

## **Cultural Life Review Program: A Community-based Intervention for African American and Caribbean American Older Adults**

PI: Jo Anne Sirey, Ph.D.  
 Co-PI: Sharon McKenzie, Ph.D., CTRS  
 Partner: Katherine Martinez, LCSW & David S. Taylor, *Presbyterian Senior Services*

### **Specific Aims**

Social activities and social relationships are important in the later stage of life for many reasons. They are related to life satisfaction and high morale<sup>1,2</sup>, essential for maintaining a strong sense of identity. When involved in meaningful and purposive activities, individuals have opportunities to continue life roles and contribute in meaningful ways that maintain a stable self-image<sup>3-5</sup>. Later life chronic conditions such as Mild Cognitive Impairment (MCI) and depression interfere with the ability of individuals to fully participate in the relationships, continued roles and interactions within their social environment.

Studies suggest that the prevalence of MCI in the population over 65 may be as high as 20% and among older adults with MCI, depression is common<sup>6-9</sup>. Many older adults do not seek mental health services due to both logistical and psychological barriers to care<sup>10</sup>. Minority elders may be even less likely to access mental health services<sup>11</sup>. To address these barriers new initiatives have moved mental health services to community-based settings to improve acceptability and access to care. Recognizing the value of community based mental health care, partnerships have emerged to help integrate mental health into community settings and to design care that is acceptable to older adults who need help.

The proposed study brings together academic faculty with expertise in depression (Dr. Sirey, Weill Cornell Medical College Cornell Institute of Geriatric Psychiatry) and dementia (Drs. McKenzie & Mittleman, NYU William and Silvia Silberstein Institute for Aging and Dementia) with one of the oldest community-based, geriatric social service organizations, the Presbyterian Senior Services (PSS). This collaboration will introduce Life Review Programs into PSS' service portfolio and implement the proposed pilot project. The goal of the project is to pilot test the usefulness of a community-based intervention, Cultural Life Review Program (CLRP) to improve social and psychological functioning among African Americans and African Caribbean elders with MCI. We propose a one-year pilot study to document feasibility, and effect-size estimates for the impact of the Cultural Life Review Program (CLRP) in reducing symptoms of depression and improving social integration. We will use a treatment control design, in which participants are randomly assigned to CLRP or to a series of crafts workshops.

CLRP is an activities-based psychosocial intervention that guides seniors through a review of their lives in a systematic way. CLRP offers the opportunity to review and accept one's life trajectory and focus on present day activities and experiences. The activities and focus of this program have been especially designed for African American and African Caribbean elders. The structure of this activities-based life review program is built on an oral modality. Communities of color have a long history of using the oral tradition as a means of retaining historical events, traditions, wisdom and values<sup>12</sup>. We believe that this intervention will improve social functioning and decrease depression by increasing social contacts and processing regrets that interfere with psychological health<sup>13</sup>

The specific study aims are:

1. To test the acceptability and feasibility of the CLRP among Black older adults with Mild Cognitive Impairment (MCI) identified in a community setting.

2. To estimate the potential effect of CLRP on depressive symptoms among participating older adults.
3. To estimate the potential effect of CLRP on social functioning, both perceived social support and social activities.

We hypothesize that:

1. Older adults who participate in the CLRP will report a greater decrease in depressive symptoms than older adults who participate in the craft activity group.
2. Older adults who in the CLRP group will increase their social contacts and experience greater leisure satisfaction than adults in the crafts group.

As an exploratory hypothesis we will examine whether older adults who participate in CLRP report more self-efficacy as compared to those who participate in the craft group.

If the intervention appears to meet the needs of the participants, and have the hypothesized effects, we plan to apply for additional funding to test it with a larger number of community dwelling elders with MCI, of African-American and Caribbean American backgrounds, and ultimately to adapt the activities to be appropriate for elders with other ethnic backgrounds.

## **B. Background**

MCI is a clinical classification characterized by episodic memory deficits, and mild executive memory dysfunction similar to but less severe than is found in Alzheimer's disease (AD)<sup>14-21</sup>. Current research suggests that MCI is frequently a precursor, early or transitional phase to dementia and/or Alzheimer's disease<sup>15-18, 20-23</sup> with a progression rate of approximately 12-14% per year from MCI to dementia<sup>16, 19</sup>. There is evidence of a higher prevalence and incidence rate of AD among community-dwelling African Americans compared to non-Hispanic White seniors<sup>24-29</sup>. In the general population, the prevalence of MCI is estimated to be approximately 20% for individuals 65 years and older<sup>7-8</sup>. Several studies have investigated the etiology, diagnosis, age of onset, and pharmacological treatment of MCI among minority ethnic/racial groups<sup>30, 31</sup> but few have investigated nonpharmacological interventions to address the psychological aspects of MCI. In addition, there is little information on individual differences in symptoms and manifestation of MCI and how such interventions might differentially affect minority racial and ethnic groups. Research informs us that symptom of depression frequently precede symptoms of cognitive decline in the elderly<sup>6, 32-33</sup>. Older adults with MCI and other disease-related processes are extremely vulnerable to mood disorders, specifically late-life depression<sup>32, 34-36</sup>.

### **B.1. Depression and MCI**

It is estimated that approximately 2 million (8 to 20%) older community-residing adults display some symptoms of depression or have some form of depressive illness<sup>37</sup>. Community-dwelling seniors, more often than not, are undiagnosed or their symptoms do not fulfill the diagnostic criteria for a depressive disorder<sup>38</sup>. The cumulative prevalence for depression among individual with MCI is estimated to be 26%<sup>7</sup>. Moreover, "the combination of impaired cognition and depressive symptoms doubles in frequency at each 5-year interval after the age of 70 years"<sup>39-40</sup>. Individuals living with any chronic condition and/or cognitive impairments are at an increased risk of developing major depression<sup>41,36</sup>. Additional psychosocial risk factors, experienced by many minority ethnic groups, include lower socio-economic status, perceived income inadequacy, lower health status, lower social support and resources, lower participation in leisure services, and less ability to care for family members<sup>34, 42-48</sup>. As a result, minority individuals with MCI are at especially high risk for social isolation and depression<sup>11</sup>

### **B. 2. Mental Health Service Disparities and Racial and Ethnic Groups**

Of all minority groups (i.e., Asian Americans, Hispanic, etc.), African Americans are most vulnerable and least likely to seek mental health treatment from healthcare professionals<sup>49-51</sup>. This

is often due to lack of insurance coverage, income, understanding of resources and choices available, and to the cultural stigma of mental illness. African Americans tend to earn lower incomes compared to their Asian and White counterparts and to live in neighborhoods with less access to education, employment, and health services<sup>53-55, 11</sup>. Black immigrants “provide a unique opportunity [for researchers] to identify how socioeconomic status, acculturation, and exposure to racism [and how they] relate to each other and combine to affect.”<sup>56</sup>

### **B. 3. Facilitating Reminiscence as Theory-Based Practice**

Life review therapy interventions rest conceptually upon Erikson’s theory of life stages. Erikson<sup>(57-58)</sup> proposed that there are eight psychosocial stages, during which individuals struggle to balance opposing themes or life conflicts (syntonic and dystonic). Movement from one stage to the other is determined by the individual’s ability to resolve the conflict. If the individual is successful, he or she creates a ‘stepping stone’ to the next stage of development. In the final stage of adult development, the individual battles with integrity versus despair to achieve ego-integrity<sup>(58-59)</sup>. Life review allows individuals to assess how well they have managed conflicts at each life stage, and come to terms with what life has had to offer. The result of a review that is successful is the integration of accumulated experiences into present life and for the future. Achieving integrity results in self-acceptance, strong self-identity and recognition of one’s worth and value.

