Original Research Article

Thwarted Belonging and Perceived Burdensomeness During Middle and Older Adulthood: The Role of Generativity

Constance T. Gager[1] (iD), **John F. Gunn[2],
Sara E. Goldstein[3], and
Stephanie M. Martinez[4]**

Abstract
Using a sample of middle-aged and older adults, this research explores associations between generativity and two key risk factors for suicide: thwarted belonging (T.B.) and perceived burdensomeness (P.B.). These variables are typically studied as predictors of suicide; the current study is unique in examining their psychosocial correlates. Erikson described, generativity as a psychosocial construct that characterizes adult well-being in mid-life, conceptualized as the sense one has successfully guided and contributed to the younger generation through mentoring. Using the Midlife in the United States Survey (MIDUS), the current analyses indicate that generativity is associated with lower levels of P.B. and T.B., even after accounting for measures of hopelessness, depressive symptoms, financial stability, perceived neighborhood quality, chronic health conditions, and respondent's demographic characteristics including gender and age. Results are discussed in terms of applications for suicide-risk prevention, and with regard to the promotion of positive psychosocial development across the lifespan.

[1]Department of Family Science & Human Development, Montclair State University, Montclair, NJ, USA
[2]Department of Arts & Sciences, Gwynedd Mercy University, Gwynedd Valley, PA, USA
[3]Department of Human Development and Family Sciences, University of Delaware, Newark, DE, USA
[4]Department of Counseling, Montclair State University, Montclair, NJ, USA

Corresponding Author:
Constance T. Gager, Department of Family Science & Human Development, Montclair State University, 1 Normal Ave, Montclair, NJ 07043-1624, USA.
Email: gagerc@mail.montclair.edu

Despite extensive research examining risk and protective factors for suicidal thoughts and behaviors, suicide rates in the United States have continued a steady rise since 1999, with only small declines in recent years (Drapeau & McIntosh, 2023). Deaths attributed to suicide accounted for 48,183 deaths in the United States in 2021, with a rate of 14.5% per 100,000. Older adults comprised around 16.8% of the U.S. population but accounted for 20% of all suicide deaths. Likewise, middle-aged adults comprised 25.2% of the U.S. population, but 30.4% of suicide deaths were reported for this age group (Drapeau & McIntosh, 2021). As with the overall U.S. suicide rate, the rate among those aged 40 years and older (those included in the present study), has increased approximately 23% from 14.2 in 1999 to 17.5 in 2021 (https://wonder.cdc. gov). Rates rose for both males and females in this age group, with males experiencing an approximately 20% increase and females an approximately 25% increase. This is particularly concerning given the rise in those reporting suicidal thoughts during the coronavirus disease 2019 (COVID-19) pandemic—though it is important to note that the rise in thoughts are most prominent among younger populations (Czeisler et al., 2020). Despite this rise reported by the CDC as being predominantly among younger adults, there is good reason, given theoretical frameworks for suicide, to suspect that the social isolation associated with the COVID-19 pandemic may have led to an increased risk of mid to late-life suicide (Sheffler et al., 2021).

We propose an additional variable that may be important to consider for understanding suicide risk during mid-to late-adulthood: *generativity*. Generativity is a psychosocial construct that is, according to Erikson (1963, 1982), characteristic of adult well-being in mid-life. It can be conceptualized as the sense that one has successfully guided and contributed to the well-being of others—which is done through providing knowledge born of experience and care. According to Erikson's developmental theory, successful navigation of the challenges at each stage is aided or hindered by the challenges of the previous stages. Failure to achieve a sense of generativity in mid to late adulthood can influence the experience of despair in later adulthood and can lead to a sense that one has not contributed to their families, communities, and society (Erikson, 1963, 1982). Since Erikson's proposal, work has pushed for considering the role of generativity in older adults as well as their middle-aged counterparts (McAdams et al., 1993; Villar, 2012).

Empirical work motivated by Erikson's theory has confirmed that generativity is associated with psychological well-being in middle and older adulthood (e.g., An & Cooney, 2006), and generativity-promotive targeted interventions have been shown to improve various aspects of mental and physical health among older adults including perceived social connection, decreased distress, and healthy changes in physiological measures of inflammation and stress (e.g., Moieni et al., 2020). Unfortunately, physical challenges can make generativity-related activities difficult for aging adults, resulting in lower participation than desired (Carlson et al., 2000).

Despite the central role that generativity can have for understanding adult well-being during the middle-aged adult years and beyond, very little research has explored the possible connection between generativity and suicide. This is surprising given the relatively high rates of suicide among middle-aged and older adults, especially given the potential overlap between generativity and several key risk factors highlighted by recent theories of suicide. We discuss these below. The present work explores what role generativity may play in middle-aged and older adults reporting of two key risk factors for suicide: (1) perceived burdensomeness (P.B.) and (2) thwarted belonging (T.B.). These two risk factors are posited by the Interpersonal-Psychological Theory of Suicide (IPTS) to be instrumental in the development of the desire to die by suicide (Joiner, 2005; Van Orden et al., 2010).

The IPTS

The IPTS was proposed by Joiner (2005) and further expanded on by Van Orden et al. (2010). The theory proposes three key components to understanding suicide: (1) P.B., (2) T.B., and (3) the acquired capability for suicide. P.B. and T.B. important contributors to the desire to die by suicide, while the acquired capability for suicide focuses on the transition from desire to action. P.B. is characterized by a sense of being a liability (such as believing that their death is worth more than their life) and self-hate. T.B. is characterized by loneliness, a general sense of disconnection from others, and feelings of having a lack of support (as either a provider or recipient). The combination of P.B. and T.B. results in the desire to die by suicide. According to the IPTS, individuals then transition from desire to action when the acquired capability for suicide is also present.

Although the original formation of the model focused exclusively on these three factors, Van Orden and colleagues' (2010) update of the model by introducing the importance of hopelessness. In this updated model, P.B. and T.B. are enough for more passive suicidal thoughts, but the presence of hopelessness increases the suicidal desire toward action. Hopelessness has long been an established risk factor for suicide (Beck, Kovacs et al., 1975; Beck, Steer et al., 1985). Hopelessness is characterized by negative perceptions of the future getting better or their conditions improving. Due to their inability to perceive an alleviation of their present state, suicide becomes necessary (Beck et al., 1985). Since the IPTS was proposed, a large body of work has examined the theory in diverse populations, generally receiving empirical support (Chu et al., 2017; but see Ma et al., 2016 for a discussion of caveats). Guided by the IPTS theory's emphasis on the critical importance of P.B. and T.B. in the prediction of suicide, the present study explores how generativity might influence perceptions of burdensomeness and T.B. among middle-aged to older adults.

