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Attachment-Focused Integrative Reminiscence with Older African-Americans: A Randomized Controlled Intervention Study

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Abstract

Objectives—Prior integrative reminiscence interventions have had a limited focus on attachment themes. The Attachment-Focused Integrative Reminiscence (AFIR) intervention differs from these in its central emphasis on attachment themes. The wide range of health benefits resulting from integrative reminiscence may be due in part to reminiscing about, mourning, and integrating unresolved attachment experiences.

Method—Participants were randomized into treatment and wait-list control conditions; completed a pre-test; met for 8 consecutive weekly 2-hour sessions of largely attachment-focused reminiscence; then completed post-tests immediately following the intervention and again 6 months later.

Results—Results show treatment effects for depression ($p = .01$ and $.05$ at 8 weeks and 6 months), perceived stress ($p = .01$ and $.04$), and emergency room (ER) visits at 6 months ($p = .04$), with the intervention group showing lower depression and stress and fewer ER visits.

Conclusion—Integrative reminiscence interventions are cost-effective, have rapid impact, and carry a certain appeal to older adults. Augmenting such interventions with a focus on attachment experiences may reduce perceived stress, an important health risk factor. Wider application of AFIRs may further reduce health disparities among U.S. older adults.

Key terms

health disparities; integrative reminiscence; attachment; perceived stress; depression; African American Older Adults

Introduction

Integrative reminiscence is a form of life review in which memories are recalled for the express purpose of examining, appraising, and coming to terms with one's past. It includes analysis, evaluation, working through, and integration (Gibson, 2004; Butler, 1963) of experiences. Among the several functions of integrative reminiscence are internal conflict resolution, the revision of self-schemas, the development of alternative explanations for self-blame and self-criticism, the search for self-worth and identity, disconfirmation of negative beliefs about the self, achieving self-acceptance, and existential/self-understanding (Romaniuk & Romaniuk, 1981; Watt & Cappeliez, 1995, 2000; Wong & Watt, 1991). Integrative reminiscence has been shown to reduce depression (Bohlmeijer, E., Smit, F., & Cuijpers, P.; 2003; Fry, 1983; Haight & Dias, 1992; Lamers, Bohlmeijer, Korte, & Westerhof, 2015; Shellman, Mokel, & Hewitt, 2009; Stevens-Ratchford, 1992) and to increase self-acceptance, self-esteem, self-efficacy, psychological well-being, and life satisfaction (Haight & Dias, 1992; Fry & Barker, 2002). Integrative reminiscence is also linked to generativity, Erikson's (1963) marker of psycho-emotional health in older adulthood (Coleman, Hautamaki, and Podolskij, 2002; Wink Schiff, 2002), and to psychological coherence (Main, Kaplan, & Cassidy, 1985; Siegel, 2012).

These and other psychological health benefits of integrative reminiscence might be expected given the intervention's focus on psycho-emotional aspects of experience; however, many physical health benefits of integrative reminiscence can also be inferred from the research on emotional disclosure (Cappeliez & O'Rourke, 2006; Esterling, L'Abate, Murray & Pennebaker, 1999; Smyth, 1998). For the past two decades, research has consistently shown that individuals who write or talk about difficult emotional experiences have used fewer psychological and medical health services and shown improvements in physical health symptoms such as asthma, arthritis, hypertension, cholesterol, t-cell counts, hepatitis B, and heart disease. Positive changes in behaviors such as alcohol use and smoking (Smyth, 1998; Esterling, L'Abate, Murray & Pennebaker, 1999; Pennebaker & Chung, 2007; Niederhoffer & Pennebaker, 2002) have also been shown.

In terms of the mechanisms through which physical health is impacted by integrating negative emotional experience, Siegel (2012) postulates that integration is the "central mechanism by which health is created in mind, brain, body, and relationships" (2012, p. 336). According to Siegel, the stress hormones associated with negative emotions can produce toxic effects on the body. This is affirmed by stress researchers who include heart disease, obesity, diabetes, depression, cognitive impairment, inflammatory disorders, and autoimmune disorders (Djuric, et al., 2008) in the list of detrimental effects of stress. The integrative reminiscence process is thought to decondition traumatic memories and their associated emotional and physiological impacts (Smyth, 1998). In other words, sufficiently

working through unfavorable or negative memories is thought to reduce their potency and continuing stressful effects on health.

Concomitant with the emotional processing of experience, a cognitive processing of experience must also occur to effectively integrate traumatic memories (Frattoroli, 2006). In addition to mourning and catharsis, participants must also gain insight to what happened to them in order to reduce the continuing impact of stressful experiences. They “must also make sense of, organize, and integrate [the] event for benefits to occur.” (p. 825). The most recent meta-analysis of the literature by Frattoroli (2006) suggests that both catharsis and cognitive integration may serve the larger function of self-regulation. Integrative reminiscence is seen as a process of mastering the self or one’s emotions, giving individuals a stronger sense of self-efficacy for emotional regulation. Specifically, they may experience their stress or trauma as more controllable, which in turn could improve well-being and reduce negative affect.