Recent studies of life review have examined the process further, using structured life review in a therapeutic framework<sup>60-61, 63-67</sup>. These researchers contend that when life review is orchestrated as a therapeutic intervention in which a therapeutic listener helps the older person instigate and reorganize his or her memories, the person can make sense of the past and discovers meaning he or she had not recognized in the present<sup>65-66</sup>. A study of a therapeutic-activities intervention older adults institutionalized for moderate dementia of the Alzheimer’s type indicated that life review promoted memory, perceived social values of self, decreased disorientation, reduced fear and anxiety, and improved self-esteem and social interaction<sup>67</sup>.

Other studies of life review have demonstrated that such interventions assist in the regaining of a cohesive sense of self, so that individuals can carrying out psychological and social tasks, and revise life structures in the context of the illness experience<sup>66-68</sup>. Life review interventions have also been effective in attenuating behavioral problems, depression, and attention deficits in the older population<sup>64, 69-70</sup>. Two recent reviews of effective therapies for older adults supported Reminiscence Therapy as a useful intervention for depression<sup>71</sup> and as a promising intervention among older adults with dementia<sup>72</sup>.

To be effective life review interventions need to use systematic and methodological approaches to enhance self-esteem and help the reviewer develop a sense of control<sup>65, 73</sup>. Haight and colleagues<sup>65</sup> identified key components, or “linchpins to make life review effective as an intervention. These “linchpins” include: structure (following a developmental model), individuality (one-on-one delivery), and evaluation that allow for analysis and synthesis of past life experiences. They recommended that the process be conducted over a period of at least six to eight weeks and that the therapist should use a structured guide to facilitate the life review process<sup>74</sup>. However, studies investigating the therapeutic use of life review in a group found that it is just as effective and yields similar benefits, as does a one-on-one setting<sup>75</sup>.

### **B. 4. Life Review: Ethnic and Cultural Considerations**

Several studies have tackled the manifestation of the life review from the perspective of culture and ethnicity and the implications for certain aspects of aging<sup>(62, 76-81)</sup>. Researchers have challenged the notion that life review is a universal phenomenon that occurs in the late stage of life<sup>77, 80, 82-83</sup>. Results from the Georgia Centenaria Study<sup>77-78</sup> suggested that life review was not a universal phenomenon as posed by Butler<sup>84</sup>. Almost half (46.4%) of the Centenarians had not engaged in life review. Black participants (27.8% of sample) scored higher than their White

counterparts on different functions of reminiscence suggesting racial, ethnic and cultural differences in the function of life review. Very few other studies have investigated the unique nature and function of life review in the African American experience<sup>76, 79, 85-86</sup>. Additional studies are needed to address whether African Americans use reminiscence differently.

### **B. 5. The Intervention: Cultural Life Review Program**

The CLRP was developed based on an earlier intervention, the Life Review Program<sup>67</sup>, which used recreation therapy types of programming to promote structured reminiscence in a group format. The intervention was designed and tested on a sample of institutionalized (long-term care) older Jewish immigrants and Euro-American adults with mild to moderate dementia. Participants met twice a week for 12 weeks. Recreation activities were used to stimulate reminiscence and to promote life review in a group setting. The activities had no historical or cultural context relevance to the participants as members of a particular ethnic group.

Each session was organized around the stages of life progressing from birth to old age in accordance with developmental theory and with the theoretical underpinning of Erikson's<sup>58</sup> theory of psychosocial stages. Each successive session builds on the previous ones with the intent of promoting continuity from session to session and to stimulate short and long-term memory. In the original intervention, sequential-protocols were written in paragraph format providing basic information about the specific activities and suggestions about the actual process for each session. The format of each session included: (a) an introduction, (b) a review of the previous session, (c) implementation of the current topic and activity, and (d) closure with an introduction of the upcoming session. Activities included songs, discussions, story telling, poetry, a slide show, artifacts using a timeline, cooking, arts and crafts, photograph/matching activity, and history. These activities tapped the cognitive, affective, social and physical domains. Qualified therapeutic recreation specialists (TRSs) trained in leadership and counseling techniques to led the groups.

The LRP was efficacious as a structured reminiscence program implemented in a recreational, fun, non-threatening, and challenging environment and elicited life review<sup>(67)</sup>. The intervention proved to be effective in increasing self-esteem, self-image and social interaction for the participants. In a replication study, with a similar sample ( $N=32$ ) of institutionalized older adults, the intervention was also effective in decreasing disorientation and depression among participants in the treatment group<sup>66</sup>.

Derived from Tabourne's work, the CLRP<sup>(85-86)</sup> was developed to include specific recreation activities that were culturally relevant to the African American experience and a more concisely written protocol that include a comprehensive plan for implementation and evaluation (refer to Appendix A and B). Specific content and processes for presenting each session were provided and were strategically linked to thematic outcomes. This intervention was designed for cognitively intact community-dwelling individuals with the goal of later testing the efficacy of the intervention on a population with early signs of cognitive impairment. The Therapeutic Recreation Outcome (TROM) and the Therapeutic Recreation Service Delivery Model (TRSDM)<sup>(87-88)</sup> were used to frame the CLRP for maximum effect on well-being and to include the scope of service necessary in a life review intervention.

The CLRP had measurable objectives that were directly linked to the purpose of the intervention (i.e., CLRP affecting change in well-being). The CLRP included health promoting content that stimulate evaluation, identification, and re-education of skills and strategies from the participant's past to improve present life circumstances and promote psychological health. Behavioral outcomes, referred to as terminal program objectives (TPO), are the benefits/results anticipated for clients participating in the intervention<sup>(89)</sup>.

### **C. Preliminary Studies**

#### **C1. The Cultural Life Review Program (CLRP)<sup>(85-86)</sup>**

CLRP was tested with community-dwelling African Americans 65 years and older who had little or no cognitive impairment. Subjects participated in either the treatment (CLRP) or the control (reminiscence group) condition for ten weeks with participants meeting once weekly for ninety-minute sessions. A qualitative design using a focus group format for outcome evaluation (done in the 10<sup>th</sup> week) was employed. The primary intent was for participants to identify aspects of their lives worth celebrating, identify the occurrence of life, and explore the relevance of the content, process, choice of activities that were reflective to the cultural values of African Americans.