Suicide and Generativity

Surprisingly, very little research has investigated links between generatively and suicide. With the exception of one recent dissertation study (which found support

for the link between generativity and suicidal cognition among military veterans; Hernandez, 2022), we could not identify a single published manuscript examining generativity in the context of suicide or self-harm. We did identify some research exploring generativity in ways that might relate to suicidal thoughts and behaviors. For example, Grossman & Gruenewald (2017) examined the impact of caregiving on self-reported generativity among middle to late adulthood using the 2nd wave of the National Survey of Midlife Development in the United States (MIDUS). They found that those who were caring for loved ones were more likely to report a higher sense of generativity. This aligns with the IPTS construct of T.B., specifically with the concept of reciprocal care. In addition, Peterson (2002) found that women with higher sense of generativity reported less burden caring for their aging parents. Although this does not speak to the parents' sense of P.B., this does speak to a familial sense of burden that may be felt by all involved. Last, it is well established that women are more likely to be family caregivers than men (Dwyer & Goward, 1992; Slaughter, 2015), thus women may derive a higher sense of generativity through their caregiving roles as compared to men who are less likely to adopt such roles (Miller-McLemore, 2004).

Moieni et al. (2021) examined how a generativity task might affect reporting of loneliness among older women and the influence that expectations surrounding aging and mental health might have. In this work, women who had positive expectations for their mental health as they aged reported lower loneliness and greater perceived social support after a generativity condition (i.e., writing about life experiences and sharing advice). Finally, Miller and colleagues (2013) examined associations between generativity and depressed mood among immigrants from the former Soviet Union. Low levels of generativity were a significant predictor of depressed mood.

Given the steadily increasing higher rates of suicide among middle/older-aged adults (Piscopo, 2017), the scarcity of research exploring the role of generativity in suicide is surprising. Thus, the goal of the present study is to fill this dearth in the field. The work we have reviewed suggests a number of ways in which generativity might influence suicide risk. First, it may be the case that a greater sense of generativity decreases a sense of burden. For example, even if an individual may need assistance in some aspects of their life (e.g., they can no longer drive and depend on family or social service agencies for transportation), being able to contribute to assist in other ways (e.g., babysitting grandchildren or volunteering) may lessen older individuals' sense of burden. Thus, we anticipate finding that greater generativity will be associated with lower P.B. (H1).

Second, generativity may influence whether or not an individual reports greater feelings of loneliness and is higher among those engaging in reciprocal care—two characteristics of T.B. Therefore, we anticipate finding that those higher in generativity will report lower T.B. (H2). Additionally, given that we expect to find a significant independent effect between generativity with both P.B and T.B., we also expect to find a significant association between the generativity and the interaction of the two (H3), such that the combined effect of high scores on these two risk factors will be lowest among those with high generativity. When individuals are relatively high in terms of both P.B

and T.B., their risk for suicide is most amplified, therefore it is important to test this final hypothesis.

Of particular interest in our analyses is the role that gender plays in perceived T.B. and P.B. given prior research finds that gender plays a significant role in suicidal ideation and behavior (Haw et al., 2013). For example, death by suicide is more common among men than women, although women attempt at a greater rate (Drapeau & McIntosh, 2023). Some evidence also suggests that the role of P.B and T.B. in suicide risk may also vary by gender (Donker et al., 2014; Hill et al., 2017). Donker and colleagues (2014), using a seven-point scale for P.B., found that males were five times more likely to report suicide ideation with a one-point increase on the scale for P.B., while females likelihood only increased two-fold. In contrast, a one-point increase on the T.B. scale increased the odds of suicide ideation by 67% in females, but was no significant for males in the sample. Their research suggests that feelings of being a burden seems to me a more important predictor of suicide ideation among men, while feelings of not belonging may be a stronger factor in females' likelihood of suicide ideation, with no effect found for men. Therefore, we expect T.B. and P.B., and their interaction, to vary by gender (H4).

Lastly, using the MIDUS dataset allows for the simultaneous consideration of other potentially important variables to understanding T.B. and P.B and their link with generativity such as neighborhood quality, financial stability, family and friend support, hopelessness, depression, and chronic health conditions (see the "Methods" section for detailed scales). Previous researchers have also hypothesized that T.B. and P.B. may arise from poor social relationships. This research has identified particular characteristics that may impede a person from interacting appropriately with others. These characteristics could be psychosocial in nature: i.e., hopelessness, anxiety, or depression that lead to withdrawal from family or friends thus leading to lessened social support (Christensen et al., 2014).

In addition to mental health characteristics, poor physical health has also been found to affect suicide ideation, (for a review see Hunt et al., 2009) and may increase isolation, leading to an increases feeling of not belonging (T.B.) as well as greater sense of being a burden (P.B.). Demographic characteristics such as financial stability underlie all these factors as well as the neighborhood characteristics of places where respondents live. For example, if an older person lives in a wealthier community or one where they've lived for many years and know their neighbors, they likely have better social relationships than those who inhabit more disadvantaged neighborhoods with high crime that they perceive as dangerous. Financial strain and negative neighborhood perceptions also likely reduce one's ability to engage in generative activities. Thus, we take into account these psychosocial, demographic, and neighborhood characteristics in our multivariate analysis of the relationship between T.B. and P.B. and generative activities.

These complex issues are examined in the current study in a sample representing middle/older-age-adults in the United States (MIDUS) biomarker subsample.

Methods

Participants

The current study is drawn from the biomarker subsample of the Midlife in the United States Refresher (MIDUS-Refresher). Data from the MIDUS-Refresher were collected between 2011 and 2014 as part of an attempt to replenish the MIDUS-1 baseline cohort, collected between 1995 and 1996. The total MIDUS-Refresher sample consisted of 3,577 adults aged 25–74. The biomarker subsample of the MIDUS-Refresher was collected between 2012 and 2016. This subsample consisted of 863 participants drawn from the MIDUS-Refresher. This specific biomarker sample was intended to investigate biopsychosocial pathways to various health outcomes. The final analytic sample of our study consists of the 457 respondents who had complete data across our study variables and who were retained after the removal of outliers. Of this final analytic sample (N = 457), ages ranged from 40 to 76 years of age with a mean age of 57.2 ($SD = 10.38$). The sample was approximately evenly divided between males ($N = 236$; 51.6%) and females ($N = 221$, 48.4%). The majority of the sample indicated that they were White and non-Hispanic ($N = 390$, 85.3%).

Procedures

Accessing the MIDUS-Refresher and MIDUS-Refresher biomarker subsample was conducted through the Inter-University Consortium for Political and Social Research (ICPSR) database. The ICPSR, housed at University of Michigan, allows access to social science data for the purposes of instruction and research. All waves of the MIDUS data are available through ICPSR. Again, the present study uses the biomarker subsample of the MIDUS-Refresher survey. This subsample is one of five projects that comprise the MIDUS-Refresher and was collected to explore the links between socio-demographic, psychosocial, and biological factors related to morbidity and mortality in later life. Eligibility for participation required survey respondents to have completed the MIDUS-Refresher and to live in the continental United States. Eligible participants were contacted by one of three data collection sites (University of California—Los Angeles, University of Wisconsin, or Georgetown University). The data used in the present analysis were collected via a self-administered questionnaire.

