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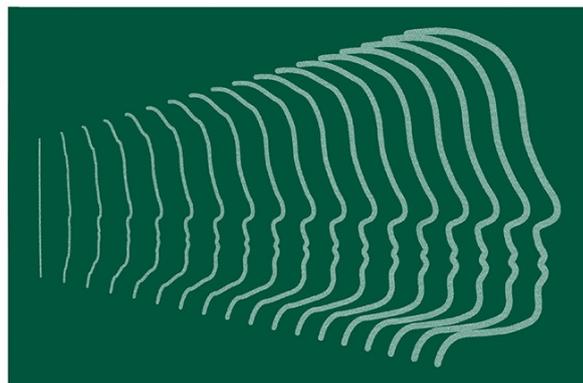
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Generativity and Productive Pursuits: Pathways to Successful Aging in Late Midlife African American and White Women

H. Shellae Versey · Nicola J. Newton

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Abstract The current study aims to examine correlates of successful aging in the context of midlife, by examining its relationship to generativity, or providing for the next generation (Erikson in *Dimensions of a new identity: the 1973 Jefferson lectures in the humanities*, W. W. Norton & Co., Oxford, 1974). This research identifies productive activities (e.g., paid work, sports and recreation) and spiritual commitment as potential moderators of the generativity–successful aging relationship, since engagement in these activities has been suggested to benefit health. Furthermore, we examine how these interactions differ for a sample of 237 middle-aged women (mean age = 61), depending on race. Results indicate that, whereas generativity and successful aging are related for the overall sample, this relationship is moderated by sports and recreation activities, and to a lesser extent, spiritual commitment. Importantly, spiritual commitment is associated with a positive relationship between generativity and successful aging, while sports and recreation is associated with a negative one. When viewed by race, spiritual commitment, and sports and recreation activities moderate the relationship specifically for White women, while paid work does so for Black women. This research highlights the

importance of examining different pathways between generativity and aging successfully.

Keywords Generativity · Successful aging · Middle age · Productive activities

Introduction

The manner in which we age has been and continues to be a major topic of study. Whether conceptualized as optimal aging (Aldwin and Gilmer 2004; Baltes and Baltes 1990; Vaillant and Vaillant 1990) or successful aging (Rowe and Kahn 1987, 1997), the underlying premise is that aging can be a positive experience. Rowe and Kahn define successful aging as having three components: low probability of disease, maintenance of high physical and cognitive function, and active engagement in life (Rowe and Kahn 1997). This approach emphasizes the heterogeneity or variability in how individuals age. It has also been suggested that the concept of successful aging should be less about satisfying rigid criteria solely in *old* age and more about highlighting the adaptive and resilient nature of the individual over their *entire* adult life (Dillaway and Byrnes 2009). Therefore, it is important to explore what defines successful aging, its antecedents, correlates, and pathways.

Previous research has focused on identifying elements of successful aging, finding that well-being, happiness, and positive affect were markers of successful aging (Herzog and Rodgers 1981; Ryff 1989; Stock et al. 1986). Although important, these aspects of aging lack an emphasis on activities that are more appropriately developmental to—and thus, central in—the stage preceding old age: midlife. Generativity, a hallmark of midlife, is associated with

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well-being (Huta and Zuroff 2007) and successful aging (Warburton et al. 2006); however, the mechanism that underlies this relationship is unclear. We examine generativity as a predictor of successful aging and several productive activities as moderators of that relationship. Successful aging is a process that begins well before individuals reach old age, an idea not yet fully explored.

Research has also identified potential expansions to Rowe and Kahn's model, as well as modifications. For example, spirituality (Crowther et al. 2002; McCann et al. 2008), gender, socioeconomic status, and race (McLaughlin et al. 2010) are predictors of aging well, but have received less attention. Moreover, McLaughlin et al. question the relevance of the model for all older individuals, commenting that a minority of older people actually meet Rowe and Kahn's criteria. Their study is one of few to explore the relationship between race and successful aging, motivating the current study's inclusion of race as a secondary moderator of successful aging, as well as an expansion of what successful aging incorporates. Our definition of successful aging incorporates perceived good health, high overall satisfaction with life, and the feeling of empowerment or self-confidence, themes generally spontaneously expressed by midlife and older adults.