Thirty-one seniors were recruited from local community centers in a city in the Mid-western U.S. During the focus group, a semi-structured approach was used with a mixture of both open-ended and semi-structured questions. Both audio-tapes of sessions and field notes were transcribed and analyzed using <sup>(92)</sup> analysis guidelines. Additional data-unit-constant-comparative methods were employed <sup>(93-94)</sup>. Analysis of data by both the primary researcher and an independent researcher resulted in eight themes. Inter-rater reliability was established using a third researcher.

The themes included: CLRP triggered self-evaluation and self-reflection, 2) CLRP facilitated opportunity to draw meaning to life, 3) life review was difficult and identified unachieved goals, 4) similarity of life experiences with group members provided meaning to the life review process, 5) group members were empowered by the process, 6) the structure and delivery of program facilitated life review – activities tapped African American experiences, 7) CLRP promoted thoughts of legacy and generativity, and 8) religiosity/spirituality was a driving force in participants' lives. Themes suggest that an intervention with culturally relevant activities incite meaning for participants' experiences as African Americans.

Within the CLRP group we found a significant change ( $F=4.52, p=.04$ ) in the *Purpose in Life* <sup>(96)</sup> dimension of well-being of the six subscales of psychological well-being. This dimension measured goal-setting orientation and a sense of directedness in life. In a between group comparison, the effect of CLRP on psychological well-being and life satisfaction was also tested but did not yield significance from pre- to post-testing. We understand this finding to reflect the powerful impact of both interventions.

## **D. Methods**

### **D.1 Overview:**

The study is designed as a single-blind (assessor blind) randomized-trial. Thirty five individuals will be recruited and randomly assigned to participate in CLRP or a craft activity condition. Individuals receiving CLRP will participate in a 90-minute group session once per week for 10 weeks under the guidance of a certified therapeutic recreation specialist. Those not assigned to CLRP will participate in a craft activity group for the 10 weeks also meeting for 90 minutes. In the preliminary study the control group participated in a reminiscence group doing the same activities as the treatment group. We believe this affected our ability to distinguish between group differences because the groups were so similar in their content. Hence, a craft activity conducted for the same time as the CLRP was selected for this present study. Independent research assessments will be carried out to evaluate study outcomes (depressive symptom severity and social integration) and covariates (overall medical burden and functioning) at four times; pre-intervention (baseline), mid intervention telephone (6 weeks), post intervention (10-11 weeks) and three months later (24 weeks).

### **D.2 Sample and Inclusion Criteria:**

A sample of 35 community-dwelling individuals of African and Black Caribbean descent with MCI will be recruited. Sample selection will be guided by the following considerations: that individuals 1) African and/or Black Caribbean American, 2) are community-dwelling individuals who were self-sufficient or partially self-sufficient (meaning not living in custodial institutions), and 3) are 65 years of age or older. Cognitive impairment will be assessed using the Mini-Mental

State Examination <sup>(MMSE: 97)</sup> defined as a score  $\geq 24$  and to include the ability to recall two or fewer of three objects at five minutes (adjustment will be made for education), and having a score between 4-11 on the NYU Paragraph Recall Test.<sup>98</sup> Minor depression, major depression or dysthymia must also be present as indicated by the Structured Clinical Interview for DSM-IV Disorders (SCID) section for mood disorders <sup>(99)</sup>. Exclusion criteria include: 1) moderate to severe depression with any suicidal ideation (from SCID assessment), 2) history of episodes of mania, psychosis, suicide attempts or a psychiatric hospitalization (from SCID screening questions). In addition, older adults with severe impairment (MMSE<18) will be excluded.

### **D. 3 Recruitment of Potential Study Participants:**

Potential participants will be recruited through Presbyterian Senior Services' outreach. Potential participants will be asked to one of three informal meetings. During these informal gatherings to be held at PSS' Harlem location, the co-PI, Dr. McKenzie and trained Research Assistant staff will describe the program and meet with each participant interested. We expect many of the older adults who attend this meeting to be eligible for participation in the study. This is based on the fact that PSS in Harlem services approximately 15 to 20 clients daily. To maximize the use of time and minimize burden, after hearing the study describe, interested participants will be asked to sign informed consent and have an individual interview with research staff. Using space available at PSS in Harlem, we will administer the baseline assessment, beginning with the measures used to define inclusion and exclusion criteria. Using this recruitment strategy and to reduce participant burden the consent, screening and initial research assessment will be collapsed into a single assessment meeting during this informal gathering. Potential participants who wish to schedule a meeting at a different time will be offered a chance to do so. In addition, this format will enable us to bring 2-3 trained staff to conduct multiple assessments at a given time.

Older adults who meet study criteria and provide informed consent will be told that they will be contacted by telephone to arrange their group meeting. Dr. McKenzie will contact subjects and tell them their group membership. Older adults who do not meet study criteria will be referred to other daily activities that are offered at PSS. Those older adults who are in acute crisis and require a more immediate intervention will be referred to a local mental health provider who has a relationship already established with PSS. Harlem Hospital has an established partnership with PSS providing mental health services.

Based on the popularity of PSS' services and the number of seniors served daily at this location, we expect to be able to recruit study participants within two months of our start date. Ms. Katherine Martinez, Director of Social Services has been successful in establishing relationships with the older adults in the surrounding community and familiar with their needs. In addition, PSS has an established relationship with other key players in the community to include the religious leaders, elected officials, and local community organizations.

### **D.4 Research Assessment:**

The objective of the assessment is to gather demographic data, as well as information on cognitive status, depressive diagnoses, symptom severity, overall medical burden, functioning, and social support. Instruments, including self-reports, will be administered by research staff to minimize misunderstanding and incomplete ratings. The baseline research assessment will be conducted at the time of informed consent, when possible. We expect that with consent, the assessment will take 1-1/2 hours. Follow-up assessments (weeks 6, 10/11, 23/24) will be conducted by research staff who will not be informed of the participant randomization status or our hypotheses. We expect that some participants may describe their group experience to RAs and thus compromise the "blind" to treatment assignment. However, the participants and the RAs will be unaware of the study hypotheses.

Training for the research assessments will be carried out by Dr. Sirey and Cornell ACISR faculty. Supervision of clinical assessments will be carried out by Dr. Sirey. As part of this application, Dr. McKenzie will undergo training to conduct a structured diagnostic interview to assess for depression.

**D. 5 Variables and Measurement:** The table below summarizes the assessment schedule and measures of outcome.

Research Assessment Schedule					
Domain/Measure	Time (mins)	Baseline	Interim (6 weeks, phone)	Post group (10-12 wks)	Follow-up (24 wks)
Cognitive status/ MMSE & NYU Paragraph Recall	15	X			
Depression • Diagnosis/SCID • Severity/MADRAS	20	X X	X	X	X
Social Integration • Social Support/DSSI • Leisure Satisfaction	8 10	X		X X	X X
Self-efficacy	8	X		X	X
Satisfaction	3		X	X	X
Medical conditions/MAI list of diseases	5	X			
Functioning/ WHODAS 12	10	X		X	X

Mini-Mental State Examination<sup>97</sup> will be used to screen for general cognitive function. The MMSE consist of 11 questions assessing general functions in orientation, registration, attention and calculation, recall and language. Scores range from 1 to 30 with 24 being considered as early cognitive difficulties. The MMSE is widely used in many settings with older adults. False positives in scores have been found for older African Americans with less than eight years of formal education (if less than a years, a score of  $\geq 18$  will be permitted)<sup>100</sup>.