Measures

Perceived Burdensomeness. P.B. was constructed using 8 items[1]; although newly developed for the current study, this index as currently comprised has excellent face validity and good internal consistency (Cronbach's $\alpha = 0.77$). We included two items from the Mood and Symptom Questionnaire (MASQ; Clark & Watson, 1991; Watson et al., 1995a, 1995b), 5 items from the self-esteem questionnaire (Rosenberg, 1965), and 1item from the self-control scale (Gross & John, 2003;

Markus & Kitayama, 1991). These items were selected for their theoretical applicability to the construct of P.B. The two items on the MASQ were measured using a 5-point Likert-type scale ranging from (1) not at all to (5) extremely. The 5 items from the self-esteem questionnaire were measured on a 7-point Likert-type scale ranging from (1) strongly agree to (7) strongly disagree. The one item from the self-control scale was measured on a 7-point Likert-type scale ranging from (1) strongly disagree to (7) strongly agree. All items were standardized and, when applicable, reversed so that high scores were indicative of experiencing greater P.B. Sample items include: "felt worthless," "felt inferior to others," "certainly feel useless at times," and "worry that I am a burden on others." The mean score for P.B was 1.68 ($SD = 0.54$) with a range of 1.00 to 3.43. The questions used to construct the measure of P.B. were chosen due to their similarity to the construct as outlined by Van Orden et al. (2010). For example, they are similar to a sense of liability (e.g., "I worry that I am a burden on others") and self-hate (e.g., "I felt worthless") that are characteristic of P.B..

Thwarted Belonging. T.B. was constructed using 9-items[2]; although the scale was developed for the current study, this index has a high degree of internal consistency (Cronbach's $\alpha = 0.83$) and excellent face validity. Of the 9-items, 7-items were drawn from the UCLA Loneliness Scale (Russell, 1996) and 2-items were drawn from a social well-being scale (Keyes, 1998). Items taken from the UCLA loneliness scale were measured on a 4-point Likert-type scale ranging from (1) never to (4) often while the social well-being items were measured on a 7-point Likert-type scale ranging from (1) strongly agree to (7) strongly disagree. All items were standardized, and when necessary, reversed so that high scores were indicative of greater reporting of T.B. Sample items include: "There is no one I can turn to," "I feel isolated from others," "I don't feel I belong to anything I'd call a community," and "People are around me but not with me." The mean score for T.B. was −0.18 ($SD = 0.58$) with a range of −1.01 to 1.98. As with P.B., the questions used to construct the T.B. were selected due to their connection to the theoretical construct as outlined by Van Orden et al. (2010). For example, their connection to loneliness (e.g., "I feel isolated from others") and absence of reciprocal care (e.g., "There is no one I can turn to").

Generativity. Generativity was constructed using a 6-item short form of the Loyola Generativity Scale (McAdams & de St. Aubin, 1992) and had a high degree of internal consistency (Cronbach's $\alpha = 0.82$). Items were measured with a 4-point Likert-type scale ranging from (1) not at all to (4) extremely. Items were reversed, when necessary, so that high scores on the generativity measure indicated a greater sense of generativity. Sample items include: "You have important skills you can pass along to others," "You like to teach things to people," "Many people come to you for advice," and "Others would say that you have made unique contributions to society." The mean score for generativity was 2.94 ($SD = 0.58$) with a range of 1.17 to 4.0.

Family and Friend Support. Family and friend support were constructed with 4-items each (8 in total) adapted from previous research (Schuster et al., 1990). Family support had good internal consistency (Cronbach's $\alpha = 0.73$) and friend

support had very good internal consistency (Cronbach's $\alpha = 0.86$). Items were measured using a 4-point Likert-type scale ranging from (1) a lot to (4) not at all. Sample items include: "How much do they [family] care about you," "How much can you open up to them [family] to talk about your worries," and "How much can you rely on them [friends] for help if you have a serious problem." The mean score for family support was 3.52 ($SD = 0.47$) with a range of 2.25 to 4.00, while the mean score for friend support was 3.36 ($SD = 0.58$) with a range of 1.50 to 4.00.

Perceived Neighborhood Quality. Perceptions of neighborhood quality were constructed using 5 items from past research (Keyes, 1998) and 4-items developed by the MIDUS researchers and had suitable internal consistency (Cronbach's $\alpha = 0.72$). These items were measured on a 4-point Likert-type scale ranging from (1) a lot —(4) not at all. When necessary, items were reversed so that high scores on the measure were indicative of high perceptions of neighborhood quality. Sample items include: "I feel safe being out alone in my neighborhood at night," "I could call on a neighbor for help if I needed it," and "It is hopeless to try and improve my home or neighborhood." The mean score of neighborhood quality was 3.59 ($SD = 0.35$) with a range of 2.56 to 4.00.

Financial Stability. The measure for financial stability was collected using 7 items developed by the MIDUS researchers and which had very high internal consistency (Cronbach's $\alpha = 0.82$). These 7 items were measured on 11-point Likert-type scales (0 = worst/none—10 = best/very much), 4-point Likert-type scales (1 = very difficult–4 = not at all difficult), and 7-point Likert-type scales (1 = much more difficult now–7 = much less difficult now). Sample items include: "Rate your financial situation these days," and "How difficult is it for you and your family to pay your monthly bills." Items were standardized and, when necessary, reversed so that high scores on the item was emblematic of a positive financial situation. The mean score for financial situation was 0.12 ($SD = 0.65$) with a range of −1.92 to 1.55.

Hopelessness. Hopelessness was constructed with 12 items, 2 items drawn from the MASQ (Mood and Anxiety Symptom Questionnaire; Clark & Watson, 1991; Watson et al., 1995a, 1995b) and 10 items from optimism and pessimism scales (Scheier et al., 1994; Scheier & Carver, 1985; Schulz et al., 1996). The scale had very good internal consistency (Cronbach's $\alpha = 0.82$). The items were measured using 5-point Likert-type scales ranging from (1) not at all—(5) extremely and (1) a lot agree—(5) a lot disagree. When necessary, items were reversed, so that high scores on hopelessness was indicative of high levels of hopelessness. Sample items include: "Felt hopeless," "Felt hopeful about the future," and "I hardly ever expect things to go my way." The mean score for hopelessness was 2.04 ($SD = 0.53$) with a range of 1.00 to 3.67.

Depressive Symptoms. The depressive symptoms measure was constructed using 9 items from the MASQ (Clark & Watson, 1991; Watson et al., 1995a, 1995b) and 2 items from the Center for Epidemiological Studies Depression Scale (CES-D; Devins & Orme, 1985; Radloff, 1977; Roberts & Vernon, 1983). The measure had good internal consistency (Cronbach's $\alpha = 0.78$). Items were standardized and, when necessary, reversed so that high scores were indicative of high levels of depressive

symptoms. The items of the MASQ ranged from (1) not at all—(5) extremely while the CES-D items ranged from (1) rarely or none of the time—(4) most or all of the time. Sample items include: "Felt depressed," "Felt nothing was very enjoyable," and "Felt like crying." The mean score for depressive symptoms was 1.57 ($SD = 0.44$) with a range of 1.00 to 2.92.