Along with the inclusion of race as a moderator in the relationship between generativity and successful aging, we propose that successful aging does not merely begin in late adulthood, but is a process that is well underway even by midlife. Because our sample is middle-aged, generativity (Erikson 1982), or providing for the next generation, seems a likely correlate. Our expanded definition of successful aging includes confident power, which theoretically complements the ideals of successful aging (Stewart and Ostrove 1998; Stewart et al. 2001). Confident power is an expression of mastery and competence as an outcome of psychosocial development (Neugarten 1964; Stewart et al. 2001). Levels of perceived competence vary by age, but these attributions are often correlated with a sense of well-being, particularly among middle-aged women (Helson and Moane 1987).

Additionally, evidence suggests that both generativity and certain types of active engagement benefit health and successful aging (Ackerman et al. 2000; Aubin and McAdams 1995; Keyes and Ryff 1998; Peterson and Duncan 2007; Peterson et al. 1997; Stewart et al. 2001; Vaillant 2004; Versey 2011). For example, both social integration and social contribution (also elements of generativity) are particularly beneficial for well-being (Berkman et al. 2000; Keyes and Ryff 1998), as is political involvement (Peterson et al. 1997). Social and physical activities are also beneficial for health and successful aging (Hoglund et al. 2009). Thus, we hypothesize that feeling generative can take the form of generative actions in many

ways, and these behavioral pathways may be particularly important to consider in the relationship between generativity and successful aging. Essentially, people who feel generative may have a stronger propensity for aging well when attitudes and beliefs about generativity are transformed into pro-social or productive activities. We further suggest that these moderated pathways may differ for Black and White women, since involvement in such activities often varies as a function of race and gender. Therefore, we are proposing a study design in which we are first testing interactions between generativity and certain moderators (e.g., paid work), and then extending this model to account for a potential third interaction by race (three-way moderation).

Initially, we test the relationship between generativity and successful aging, based upon prior literature that generativity may contribute to successful aging (Huta and Zuroff 2007; Vaillant 2004) and then examine how spiritual commitment, sports and recreation, and paid work potentially moderate the primary relationship between generativity and successful aging. From a developmental standpoint, we focus on paid work rather than volunteer or unpaid work: The sample in the current study is approaching retirement, and paid work may be more pertinent to them. Additionally, difficulty arises between types of volunteer activity—whether formal or informal—and how it is reported. Moreover, considerable research concerning volunteer work already exists, whereas fewer studies concerning paid work for middle-aged people are evident.

Generativity and Successful Aging

Generativity, the seventh of Erikson's eight stages (Erikson 1974, 1982), is usually associated with middle age and characterized by "...the establishment, the guidance, and the enrichment of the living generation and the world it inherits" (Erikson 1974, p.123). Erikson felt that accomplishing developmental tasks in later life, particularly those related to "giving back" to future generations, was a positive contribution to psychological well-being. Warburton et al. (2006) support the link between generativity and successful aging: "Involvement in the family and community is seen as a productive and generative activity, [promoting] a positive experience of aging" (p. 115). Other research also supports the generativity well-being link, particularly in midlife (e.g., Ackerman et al. 2000; Keyes and Ryff 1998). In old age, this association has also been demonstrated longitudinally (Vaillant 2004), implying a strong causal association between the two. However, the *process* through which generativity and successful aging are related is less clear (Schoklitsch and Baumann 2012). The relationship appears to be complex, although both

generativity and successful aging emphasize an active engagement in life. Thus, activities such as sports and recreation, work, or commitment to spiritual or religious beliefs may act as positive moderators in this relationship, suggesting that generative individuals who pursue productive outlets during midlife may be more likely to age well (Carlson et al. 1999). A central distinction between this study and previous research (McLaughlin, et al. 2010; Rowe and Kahn 1997) is the hypothesis that productive activities may facilitate, rather than serve as a criterion for, successful aging.

Generativity, Productive Activities, and Successful Aging

Fisher (1995) links generativity to successful aging in a qualitative study that asks participants to identify what successful aging meant to them. He found that the majority of respondents mentioned interactions with others, making a contribution or having a sense of purpose as important, such as “Being around other people. Be active” (p. 244). One participant in a step-grandparent program commented: “These children are our future. They need us to teach them, to point them in the right direction” (p. 247).