The NYU Paragraph Recall Test<sup>98</sup> will be an additional tool used to screen for cognitive function. The test measures immediate and delayed verbal recall of a brief story. Immediate recall is queried after reading the paragraph aloud to the subject. Immediately following the subject=s recall, a second reading of the paragraph is administered. After about 5 to 10 minutes of intervening tests, delayed recall for the paragraph is assessed. Unique features of this test paradigm include a second reading of the paragraph after immediate recall, a relatively short (5 - 10 minute) delay interval, and a requirement for verbatim recall. Currently, nine alternate forms of this test are available for research requiring serial assessment (one of paragraph 8 through 9 will be used). This test is sensitive to the effects of aging and early Alzheimer=s disease (AD),<sup>101-102</sup> and may predict conversion to AD in subjects with Mild Cognitive Impairment (MCI)<sup>98</sup>. Predetermined educational level cut-off score of  $\geq 4$  for 8 to 15 years of education is recommended<sup>98</sup>.

Depression Diagnosis: The primary diagnostic tool is the SCID because it relies on clinical judgment and is used extensively in research and clinical care. We use the SCID to make DSM-IV diagnoses of major depression, dysthymia, and minor depression. The SCID has adequate reliability, with a test-retest coefficient equaling 0.69 and inter-rater reliability of 0.64.<sup>(103)</sup> Given the complex relationship between medical-neurological comorbidity and disability, this study will use the “all-inclusive approach” by having research staff record all symptoms and signs of depression, and document evidence of possible medical contributors to symptoms of depression. In addition, we will administer the SCID screening questions to identify possible mania and

psychosis. Each SCID interview will be reviewed by Dr. Sirey to make the final diagnosis.

Depressive symptoms: To measure depression severity we plan to administer the Montegomerg Asberg Depression Rating Scale (MADRAS) <sup>(104)</sup> a 10 item severity scale that rates depression based on a clinical interview. The MADRAS has been found to be more sensitive to change over time than the HAM-D. Interviewer rating scales help assess depressive symptoms that may be underreported among older adults due to concerns about stigma or social desirability. Dr. Sirey will monitor the depression severity ratings for acute clinical symptoms (e.g., suicidal ideation) that require immediate intervention.

Reliability: Training and ongoing supervision of Dr. McKenzie and participating research staff in clinical interviewing and diagnostic assessments will follow procedures used by the ACISR. Training on clinical assessments consists of several components: 1) observation and discussion of the full set of SCID-IV 2) in-person observation of several interviews conducted by experienced clinicians with patients exhibiting a range of depression severity; 3) role plays of the interviews; and 4) conducting patient interviews with in-person supervision. These efforts resulted in good reliability for clinical assessments conducted by our RAs. In our prior research on depression in homecare patients, the averaged kappa for SCID depression diagnoses was .80.

Social Integration: We recognize that there is a relationship between perceived social support, attendance at social activities, satisfaction with leisure social activities and depression. For this pilot project we will assess each of these areas separately. We will examine the impact of the CLRP on each outcome.

Social Support: For general assessment of social support, we chose the Duke Social Support Index <sup>(105)</sup> because it is widely used in older adults with depression. The measure yields scores on 3 categories: subjective social support, social interaction, and instrumental social support.

Leisure Satisfaction Measure <sup>(LSM; 106-107)</sup> Measures the degree to which client perceives his/her general “needs” are being met through leisure. The tool contains 24 statements in which the client indicate the statement that best fit their situation (“1” statement almost never true, “2” statement seldom true, “3” sometimes true, “4” often true, and “5” almost always true). The alpha reliability coefficient is .93. The LSM is appropriate for clients with moderate to no cognitive impairment.

Self-Efficacy: The General Self-Efficacy Scale <sup>(GSE, 108)</sup>. (test-retest reliability:  $k = .76$  to  $.90$ ) is a 10 item measure of general self-efficacy that has been widely used with older adults <sup>(109)</sup>, including those with cognitive impairment <sup>(110)</sup>.

Functional Status: Functional status will be assessed using the World Health Organization Assessment Schedule II (WHODAS II). The 12-item version will be used to assess overall functioning. This instrument is compatible with the international classification system, is cross-culturally applicable and treats all disorders at parity when determining level of functioning <sup>(111)</sup>. The 12-item form was found to predict 93% of general disability factor predicted by the 36-item form of the WHODAS II <sup>(112)</sup>.

Satisfaction: The final group meeting of both groups will include an evaluation of participants’ experience in a focus group format. Questions will cover the program’s ability to trigger life review, the structure and delivery of the program and aspects of the program that were most relevant. This meeting will be audiotaped. All participants will rate their experience on a measure of satisfaction. Questions will include aspect of the program delivery (example, “Were the activities (i.e., props, stories, etc.) relevant to your culture and ethnicity?”); effectiveness of leader; program duration; environment; recommendations for future programming.

Medical conditions will be catalogued using the MAI's checklist<sup>(113)</sup>. Other options, e.g., the CIRS-G or Charlson Comorbidity Index, were considered too time consuming and, without access to medical records, not necessarily more reliable;

Sociodemographic Status and Changes: Information on date of birth, gender, country of origin, race, ethnicity, marital status, household size, and education are obtained using a form used routinely by for our group. To assess current financial situation, we ask for both total income and a self-rated financial assessment. We will assess major changes (e.g., death of a spouse) at follow-up interviews and ask for information about the events' valence and perceived impact when events are reported.

#### **D. 6. Data Management**

All data will be reviewed for completeness prior to data entry. Data will be entered into an Access database designed by the Data Management Unit of the Cornell ACISR using Cornell ACISR conventions. The first step of the data analysis will consist of fully describing and screening data using graphical analysis and descriptive summaries to ensure that values are within expected ranges, to check for outliers and abnormal values, and to verify that the distributions of measures meet the assumptions of the statistical tests to be used. Tests will be conducted to ensure that random assignment was not compromised and that the experimental conditions are equivalent on potentially important baseline variables, such as age, gender, and severity of depression, overall cognitive impairment, and medical burden.

#### **D.7 Data Analyses:**

The goal of the data analyses of the pilot data collected (N=35) is to examine the effect size of CLRP on depressive symptoms and social integration. To test the two primary study hypotheses, we will conduct bivariate comparisons (e.g., t-tests between the two groups on the outcome measures (depression severity, social activities and satisfaction with leisure activities) at post-group and 3 month follow-up assessments. These findings will provide the evidence for the impact of the interaction and will be used for power calculations to justify the sample size for the larger study. All statistical analyses will be achieved using SAS software.