Chronic Health Conditions. The number of chronic conditions participants experienced in the past 12 months was measured using a total of 39 items representing the presence (1) or absence (0) of a chronic condition. These conditions include lung disease, diabetes and others. The total number of chronic conditions was computed by summing across these 39 items; higher scores indicated a greater number of health challenges. The mean score for chronic conditions was 2.31 ($SD = 2.01$) with a range of 0 to 8.

Data Analysis Strategy

We use hierarchical linear regression to explore the unique role of generativity in the prediction of two well-established interpersonal risk factors for suicide: P.B and T.B. (controlling for the other psychosocial, physical, and contextual variables). Our analysis focuses on three hierarchical linear regression models: (1) model 1 predicting P.B, (2) model 2 predicting T.B., and (3) model 3 predicting the interaction of P.B and T.B. Each model will introduce gender, age, financial situation, depressive symptoms, perceived neighborhood quality, hopelessness, friend support, and family support at step 1 (as controls) and generativity at step 2.

Results

Sample Characteristics and Bivariate Results

Given the well-established gender differences in most of the variables addressed in the current study, the first analytic step was to provide descriptive information by gender (and to test for gender differences) in all study variables. Thus, the results of independent samples *t*-tests exploring gender differences across study variables are depicted in Table 1. As indicated, there are a number of statistically significant gender differences of interest. Although male and female participants did not differ on P.B, they did differ on T.B., $t(455) = 2.63, p < .01$, with male participants reporting a greater sense of T.B. as compared to female participants. Additionally, there was a statistically significant difference in generativity, $t(454) = -3.31, p < .001$, with female participants more likely to report generativity compared with male participants. We found a higher association of generativity for women compared to men. Females also reported higher depression, family support, friend support, as well as chronic health conditions. In contrast, men, as compared to women, reported higher financial security.

Table 2 displays the bivariate associations across study variables and provides some preliminary indications of the nature of the associations between our predictors and

Table 1. Gender Differences Across the Study Variables.

	Male		Female		
	M	SD	M	SD	t-Test
Depressive symptoms	1.50	0.39	1.65	0.47	−3.76***
Perceived burdensomeness	1.67	0.54	1.70	0.53	−0.61
Thwarted belonging	−0.11	0.58	−0.25	0.57	2.63**
Hopelessness	2.07	0.53	2.01	0.53	1.25
Generativity	2.86	0.56	3.03	0.58	−3.31***
Perceived neighborhood quality	3.61	0.33	3.58	0.37	1.06
Financial situation	0.19	0.62	0.05	0.66	2.38*
Family support	3.48	0.48	3.56	0.46	−2.01*
Friend support	3.20	0.58	3.54	0.53	−6.38***
Chronic conditions	1.99	1.83	2.66	2.14	−3.62***

$*p \leq 0.05.$
$**p \leq 0.01.$
$***p \leq 0.001.$

outcome variables. For example, P.B and T.B. had a relatively robust and significant positive association ($r = .51$ males; $r = .40$ females) which is to be expected given their focal role in suicide as postulated by the IPTS. Additionally, our main predictor of interest, generativity, also had significant associations with P.B ($r = -0.28$ males; $r = -0.14$ females) and T.B. ($r = -0.28$ males; $r = -0.14$). Other associations were in expected directions. For example, friend and family support were both associated with decreased P.B and T.B., whereas depression was associated with increased P.B and T.B.

Model 1: Perceived Burdensomeness

Hierarchical multiple regression was used to assess the ability of generativity to predict P.B after taking into account other environmental and individual risk and protective factors. Table 3 highlights the results of this analysis. At step 1, participants' gender, age, depressive symptoms scores, hopelessness scores, perceived neighborhood quality scores, financial situation scores, family support scores, friend support scores, and number of chronic conditions were all entered into the regression. Step 1 independent variables explained between 48.5% and 49.5% of the variance in P.B. After entering generativity at step 2, the model as a whole explained between 49.3% and 50.4% of the variance in P.B. This indicates that generativity helped explain an additional 0.8% to 0.9% of the variance in P.B ($\Delta R^2 = 0.01$, $p = .004$). Generativity had a statistically significant, negative regression coefficient ($\beta = -0.10$), indicating that participants with higher levels of generativity were less likely to report P.B. In

Table 2. Bivariate Associations Across the Study Variables by Gender.

	1	2	3	4	5	6	7	8	9	10
1. Perceived burdensomeness	—	0.40***	0.51***	0.64***	-0.33***	-0.32***	-0.14*	-0.03	-0.12	0.20**
2. Thwarted belonging	0.51***	—	0.38***	0.47***	-0.15*	-0.29***	-0.26***	-0.30***	-0.44***	0.19**
3. Depressive symptoms	0.52***	0.43***	—	0.47***	-0.12	-0.23***	-0.02	-0.12	-0.14*	0.33***
4. Hopelessness	0.65***	0.52***	0.50***	—	-0.35***	-0.27***	-0.21**	-0.09	-0.20**	0.17*
5. Financial situation	-0.35***	-0.24***	-0.25***	-0.30***	—	0.38***	0.03	-0.01	0.03	-0.21***
6. Neighborhood quality	-0.22***	-0.28***	-0.27***	-0.30***	0.29***	—	0.11	0.21**	0.22***	-0.12
7. Generativity	-0.28***	-0.24***	-0.003	-0.23***	0.08	0.03	—	0.02	0.26***	0.06
8. Family support	-0.22***	-0.30***	-0.17*	-0.20**	0.11	0.17*	0.13*	—	0.29***	0.04
9. Friend support	-0.24***	-0.34***	-0.21***	-0.26***	0.04	0.24***	0.16*	0.29***	—	-0.06
10. Chronic conditions	0.27***	0.08	0.27***	0.17**	-0.17**	-0.11	-0.01	0.00	-0.06	—

Note. Female results are shown in the upper half, whereas male results are shown in the lower half.

*$p \leq 0.05$.
**$p \leq 0.01$.
***$p \leq 0.001$.

35

Table 3. Results of Hierarchical Multiple Regression Analysis for Perceived Burdensomeness and Thwarted Belonging.