Productive Activities. Other research has focused on specific productive activities that also have positive health and well-being outcomes, such as physical activity (Nadasen 2008), sports and recreation (Janke et al. 2008), and work, whether paid or unpaid (Fast et al. 2006; Kahn 1991). For example, Herero and Extremera (2010) found that daily activities, particularly social activities, have a positive effect on well-being. The importance of participating in recreation and meaningful activities in later life as a means of increasing social integration and maintaining life satisfaction is also a focus in research on aging (e.g., Bowling 2007; Nimrod 2007; Silverstein and Parker 2002; Thang 2005).

Likewise, spirituality or religion may provide important pathways to successful aging through perceived support and life satisfaction. Crowther et al. (2002) argue that spirituality is a key element of well-being outcomes among older adults. In fact, research has found that religious activity and religious-related volunteerism are associated with longevity (Glass et al. 1999; Hummer et al. 1999; Oman and Reed 1998). Other studies have shown a positive association between religion and spirituality and better adaptation to medical illness (Ell et al. 1989), more positive health behaviors, effective coping strategies (Kendler et al. 1997; Koenig et al. 1998), and overall greater well-being and purpose in life (Ai et al. 2010; Ironson and Hayward 2008): all conceivably attributes of aging

successfully. Thus, if an individual values a religious or spiritual commitment, they may be more likely to engage in these activities and benefit accordingly.

For some older adults, not only are physical activity, sports and recreation, or religion/spirituality important, but also their involvement in work remains a priority in daily life. Fast et al. (2006) found variations in patterns of paid work at retirement age, for both women and men. The authors note that, although retired, seniors can remain engaged in productive activities well into old age. Hence, we have good reason to think that, particularly in the over-60 age group, having a spiritual orientation and pursuing specific activities (sports and recreation, and work) may moderate the relationship between generativity and successful aging. Taken together, these activities represent pathways that could facilitate benefits for the self and the propensity to age well.

Race, Generativity, Productive Acts, and Successful Aging

Although we have argued that the generativity–successful aging relationship is significant for those individuals who engage in productive activities, we also expect these relationships to differ across racial groups. In a study by Hart and colleagues (2001), African Americans showed higher levels of generative concerns and generative acts than their Caucasian counterparts. However, the generativity/productive activity relationship (in this case, community involvement) was stronger for Whites only, suggesting that generativity may be expressed differently across groups.

The context of race–ethnicity is also relevant to aging, as certain race-related factors and life experiences often affect opportunities for successful aging (Glass et al. 1995; Herd et al. 2011; Jackson et al. 1990; Williams and Wilson 2001). Research suggests that while productive activities may present a pathway for positive health outcomes among older adults, the relationship between these two variables varies by race. Hinterlong (2006), for instance, found that engagement in productive activities was significantly associated with higher self-rated health only among White adults. McIntosh and Danigelis (1995) found that for certain types of productive activities, positive and negative affect varied by racial and gender group; for example, formal religious engagement decreased negative affect for Black women, whereas informal volunteering increased positive affect and decreased negative affect among both Black men and White women (not Black women). The current study seeks to examine whether similar differential patterns exist in relation to successful aging, as such research is rare.

Danigelis and McIntosh (1993) found several sociodemographic differences in the amount of post-retirement fulltime employment in which older individuals engage; for example, younger, more physically active, and higher-SES retirees were more likely to be employed. Continued engagement in paid work during advanced years may also indicate self-fulfillment and/or genuine enjoyment of work. Conversely, working during retirement years may be a stressor and decrease life satisfaction (Dorfman 1992; Suurnakki et al. 1991). In general, evidence suggests that participation in the labor force for older African Americans has negative effects, as paid work may indicate an economic necessity, rather than an optional decision (Gibson 1993). As older adults reach retirement age, consideration of weekly activities and attention to both work and non-work activities becomes relevant, particularly because underlying successful aging is the importance of active engagement with life and a continuation of midlife activity.

Thus, given prior associations between race, productive activities, and health-related outcomes, the effect of generativity on successful aging may vary across level of engagement in productive pursuits during midlife. Furthermore, differential moderation of the generativity–successful aging relationship likely depends on race. We seek to clarify such relationships in the present study, testing whether sports and recreation, paid work, and spiritual commitment strengthen the relationship between generativity and successful aging. In sum, we examine the relationship between generativity and successful aging; two-way moderation of specific productive activities; and three-way moderation of these productive activities by race, in a sample of late midlife women.