Based on the effect sizes calculated, the larger study could be powered sufficiently to examine the impact of the intervention taking into account covariates. In addition, a larger sample would provide the opportunity to tease apart the relation between social activities, satisfaction and changes in depression.

#### **E. Collaborating Agency & Partnership arrangement**

Founded in 1962, Presbyterian Senior Services has provided social services, primarily to the elderly, throughout New York City. In 1990, PSS began to provide senior center services under contract with the New York City Department for the Aging (DFTA). The agency sponsors six senior centers, five throughout the Bronx and one in Harlem. PSS services also include a Caregiver Support Program serving caregivers caring for an elderly, frail or disabled loved one in the South Bronx and a residence for grandparents raising grandchildren. They also offer a Life Enrichment / After School Program within the residence offering educational training, support groups, life skills training, parenting skills workshops, legal assistance, advocacy, individual & family counseling. The residence is the first building of its kind in New York State. Presbyterian Senior Services has an operating budget of 3.3 million dollars and a total of forty-two employees.

PSS senior centers provides service to approximately 1800 seniors, provide 150, 000 meals per year. PSS services include case management, information & referral, advocacy, leisure activities & trips, educational training, health & wellness activities. At the Harlem Senior Center location,

located at 128<sup>th</sup> Street and Adam Clayton Powell Blvd, they see on average of 15 to 20 seniors daily who are primarily from the African and Caribbean American communities. PSS currently has a partnership with Harlem Hospital where they provide mental health services to the seniors at the Harlem Senior Center. Therefore, Harlem Hospital would be the site for making some referrals.

This collaboration between Cornell Medical College, NYU William and Silvia Silberstein Institute for Aging and Dementia and PSS would help to identify clients in the PSS system who require further assistance; help with expanding and developing more outcome based activities, increase mental health education to seniors within the senior center, and create community mental health referral. This partnership is the first step towards future collaboration of helping to expand the quality of services offered by PSS and their various locations. Dr. McKenzie, with the guidance of Dr. Mittelman and Dr. Sirey proposes to pilot test the efficacy of a life review program with older adults with mild cognitive impairment and depressive symptoms. This new life review program would target these individuals, to decrease depression and increase their opportunities for social and leisure activity.

The first phase of this program will be a 10-week Cultural Life Review Program (CLRP; McKenzie, 2004; 2006) with the Caribbean and African American residents of the community with mild cognitive impairment. This program will be the basis of the research project and will offer an opportunity for PSS to tailor a portion of the already existing program to an underserved ethnic group within PSS. It is a concern of PSS that many of the African American and African Caribbean American residents of the community who are noticing changes in their memory are not willing to seek the services that PSS has to offer and are also isolated from other social opportunities within the community. The second phase will be to offer a Life Review Program to a multi-ethnic group of elders with MCI and depressive symptoms. PSS will host the study groups, assist with the recruitment of volunteers, and act as liaison to the existing clients that they serve and other community leaders in the neighborhood in outreach for eligible participants.

If this program is successful, we plan to maintain and increase linkages with PSS by seeking other research funding to rigorously assess the effects of these programs with additional seniors and to initiate new programs. Future plans include developing a comprehensive demonstration project with PSS, Weill Cornell Medical School and NYU School of Medicine Silberstein Institute. PSS would be the primary fund holder for development and implementation of the project, and Cornell and NYU partnering with funding for program evaluation and research. We plan to submit a proposal for a demonstration project to be funded by monies allocated through the New York State Geriatric Mental Health Act (RFP is due in Fall 2006). In addition, we will explore other potential Foundation funding.

**PROJECT TIMELINE**

<b>Activities</b>	<b>Resources/Input</b>	<b>Timeline</b>
Submit proposal to NYU and Cornell's IRB	Primary submission to NYU School of Medicine review board	August
Make required revisions and adjustments to intervention that will be specific to African Caribbean American experience	Research the Schiemberg Museum; check library resources; Historical Society; Input from seniors living in this community from the various Caribbean Islands; Seek input from at least three seniors from two or three of the Caribbean Island (Jamaica, Trinidad & Tobago, and Guyana). The Caribbean Nursing Association has agreed to also assist with this. Training in depression assessment through SCID training tapes, observation and in person interviews.	August to September
Funding announcement	CITRA	September
Begin recruitment	Research team along with PSS will begin recruitment via conducting presentations to the regular clientele and to the immediate neighboring community organizations (i.e. church)	October
Eligibility screening Enrollment Baseline assessments	Conduct screening for eligible participants; if eligible obtain informed consent; conduct initial baseline assessments; group assignment via randomization	End of October to beginning of November
Program implementation	Implement the CLRP; Meeting 1 x per week for 10-weeks	Week of November 6 – Week of January 29 (Break: week of Nov. 26, Dec. 24, Jan. 1)
Interim assessments	6 weeks into program	Week of Dec 18, 2006

Post intervention assessments	Conduct post assessment during the between the 10 <sup>th</sup> and 12 <sup>th</sup> week post the intervention	February 1 – 19, 2007
Data analysis	Create database; input data; analysis of baseline, interim and post intervention assessments; begin preliminary report	March – April, 2007
Conduct 24-week follow-up assessment	One week prior to this, participant will be contact via telephone to schedule a face-to-face follow-up meeting.	Week of April 29, 2007
Final data analysis	Complete data analysis;	May – June 2007
Final Report Submit article to a Journal	Complete final report to Citra; prepare and submit article to a peer-reviewed journal	July – August 2007