	MODEL 1 Perceived Burdensomeness		MODEL 2 Thwarted Belongingness		MODEL 3: Perceived Burdensomeness *Thwarted Belonging	
	β (SE)	95% CI (lower, upper)	β (SE)	95% CI (lower, upper)	β (SE)	95% CI (lower, upper)
Step 1						
Gender	−0.001 (0.039)	−0.078, 0.076	−0.052 (0.047)	−0.144, 0.040	−0.061 (0.088)	−0.234, 0.112
Age	−0.030 (0.002)	−0.034, −0.026	0.022 (0.002)	0.018, 0.026	0.030 (0.004)	0.022, 0.038
Depressive symptoms	**0.245 (0.050)**	**0.147, 0.343**	**0.184 (0.059)**	**0.068, 0.300**	**0.176 (0.112)**	**−0.044, 0.396**
Hopelessness	**0.450 (0.042)**	**0.367, 0.533**	**0.290 (0.050)**	**0.192, 0.389**	**0.283 (0.094)**	**0.098, 0.468**
Neighborhood quality	−0.023 (0.058)	−0.137, 0.091	−0.067 (0.068)	−0.201, 0.067	−0.036 (0.130)	−0.291, 0.219
Financial situation	**−0.117 (0.032)**	**−0.180, −0.054**	−0.029 (0.037)	−0.102, 0.044	−0.039 (0.071)	−0.179, 0.101
Family support	−0.015 (0.041)	−0.096, 0.066	**−0.153 (0.049)**	**−0.249, −0.057**	**−0.136 (0.092)**	**−0.317, 0.045**
Friend support	0.001 (0.035)	−0.068, 0.070	**−0.206 (0.042)**	**−0.289, −0.123**	**−0.232 (0.080)**	**−0.389, −0.075**
Chronic conditions	0.071 (0.010)	0.051, 0.091	0.011 (0.012)	−0.013, 0.035	0.015 (0.022)	−0.028, 0.058
Step 2						
Generativity	**−0.103 (0.033)**	**−0.168, −0.038**	**−0.111 (0.039)**	**−0.188, −0.034**	**−0.078 (0.074)**	**−0.223, 0.067**

Note. Regression coefficients reported are the standardized regressions from the final step in the analyses. Bold indicates statistical significance ($p \leq 0.05$).
- Model 1, Step 1: $F(9, 446) = 48.58$, $p \leq 0.001$, $R^2 = 0.495$; Step 2: $F(10, 445) = 45.31$, $p \leq 0.001$, $R^2 = 0.504$
- Model 2, Step 1: $F(9, 446) = 31.57$, $p \leq 0.001$, $R^2 = 0.389$; Step 2: $F(10, 445) = 29.67$, $p \leq 0.001$, $R^2 = 0.400$
- Model 3, Step 1: $F(9, 446) = 28.83$, $p \leq 0.001$, $R^2 = 0.368$; Step 2: $F(10.445) = 26.50$, $p \leq 0.001$, $R^2 = 0.373$

the final model, depressive symptoms ($\beta = 0.25$), hopelessness ($\beta = 0.45$), and financial situation ($\beta = -0.12$) were also significant predictors of P.B.

Model 2: Thwarted Belonging

Hierarchical multiple regression was also used to assess whether generativity is associated with T.B. beyond the influence of a number of environmental and individual factors. The summary of the results can be seen in Table 3. At step 1, participants' gender, age, depressive symptoms scores, hopelessness scores, perceived neighborhood quality scores, financial situation scores, family support scores, friend support scores, and the number of chronic conditions a participant has were all entered into the regression. Step 1 explained between 37.7% and 38.9% of the variance in T.B. After the introduction of generativity at step 2, the model explained between 38.7% and 40.0% of the variance in T.B., indicating that the addition of generativity increased the variance explained by between 1% and 1.1% ($\Delta R^2 = 0.01 = 0.01$, $p = .005$). Generativity had a statistically significant negative regression coefficient ($\beta = -0.11$), indicating that participants with high scores on generativity were more likely to have low scores on T.B. In addition to generativity, depressive symptoms ($\beta = 0.18$), hopelessness ($\beta = 0.29$), family support ($\beta = -0.15$), and friend support ($\beta = -0.21$) were all significantly associated with T.B.

Model 3: Perceived Burdensomeness × Thwarted Belonging

Hierarchical multiple regression was also used to assess the ability of generativity to predict the interaction of P.B and T.B., arguably had the strongest association, after controlling for several environmental and individual factors. These results can be seen in Table 3. At step 1, participants' gender, age, depressive symptoms scores, hopelessness scores, perceived neighborhood quality scores, financial situation scores, family support scores, friend support scores, and the number of chronic conditions a participant has were all entered in the regression. Step 1 explained between 35.5% and 36.8% of the variance in the interaction of P.B and T.B. The introduction of generativity into the model at step 2 increased the percent of variance explained to a range of 35.9% to 37.3% (an increase of between 0.4% and 0.5%, $\Delta R^2 = .01 = .01$, $p = .05$). Generativity, as expected given results from Model 1 and Model 2, had a statistically significant association with the interaction of P.B and T.B. and had a negative regression coefficient ($\beta = -0.08$), indicating that participants with high generativity had lower interaction scores. This indicates that those with high generativity were less likely to report higher scores on both T.B. and P.B. Additionally, depressive symptoms ($\beta = 0.18$), hopelessness ($\beta = 0.28$), family support ($\beta = -0.14$), and friend support ($\beta = -0.23$) were all significant contributors to the model. In all three of our multivariate models, neither the gender nor age was statistically significant.

Discussion

Our research sought to fill a gap in the literature by examining the association of generativity with two characteristics of social cognition that previous researchers found was linked to suicide—P.B. and T.B.. We hypothesized that those higher in generativity would report lower T.B., P.B., and the interaction of these two measures of risk for suicide. First, our results show support for H1 with our finding that higher levels of generativity are associated with lower P.B. Respondents with high generativity are less likely to report feeling inferior or worthless, or that they are a burden to others. In addition, higher generativity may decrease the sense of burden among those who are being cared for by their family or others. This is especially important as Americans are living longer, more likely to age in place, and be cared for by their children, especially daughters (Miller et al., 2008). As some previous research has found associations between being cared for and a sense of burdensomeness (Choi-Kwon et al., 2005), we suggest that high generativity may mitigate perceptions of burdensomeness.

Second, we also find a significant negative association of high generativity with respondents' sense of T.B (providing support for H2). Thus, perceived isolation—the sense that one doesn't belong to a community or has no one to turn to—is lower when generativity is higher. We surmise that those individuals who have a high sense of generativity may feel that others come to them for advice, or that they possess important skills which they can pass along to others. These aspects of self-perception, then, may help to mitigate feelings of isolation from family, friends, or their community. Overall, the results of our analyses provide support for the notion that a sense of feeling needed—whether as a caregiver, sharer of information and wisdom, or mentor to colleagues—is associated with feelings of being a significant member of a family, community, or larger society. This is in line with the IPTS model, which posits that loneliness and lack of social connectedness are associated with suicidal thoughts and behavior (Van Orden et al., 2010). Additionally, participants with high generativity had lower interaction scores, providing stronger support for H3. Risk for suicide, according to the IPTS, is highest among individuals when *both* P.B and T.B. are perceived. Thus, our findings regarding the interaction of the two, are important in understanding the potential impact of generativity on older adult suicidal desire (Van Orden et al., 2010).

Focusing on the bivariate results on gender differences in our two main outcome variables, we find no gender difference in P.B, but did find male respondents reported a greater sense of T.B. than that of female respondents (supporting H4). This gender difference is consistent with findings described above by Donker et al. (2014). Furthermore, according to Joiner (2011), men in mid-life and old age allow their relationships to atrophy, leading to greater experience of T.B. and ultimately greater suicide risk. The bivariate results also show women are significantly more likely to report greater generativity as compared to their male peers. Although mixed, our findings on gender differences are also interesting given that previous research has called

for more exploration of adult development, specifically the complicated and under-evaluated 'double' generativity derived from both caregiving relationships and occupational ones among women (Miller-McLemore, 2004). In sum, women may report higher generativity due to their multiple roles across family and work. Our research may inform future research on women's greater role in child caretaker that burgeoned during the Covid-19 pandemic (Carlson & Petts, 2022; Heggeness & Fields, 2020).