Hypotheses

The current study follows previous research concerning the link between generativity and successful aging (e.g., Ackerman et al. 2000; Grossbaum and Bates 2002; Warburton et al. 2006); that is, we specifically hypothesize that: (a) generativity will be associated with successful aging; (b) productive activities—sports/recreation and paid work—and religious/spiritual commitment will moderate the relationship between generativity and successful aging; (c) the moderators of the relationship between generativity and successful aging—productive activities and spiritual or religious commitment—will also be moderated by race. In particular, although sports and activities will moderate the relationship for both Black and White women, the relationship between generativity and successful aging will be moderated by paid work and religious/spiritual commitment for African American women.

Method

Participants

The Women's Life Paths Study (WLPS) is a longitudinal study of women who graduated from the University of Michigan between 1967 and 1973 (Tangri 1972; Tangri and Jenkins 1986). Women completed follow-up surveys in subsequent waves (1970, 1981, 1992, and 2008), which consisted of measures pertaining to work and family life, identity, personality, civic/political involvement, and well-being.

Two-hundred and forty-four women responded to the 2008 follow-up survey. Sixty-five percent of those responding in 2008 identified as White/Caucasian ($N = 158$), 32 % ($N = 79$) as Black/African American, 3 % ($N = 7$) identified as other (including bi-racial, Latina, Native American, and Jewish) and were excluded from the current analysis, leaving a total sample of $N = 237$. Sixty-six percent of the women in the sample reported that they currently lived with a partner or a spouse; 95 % reported having ever been married or lived with a partner; 49 % had been divorced or had a live-in relationship end. Overall, the women in this sample represent a cohort leaving late midlife, but not yet categorized as young-old. Black women were slightly younger ($M = 59.7$, $SD = 3.48$) than White women ($M = 62.2$, $SD = 3.49$), but both Black and White women were in their early sixties, transitioning to older age.

Measures

Generativity

An eight-item Generativity subscale, taken from the Feelings about Life scale (Helson and Moane 1987; Stewart et al. 2001), was used. Items included “Having a wider perspective” and “Having an interest in things beyond my family,” with (1) indicating the items were not at all descriptive of the respondent; (2) indicating items were somewhat descriptive; and (3) indicating that they were very descriptive; internal consistency was $\alpha = .75$.

Race

Participation in this study was limited to respondents who indicated either “White/Caucasian” or “Black/African American” membership (98 % of the total sample).

Successful Aging

While there is no agreed upon definition of “successful aging,” the current study uses an aggregate measure of subjective health, life satisfaction, and confident power to

represent the general themes expressed by older adults; i.e., that aging successfully includes well-being and feeling a sense of confidence (Depp and Jeste 2006). This definition departs from a strictly biomedical or narrow delineation of “aging successfully,” constituting an effort to broaden the scope of criteria associated with healthy aging.

Perceived General Health

Perceived general health was assessed with two items asking respondents to rate their current state of health in the past year and compare their health with others they knew. Each item was assessed on a 5-point scale that ranged from 1 (*poor*) to 5 (*excellent*). The combined mean score for both items was 4.17 (SD = 1.10); internal consistency for this measure was $\alpha = .75$.

Life Satisfaction

Global life satisfaction was assessed by asking participants “Overall, how satisfied are you with the way your life has turned out so far?” Responses ranged from 1 (*not at all satisfied*) to 5 (*extremely satisfied*). This measure has been shown to have high reliability and validity (Gurin et al. 1960). On average, respondents in this sample indicated a moderate degree of life satisfaction; the sample mean was 3.91 (SD = .82).

Confident Power

Confident power was measured according to a six-item scale; items include, “I feel confident” and “I feel I have the authority to do what I want” (see Stewart et al. 2001, for full description); responses ranged from 1 (*not at all descriptive*) to 3 (*very descriptive*). The sample mean was 2.37 (SD = .55), and internal consistency was .80. Scores on all items were combined and standardized, creating an aggregate measure of successful aging.