In sum, integrative reminiscence has demonstrated a broad range of significant positive effects on several health indicators among adults of all ages, including older adults (Haight, 1992; Haight & Haight, 2007; Shellman, Mokel, & Hewitt, 2009); however, there have been 1) few studies of its impact on African American older adults, and 2) no studies examining its impact on perceived stress, which is of particular significance to this population (APA, 2014; Djuric, et al., 2008). We report on a previously unreported health benefit (lower perceived stress) among African American older adults in Harlem, New York who participated in the Harlem Life Review and Health in Later Life Study (HLRHLL), a randomized controlled Attachment-Focused Integrative Reminiscence (AFIR) Intervention. Given that older African Americans experience health disparities across most health indicators when compared to other older adults in the U.S. (Jackson, 1993; Pinn, 2000; Rooks and Whitfield, 2004), expanding our understanding of integrative reminiscence and health in this population is warranted.

Conceptual Basis and Hypotheses

The intervention tested in this study was an AFIR Intervention. It is based on prior work suggesting that reviewing, processing, and integrating a specific class of past experiences (unresolved attachment experiences) helps to foster the psychological and physical health benefits consistently found (Pearson, Cohn, Cowan, and Cowan, 1994; Seigel, 2011, 2012). Secure (resolved) attachment experiences are those involving the invisible but very real ‘affective tie’ between two people (Sroufe and Waters, 1977) on which one or both rely for both psychological and physical safety (Baumeister & Leary, 1995; Bowlby, 1969; Collins & Feeney, 2000; Maslow, 1954; Milulincer, Florian, & Hirschberger, 2001; Pietromonaco & Barrett, 2000; Sullivan, 1953; Suttie, 1952). The secure attachment bond provides a felt (psychological) sense of security, built through repeated, consistent, and fitting responses to a person’s needs. A deep-seated trust of the other and of the environment in general embeds to the psyche (Bretherton & Munholland, 1999).

In contrast, unresolved attachment experiences are those in which the deep trust inherent or anticipated (Trevarthen, 2004) in such ties has been breached in some way, but also left

unacknowledged, unexamined, and un-mourned (Bowlby, 1980; Miller, 1996). The failure to integrate such unresolved experiences distorts and compromises the self-structure (Loevinger, 1976; Ogawa, Sroufe, Weinfeld, Carlson, and Egeland, 1997), which can lead to poor psycho-emotional health.

Prior integrative reminiscence interventions touch to some degree on themes of attachment. The AFIR intervention differs from past efforts, however, in its particular emphasis on reminiscence around attachment themes. The overall hypothesis of this project is that the wide range of physical and psychological health outcomes resulting from integrative reminiscence may in part be due to reminiscing about, mourning, and integrating this quite specific set of life experiences (Bowlby, 1980; Hesse, 2008; Klein & Boats, 2010; Main, Hesse, & Goldwyn, 2008; Main, Kaplan, and Cassidy, 1985; Mackenzie, 2009; Miller, 1981; Neimeyer & Levitt, 2001; Siegel, D., 2001, 2010, 2012). Siegel (2001, 2012) makes the compelling case that an integrated self is a natural outcome of the processes that establish a secure (resolved) attachment. Thus, reviewing, processing, and integrating unresolved attachment experiences through various forms of narrative review, restores what would have been a naturally integrated state (Main, Kaplan, & Cassidy, 1985). For these reasons, AFIR focuses on recalling, discussing, and integrating unresolved attachment experiences.

The conceptual model for this intervention differs from life review reminiscence approaches as well as from integrative reminiscence therapy. Life review reminiscence approaches may serve a variety of purposes including autobiographical memoir writing or the documentation of a family history (Birren & Deutchman, 1991). Integrative reminiscence therapy extends beyond mere life review in that it necessarily involves the integration of unfavorable life experiences (Watt & Cappeliez, 2000). Integrative reminiscence therapy also intentionally focuses on both positive and negative experiences in order to foster a more balanced interpretation of the life lived. The terms “life review” and “integrative reminiscence” are often used interchangeably. Both are typically structured around life themes such as family (e.g., one’s childhood) or work (e.g., work choice) or major turning points, (becoming a parent). However, it is only when life review serves the evaluative function or seeks to resolve or come to terms with unfavorable experiences that the research findings from both may be merged to form a single body of knowledge.

Like, integrative reminiscence therapy, the AFIR intervention necessarily involves the integration of unfavorable life experiences; however, AFIR seeks to integrate a specific set of unfavorable life experiences: those occurring within attachment relationships. Also, AFIR does not seek intentionally to review both positive and negative life experiences or to achieve a balanced perspective on the life lived (see Bohlmeijer, Westerhof, & Emmerik-de Jong, 2008). The primary goal of an AFIR intervention is to achieve attachment repair.

Several elements were important for creating a climate in which participants might take the emotional risks that are essential for the success of this intervention. Concrete elements include sharing a meal together and participant agreement to abide by a set of ground rules (e.g., confidentiality, non-judgment). Less tangible elements include the personal “holding” capacity (Kegan, 1982) of the facilitator, easing participants into the vulnerability, and

participant mourning of attachment-related losses in the manner most comfortable (For details see Sabir, 2014a).

