

**Evaluating a Community-based, Multi-component Intervention for Latino Family
Caregivers of Patients with Alzheimer's Disease**

Revised

Specific Aims

Latinos constitute the fastest growing subpopulation among the aged in the United States. Accompanying this tremendous growth will be a dramatic increase in the number of older Latinos suffering from Alzheimer's disease (AD) and related dementias—from under 200,000 to as many as 1.3 million by 2050 (Alzheimer's Association, 2004). Caring for someone with AD can create a tremendous burden for families (Pinquart & Sörensen, 2003). Research indicates that Latino family caregivers face special challenges (Aranda & Knight, 1997) and may be particularly affected by caregiving (Gallagher-Thompson, et al., 2000; Janevic & Connell, 2001; Polich & Gallagher-Thompson, 1997). Thus, Latino family caregivers may have an especially strong need for interventions that support them in their caregiving role.

Recent reviews of the literature indicate that interventions for caregivers generally are effective in producing clinically meaningful improvements in psychological well-being, and that multifaceted, individualized interventions have the strongest impact (Bourgeois, Schulz & Burgio, 1996; Pinquart & Sörensen, 2006; Schulz et al., 2002; Sörensen, Pinquart, & Duberstein, 2002). Two such interventions include the New York University Caregiver Intervention (NYUCI) and the Resources for Enhancing Alzheimer's Caregiver Health (REACH) intervention. However, neither has been implemented and evaluated at the community level within existing service structures, and only REACH has been evaluated with Latino caregivers (Belle et al., 2006). While sharing a multi-component, individualized approach, the NYUCI differs from REACH II in focusing on the entire family, and not just the

individual caregiver, as well as in offering on-going support and case management, intervention characteristics which may be particularly suited to the cultural value of familism as well as the significant psychosocial needs of many Latino caregivers. In addition, REACH II has had only one six-month follow-up, making it difficult to assess the long-term impact of the intervention (Belle et al., 2006), while the NYUCI has demonstrated an impact on caregiver well-being over more than 10 years (Mittelman et al., 2006).

The primary purpose of this study is to explore the feasibility of implementing the NYUCI within existing community-based structures, which has not yet been done, and to evaluate its impact on Latino caregivers by comparing a variety of measures of well-being, including anxiety, depression, levels of social support, perceived burden and connection to care recipient, pre- and post-intervention. Participants receiving the intervention will also be interviewed at intervention completion regarding their experience and ways the NYUCI may need to be tailored to be most relevant and sensitive to their needs. Key informants within the agency (e.g. support group leader, director) will be interviewed every three months and at study completion regarding their experience with the implementation of the NYUCI and its impact on clients, and how it may need to be tailored to be most relevant and sensitive to agency and client needs. Hypotheses are as follows:

H1: Latino spouse and adult child caregivers receiving the NYUCI will demonstrate greater levels of social support, decreases in family conflict, and increased affectual connection with care recipient at six and 12 months following the start of the intervention compared to baseline.

H2: Latino spouse and adult child caregivers receiving the NYUCI will report decreases in stress at six and 12 months following the start of the intervention compared to baseline.

H3: Latino spouse and adult child caregivers receiving the NYUCI will report decreases in

burden and increases in measures of positive aspects of caregiving at six and 12 months following the start of the intervention compared to baseline.

H4: Latino spouse and adult child caregivers receiving the NYUCI will report decreases in depression, and increases in subjective physical health at six and 12 months following the start of the intervention compared to baseline.

Background and Significance

By 2050 Latinos are projected to account for 25% of the population, outnumbering the nation's total of African Americans, Asian Americans, and American Indians combined (Sotomayor, 1993). Among the aged, the Hispanic¹ population is predicted to grow the fastest, from 2 million in 2000 to over 13 million by 2050 (FIF, 2000, p. 4), with a concomitant dramatic increase in the number of Latinos suffering from AD and related dementias (Alzheimer's Association, 2004). Latino elders may be at greater risk for AD than the population as a whole—and at as much as twice the risk as Caucasians—because of the prevalence of several known or suspected risk factors for AD such as low levels of education, greater prevalence of vascular diseases (Haan et al., 2003; Tang et al., 1998), and different susceptibility genes in various Hispanic subgroups (Alzheimer's Association, 2004).

Latinos' Caregiving Burden

Caring for a loved one with AD is often experienced as burdensome and distressing for families. Caregivers can experience serious mental and physical health effects from the chronic stress of dementia caregiving, including increased rates of depression and anxiety, role stress, family conflict, poorer self-rated health, alterations in immune functioning, and even increased mortality (Biegel & Schulz, 1999; Haley & Bailey, 1999; Ory, Yee, Tennstedt, & Schulz, 2000;

¹ Throughout this proposal we favor the term Latino, but will employ the term Hispanic if that is the term used in the work being cited.

Pinquart & Sörensen, 2003; Schulz, Visintainer, & Williamson, 1990; Schulz, O'Brien, Bookwala, & Fleissner, 1995; Schulz & Beach, 1999).

Latino family caregivers face special challenges as Latino elders tend to be significantly more disabled than whites (Andrews, Lyons, & Rowland, 1992; Chiodo, Kanten, Gerety, Mulrow, & Cornell, 1994; Jette, Crawford, & Tennstedt, 1996) and to underutilize formal services when compared to other groups (Burnette, 1999; Starrett, Wright, Mindel, & Tran, 1989; Tennstedt, Chang, & Delgado, 1998). The latter means greater dependence on informal supports, especially family caregivers (Angel et al., 1992; Haley, Han, & Henderson, 1998).

