.

In addition to beliefs about aging, another psychosocial factor that may influence social well-being in older adults is generativity, or the feeling that one is contributing to others, particularly younger generations. Indeed, generativity, which involves the "need to be needed" (McAdams & De St Aubin, 1992) through a desire to be useful to others, has been associated with greater psychological and social well-being (Keyes & Ryff, 1998), social support (Hart, McAdams, Hirsch, & Bauer, 2001), and prosocial behavior (Cox, Wilt, Olson, & McAdams, 2010). Furthermore, many older adults experience loneliness due to a loss of meaningful social engagement (Smith, 2012), suggesting low levels of generativity and social usefulness may contribute to subjective feelings of social isolation in this population. Importantly, providing opportunities to participate in generative activity may reduce social isolation in older adults (Carlson, Seeman, & Fried, 2000). Improving such social outcomes in older adults is a public health priority, given that greater loneliness and decreased social support are associated with greater morbidity and mortality (Blazer, 1982; Perissinotto, Stijacic Cenzer, & Covinsky, 2012).

Thus, increasing generativity via an intervention may improve older adults' social well-being, suggesting that generativity interventions may be an effective tool for improving loneliness and perceived social support (PSS) in older adults. Specifically, previous work has found that a volunteering intervention involving intergenerational contact can increase generativity (Gruenewald et al., 2016) and improve PSS (Fried et al., 2004) in older adults. However, this type of "high intensity" intervention may not be a proper fit for all older adults, particularly ones with limitations preventing them from participating in intensive volunteering. As such, there is a need to develop generativity interventions which may impact social well-being but may also be more accessible, such as a writing-based intervention.

Furthermore, given the influence of beliefs about aging on social outcomes, it is possible that positive views about aging may also influence how older adults respond to psychological interventions. Thus, it is possible that a generativity intervention may have its most salutary effects on social well-being in older individuals with positive ERA. In support of this notion, psychological interventions are more effective for those who are motivated to and expect to benefit from the activity (Lyubomirsky & Layous, 2013). Furthermore, stereotype embodiment theory (Levy, 2009) suggests that stereotypes and beliefs about aging can lead to differential outcomes via self-fulfilling prophecies (e.g., engagement with the generativity intervention) and behaviors (e.g., self-efficacy regarding the generativity intervention).

As such, the goal of this study was to test whether ERA, specifically in the mental health domain, moderated the effect of a generativity intervention on social well-being, as a secondary analysis on a previous data set. We hypothesized that the generativity intervention would lead to greater social well-being for those with more positive ERA.

## Method

### Participants and Procedures

Detailed information about participants and procedures are described elsewhere (reporting the primary outcomes of the study; Moieni et al., 2020), as well as in the Supplementary Material, but are also summarized here. In brief, participants were healthy women aged 60 and older screened for feeling low in current generative achievement relative to their generative desire (Gruenewald et al., 2016).

All participants ($n$ = 78 females) were randomized into either a 6-week generativity or control writing condition and were told that the study was investigating the relationship between writing about experiences and health. As described previously (Moieni et al., 2020) and the Supplementary Material, 5 participants did not complete the study, leaving a total final sample of 73 female participants (mean age 70.9 ± 6.5 years; 80.8% white; 35 in the control condition, 38 in the generativity condition). The sample size was determined for the primary aims of the study (Moieni et al., 2020); further details are available in the Supplementary Material.

Participants in the generativity condition wrote weekly about their life experiences and shared their wisdom and advice (for middle-aged adults) in response to topics such as: "What are some of the most important lessons you feel you have learned over the course of your life? If a middle-aged person asked you "what have you learned in your _____ years in this world," what would you tell him or her?...." In order to provide an audience for participants' generative action, participants in the generativity condition were informed that their responses would be collected, made anonymous, and published into a book or website intended to help middle-aged adults. For the full listing of the prompts, see Supplementary Material.

Participants in the control condition were not told that their writings would be shared and wrote about neutral topics such as: "In the space provided below, please describe what you had for lunch today—what it looked like, how it tasted…. In your writing, please try to focus on the details of what you ate, how it looked, and how it tasted, rather than on who you were with or what you were thinking about during this time…."

All participants provided written consent. All procedures were approved by the UCLA Human Subjects Protection Committee (IRB#14-000811). The general design, as well as the primary outcomes, of the study (Moieni et al., 2020), was registered with ClinicalTrials.gov (NCT02472379). The secondary analyses presented here were not preregistered.