Moderators

Productive Activities

Responses to two questions were coded for productive activities: “What is your present major activity? That is, what takes most of your time now, or what are you doing that is most important to you?” and “Please describe your current employment.” Open-ended answers were content coded by two experienced coders, whose inter-rater agreement [calculated as twice the number of the raters’ agreements divided by the sum of raters’ scoring for that category (Smith et al. 1992)] was .91. Work was coded as paid or unpaid, whether it appeared in response to either question; non-work included

productive activities such as sports and recreation, and hobbies. For example, in response to the question concerning present major activity, the following response was coded as paid work: “Working as an educator of children and adults.” “I am also enjoying sports and more socializing” was coded as sports, and “Exercise, gardening” was coded as recreation. Sports and recreation were combined due to the overlapping nature of their functions as both leisure activities and socializing opportunities, given that recent research has found that even moderate exercise (such as gardening, housework, and home maintenance) can contribute to successful aging (Hamer et al. 2012).

Spiritual Commitment

Two items were used to measure spiritual or religious commitment: “For you to be happiest and most comfortable, how much do you need to achieve spiritual growth?” and “How important is spirituality/religion in your life?”

Both items were rated on a Likert-type scale that ranged from 1 (*not at all*) to 4 (*a great deal*). They were combined into a single indicator of spirituality or religious engagement, with a combined sample mean of 2.71 (SD = 1.02) and an internal consistency of .92.

Data Analysis

We used hierarchical linear regression analysis to test all hypotheses. Interaction effects (moderation) were assessed by regression analyses and confirmed using contrast coding where appropriate (e.g., categorical variables), as well as Hayes and Matthes (2009) conditional effects analysis. All analyses controlled for baseline health.

Bivariate correlational relationships between all variables—generativity, productive activities, spiritual commitment, and successful aging—were determined (Table 1). The effect between generativity and successful aging was assessed by modeling the continuous variables.

Moderation or interaction effects—relationships between generativity (X) and successful aging (Y) that are conditional in terms of magnitude and/or relative significance of the main effect depending on a third variable—are “two-way” interactions because they involve the interaction of two variables. We use the following general model: $y = A + B + A * B$. These effects were then analyzed in a “three-way” analysis to determine whether the initial two-way interaction differed depending on a third variable, race ($y = A + B + C + A * B + A * C + B * C + A * B * C$). Continuous variables were centered, and all analyses used OLS regression models and the inclusion of interaction (product) terms. To detect significant effects, we adhered to traditional conventions regarding cell sizes and used a Bonferroni adjustment (Cohen 1988). These analyses addressed

Table 1 Relationships between all study variables for the entire sample and each subsample (White and African American women)

	1	2	3	4	5	6
Combined sample ($N = 237$)						
1. Generativity	–	–	–	–	–	–
2. Successful aging	.61**	–	–	–	–	–
3. Spiritual commitment	.22**	.16*	–	–	–	–
4. Paid work	.22**	.17**	–.11	–	–	–
5. Unpaid work	–.12	.02	.08	–.32**	–	–
6. Sports and recreation	–.20**	–.14*	.05	–.30**	–.06	–
White women ($N = 158$)						
1. Generativity	–	–	–	–	–	–
2. Successful aging	.62**	–	–	–	–	–
3. Spiritual commitment	.20*	.21**	–	–	–	–
4. Paid work	.19*	.10	–.15	–	–	–
5. Unpaid work	–.04	.10	.05	–.26**	–	–
6. Sports and recreation	–.24**	–.10	.02	–.28**	–.12	–
African American women ($N = 79$)						
1. Generativity	–	–	–	–	–	–
2. Successful aging	.57**	–	–	–	–	–
3. Spiritual commitment	.10	–.07	–	–	–	–
4. Paid work	.31**	.33**	.05	–	–	–
5. Unpaid work	–.33**	–.25**	.03	–.40**	–	–
6. Sports and recreation	–.05	–.27*	.22	–.36**	–.02	–

* $p < 0.05$, ** $p < 0.01$

hypothesis (a) and (b), where productive pursuits were examined to determine whether generativity is related to successful aging only (or to a greater magnitude) for women who engaged in these activities. Further examination of these relationships explored racial differences in the two-way interactions (hypothesis c) based upon suggestions from prior literature that activities undertaken during midlife may differ for Black and White women. Results from regression models were confirmed using path analysis (Hayes and Matthes 2009). All data analyses were performed in SPSS (version 19.0).

In sum, multiple models were first constructed for all women to determine primary effects (two-way moderation) between generativity and successful aging, considering certain productive activities as moderators. Further probing for higher-order effects (three-way moderation) estimated the total conditional effects of generativity on successful aging through paid work, sports and recreation, and spiritual commitment, by a function of race. A final set of models included interaction terms in each subgroup and difference slopes analysis to confirm findings.