While integrative reminiscence (revisiting and coming terms with the life experience) is postulated to be a universal phenomenon of old age (Butler, 1964), we did consider that AFIR may be especially pertinent for these African American elders in particular who came of age during the 1930s, 40s, and 50s in the United States. Continuing matters of social belonging and economic hardship affected their families profoundly (Leary, 2005).

Official Jim Crow laws and lynching were still quite prevalent during their childhoods. While there is evidence that such conditions may have bound African Americans together more closely (Webber, 1978), and that the prevalence of the extended family structure with multiple caregivers among African Americans (Howes, 1999) may have helped to attenuate the psychologically detrimental effects on African Americans' development of secure/resolved attachments, research has also shown that African Americans in this age range demonstrate higher rates of unresolved attachment than their European American counterparts (Magai, Cohen, Milburn, Thorpe, McPherson & Piralta, 2001).

Hypotheses

Based on the literature showing the consistently beneficial health effects of integrative reminiscence, it was hypothesized that older African Americans who completed the reminiscence protocol would demonstrate improvements on self-reported measures of both physical and psychological health outcomes. In the area of physical health, the literature suggested that participants would demonstrate a reduced number of medical visits (doctor's office, emergency room, hospital, medical clinic) and higher ratings on measures of overall health. In the area of psychological health, the literature suggested that participants would demonstrate improvements in self-reported depression, self-acceptance, self-efficacy, generativity, and sense of coherence. Although psychiatric epidemiological surveys show mood disorders such as depression to be consistently lower in African Americans than in European Americans (Jackson, Knight, & Rafferty, 2010), depression remains an important health concern in this population.

We were especially interested to see if this AFIR approach might affect perceived stress in this population, given that stress is associated with unresolved attachment styles (Kotler, Buzwell, & Romeo, 1994; Mauder & Hunter, 2001; Siegel, 2012) and their associated health risks (Feeney, 2000). The chronic stress experienced by African Americans derive from many sources, including racism (Jackson, Brown, Williams, Sellers, & Brown, 1996), perceived discrimination, poverty, family dysfunction, early childhood trauma, and neighborhood conditions (APA, 2014). Chronic stress can negatively affect the immune system, increasing the risk for numerous health problems including heart disease, obesity, diabetes, depression, cognitive impairment, inflammatory disorders and autoimmune disorders (Djuric, et al., 2008). Perceived discrimination, in particular, is a key source of chronic stress for African Americans (deCastro, Gee, & Takeuchi, 2008; Williams & Mohammad, 2009; Meyer, Schwartz & Frost, as cited in APA 2014; Gyll, Matthew, & Bromberger, 2001). It can be ubiquitous in US society, experienced in the workplace, in daily life, and around gender, race, ethnicity, and sexual-orientation. Perceived

discrimination impacts the prevalence of hypertension and diabetes among African Americans and other minorities (Peek, Wagner, Tang, & Baker, 2011; Williams & Neighbors, 2001), as well as cigarette smoking, alcohol and substance abuse, and more (Lee, Ayers, & Kronenfeld, as cited in APA 2014).

Perceived stress, through its many mechanisms, weighs in as a major contributor to the health disparities challenge and one an AFIR approach might help to ameliorate. Given the stress and unresolved attachment literature and the integrative function of the reminiscence process across domains such as internal conflict resolution, self-blame, and self-criticism, we hypothesized that those who completed the AFIR protocol would demonstrate lower levels of perceived stress.

While we did not predict precisely at which point following the intervention beneficial treatment effects might emerge, we did expect the effects to be apparent by time 3 and to be maintained over time. In one previous study, the therapeutic effects of a life review lasted for at least one year (Haight, 1992), and in another study significant improvements were retained at year 3 on measures of depression, life satisfaction, and self-esteem (Haight, Michel, Hendrix, 2000).

Methods

Intervention Design

In this study, we made selective use of The Life Review and Experiencing Form (LREF), an integrative reminiscence protocol developed by Haight and Haight (2007) and used in reminiscence research for more than 25 years. The LREF was designed for use with a single older adult over 8 visits. The LREF provides a series of questions from which to choose for use in each session. The full series of prompts walks the participant through each of Erik Erikson's (1963) eight developmental stages, from *basic trust versus basic mistrust* in early childhood to the final life stage of *integrity versus despair* in old age. The questions guide the life reviewer to examine, appraise, and come to terms with important life experiences across the entire lifespan without preferring some experiences over others. Among the questions available, however, are a sufficient number of questions relevant to the attachment construct.

While the LREF was designed for use with a single older adult over 8 visits, it was adapted in this study to an 8-week group intervention format. In adapting the LREF, we took the necessary steps toward proper group formation, including setting ground rules and making everyone sufficiently comfortable to move forward with sharing intimate details of the life lived. For example, group members shared a meal together each week. The beginning sessions included activities that allowed participants to begin to get to know each other while discussing non-threatening topics. Participants played a name game in which they shared their historical and continuing emotional connection to their first names. First names are usually far less threatening to examine than surnames can be, and initiate the introspective process in a gentle and often humorous way. The number of questions posed during sessions varied from a single question to three or four, depending on the amount of

discussion from participants; however, the question(s) most important for a particular session was posed first.