## Self-report Measures

### ERA Survey

The ERA Survey (Mental Health Domain), measured at preintervention, is a valid, reliable (α = .64) scale to assess participants' beliefs about mental health as a function of age (Sarkisian, Steers, Hays, & Mangione, 2005).[1] Participants were presented with four statements regarding beliefs about aging and mental health, including two items relevant to the social domain (e.g., "being lonely is just something that happens when people get old"; all four items in Supplementary Material).

### Social Provisions Scale

The Social Provisions Scale, measured pre- and postintervention, is a valid, reliable (α = .90) scale to assess multiple domains of PSS, such as feelings of attachment and social integration (Cutrona, 1984; Cutrona & Russell, 1987; e.g., "I feel a strong emotional bond with at least one other person").

### UCLA Loneliness Scale

The UCLA Loneliness Scale, measured pre- and postintervention, is a valid, reliable (α = .92) scale to assess loneliness (Russell, 1996) (e.g., "how often do you feel alone?"). Loneliness and perceptions of social support were significantly correlated with each other (at preintervention, $r = -.71$, $p < .001$) but represent distinct constructs with separate, rich literatures and thus were both examined as social well-being outcomes.

## General Analytic Strategy

In order to test the moderating effect of ERA on PSS and loneliness, the PROCESS macro for SPSS was used (Hayes, 2012). To examine whether ERA moderated the effect of the intervention on PSS and loneliness, we tested the interaction of condition (generativity vs control) and ERA on PSS and loneliness postintervention, controlling for preintervention values.

## Results

At baseline, the two groups were not different in ERA, loneliness, or PSS ($p$s > .2). As hypothesized, there was a significant interaction between condition (generativity vs control) and ERA, such that more positive ERA predicted greater PSS postintervention for those in the generativity condition (vs control; Figure 1; $B = .174$,

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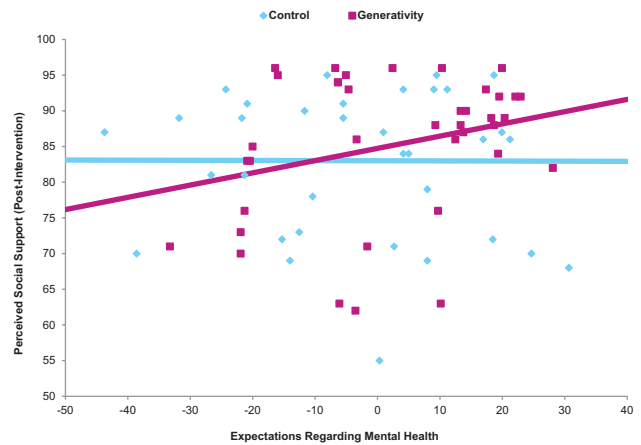
**Figure 1.** Relationship between expectations regarding aging (ERA) in the mental health domain and perceptions of social support (PSS). ERA scores, displayed regression lines, and all statistical analyses adjusted for preintervention values on PSS.
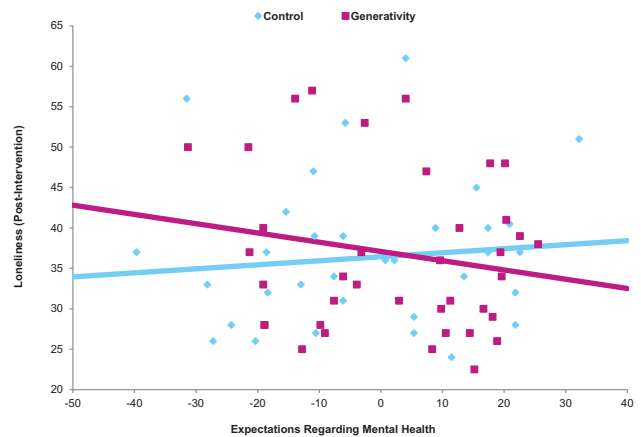


**Figure 2.** Relationship between expectations regarding aging (ERA) in the mental health domain and feelings of loneliness. ERA scores, displayed regression lines, and all statistical analyses adjusted for preintervention values on feelings of loneliness.

$SE = .070$, 95% confidence interval [CI] = [.034, .313], $t = 2.48$, $p < .05$). Analysis of conditional effects revealed that higher ERA predicted improvements in PSS within the generativity condition ($B = .172$, $SE = .052$, 95% CI = [.068, .276], $t = 3.30$, $p < .01$), but not in the control condition ($B = -.002$, $SE = .048$, 95% CI = [−.097, .093], $t = -.042$, $p > .9$).