## REFERENCES

1. Brooks, J. (1985) Social indicators and the life satisfaction of a group of Black elderly Americans (Gerontology, social relations, urban-rural, Mississippi). *Dissertation Abstracts International*, 46 (12), 3861 (UMI No. 8603276).
2. Havighurst, R. (1964). Changing status and roles during the adult life cycle: Significance for adult education. In H.W. Burns (Ed.), *Social backgrounds of adult education (17-38)*. Boston: Center for the Study of Liberal Education Adults.
3. Atchley, R. (1999). *Continuity and adaptation in aging: Creating positive experiences*. Baltimore: John Hopkins University Press.
4. Bevil, C. A., O'Connor, P. C., & Mattoon, P. M. (1993). Leisure activity, life satisfaction, and perceived health status in older adults. *Gerontology & Geriatrics Education*, 14, 3-19.
5. DeGenova, M. K. (1993). Reflections of the past: New variables affecting life satisfaction in later life. *Educational Gerontology*, 19, 191-201.
6. Jorm, a.F. (2000). Is depression a risk factor for dementia or cognitive decline? A review. *Gerontology*, 26, 219-227.
7. Lyketsos, C.G., Lopez, O., Jones, B., Fitzpatrick, A.L., Breitner, J., & DeKosky, S. (2002). Prevalence of neuropsychiatric symptoms in dementia and mild cognitive impairment: Results from the Cardiovascular Health Study. *JAMA*, 288, 1475-1483.
8. Mayo Clinic. (2004). Mild Cognitive Impairment. <http://www.mayoclinic.com/health/mild-cognitive-impairment/DS00553>. Retrieved: January 6, 2006.
9. National Institute of Mental Health (NIMH) (2003). Older Adults: Depression and suicide facts. Retrieved 7/6/2006. <http://www.nimh.nih.gov/publicat/elderlydepsuicide.cfm>
10. Van Citters AD, Bartels SJ. A systematic review of the effectiveness of community-based mental health outreach services for older adults.
11. Psychiatr Serv. 2004 Nov;55(11):1237-49.
12. Miller, D.K., Malstrom, T.K., Joshi, S., Andresen, E.M., Morley, J.E., & Wolinsky, F.D. (2004). Clinically relevant levels of depressive symptoms in community-dwelling middle-aged African Americans. *Journal of American Geriatric Society*, 52(5), 741-748.
13. Collins (1990)
14. (McKee et al., 2005)
15. Davie, J.E., Azuma, T., Goldinger, S.D., Connor, D.J., Sabbagh, M.N., and Silverberg, N.B. (2004). Sensitivity to expectancy violations in health aging and mild cognitive impairment. *Neuropsychology*, 18 (2), 269-275.
16. Fernandez-Ballesteros, R., Zamarron, M.D., Tarraga, L., Moya, R., & Iniguez, J. (2003). Cognitive plasticity in healthy, mild cognitive impairment (MCI) subjects and Alzheimer's disease patients: A research project in Spain. *European Psychologist* 8 (3), 148-159.
17. Flicker, C., Ferris, S.H., & Reisberg, B. (1991). Mild cognitive impairment in the elderly: predictors of dementia. *Neurology*, 41, 1006-1009.
18. Flicker, C., Ferris, S.H., & Reisberg, B. (1993) A longitudinal study of cognitive function in elderly persons with subjective memory complaints. *Journal of the American Geriatrics Society*. 41,1029-1032
19. Morris, J.C., Storandt, M., Miller, J.P., McKeel, D.W., Price, J.L., Rubin, E.H., et al. (2001). Mild cognitive impairment represents early-stage Alzheimer's disease. *Archives of Neurology*, 58, 397-405.
20. Petersen, R.C., Stevens, J.C., Ganguli, M.D., Tangalos, M.D., Cummings, J.L., & DeKosky, S.T. (2001). Practice parameter: Early detection of dementia: Mild cognitive impairment (an evidence-based review). *Neurology*, 56, 1133-1142.

21. Reisberg, B; Laska, E; Monteiro, I; Boksay, I; Torossian, C; Javed, A; Khan, M.A., Ferris, S. (2004). Predicting MCI and dementia in elderly subjects with subjective complaints [Abstract]. *Neurobiology of aging*, 25, (S26)
22. Reisberg, B.; Laska, E, Prichep, L.S., John, E.R., Franssen, E.H., Monteiro, I.M., Boksay, I., Brula, A.Q., Ferris, S.H. (2003). Predicting mild cognition impairment using multiple modalities. *International Psychogeriatrics*, 15, 214.
23. Boksay, I., Reisberg, B., Torossian, C., & Krishnamurthy, M. (2005). Alzheimer's disease and medical disease conditions: A prospective cohort study. *Journal of the American Geriatrics Society*, 53(12), 2235.
24. Chertkow, H., Verret, L., Bergman, H., et al. (2001). Predicting progression to dementia in elderly subjects with Mild Cognitive Impairment: A multidisciplinary approach. Contemporary Clinical Issues. Plenary Session, 53<sup>rd</sup> Annual Meeting of the American academy of Neurology. Philadelphia.
25. Folstein, M., Anthony, J.C., Parhard, J., Duffy, B., & Gruenberg, E.M. (1985). The meaning of cognitive impairment in the elderly. *Journal of American Geriatric Society*, 33, 228-233.
26. Folstein, M.F., Bassett, S.S., Anthony, J.C., romanoski, A.J., & Nestadt, G.R. (1991). Dementia: Case ascertainment in a community survey. *Journal of Gerontology*, 46, M132-M138.
27. Gurland, B., Wilder, D., Cross, P., Lantigua, R., Teresi, J., Barrett, V., Stern, Y., & Mayeux, P. (1995). Relative rates of dementia by multiple case definitions, over two prevalence periods, in three socio-cultural groups. *American Journal of Geriatric Psychiatry*, 3, 6-20.
28. Gurland, B.J., Wilder, D.E., Lantigua, R., Stern, Y., Chen, J., Killeffer, H.P., & Mayeux, R. (1999). Rates of dementia in three ethnorracial groups. *International Journal of Geriatric Psychiatry*, 14, 481-493.
29. Heyman, A., Fillenbaum, G., Prosnitz, B., Raiford, K., Burchett, B. & Clark, C. (1991) Estimated prevalence of dementia among elderly black and white community residents. *Archives of Neurology* 48, 594-598.
30. Murden, R.A., McRae, T.D., Kaner, S. & Bucknam, M.E. (1991) Mini-Mental State Exam scores vary with education in Blacks and Whites. *Journal of American Geriatric Society*, 39, 149-155.
31. Clark, L., N., Levy, Gilberto, Tang, M., Mejia-Santana, H., Ciappa, A., Tycko, B., Cote, L.J., Mayeux, R., & Marder, K. (2003). The Saitohin 'Q7R' polymorphism and tau haplotype in multi-ethnic Alzheimer disease and Parkinson's disease cohorts. *Neuroscience Letters*, 347 (1), 17-20.
32. Mayeux, R., Lee, J.H., Romas, S.N., Mayo, D., Santana, V., Williamson, J., Ciappa, A., Rondon, H.Z., Estevez, P., Lantigua, R., Medrano, M., Torres, M., Stern, Y., Tycko, B., & Knowles, J.A. (2002). Chromosome-12 Mapping of late onset Alzheimer disease among Caribbean Hispanics. *American Journal of Human Genetics*, 70, 237-243.
33. Devanand, D.P., Sano M., Tang, M.X., et al. (1996). Depressed mood and the incidence of Alzheimer's disease in the elderly living in the community. *Arch Gen Psychiatry*, 150, 1693-1699.
34. National Institute of Mental Health (NIMH). (2003). *Breaking Ground, Breaking through: The Strategic Plan for Mood Disorders Research of the National Institute of Mental Health*. Bethesda, MD: NIMH, National Institutes of Health, U.S. Dept. of Health and Human Services; NIH Publication 03-5121.
35. Alexopoulos, G.S. (2005). Depression in the elderly. *Lancet*, 365, 1961-1970.