Most importantly, we made a decidedly specific use of the LREF. Haight and Haight's 'most important purpose of the LREF is to ensure that Life Reviewers talk about all the stages of their lives, from early childhood to the present (p. 208).' Their intention is to assist older adults in achieving Erikson's idea of integrity in old age—a retrospective sense that one's whole life had purpose and meaning—which is quite important for well-being in the latter years (Haight & Hendrix, 1995; Hearn et al., 2011; Molinari, Cully, Kendjelic, & Kunik, 2001; Molinari, & Reichlin, 1984; Nygren et al. 2005). This was our intention as well. However, hypothesizing that the integration of unresolved attachment experiences is a central mechanism by which a life review intervention has effects, we focused on guiding participants to their attachment narratives, which directed our selection of questions from the substantial list the LREF provides. For example, questions selected from the LREF included: 'Did someone important to you go away?' and 'Did you always feel cared for?' in the session titled *Childhood*; and 'Did you have a sense of belonging?' and 'Do you remember feeling left alone, abandoned, not having enough love or care as a child or adolescent?' in the session titled *Adolescence*. 'Did someone close to you die or go away?' and 'Did you ever feel alone or abandoned?' were rephrased from previous sessions in the session titled *Young Adulthood*.

We also included several questions to augment the LREF. For example, we inserted the question 'What was the most unpleasant thing about your adolescence?' inspired by the work of Pennebaker and colleagues (Smyth, 1998; Esterling, L'Abate, Murray & Pennebaker, 1999; Niederhoffer & Pennebaker, 2002), and 'What did you want from your mother/father that you did not get?' from the first author's Life-Writing research protocol (author citation). While we did, in fact, guide participants through each stage of the life lived, as this is important when working with older adult populations (Haight & Haight, 2007), we also took careful advantage of the opportunity to encourage them to examine unresolved attachment experiences and to mourn the related losses. Participants were encouraged to express rather than withhold emotions around attachment losses. Participants were prepared for this aspect of the intervention during the informed consent process. (See Table 1 for a summary of intervention components.)

Participants completed a pre-test and then treatment group participants (n = 32) met for 8 consecutive weekly 2-hour sessions of deeply engaging oral reminiscence work. Control group participants (n = 29) met for two sessions (session 1 and session 8 at the same time as sessions 1 and 8 for treatment participants). Control group participants discussed positive experiences across the life span. For example, they were asked to 'Think of a period or moment when you felt especially good about yourself. About what age were you? What were the circumstances? What was the event? What did you feel and why?' Control group members were also asked about the generative contributions they made in their lives. They were asked, 'What are the best things about the age you are now? What are you grateful for?'

The control group was asked to focus on positive experiences in order to avoid their reminiscing about unfavorable or negative events and in order to provide an active control condition. The emotional and cognitive processing of unfavorable or negative memories is understood to be the primary mechanism through which the beneficial effects of integrative reminiscence are generated, and research methodologists suggest that randomized controlled trials for psychological interventions are strongest when they include some form of active control condition (Mohr et al, 2009). Not only can such control conditions eliminate the possibility of effects due to the attention received from the researcher or due to human interaction variables such as clinician warmth or empathy, or to social support and interaction among group participants; they also provide the opportunity to show effects over and above the active control condition, in this case positive reminiscence. Because the active control condition can in its own right have substantial impact on the outcome, large sample sizes are often required to find a significant difference between the treatment and active control conditions. In the present case, not only did the study find significant differences in the treatment and control conditions, but significant differences were found despite a small sample size.

Each received a \$10 stipend, and healthy foods were served each session. With participants' consent, the sessions were audio-recorded and transcribed. Participants took turns responding orally to the questions posed, followed by open-ended and fluid discussion. All sessions were facilitated by the first author, a narrative psychologist who specializes in attachment-focused integrative reminiscence.

Recruitment and Randomization of Participants

The HLRHLL was conducted in 2005. Participants were older adults receiving services at a senior center that is part of the Central Harlem Senior Center Coalition (CHSCC). CHSCC was established in 1973 by a concerned citizens committee composed of local neighborhood residents of Harlem, New York. Colleagues at Weill Cornell Medical College and at the Cornell Institute for Translational Research on Aging (CITRA) who were already engaged in community-based research at CHSCC and had long-term relationships with NYC center directors facilitated the initial introduction. The CHSCC Directors and Advisory Committee approved the study after a detailed review and discussion of the intervention protocol. The Cornell University Institutional Review Board also approved the study. Eligible participants were 60 years of age or older and English speaking, with no significant symptoms of cognitive, hearing, or visual impairment. Screening was conducted by the Center Program Director and the Center social worker, both of whom knew each center member well.

Recruitment of a sufficient number of participants for research studies is often lengthy, time consuming, and expensive. This was not the case in the present study (author citation). Following a presentation at a monthly birthday celebration, individuals who were interested were invited to register for the project. Registration took place with senior center staff members who screened out those who were ineligible. The total number of participants sought for the study was 64. Seventy-four eligible center members expressed interest. Eleven of the 74 did not respond to telephone calls, so there was no further contact with

them. One was unable to participate because she would have been out of town on several of the session dates.