Despite these gender differences in the bivariate models, in our multivariate models, gender failed to have a significant independent effect on P.B. or T.B., taking into account generativity and other individual or environmental factors. Prior feminist researchers have argued that the notion of a singular psychosocial crisis in middle adulthood may be more relevant for men than for women (Edelstein, 1997; Gilligan, 2016). In contrast, women's engagement in paid labor has increased significantly since Erikson's formulation of generativity versus stagnation. The fact that our multivariate models do not bear out significant gender as a significant predictor of our measures of suicide risk, we suggest that this may be due to gender differences in how men and women think about and experience generativity (Edelstein, 1997; Gilligan, 1982) that may not be captured in the Loyola scale utilized by the MIDUS survey. Future research should examine this potential gender difference and its implications.

It is important to note that generativity *does have* an independent effect on T.B. and P.B. even after taking into account additional individual and environmental factors including age, gender, depressive symptoms, hopelessness, finances, family and friend support, chronic medical conditions, and neighborhood quality. For example, we find a significant and positive association between hopelessness with both T.B. and P.B., as well as with the interaction of these two ITPS model constructs. Thus, greater hopelessness is associated with greater feelings of not belonging or being a burden. However, high generativity still provides a significant, independent, and positive effect. Thus, our results suggest that generativity—by providing a protective effect against P.B and T.B.—may be associated with lower suicide ideation and acts.

We also note that age had no significant effect on T.B. or P.B. or the interaction of the two. On the one hand conventional wisdom might predict—given the difficulties associated with older age (post 65) including greater isolation stemming from an increasing likelihood of being retired, widowed, or having chronic conditions—that increased older age will be associated with a greater sense of T.B. and P.B. However, we suggest that this lack of significance of age may suggest that community connection and perceptions of burdensomeness are occurring more and more at younger ages. For example at midlife, many face reductions in family or social network size and support as children leave for college leaving empty nests, or through marital dissolution, moving to a new region, or changing jobs. During these possible mid-life events, declining social networks may necessitate the need to build new social bonds—especially those unrelated to family or employment. Even at mid-life, individuals may seek new activities as a path to creating social bonds. And lastly, recent research indicates that Covid-19 has fueled existing and more prevalent social isolation, likely related to increased use of social media among all age groups.

Both government and healthcare corporation reports find that loneliness is the highest among those ages 18 to 24. Thus, thoughts and feelings that may lead to suicide among elders and middle-aged individuals are increasingly reported among younger populations as compared with the past. (Cigna Corp, 2021; Office of the Surgeon General, 2023).

In sum, from a preventative perspective, this research and more recent reports suggest the importance of community-based organizations to embed social connection opportunities in inclusive spaces to promote social connection and to actively seek and construct partnerships social institutions including families, schools, health organizations, and workplaces to support those experiencing loneliness and social isolation. Additionally, we suggest that just as pediatricians check in the psychosocial well-being of children and teens, primary care physicians and gerontological specialists might inquire about adults' social relationships and community connections to ensure that they are well supported and have opportunities to remain vital and involved in their communities.

Limitations

As with any research, there are several limitations to note with regard to the current study. First, the use of cross-sectional data limits our findings to identifying associations between generativity with T.B. and P.B., as opposed to causal links. Though some variables can be tracked longitudinally with the MIDUS data, many of our variables of interest were structured in such a way as to make longitudinal analysis impossible (e.g., items not measured again in later waves). Second, unfortunately, the current sample size limited our ability to effectively consider racial/ethnic differences, which are certainly important, especially in light of racial differences present in the literature on generativity (Hart et al., 2001; Newton & Baltys, 2014). Moreover, preliminary state-level data from the Covid-19 Pandemic points to alarming emerging racial differences, with white suicides decreasing and non-white suicides increasing (Bray et al., 2020; Mitchell & Li, 2021). Future data collection efforts must aim for more representative samples across race/ethnicity.

A third limitation concerns the Loyola scale on generativity used in the MIDUS sample, based on the assumptions in Erikson's theory of generativity, developed in 1959. Although gender neutral in language, this scale may not adequately capture important gender differences in adult development including the rapid growth in women's, and especially mothers', entrance into the labor force beginning in the late 1960's. Although considerable negative effects are the focus of much research on the second shift (especially salient during the Covid-19 pandemic), we note that women's dual family caregiver and paid work roles may actually protect women from feelings of isolation or being a burden. Thus, future research should consider gender differences in the roots of generativity vs. stagnation in mid- to late-life.

Another consideration is the limited impact of generativity on the predictive model in terms of variance explained. The introduction of generativity to our models

increased the amount of variance explained by around 1%. There is concern about whether or not this statically significant finding is in fact meaningful. Future work would benefit from collecting qualitative data among older adults to determine the meaningfulness of generativity in the lives of those experiencing P.B. or T.B. Finally, the MIDUS dataset does not include scales for P.B. and T.B. nor did we have data to assess suicidal thoughts and behaviors directly. Thus, although the present study drew items from the dataset that were similar to these two constructs, and although we were able to find good internal reliability and acceptable measures of face, discriminate, and converging validity, it is important to note that the specific group of items were not themselves originally intended for measuring these concepts. Future research should make use of scales designed to measure P.B and T.B.in exploring their associations with generativity as well as examine suicidal thoughts and behaviors directly.

Conclusion

In this research, we examined whether Erikson's concept of generativity was associated with two measures of suicide risk, P.B. and T.B. among a sample of middle/older-age respondents using the MIDUS-biomarker survey. We find support for our hypotheses that feeling isolated or that one is a burden are decreased when generativity—the feeling that one is contributing to the care of others and to society—is high. We also find support for the association of generativity and the interaction of these two risks factors for suicide. More research is needed to further understand potential connection of one's sense of generativity with mid- to late-life suicidal ideation and behaviors, and how this association varies by gender and race/ethnicity. However, the present findings highlight the potential for generativity to be a protective factor against two highly discussed suicide risk factors: P.B. and T.B. Thus, families and agencies working with middle-aged and older adults, especially with those who have reduced proximal social ties, should embark upon efforts to promote generativity-related activities. Doing so would have preventative benefits for the focal adult and would also have the collateral benefit of contributing to others and/or to society in a meaningful way.

ORCID iD

Constance T. Gager https://orcid.org/0000-0001-7181-5176

Notes

1. Information on the discriminate and converging validity can be obtained by contacting the authors.
2. Information on the discriminate and converging validity can be obtained by contacting the authors.