Results

Results indicated that, after controlling for baseline health, generativity was positively related ($\beta = .58$, $p < .001$) to

successful aging in the total sample. Overall—and as expected—religious and spiritual engagement, paid work, and sports and recreation were correlated with both generativity and successful aging (see Table 1).

Two-way Moderation

Moderation is demonstrated when the effect of generativity on successful aging differs in strength in the presence of a third variable, and results showed significant two-way interaction effects indicating moderation. Among all women, spiritual commitment and sports and recreation changed the magnitude of the primary effect between generativity and successful aging for women who indicated engagement in these areas (see Tables 2, 3, 4). For example, a positive interaction effect indicated that (contrary to our prediction) generative women who did not engage in sports and activities had higher evaluations of successful aging (see Fig. 1).

Three-way Moderation

Three-way moderation analyses were conducted for African American and White women, respectively. Generativity and successful aging were significantly related in both subsamples: $\beta = .53$, $p < .001$ (African American women) and $\beta = .61$, $p < .001$ (White women). While generativity

Table 2 Moderation by spiritual commitment of the relationship between generativity and successful aging ($N = 237$)

Predictor	Model 1 β	Model 2 β	Model 3 β
Prior health (1992)	.49***	.40***	.37*
Generativity		.60***	.89***
Spiritual commitment		.01	-.08
Race/ethnicity	-.04	-.05	-.05
Generativity*spiritual commitment			.04†
Generativity*race			-.04
Spiritual commitment*race			-.11†
Generativity*spiritual commitment*race			.10†
R-square	.38	.39	.40

† < .10, * $p < 0.05$, ** $p < 0.01$, *** $p < .001$

Table 3 Moderation by sports and recreation of the relationship between generativity and successful aging ($N = 237$)

Predictor	Model 1 β	Model 2 β	Model 3 β
Prior health (1992)	.49***	.40***	.37*
Generativity		.58***	.42***
Sports and recreation		-.02	.88***
Race/ethnicity		-.06	.40
Generativity* sports and recreation			-.28*
Generativity*race			-.16†
Sports and recreation*race			-.20*
Generativity*sports and recreation* race			-.23*
R-square	.36	.39	.40

† < .10, * $p < 0.05$, ** $p < 0.01$, *** $p < .001$

Table 4 Moderation by paid work of the relationship between generativity and successful aging ($N = 237$)

Predictor	Model 1 β	Model 2 β	Model 3 β
Prior health (1992)	.49***	.40***	.36*
Generativity		.58***	.76***
Paid work		.02	-.04
Race/ethnicity		-.05	.15
Generativity*paid work			-.06
Generativity*race			-.13
Paid work*race			.15†
Generativity*paid work* race			.12†
R-square	.38	.37	.40

† < 0.10, * $p < 0.05$, ** $p < 0.01$, *** $p < .001$

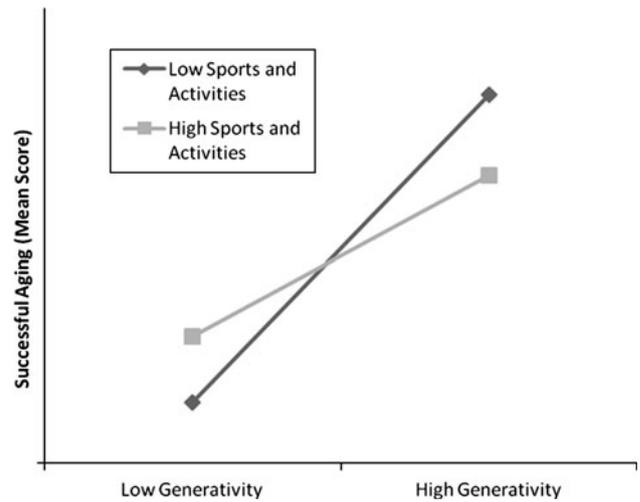


Fig. 1 Effect of generativity on successful aging by moderated engagement in sports and activities (total sample, $N = 237$)

Table 5 Comparison of indicator variables between Black and White women

	Black	White
Successful aging	4.01 (SD = .75)	4.12 (SD = .88)
Generativity	2.47 (SD = .33)**	2.32 (SD = .36)
Religious commitment	3.27 (SD = .80)***	2.43 (SD = .89)
Sports/recreation (non-work)	16.5 %	22.8 %
Paid work	62.0 %	65.8 %