Sixty-two participants completed the baseline assessment at Time 1. Since we do not know how many center members received information about the study, either at the center presentation or from board members who may have told center members about the study, we cannot calculate the actual recruitment rate. However, it should be noted that all participants in the study were successfully enrolled on the day of the presentation. The group of eligible participants was assigned to treatment and waitlist control groups by stratified random sampling within sex groups.

Sample Description/Baseline Equivalence of Treatment and Control Groups—

The mean age of participants was 72 years ($SD = 8$). Ninety percent (90%) of the participants were female. All the participants were of African heritage ($N = 2$ Caribbean American). Forty-four percent (44%) of the participants were widowed; 34% were single; 17% were married; 3% were cohabiting; and 2% did not respond to the question. Nine percent (9%) of the participants earned less than a high school diploma; 21% completed high school or earned a GED; 39% completed some college or obtained an associates or vocational degree; 18% earned a bachelor's degree; 11% earned a master's degree; and 2% did not respond to the question.

The treatment and control groups were very similar on most variables at baseline. Despite random assignment, however, the groups differed at baseline on depression and perceived stress.

Data Collection

Data were collected at the beginning of session 1, at the end of session 8, and 6 months following the intervention. The waves of data collection were as follows:

1. *Pretest baseline assessment* (T1) took place within 1–2 weeks after recruitment and at the beginning of Session 1 for all participants.
2. *Posttest 1* (T2) took place during the 8th and final week of the intervention for all participants.
3. *Posttest 2* (T3) took place 6 months after the intervention for both treatment and control participants.

Measures

Self-rated health—Participants were asked to rate their health as bad, poor, fair, good, or excellent, creating a range of 1–5, where 1 is the lowest possible score and 5 is the highest possible score. This self-rated health measure is routinely used in both military and civilian studies and strongly correlates with both direct and indirect measures of health (Lundberg & Manderbacka, 1996). The mean score at baseline for self-rated health was 3.63 ($SD = .79$) for controls and 3.68 ($SD = .74$) for the treatment group.

Number of visits to the doctor in the past month—Participants were asked to indicate the number of times they visited a doctor’s office, medical clinic, emergency room, hospital, or other care setting in the past month. The means for visit types were as follows: doctor’s office for controls was 1.54 (SD = 1.76) and 2.03 for treatment group (SD = 1.96); medical clinic for controls was .26 (SD .60) and .34 for the treatment group (SD = 1.08); emergency room for controls was .09 (SD .29) and .07 for the treatment group (SD .25); hospital for controls was .08 (SD .32) and .12 for the treatment group (SD .39); other care setting was .09 (SD .48) for controls and .36 for the treatment group (SD 1.69).

Sense of Coherence—Sense of Coherence (SOC) was measured using the 13-item version of Antonovsky’s SOC scale (Eriksson & Lindstrom, 2005). The 13-item scale was developed at the same time as the original 29-item scale for use with populations for whom response burden might be an issue. Content and construct validity are well-documented for both the 29-item and the 13-item scales. Items are measured on a 7-point scale, where 7 represents the strongest SOC and 1 represents the weakest SOC, creating a range of 44–85, where 13 is the lowest possible score and 91 is the highest possible score. The mean score at baseline for sense of coherence was 70.25 (SD = 11.19) for controls and 65.85 (SD = 10.14) for the treatment group. Sample question: ‘When something happened, have you generally found that you overestimate or underestimate its importance (1) or you saw things in the right proportion? (7)’

Self-efficacy—Self-efficacy was measured using Schwarzer and Jerusalem’s (1995) General Self-Efficacy Scale. Items are measured on a 4-point scale where 1 represents ‘not at all true’ and 4 represents ‘exactly true’, creating a range of 23–40, where 10 is the lowest possible score and 40 is the highest possible score. The mean score for self-efficacy at baseline was 32.79 (SD = 4.72) for controls and 32.41 (SD = 4.00) for the treatment group. Sample question: ‘I can usually handle whatever comes my way’

Self-acceptance—Self-acceptance was measured using the 3-item version of Ryff and Keyes’s self-acceptance subscale from the MacArthur Foundation National Survey of Midlife Development in the U.S. (MIDUS) study. The MIDUS shortened scales correlate from .70 to .89 with 20-item parent scales (Ryff & Keyes, 1995). Items are measured on a 7-point scale where 1 represents ‘Strongly Agree’ and 7 represents ‘Strongly Disagree’, creating a range of 9–21, where 3 is the lowest possible score and 21 is the highest possible score. Items were reverse scored so that a high score represents a high level of self-acceptance. The mean score at baseline for self-acceptance was 17.51 (SD = 3.70) for controls and 16.31 (SD = 3.73) for the treatment group. Sample item: ‘I like most parts of my personality.’

Generativity—Generativity was measured using the 6-item Loyola Generativity Scale from Alice Rossi’s (2001) research on social responsibility. Items are measured on a 4-point scale where 1 represents ‘A Lot’ and 4 represents ‘Not at all’, creating a range 10–24, where 4 is the lowest possible score and 24 is the highest possible score. Items were reverse scored so that a high score represents a high level of generativity. The mean score at baseline for

number of generativity was 19.99 (SD = 3.70) for controls and 18.99 (SD = 3.15) for the treatment group. Sample item: ‘You like to teach things to people.’