References

An, J. S., & Cooney, T. M. (2006). Psychological well-being in mid to late life: The role of generativity development and parent–child relationships across the lifespan. *International Journal of Behavioral Development*, *30*(5), 410–421. https://doi.org/10.1177/0165025406071489

Beck, A. T., Kovacs, M., & Weissman, A. (1975). Hopelessness and suicidal behavior: An overview. *JAMA*, *234*(11), 1146–1149. https://doi.org/10.1001/jama.1975.03260240050026

Beck, A. T., Steer, R. A., Kovacs, M., & Garrison, B. (1985). Hopelessness and eventual suicide: A 10-year prospective study of patients hospitalized with suicidal ideation. *American Journal of Psychiatry*, *142*(5), 559–563. https://doi.org/10.1176/ajp.142.5.559

Bray, M. J., Daneshvari, N. O., Indu, I, Cubbage, J., Eagle, M., Southall, P., & Nestadt, P. S. (2021). Racial differences in statewide suicide mortality trends in Maryland during the coronavirus disease 2019 (COVID-19) pandemic. *JAMA Psychiatry*, *78*(4), 444–447. https://doi.org/10.1001/jamapsychiatry.2020.3938

Carlson, D. L., & Petts, R. J. (2022). Parents' domestic labor during the first year of the COVID-19 pandemic. *Population Research and Policy Review*, *41*(6), 2393–2418. https://doi.org/10.1007/s11113-022-09735-1

Carlson, M. C., Seeman, T., & Fried, L. P. (2000). Importance of generativity for healthy aging in older women. *Aging Clinical and Experimental Research*, *12*(2), 132–140. https://doi.org/10.1007/BF03339899

Choi-Kwon, S., Kim, H. Kwon, S. U. & Kim, J.S. (2005). Factors affecting the burden on caregivers of stroke survivors in South Korea. *Archives of Physical Medicine and Rehabilitation*, *86*(5),1043–1048. https://doi.org/10.1016/j.apmr.2004.09.013

Christensen, H., Batterham, P. J., Mackinnon, A. J., Donker, T., & Soubelet, A. (2014). Predictors of the risk factors for suicide identified by the interpersonal-psychological theory of suicidal behaviour. *BMS Psychology*, *2*(1), 20. https://doi.org/10.1186/2050-7283-2-20

Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., Rogers, M. L., Podlogar, M. C., Chiurliza, B., Ringer, F. B., Michaels, M. S., Patros, C. H. G., & Joiner, T. E. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, *143*(12), 1313–1345. https://doi.org/10.1037/bul0000123

Cigna Corporation (2021). The loneliness epidemic persists: A post-pandemic look at the state of loneliness among U.S. adults.

Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, *100*(3), 316–336. https://doi.org/10.1037/0021-843X.100.3.316

Czeisler, M. E., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., Weaver, M. D., Robbins, R., Facer-Childs, E. R., Barger, L. R., Czeisler, C. A., Howard, M. E., & Rajaratnam, S. M. W. (2020). Mental health, substance use, and suicidal ideation during the COVID-19 pandemic — United States. *CDC Morbidity and Mortality Weekly Report*, *69*(32).

Devins, G. M., & Orme, C. M. (1985). Center for epidemiologic studies depression scale. *Test Critiques*, *21*(3), 267–283. https://.apa.org/doi/10.1037/h0078842ype

Devins, G. M., & Seland, T. P. (1987). Emotional impact of multiple sclerosis: Recent findings and suggestions for future research. *Psychological Bulletin*, *101*(3), 363–375. https://doi.org/10.1037/0033-2909.101.3.363

Donker, T., Batterham, P. J., Van Orden, K. A., & Christensen, H. (2014). Gender-differences in risk factors for suicidal behaviour identified by perceived burdensomeness, thwarted belongingness and acquired capability: Cross-sectional analysis from a longitudinal cohort study. *BMC Psychology*, *2*(1), 20. https://doi.org/10.1186/2050-7283-2-20

Drapeau, C. W., & McIntosh, J. L. (2021). *U.S.A. suicide: 2020 Official final data.* Minneapolis, MN: Suicide Awareness Voices of Education (SAVE), December 24, 2021, from https://save.org/about-suicide/suicide- statistics

Drapeau, C. W., & McIntosh, J. L. (2023). *U.S.A. Suicide: 2021 Official Final Data.* Minneapolis, MN: Suicide Awareness Voices of Education (SAVE), dated January 12, 2023, from https://save.org/about-suicide/suicide-statistics

Dunn, O. J. (1959). Estimation of the Medians for Dependent Variables. *The Annals of Mathematical Statistics*, *30*(1), 192–197. http://www.jstor.org/stable/2237135

Dwyer, J. W., & Goward, R. T. (Eds.). (1992). *Gender, families, and elder care*. Sage.

Edelstein, L. N. (1997). Revisiting Erikson's views on women's generativity, or Erikson didn't understand midlife women [Paper presentation]. Annual meetings of the American Psychological Association, Chicago, IL.

Erikson, E. H. (1963). *Childhood and society*. W. W. Norton.

Erikson, E. H. (1982). *The life cycle completed*. W. W. Norton.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Harvard University Press.

Gilligan, C. (2016). *In a different voice*. Harvard University Press.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

Grossman, M. R., & Gruenewald, T. L. (2017). Caregiving and perceived generativity: A positive and protective aspect of providing care? *Clinical Gerontologist*, *40*(5), 435–447. https://doi.org/10.1080/07317115.2017.1317686

Hart, H. M., McAdams, D. P., Hirsch, B. J., & Bauer, J. J. (2001). Generativity and social involvement among African Americans and white adults. *Journal of Research in Personality*, *35*(2), 208–230. https://doi.org/10.1006/jrpe.2001.2318

Haw, C., Hawton, K., Niedzwiedz, C., & Platt, S. (2013). Suicide clusters: A review of risk factors and mechanisms. *Suicide and Life-Threatening Behavior*, *43*, 97–108. https://doi.org/10.1111/j.1943-278X.2012.00130.x

Heggeness, M. L., & Fields, J. (2020, August 18). Working Moms bear brunt of home schooling while working during Covid-19. https://www.census.gov/library/stories/2020/08/parents-juggle-work-and-child-care-during-pandemic.html

Hernandez, S. C. (2022). *Suicidal ideation across adulthood: Applying Erikson's theory of psychosocial development* [Doctoral dissertation]. Case Western Reserve University.

Hill, R. M., Hatkevich, C., Pettit, J. W., & Sharp, C. (2017). Gender and the interpersonal-psychological theory of suicide: A three-way interaction between perceived burdensomeness, thwarted belongingness, and gender. *Journal of Social and Clinical Psychology*, *36*(10), 799–813. https://doi.org/10.1521/jscp.2017.36.10.799

Hunt, I. M., Kapur, N., Webb, R., Robinson, J., Burns, J., Shaw, J., & Appleby, L. (2009). Suicide in recently discharged psychiatric patients: A case control study. *Psychological Medicine*, *39*(3), 443–449. https://doi.org/10.1017/S0033291708003644

Joiner, T. E. J. (2005). *Why people die by suicide*. Harvard University Press.

Joiner, T. E. J. (2011). *Lonely at the top: The high cost of men's success*. Palgrave Macmillan.