36. Burns, A. Zaudig, M. (2002). Mild cognitive impairment in older people. *Lancet*, 360, 1963-1965
37. Jorm, A.F. (2000). Is depression a risk factor for dementia or cognitive decline? A review. *Gerontology*, 26, 219-227.
38. NIMH. (1999). Mental Health: A report of the Surgeon General. Chapter 5 Depression in older adults Retrieved: 7/5/06  
<http://www.surgeongeneral.gov/library/mentalhealth/chapter5/sec3.html> U.S. Department of Health and Human Services. *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.
39. (NIMH, 2006)
40. Steffens, D.C., Otey, E., Alexopoulos, G.S., Butters, M., Cuthbert, B., Ganguli, M., et al. (2006). Perspectives on depression, mild cognitive impairment and cognitive decline. *Arch Gen Psychiatry*. 63, 130-138.
41. Arve, S., Tilvis, R.S., Lehtonen, A., Valvanne, J., & Sairainen, S. (1999). Coexistence of lowered mood and cognitive impairment of elderly people in five birth cohorts. *Aging*. 11, 90-95.
42. Alexopoulos GS. Mood disorders. In: Sadock BJ, Sadock VA, eds. *Comprehensive Textbook of Psychiatry, 7th Edition, Vol. 2*. Baltimore: Williams and Wilkins, 2000.
43. Lautenschlager NT, Almeida OP, Flicker L, Janca A.  
Can physical activity improve the mental health of older adults?  
*Ann Gen Hosp Psychiatry*. 2004 Jun 29;3(1):12.
44. Baker, F.M. (1991). Dementing illness in African American populations: Evaluation and management for the primary physician. *Journal of Geriatric Psychiatry*, 24, 73-91.
45. Baker, F.M. (1996). Issues in assessing dementia in African American elders. In: G. Yeo & D. Gallagher-Thompson (Eds.), *Ethnicity & the dementias* (pp. 59-71). Washington, DC: Taylor & Francis.
46. Baker, F.M., & Lightfoot, O.B. (1993). Psychiatric care of ethnic elders. In A.C. Gaw (Ed.), *Culture, ethnicity & mental illness* (pp. 517-552). Washington, DC: American Psychiatric Press.
47. DiPietro, L (2001). Physical activity in aging: Changes in patterns and their relation to health and function. *Journal of Gerontology A: Biological Science Medical Science*, 56A, 13-22.
48. Lautenschlager, N.T., Almeida, O.P., Flicker, L., & Janca, A. (2004). Can physical activity improve the mental health of older adults? *Annals of general hospital psychiatry*, 3 (12). Retrieved: <http://www.annals-general-psychiatry.com/content/pdf/1475-2832-3-12.pdf> 1/20/2006
49. U.S. Department of Health and Human Services. (2001). *Mental Health: culture, race, and ethnicity-A supplement to mental health: A report of the Surgeon General*. Rockville, MD: U.S. Dept of Health and Human Services, Substance Abuse and mental health services Administration, Center for Mental Health Services
50. Cochran, D., Brown, D., & McGregor, K. (1999). Racial differences in multiple roles of older women: Implications for depressive symptoms. *The Gerontologist*, 39, 465- 472.
51. Dunlop, D. Song, J., Lyons, J., Manheim, L., & Chang, R. (2003). Racial/ethnic differences in rates of depression among pre-retirement adults. *American Journal of Public Health*, 93, 1945-1952.

52. CDC (2005). Health disparities experienced by Black or Africans Americans—United States. *Morbidity and Mortality Weekly Report*, 54 (01), 1-3.
53. Jang, Borenstein, Chiriboga, & Mortimer, 2005
54. Farley, R. (2000). Demographic, economic, and social trends in the multicultural America. In: Jackson, J.S. (Editor). *New Directions: African American in Diversity nation (11-44)*. Washington, D.C: National Policy Association.
55. Massey DS, Denton NA. Hypersegregation in U.S. metropolitan areas: black and Hispanic segregation along five dimensions. *Demography*. 1989 Aug;26(3):373-91.
56. Morenoff & Sampson, 1997)
57. Williams, D.R. (2005). The health of U.S. racial and ethnic populations. *Journals of Gerontology: Series B (60B), Special Issue II*, 53-62.
58. Erikson, E. (1950). *Childhood and society*. New York: W.W. Norton.
59. Erikson, E. (1963). *Childhood and society* (2<sup>nd</sup> ed.). New York: W.W. Norton
60. Erickson, E., Erickson, J., & Kivnick, H. (1986). *Vital involvement in old age*. New York: W.W. Norton.
61. Black, G., & Haight, B. K. (1992). Integrality as a holistic framework for the life-review process. *Holistic Nurse Practitioner*, 7 (1), 7-15.
62. Goshima, Y., Koga, T., Fujimura, M., Moriya, M., Ishii, M., Nakata, H., Fujiki, H., Hashiguchi, K., Tanaka, H., Mizumachi, G., & Inanaga, K. (1999). The trial reminiscence group therapy on elderly dementia patients. *Papers and Proceedings of the Reminiscence and Life Review Conference*, 2, 58-61.
63. Haight, B., & Dias, J. (1992). Examining key variables in selected reminiscing modalities. *International Psychogeriatrics*, 4, (Supplimental, 2), 279-290.
64. Haight, B.K., Gibson, F., & Michel, Y. (2006). The Northern Ireland life review/life storybook for people with dementia. *Alzheimer's & Dementia*, 2, 56-58.
65. Bohlmeijer, F, Valenkamp, M, Westerhof, G., Smi, F, & Cuijpers, P. (2005). Creative reminiscence as an early intervention for depression: Results of a pilot project. *Aging & Mental Health*, 9 (4), 302-304.
66. Haight, B. K., Coleman, P., & Lord, K. (1995). The Linchpins of a successful life review: Structure evaluation, and individuality. In B. K. Haight & J. D. Webster (Eds.), *The art and science of reminiscing: Theory, research, methods, and applications* (pp. 179-192). Washington, DC: Taylor & Frances.
67. Tabourne, C. (1995). The effects of a life review program on disorientation, social interaction, and self-esteem of nursing home residents. *The International Journal of Aging and Human Development*, 41(3), 251-266.
68. Tabourne, C. (1991). The effects of a life review recreation therapy program on confused nursing home residents. *Topics in Geriatric Rehabilitation*, 7(2), 13-21.
69. Borden, W. (1989). Life review as a therapeutic frame in the treatment of young adults with AIDS. *Health and Social Work*, 14(4), 253-259.
70. Watt, L. M., & Cappeliez, P. (1995). Reminiscence intervention for the treatment of depression in older adults. In B. K. Haight & J. D. Webster (Eds.), *The art and science of reminiscing: Theory, research, methods, and applications*. (pp. 221-232). Washington, DC: Taylor & Frances.
71. Cappeliez, P., O'rourke, N., & Chaudhury, H. (2005). Functions of reminiscence and mental health in later life. *Aging & Mental Health*, 9 (4), 295-301.
72. Frazer CJ, Christensen H, Griffiths KM. (2005). Effectiveness of treatments for depression in older people. *Med J Aust*. 20;182(12):627-32.
73. Woods B, Spector A, Jones C, Orrell M, Davies S. (2005). Reminiscence therapy for dementia. *Cochrane Database Syst Rev*. CD001120.