Depression—Depression was measured using the 20-item Center for Epidemiological Studies–Depression Scale (CES-D, Radloff, 1977). Items are measured on a 4-point scale where 0 represents ‘Rarely or None of the time’ and 3 represents ‘Most or Almost all of the time, creating a scale range of 0–33, where 0 is the lowest possible score and 60 is the highest possible score.’ The mean score at baseline for depression was 9.74 (SD = 9.27) for controls and 11.67 (SD = 8.68) for the treatment group. Sample item: During the past week, I was bothered by things that usually don’t bother me.

Perceived Stress—Perceived stress was measured using Cohen, et al.’s (1983) 4-item Perceived Stress Scale, which was designed for use with community samples. Items are measured on a 5-point scale where 1 represents ‘never’ and 5 represents ‘very often,’ creating a range of 4–15, where 4 is the lowest possible score and 20 is the highest possible score. The mean score at baseline for perceived stress was 7.82 (SD = 2.79) for controls and 9.39 (SD = 2.88) for the treatment group. Sample question: ‘In the last month, how often have you felt that you were unable to control the important things in your life?’ Reliability of all scales was in an acceptable range (alpha = .60 or above on all scales).

Statistical Models and Methods

Our interest is in evaluating the effects of the intervention by examining a number of outcomes. The final model included treatment (control versus intervention) and time of assessment (baseline, 8 weeks, 6 months) as fixed classification factors; the interactions among these factors; and individuals as levels of a random classification factor. Sex and marital status (unmarried versus married) were additional classification factors and age and education additional covariates.

Analysis was carried out in general linear mixed models. Estimation in the mixed model was by maximum likelihood. An unstructured error assumption was used, and denominator degrees of freedom were computed by the first-order Kenward-Rogers method (Kenward & Rogers, 1997). The key test for evaluation of the intervention is the test of the interaction of treatment by time. We partitioned from this interaction key pre-specified contrasts of interest—specifically, the test of treatment by time 1 versus time 2; and treatment by time 1 versus time 3 (2×2 contrasts). Table 2 in the results section shows the means and probabilities for these contrasts.

Results

Attrition and Adherence

As reported in (author citation), the retention and participation rates remained high throughout the three waves of this study. At Time 2, immediately following the intervention, 59 of the original 62* participants completed the assessment for a 95% retention rate. One participant was too ill to participate; one dropped out after attending two sessions; and one stopped responding after completing the first assessment. At Time 3, one year post-

intervention, all living participants completed the assessment. Fifty-six (56) of the 59 completing at Time 2 also completed the final assessment, for a 90% retention rate. All missing participants were deceased, thus all who could participate did. *One participant demonstrated unanticipated signs of memory loss during the sessions, however, we did not drop her from participation. She completed all three waves of the study, however, her data were dropped from the analyses.

Participants also demonstrated extraordinary commitment to the present study. Attendance at the weekly sessions remained consistently high throughout the eight weeks. Only one person was absent more than once, and she was absent only twice. In most cases, absences were preceded by advanced notice of a doctor's appointment. Participants remained fully engaged in reviewing their life narratives throughout the eight weeks, thus both recruitment and retention were highly successful in this program, despite a lengthy and demanding protocol.

Effect of Intervention on Participant Outcomes

There was a significant decline in depression measured by the CES-D scale from baseline to the posttest at the end of the workshop series (time 2) and holding again from baseline to time 3 (6 months post-intervention) for the treatment group but not for the controls, resulting in significant interactions ($P=.01$ and $P=.05$) and demonstration of treatment effects. (See the 2 rightmost columns of Table 2 on the line for Treatment – Control in the block for the depression variable.) There was also a significant decline in perceived stress across the three waves of data collection for the treatment group, but not for the control group (a significant increase in stress for controls from baseline to Time 2), resulting in treatment effects at Time 2 ($P=.005$) and Time 3 ($P=.036$). There was a significant treatment effect ($P=.045$) for emergency room visits by Time 3, six months post intervention, with visits decreasing for the intervention group and increasing for controls. No treatment effects were found on any of the other outcomes.

Discussion

The positive effects of integrative reminiscence on depressive symptoms in older adults is well-documented (e.g., Bacher, Kindler, Scheler, & Lerer, 1991; Bohlmeijer, E., Kramer, J., Smit, F., Onrust, S., & Marwijk, H., 2009; Bohlmeijer, E., Smit, F., & Cuijpers, P.; 2003; Fry, 1983; Haight & Dias, 1992; Lamers, Bohlmeijer, Korte, & Westerhof, 2015; Shellman, Mokel, & Hewitt, 2009; Stevens-Ratchford, 1992). In a meta-analysis of the impact of reminiscence and life review on depression in the elderly, Bohlmeijer, Smit, & Cuijpers (2003) found that in 15 randomized controlled trials, reminiscence and life review significantly improved depressive symptoms compared to controls and with large and highly significant effect sizes. The effect size was larger for people with severe depression compared with mild or moderate depression. It has proven effective for a large variety of older adults (Korte, Bohlmeijer, Cappeliez, Smit, & Westerhof, 2012) including community-dwelling older adults (Korte, Westerhof, & Bohlmeijer, 2012) and it has been shown to outperform psychotherapy (Bacher, Kindler, Scheler, & Lerer, 1991). Studies have also shown the impact of integrative reminiscence on depression to persist long term. In one