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

and successful aging was significantly related for the total sample, this relationship was moderated by different paths among Black and White women. With successful aging as the dependent variable, both sports and recreation ($\beta = -.28, p < .01$) and, to a lesser extent, spirituality (although only at the trend level, $\beta = .04, p < .10$) moderated the relationship between generativity and successful aging for all women; however, when examining these higher-order effects, we found several interesting distinctions. First, the inverse effect relationship between sports and recreation and generativity was significant for White women only ($p = .03$). For Black women, paid work was a marginally statistically significant moderator ($\beta = .12, p = .07$). The interaction effect between spirituality and generativity was also somewhat stronger for White women compared to Black women, although again both were at trend level only ($p = .07$ and $p = .11$, respectively).

Mean-level comparison of indicators between Black and White women (Table 5) suggested that spiritual commitment was significantly higher among Black women (3.27 vs. 2.32), as were reports of generativity (2.47 vs.

2.39). In contrast, more White women were involved in paid work and sports/recreation (22.8 %), compared to African American women (16.5 %). Interestingly, however, paid work modified the main effect, to some extent, for African American women, but not for White women. Similarly, spiritual commitment seemed to play a larger role in the relationship between generativity and successful aging for White women. Although some racial group differences were expected, these findings present new and perhaps insightful nuances regarding the role (and purported benefits) of productive activity in later life.

Discussion

The results of the current study support previous work that outlines a connection between generativity and successful aging (e.g., Ackerman et al. 2000) and present new findings regarding differential pathways for this relationship. For both African American and White women, the association between generativity and successful aging was strong, supporting previous research (e.g., Fisher 1995).

Perhaps not surprisingly, different productive activities moderated the relationship between generativity and successful aging for Caucasian and African American women. Contrary to our hypotheses, we found that not all productive pursuits resulted in the same moderating pathway. Using an intersectional approach, we found a significant inverse moderating effect of sports and recreation for White women, suggesting that the relationship between generativity and successful aging is particularly salient for White women *not* engaged in sports/recreation activities. For Black women, the generativity–successful aging relationship is particularly salient for those who are employed.

As argued throughout this paper, activities undertaken in late midlife, during retirement or at retirement age, have differential effects and frequencies across groups. Considering these results, it should be acknowledged that the availability and use of leisure time likely differs as a function of community, culturally structured norms and life stage.

The finding that, for White women, generativity was related to successful aging to a lesser extent for those who participated in sports and recreation should be carefully interpreted. This result may be reflective of the fact that while sports and recreation may be important for wellness, particularly for physical health, these activities may be especially self-oriented and not strongly aligned with generativity. Furthermore, in late middle age, many women are still employed in the labor force and may have relatively little time to engage in leisure pursuits. Indeed, in our sample, less than 25 % of women in each subgroup reported engaging in sports and recreation. Moreover,

doing so may not be a major concern for women in this sample, who historically have been politically and socially active throughout their adult lives. In a study that included retired African American professional women, Slevin (2005) noted that most participants maintained busy schedules and considered retirement as a time to engage in community and church-related work. Thus, the “luxury” to engage in sports and related leisure activities or recreation may not be considered a productive path for some women, when compared to other prioritized activities such as paid employment or civic and community-oriented involvement. For all women, engagement in sports and recreation may represent activities that do not produce the same results in highly generative adults, who may derive additional benefit from group-oriented tasks, or activities focused on helping others. Interestingly, there were no differences in the frequency of paid work as a major activity or socioeconomic status as measured by yearly household income for African American and White women. Combined with our results, this may indicate that paid work is not a necessary financial undertaking for either group of women and possibly that women who were still employed in the current sample are indeed feeling fulfilled by continuing to work, although to what extent the work is satisfying or personally meaningful is difficult to tell with the available data.

According to research in this area, roles adopted in later life are shaped by several social and cultural factors that influence behavior and activities. African Americans, for example, are less likely to engage in formal volunteer activities, but are possibly more involved in informal volunteerism not associated with formal organizations: activities that are likely underreported and not well documented in the literature (Allen and Chin-Sang 1990). African American women traditionally have a long-standing history of community engagement, but these activities may also be overlooked, given the literatures’ focus on volunteerism as a leisure activity undertaken by affluent Whites (Slevin 2005). Furthermore, older African American women are more likely to be involved in formal, paid work, compared to Whites (Hinterlong 2006).