74. Beechem, M., Anthony, C., & Kurtz, J. (1998). A life review interview guide: A structured systems approach to information gathering. *International Journal of Aging and Human Development*, 46(1), 25-44.
75. Haight, B. K., Michel, Y., & Hendrix, S. (2000). The extended effects of the life review in nursing home residents. *International Journal of Aging and Human Development*, 50 (2), 151-168.
76. Burnside, I. (1994). Reminiscence and life review: Therapeutic interventions for older people. *Nurse Practitioner*. 19, 55-59.
77. Arian, Perri, Nezu, Schein, Christopher, and Joseph, 1993
78. Merriam, S. B. (1993a). Butler's life review: How universal is it? *International Journal of Aging and Human Development*, 37, 163-175.
79. Merriam, S. B. (1993b). Race, sex, and age-group differences in the occurrences and uses of reminiscence. *Activities, Adaptation and Aging*, 18, 1-18.
80. Pasupathi & Carstensen, 2003
81. Webster, J. D. (1999). Worldviews and narrative gerontology: Situating reminiscence behavior within a lifespan perspective. *Journal of Aging Studies* 13 (1), 29-42.
82. Webster, J.D. (2002). Reminiscence functions in adulthood: Age, race, and family dynamics correlates. In: Webster, J. D., & Haight, B. K. (2002). *Critical Advances in Reminiscence Work: From Theory to Application*. New York, NY: Springer Publishing
83. De Vries, B., Birren, J. E., & Deutchman, D.E. (1995). Method and uses of the guided autobiography. In B. K. Haight & J. D. Webster (Eds.), *The art and science of reminiscing: Theory, research, methods, and applications*. (pp. 165-178). Washington, DC: Taylor & Frances.
84. Webster, J. D. (1993). Construction and validation of the reminiscence functions scale. *Journals of gerontology: Psychological Sciences*, 48, 256-262.
85. Butler, R. (1963). The life review: An interpretation of reminiscence in the aged. *Psychiatry*, 26(1), 65-76.
86. McKenzie, S.E. (2004). The efficacy of the Cultural Life Review Program: Effects on psychological well-being and life satisfaction of community-dwelling African Americans 65 years and older. Dissertation
87. McKenzie, S.E. (in press). The Cultural Life Review Program for African-American seniors. *Activities Director's Quarterly for Alzheimer's & Other Dementia Patients*, 7 (3).
88. Carter, M. J., Van Andel, G. E. & Robb, G. M. (1995). *Therapeutic recreation: A practical approach (2<sup>nd</sup> ed)*. Prospect Heights, Illinois: Waveland Press.
89. Van Andel, G.E. (1998). TR service delivery and TR outcome models. *Therapeutic Recreation Journal*, 32 (3), p. 181-193.
90. Stumbo, N.J., & Peterson, C.A. (2004). *Therapeutic recreation program design: Principles and procedures (4<sup>th</sup> ed.)*. San Francisco, CA: Pearson Benjamin Cummings.
91. Mohammed, P., & Perkins, A. Caribbean women at the crossroads: The paradox of motherhood among women of Barbadoes, St. Lucia, and Dominica. Kingston: Canoe Press University of the West Indies.
92. Sherlock, P. (1999). West Indian folk-tales. Oxford: Oxford University Press.
93. Krueger, R. A., & Casey, M. A. (2000). *Focus groups: A practical guide for applied research. (3rd ed.)*. Thousand Oaks, CA: Sage Publications.
94. Bobilya, A. J., & Akey, L. D. (2002). An evaluation of adventure education components in a residential learning community. *The Journal of Experiential Education*. 25(2), 296-304.
95. Vaughn, S., Shay Schumm, J., & Sinagub, J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, CA: Sage Publication, Inc.

96. Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57, 1069-1081.
97. Folstein, M.F., Folstein, S.E., & McHugh, P. (1975). Mini Mental State: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatry Research*. 12, 189-198.
98. Kluger, A., Ferris, S.H., Golomb, J., Mittelman, M. & Reisberg, B. Neuropsychological prediction of decline to dementia in nondemented elderly. *Journal of Geriatric Psychiatry and Neurology*, 12, 168-179..
99. First MB, Spitzer RL, Gibbon M, Williams JBW. (1996). Structured Clinical Interview for DSM-IV Axis I Disorders, Clinician Version (SCID-CV). Washington, D.C.: American Psychiatric Press, Inc.
100. Fillenbaum, G.G., Hughes, D.C., Heyman, A., George, L.K., & Blazer, D.G. (1988). Relationship of health and demographic characteristics to Mini-mental State Examination Score among community residents. *Psychological Medicine*, 18, 719-726.
101. Reisberg B, Ferris SH, de Leon MJ, Sinaiko E, Franssen EH, Kluger A, Mir P, Borenstein J, George AE, Shulman E, Steinberg G, Cohen J: Stage-specific behavioral, cognitive, and in vivo changes in community residing subjects with age-associated memory impairment (AAMI) and primary degenerative dementia of the Alzheimer type. *Drug Development Research* 1988;15:101-114.
102. Flicker C, Ferris SH, Reisberg B: Mild cognitive impairment in the elderly: predictors of dementia. *Neurology* 1991;41:1006-1009.
103. Spitzer RL, Williams JB, Gibbon M, First MB. (1992). The Structured Clinical Interview for DSM-III-R (SCID). I: History, rationale, and description. *Arch Gen Psychiatry*. 49(8):624-629.
104. Montgomery SA, Asberg M; A new depression scale designed to be sensitive to change. *Brit J Psych* 1979; 134: 382-389.
105. Landerman R, George LK, Campbell RT, Blazer DG. (1989). Alternative models of the stress buffering hypothesis. *Am J Community Psychol*. 17:625-42.
106. Beard, J., & Ragheb, M. (1980). Leisure Satisfaction Measure. *Journal of Leisure Research*, 12 (1), 20-33.
107. Burlingame, J., & Blaschko, T. (2002). Measuring Attitudes. In: *Assessment tools for recreation therapy and related fields*. (3<sup>rd</sup> ed.), pp. 257-263. Ravensdale, WA: Idyll Arbor.
108. Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-efficacy Scale. In J. Weinman, S. Wright, & M. Johnson, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.
109. Seeman, Unger, McAvay, & Leon. (1999). Self-Efficacy beliefs and perceived declines in functional ability: MacArthur Studies of successful aging. *Journal of Gerontology: Psychiatric Sciences*, 54B (4), P214-P222.
110. Luijpen MW, Swaab DF, Sergeant JA, Scherder EJ. Effects of transcutaneous electrical nerve stimulation (TENS) on self-efficacy and mood in elderly with mild cognitive impairment. (2004). *Neurorehabil Neural Repair*. 18(3):166-75.

111. Epping-Jordan JA, Üstün TB. (2000). The WHODAS-II: leveling the playing field for all disorders. WHO Mental Health Bulletin, 6:5-6.
112. Üstün B: WHODAS-II Disability Assessment Schedule. (2000). NIMH Mental Health Research Conference, Washington, DC.
113. Lawton MP, Moss M, Fulcomer M, Kleban MH. (1982). A research and service oriented multilevel assessment instrument. *J Gerontol.* 37(1):91-99.