study, the therapeutic effects of integrative reminiscence lasted for at least one year (Haight, 1992), and in another significant improvements were retained at year three (Haight, Michel, Hendrix, 2000). Integrative reminiscence has demonstrated long-term effects on a variable that typically shows high day to day variability. On the other hand, some studies have not found integrative reminiscence to reduce depression (Chao, Liu, Wu, Jin, Chu, Huang, & Clark, 2006; Stevens-Ratchford, 1993).

The general linear model shows the treatment group scoring higher on both depression and perceived stress than the control group once co-variables are accounted for. The adjusted mean for the treatment group reaches past the threshold for depression at baseline, as a score of 16 points or more is considered depressed (Radloff, L.S., 1977). Had both groups received the intervention, both would have been expected to demonstrate lower depression scores and lower perceived stress scores at post-intervention; however the treatment group would have been expected to demonstrate greater gains.

Stress is currently recognized as a widely prevalent phenomenon across all modern societies and a global public health concern (Seaward, 2000). It has long plagued African Americans due to social conditions in the United States and to related coping behaviors. The results of the treatment–control comparisons show a strongly significant impact of this AFIR intervention on perceived stress as hypothesized, suggesting that augmenting integrative reminiscence interventions with a focus on unresolved attachment experiences may reduce this important health risk factor in this population.

It is interesting that perceived stress increased from Time 1 to Time 2 in the control group. The control group met for two sessions of positive reminiscence which means they were given no opportunity to work through an important basis for chronic stress—attachment loss. It could be that in the 8 weeks from baseline to Time 2 perceived stress increased at an uninterrupted pace as opposed to the treatment group. The measure included questions such as “In the last month, how often have you felt that you were unable to control the important things in your life?” Not only do feelings of control tend to decline with age (Mirowsky, 1997; Wolinsky, Wyrwich, Babu, Kroenke, & Tierney, 2003), but they tend to decline at an accelerating rate as people grow older (Mirowsky, 1997). There were no significant age difference between the two groups at baseline ($p = .84$).

Less use of medical services is a consistent finding from integrative reminiscence interventions (Pennebaker & Beall, 1986; Pennebaker, Colder, & Sharp, 1990; Stanton et al., 2002). Perhaps there is a connection between this finding and the finding for reduced levels of perceived stress. Working through unfavorable or negative memories is thought to reduce their continuing stressful impact on the body.

The lack of improvements on measures of sense of coherence, self-efficacy, self-acceptance, and generativity for this population at the 8 week and at the 6 month follow-ups is not surprising for two reasons. First, the participants scored highly at baseline on all these variables. Second, the strong baseline scores are consistent with epidemiological surveys showing that African Americans in noninstitutionalized populations score highly on psychological health compared to European Americans (Jackson, Knight, & Rafferty, 2010)

Many researchers find it striking that so few integrative reminiscence sessions can have such an impact on outcomes such as depression, perceived stress and emergency room visits (Frattoroli 2006). In a review of the research on written forms of integrative reminiscence, Smyth (1998) writes --- “That a brief, written emotional expression intervention can impact overall health (including psychological well-being, physical health, and general functioning) over a number of months is certainly a controversial finding. Interest in the topic has resulted in numerous articles in prestigious journals.” (p. 174). It may be helpful to note that the number of integrative reminiscence sessions, whether the modality is written or oral (Donnelly & Murray, 1991; Frattoroli, 2006; Segal & Murray, 1994) or delivered in a group or one-to-one format (Haight & Dias, 1992), has been found to be unrelated to the consistently demonstrated health improvements. The salutary processes of emotional disclosure and cognitive processing of unfavorable experiences (Frattoroli, 2006) seem to be primarily responsible for generating the beneficial results. Pennebaker’s (Niederhoffer & Pennebaker, 2002) integrative reminiscence intervention is comprised of one hour of writing spread over 4 days (15 minutes per day), and the lasting benefits include reduced number of physician visits in the next year, improved immune functioning, and reduced symptoms of arthritis and chronic pain. Haight’s (Haight, Michel, Hendrix, 2000) comprises 6 sessions and benefits have lasted over a three year period. Segal and Murray’s (1994) involve 4 sessions and Donnelly & Murray’s (1991) involve 4 sessions. In their review of the literature, Esterling, L’Abate, Murray & Pennebaker (1999) write that, “It may be that in those situations where the patients are functioning well to begin with that all that is required to improve mental health is a couple of sessions aimed specifically at the events and emotions surrounding the events” (p. 82).

At present, the sessions are designed for professional leadership, however, based on similar programs (Haight & Haight, 2007), it is likely that they could be delivered by trained non-professionals. This is an important test for future research. This study suggests that the feasibility and acceptability of the intervention in community settings serving older African Americans might be high, thus training human service professionals (e.g., psychotherapists, social workers, counselors) as well as selected lay community leaders seems important.