This same pattern of results held true for feelings of loneliness. As hypothesized, there was a significant interaction between condition (generativity vs control) and ERA, such that more positive ERA predicted lower feelings of loneliness postintervention for those in the generativity condition (vs control; Figure 2; $B = -.164$, $SE = .055$, 95% CI = [−.274, −.055], $t = -3.00$, $p < .01$). Analysis of conditional effects revealed that higher ERA predicted improvements in loneliness within the generativity condition ($B = -.115$, $SE = .042$, 95% CI = [−.198, −.031], $t = -2.74$, $p < .01$), but not in the control condition ($B = .050$, $SE = .039$, 95% CI = [−.027, .127], $t = 1.29$, $p > .2$).

## Discussion

Here, we tested whether ERA moderated the effect of a novel writing-based generativity intervention on social well-being. Indeed, there was a significant moderation effect of ERA on PSS and loneliness. Those in the generativity condition with more positive ERA in the mental health domain showed greater PSS and lower feelings of loneliness after the intervention.

This study provides insight into an important question in intervention development: for whom is the intervention most beneficial? In regards to the effects of a writing-based generativity intervention on social well-being, ERA appear to play a role in deriving benefit. While no work has examined this question directly, related prior work supports this finding. For example, participants with greater motivation to become happier—who expect a positive psychology intervention may lead to benefits—show greater increases in well-being (Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011). Although participants in this study were not informed that the intervention was a well-being–enhancing intervention and thus could not explicitly expect benefits, their preexisting ERA may have played a similar role.

There are several pathways through which these beliefs about aging may impact social well-being in a generativity intervention. As suggested by stereotype embodiment theory, one way in which stereotypes of aging can lead to negative outcomes is by creating expectations that act as self-fulfilling prophecies (Levy, 2009). Thus, participants in the generativity intervention with more negative ERA may not engage as much in an intervention aiming to increase feelings of social usefulness due to their preexisting expectations. As a result of this, these participants may not derive as much benefit, leading to less favorable social well-being as a result of the intervention.

Stereotype embodiment theory also suggests that behavior may be another pathway through which beliefs and stereotypes about aging may impact outcomes (Levy, 2009). For example, priming negative age stereotypes can impair self-efficacy (Levy, Hausdorff, Hencke, & Wei, 2000). In the context of this study, impairments in self-efficacy as a result of more negative ERA may be another pathway for the moderating effects. Those in the generativity condition with lower ERA may feel that they are less effective at providing advice to others, and this lower self-efficacy may also inhibit feelings of social usefulness and generativity, driving the moderating effects.

A few limitations should be considered. First, this study was conducted in a very selective sample, exclusively female and mostly white, as well as one limited to older women who had access to the Internet and a computer. This suggests that future studies should examine these effects in more representative samples. Future studies should also directly examine the proposed mechanisms for the effects, such as examining whether participants' self-efficacy with regards to the generativity writing task is affected as a function of ERA. Additionally, the experimental component of this study was the generativity intervention; beliefs about aging were not directly manipulated and thus causal influences of ERA on social well-being cannot be determined.

The study also had several strengths, including the development of a novel generativity intervention for older adults. Furthermore, this is a low-cost, low-effort intervention and thus potentially accessible to large segments of the older adult population. The intervention also included measures of both PSS and loneliness, allowing effects to be examined across multiple social outcomes, which are both significant contributors to health outcomes in older adults (Blazer, 1982; Perissinotto et al., 2012). Furthermore, examining moderators of interventions is an important area of investigation, allowing us to understand who may benefit the most from future interventions (Lyubomirsky & Layous, 2013). Finally, these findings may ultimately have large-scale public health impacts, as they suggest that altering personal and societal views of aging may interact with other processes to impact social well-being. However, altering negative views of aging is complex, with few effective interventions supported by evidence thus far (Kotter-Grühn, 2015). Thus, while these results theoretically may have broad clinical implications, further research is needed to identify effective, long-lasting interventions to alter negative views of aging.

In conclusion, this study provides valuable information about the effect of a novel writing-based intervention on social well-being in older adults. Those with more positive ERA, specifically in the mental health domain, may derive the most benefit from such an intervention. Thus, interventions aiming to improve social well-being through generativity may also need to alter ERA in order to maximize impact.

## Supplementary Material

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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## Conflict of Interest

None reported.

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