The frequency of paid work in the current sample indicates that there are similar proportions of women in both groups who are still employed, but the finding that paid work marginally moderates the relationship between generativity and successful aging (at trend level) for African American women indicates a plausible pathway to successful aging consistent with prior evidence. Although these results should be treated with caution, and employment can be stressful in later years (Dorfman 1992), it can also be personally fulfilling and beneficial for physical and mental health (Gallo et al. 2000). These benefits may be particularly important for women who may have less time

for other types of productive activities (Adelmann 1994a, 1994b; Rushing et al. 1992).

Spiritual commitment also marginally moderated the generativity/successful aging relationship for White women at the trend level, a finding that should also be treated with caution. Social ties or the shared spiritual community formed by involvement in church or religious activity can have significant influence on physical and mental health and positive affect (Krause 2006; McIntosh and Danigelis 1995), particularly for White women. The finding that African American women failed to support the expected notion that spiritual commitment would moderate successful aging may suggest a potential ceiling effect; that is, religious/spiritual commitment is considered normative for African American women, and thus, the beneficial effects are more conspicuous in White women who value religion/spirituality.

Historically, self-reports of religious and church involvement for African Americans have been high due to the importance of the church (and related organizations) as a place of communion with others in the African American community (Taylor and Chatters 1988). Snowden (2001) found that African American women attended meetings of churches and community groups more than White women and speculated that these groups provide mentoring for African American women. Thus, African American women may be more likely to value religion/spirituality regardless of generativity, thus obscuring possible conditional effects for this group. According to these data, White women require both high levels of generativity and spiritual commitment to realize “successful aging,” whereas African American women will hold high evaluations of spiritual and religious values regardless of whether or not they are generative. Also possible is that valuing spirituality or religion takes a different form, perhaps through other types of activities.

In sum, these findings are both consistent with social gerontologists Minkler and Fadem (2002) and Dillaway and Byrnes (2009), who—along with Crowther et al. (2002) and McCann et al. (2008)—have also made calls to expand the “active engagement” component of Rowe and Kahn’s model. Perhaps the point is that generativity has various behavioral expressions and active engagement may fail to translate equally across groups (Slevin 2005). That is, paid work, sports/recreation, and spiritual commitment may have very different effects for different subgroups within the population, whether they are defined by race, socioeconomic status, age, or other characteristics.

Limitations

The moderating effects observed in this study, although interesting and informative, naturally require confirmation

through replication. In terms of the definition of “productive activities,” our selection of two domains represents a small subset of activities that could be interpreted as productive. Further, the scope of activities considered to be productive varies.

The sample used for this research was relatively modest, and thus, effects needed to be fairly robust in order to be detected. We also calculated subgroup comparisons and slope difference tests as suggested in the literature. However, these results should be interpreted carefully because slope difference tests generally have very low power unless the sample size is quite large.

In spite of the limited sample size, however, the findings present evidence for the relationship between generativity and successful aging, given that a significant relationship was found for all women. Additionally, since the primary aim of this study was to examine pathways to “successful aging” in midlife, it should be noted that participants are just entering older age in their early sixties. Therefore, findings from this research may not generalize to younger or older adults; they may be solely reflective of this particular age when women are transitioning from midlife than for, say, the youngest-old (typically 65–70+), or for individuals who are aging successfully but have not yet reached middle age. Finally, the generalizability of these findings should be examined in non-college-educated samples, as well as in groups of men, as the majority of this work (and previous work) is based on samples of well-educated, middle, and upper-middle class women.

Conclusion

The findings from this research support the notion that different productive pursuits play an important role in the relationship between generativity and successful aging. The current study not only highlights generativity as a predictor of aging well, but also explores a moderation model, incorporating race and different productive activities for middle-aged African American and White women. Furthermore, this research points to the potential relevance of under-examined late-life pursuits, such as commitment to spirituality, which may be important for generative adults. Activities associated with spiritual or religious commitment and paid work present pathways between “providing for the next generation”—or generativity—and successful aging, possibly through social interactions with others. Developmental research would benefit from further examination of this model with other race/ethnicities, as well as an expanded framework of how generativity may operate conjunctively with a range of activities to confer positive benefits for health, well-being, and aging.

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