The evidence repeatedly shows integrative reminiscence to be an effective and low-cost intervention with rapid impact and appeal to older adults who have a life-stage need to engage in life review. This AFIR intervention was designed to replicate some of the known benefits of integrative reminiscence among African American older adults and to test whether an AFIR approach might also affect perceived stress in this population. The results are encouraging in that the intervention positively influenced depression and perceived stress and reduced ER visits. The strongest effects were found in what we consider two critical psychological health indicators, depression and perceived stress. Both depression and stress are important contributors or correlates to a number of chronic health conditions including coronary heart disease (Marmot, Bosma, Hemingway, Brunner, & Stansfield, 1997), hypertension, diabetes mellitus, (Chandola, Brunner, & Marmot, 2006) and chronic pain (Blackburn-Munro & Blackburn-Munro, 2001). The once a decade White House Conference on Aging in 2005 listed improving the recognition, assessment, and treatment of depression among older Americans among its top 10 public health resolutions (WHCoA,

2014). Thus it is important that this research strongly affirms what previous research studies have shown in regard to the impact of integrative reminiscence on depression and health.

The study had several limitations. First, the participants were recruited from a geographically restricted area, which limits the generalizability of these findings. Second, the sample was nearly all female (90%); therefore, findings may not generalize to older African American men. Third, the intervention occurred in a senior center environment, which tends to attract more mobile and socially integrated older persons. The intervention should be tested among older persons in the general community. Fourth, information on non-participants was not available. Fifth, there were no fidelity checks to determine adherence to the LREF protocol to the extent it was used. Despite these limitations, the very positive results for depression, stress, and ER visits strongly suggest value in expanding and further testing of this intervention model. Future research might test differences between integrative reminiscence with and without a focus on unresolved attachment experiences to understand better the mechanisms fostering well-being.

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Table 1**Major Components of the Attachment Focused Integrative Reminiscence Intervention**

Session	Workshop Title	Sample Questions/Source
1	Time 1 Assessment What's in a Name?	History and meaning of first name; nicknames; name you would have chosen if you were naming yourself. LWP
2	Childhood	What were your parents like? LREF What were some of their dreams? LWP <u>Did someone important to you go away?</u> LREF Who were you closest to in your family? LREF
3	Adolescence	Did you feel good about yourself as a teenager? LREF <u>Did you have a sense of belonging?</u> LREF <u>Do you remember feeling left alone, abandoned, not having enough love or care as a child or adolescent?</u> LREF What did you want from your parents that you did not get? LWP
4	Young Adulthood	When did you first realize you were an adult? HLRHLL <u>Did someone close to you die? Go away?</u> LREF <u>Did you ever feel alone? Abandoned?</u> LREF What was the highest point in your life? LREF
5	Middle Adulthood	Tell [us] about your work/Did you enjoy your work/Were you appreciated? LREF <u>Did you marry/Were you happy with your choice?</u> LREF <u>How would you do marriage differently, if you had the chance?</u> HLRHLL
6	Middle Adulthood: Children	Tell us about your children? LREF What do you wish had been different? HLRHLL
7	Older Adulthood: Summation	<u>Identify a particular episode in your life that changed you forever/was a turning point.</u> LWP If you were going to live your life over again, what would you change? Leave unchanged? LREF What are the most important things in your life today? LREF
8	Looking Forward Time 2 Assessment	What was your life dream? LWP Would you like to continue to meet, say monthly? Is there someone in this group who could take the lead in organizing such a monthly meeting? I would help. HLRHLL

LWP = Life-Writing Protocol

HLRHLL = This study only

LREF = Haight's Life Review and Experiencing Form

Attachment-focused questions

Table 2

Treatment Differences by Time of Assessment

Outcome	Baseline	8-week follow-up	6-month follow-up	8 week - baseline	6 month - baseline
	Mean (p-value)				
Depression					
Control	14.67	16.50	14.10	1.82 (.205)	-.58 (.709)
Treatment	19.79	16.19	14.93	-3.61 (.019)	-4.87 (.003)
Treatment – Control	5.12 (.024)	-.31 (.897)	.83 (.735)	-5.43 (.011)	-4.29 (.055)
Perceived Stress					
Control	8.44	9.51	8.37	1.07 (.047)	-.07 (.906)
Treatment	11.20	10.03	9.47	-1.17 (.039)	-1.72 (.002)
Treatment – Control	2.75 (.000)	.52 (.503)	1.10 (.163)	-2.24 (.005)	-1.66 (.036)
ER Visits					
Control	.13	.13	.21	-.00 (.998)	.08 (.217)
Treatment	.16	.15	.06	-.02 (.789)	-.10 (.104)
Treatment – Control	.03 (.678)	.02 (.861)	-.15 (.044)	-.02 (.850)	-.17 (.045)

The model includes treatment (control versus intervention) and time of assessment (baseline, 8 weeks, 6 months) as fixed classification factors; the interactions between these factors; sex, marital status, age, and education as additional fixed variables; and individuals as levels of a random classification factor. Table entries are means or mean differences, with probabilities in parentheses. Significant Ps are in bold font. Table shows adjusted means.