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, *61*(2), 121–140. https://doi.org/10.2307/2787065

Ma, J., Batterham, P. J., Calear, A. L., & Han, J. (2016). A systematic review of the predictions of the interpersonal–psychological theory of suicidal behavior. *Clinical Psychology Review*, *46*, 34–45. https://doi.org/10.1016/j.cpr.2016.04.008

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

McAdams, D. P., & de St. Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *Journal of Personality and Social Psychology*, *62*(6), 1003–1015. https://doi.org/10.1037/0022-3514.62.6.1003

McAdams, D. P., de St. Aubin, E., & Logan, R. L. (1993). Generativity among young, midlife, and older adults. *Psychology and Aging*, *8*(2), 221–230. https://doi.org/10.1037/0882-7974.8.2.221

Miller, A. M., Sorokin, O., & Fogg, L. (2013). Individual, family, social, and cultural predictors of depressed mood in former soviet immigrant couples. *Research in Nursing & Health*, *36*(3), 271–283. https://doi.org/10.1003/nur.21535

Miller, K. I., Shoemaker, M. M., Willyard, J., & Addison, P. (2008). Providing care for elderly parents: A structural approach to family caregiver identity. *Journal of Family Communication*, *8*(1), 19–43. https://doi.org/10.1080/15267430701389947

Miller-McLemore, B. J. (2004). Generativity and gender: The politics of care. In E. de St. Aubin, D. P. McAdams, & T. C. Kim (Eds.), *The generative society: Caring for future generations* (pp. 175–194). American Psychological Association. https://doi.org/10.1037/10622-011

Mitchell, T. O., & Li, L. (2021) State-level data on suicide mortality during COVID-19 quarantine: Early evidence of a disproportionate impact on racial minorities. *Psychiatry Research*, *295*(113629). https://doi.org/10.1016/j.psychres.2020.113629

Moieni, M., Irwin, M. R., Seeman, T. E., Robles, T. F., Lieberman, M. D., Breen, E. C., Okimoto, S., Lengacher, C., Arevalo, J. M. G., Olmstead, R., Cole, S. W., & Eisenberger,

N. I. (2020). Feeling needed: Effects of a randomized generativity intervention on well-being and inflammation in older women. *Brain, Behavior, and Immunity*, *84*, 97–105. https://doi.org/10.1016/j.bbi.2019.11.014

Moieni, M., Seeman, T. E., Robles, T. F., Lieberman, M. D., Okimoto, S., Lengacher, C., Irwin, M. R., & Eisenberger, N. I. (2021). Generativity and social well-being in older women: Expectations regarding aging matter. *The Journals of Gerontology: Series B*, *76*(2), 289–294. https://doi.org/10.1093/geronb/gbaa022

Newton, N. J., & Baltys, I. H. (2014). Parent status and generativity within the context of race. *International Journal of Aging and Human Development*, *78*(2), 171–195. https://doi.org/10.2190/AG.78.2.e

Office of the Surgeon General. (2023). Our epidemic of loneliness & isolation: The U.S Surgeon General's advisory on the healing effects of social connection and community. https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf

Peterson, B. E. (2002). Longitudinal analysis of midlife generativity, intergenerational roles, and caregiving. *Psychology and Aging*, *17*(1), 161–168. https://doi.org/10.1037/0882-7974.17.1.161

Piscopo, K. D. (2017). Suicidality and death by suicide among middle-aged adults in the United States (The CBHSQ Report). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*(3), 385–401. https://doi.org/10.1177/014662167700100306

Roberts, R. E., & Vernon, S. W. (1983). The center for epidemiologic studies depression scale: Its use in a community sample. *American Journal of Psychiatry*, *140*(1), 41–46. https://doi.org/10.1176/ajp.140.1.41

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.

Russell, D. W. (1996). UCLA Loneliness scale (version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, *66*(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping and health: Assessment and implications for generalized outcome expectancies. *Health Psychology*, *4*(3), 219–247. https://doi.org/10.1037/0278-6133.4.3.219

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology*, *67*(6), 1063–1078. https://doi.org/10.1037/0022-3514.67.6.1063

Schulz, R., Bookwala, J., Knapp, J. E., Scheier, M., & Williamson, G. M. (1996). Pessimism, age, and cancer mortality. *Psychology and Aging*, *11*(2), 304–309. https://doi.org/10.1037/0882-7974.11.2.304

Schuster, T. L., Kessler, R. C., & Aseltine, R. H. (1990). Supportive interactions, negative interactions, and depressive mood. *American Journal of Community Psychology*, *18*(3), 423–438. https://doi.org/10.1007/BF00938116

Sheffler, J. L., Joiner, T. E., & Sachs-Ericsson, N. J. (2021). The interpersonal and psychological impacts of COVID-19 on risk for late-life suicide. *The Gerontologist*, *61*(1), 23–29. https://doi.org/10.1093?geront?gnaa123

Slaughter, A. (2015). *Unfinished business: Women, men, work, family*. Random House.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575–600. https://doi.org/10.1037/a0018697

Villar, F. (2012). Successful ageing and development: The contribution of generativity in older age. *Ageing and Society*, *32*(7), 1087–1105. https://doi.org/10.1017/S0144686X11000973

Watson, D., Clark, L. A., Weber, K., Assenheimer, J. S., Strauss, M. E., & McCormick, R. A. (1995a). Testing a tripartite model: I. Evaluating the convergent and discriminant validity of anxiety and depression symptom scales. *Journal of Abnormal Psychology*, *104*(1), 3–14. https://doi.org/10.1037/0021-843X.104.1.3

Watson, D., Clark, L. A., Weber, K., Assenheimer, J. S., Strauss, M. E., & McCormick, R. A. (1995b). Testing a tripartite model: II. Exploring the symptom structure of anxiety and depression in student, adult, and patient samples. *Journal of Abnormal Psychology*, *104*(1), 15–25. https://doi.org/10.1037/0021-843X.104.1.15

Author Biographies

Constance T. Gager is a Sociologist and Associate Professor in the Department of Family Science and Human Development at Montclair State University. Her most recent research examines the protective effects of generative activities such as volunteer and caring work on suicide ideation and depression among youth as well as aging and disabled populations in the U.S. Previous research focused on the intergenerational transmission of relationship conflict and divorce and perceptions of fairness in the division of labor among married couples.

John F. Gunn is a Assistant Professor of Psychology at Gwynedd Mercy University. His research interests focus on understanding suicidal thoughts and behaviors across developmental periods, exploring theoretical frameworks for suicide, and understanding suicide among at risk populations (e.g. LGBTQ + persons).

Sara E. Goldstein is a Professor of Human Development and Family Sciences at the University of Delaware. Her research focuses on social development and social cognitive development across the lifespan, with a focus on parent-youth relationships, peer relationships during adolescence and emerging adulthood, and the development and maintenance of aggressive behavior, harassment, and bullying through the lifespan.

Stephanie Martinez is a mental health counselor in private practice. She completed her Main Counselling at Montclair State University.