The specific way that AD presents in Latinos also potentially increases the burden on caregivers. Dementia-related behaviors such as combativeness, wandering and hallucinations, often the most troubling to caregivers, are more likely in blacks and Latinos than whites (Sink, Covinsky, Newcomer, & Yaffe, 2004). Furthermore, Latinos may develop Alzheimer's symptoms on average nearly seven years earlier than their non-Latino counterparts (Clark et al., 2004), making it more likely that their caregivers will be younger, with multiple familial and work roles to fulfill. Hispanic caregivers are indeed more likely to be younger and also caring for children under 18, in addition to being poorer, less educated, underemployed and in worse mental and physical health than white counterparts (Cox & Monk, 1990; NAC/AARP, 1997).

While there are personal gains related to caregiving (Sanders, 2005) and some studies have shown that Latinos appraise caregiving as less burdensome than white caregivers do (Coon et al., 2004), the relatively few studies conducted specifically with Latino dementia caregivers support a picture of significant caregiving burden (Aranda & Knight, 1997; Dilworth-Anderson, Williams, & Gibson, 2002; Gallagher-Thompson, et al., 2000; Pinquart & Sörensen, 2005). For example, despite the value of family in Latino culture, Latino caregivers report insufficient

support from extended family (Cox & Monk, 1993; John & McMillan, 1998) and high levels of self-reported depression (Polich & Gallagher-Thompson, 1997). Most studies also report a higher prevalence of depression among Latinos when compared to other groups of caregivers (Adams et al., 2002; Harwood et al., 1998; Pinquart & Sörensen, 2005). Thus, because of the special challenges faced by Latino family caregivers, they may have a particularly strong need for interventions such as the NYUCI designed to support them in their caregiving role.

Counseling and Support Interventions

A variety of interventions to assist caregivers have been developed, including support groups, individual and family counseling, respite care, and different types of psychoeducational programs. Multifaceted, individualized interventions combining individual and group modalities with education and referral appear to have the strongest impact (Bourgeois et al., 1996; Pinquart & Sörensen, 2006; Schulz et al., 2002; Sörensen, Pinquart, & Duberstein, 2002).

Relatively few of the interventions reported in the literature have included Latino caregivers (Morano & Bravo, 2002). Most significantly, the REACH project, funded since 1995 by NIH, has tested several interventions with Latinos at various sites (Gallagher-Thompson, Arean, Rivera, & Thompson, 2001; Gallagher-Thompson et al., 2003a, Gitlin et al., 2003). In the second wave of this project, REACH II, specific aspects of interventions found to be efficacious were combined into a multi-component psychosocial behavioral intervention tested at five sites among Hispanic/Latino, White/Caucasian, and Black/African American caregivers. The intervention consisted of nine in-home and three telephone sessions over six months, and five telephone support group sessions. Hispanic/Latino caregivers experienced modest but clinically meaningful improvement compared to those in a minimal support control condition in

levels of depression, burden, self-care, social support, and patient problem behaviors (Belle et al., 2006).

The New York University Caregiver Intervention

The NYUCI has demonstrated improved caregiver and care recipient outcomes, including postponed placement of patients in nursing homes (Mittelman et al., 1993; Mittelman, Ferris, Shulman, Steinberg, & Levin, 1996; Mittelman, Haley, Clay & Roth, 2006) and increased emotional and psychological well-being for caregivers (Mittelman et al., 1995, Mittelman, Roth, Coon, & Haley, 2004; Mittelman, Roth, Haley, & Zarit, 2004; Drentea, Clay, Roth, & Mittelman, 2006; Jang, Clay, Roth, Haley, & Mittelman, 2004). However, the NYUCI has been evaluated and used primarily with non-Hispanic white spousal caregivers. Because other ethnic groups experience different caregiving stressors and have different coping resources, coping styles and appraisals of caregiving burden (Adams et al., 2002; Aranda & Knight, 1997; Mausbach et al., 2004; Stueve, Vine, & Streuning, 1997), the NYUCI's potential efficacy specifically for Latinos must be evaluated.

The NYUCI has three components. The first is two individual and four family counseling sessions, specifically tailored to each caregiver's needs, for a total of six sessions undertaken in the space of four months. This works out to roughly a session every three weeks, but there is variability in the length of time between each session depending on participant needs. The timing of sessions for each participant will be carefully documented. The major aims are: (1) education (2) enhancement of social support for the primary caregiver (3) promotion of communication (4) problem solving (5) patient behavior management strategies and (6) concrete planning. The second component of treatment, beginning after completion of the counseling and continuing indefinitely, consists of weekly attendance at an existing support

group (for example one affiliated with the Alzheimer's Association). Since a major aim of this study is to assess the feasibility of implementing the NYUCI at a community level, for the purposes of this study, participants will be referred to an existing support group run at FWHSE, where they can remain as long as they want to. Their attendance for the duration of this project would be closely monitored. The third component, ad hoc counseling, consists of ongoing consultation, case management, and referrals at the behest of the caregiver or any participating family member. For the purposes of this study, participants would have access to ad hoc counseling for the duration of this project (August 31, 2009).

Theoretical Foundations

The NYUCI, developed with significant input from and administered by social workers, is grounded in a variety of conceptual models, including Pearlin and colleagues' stress process model (1990), the sociocultural stress and coping model (Knight, Silverstein, McCallum & Fox, 2000), family systems theories (Worden, 2003), and social work's strengths (Saleebey, 2000) and empowerment (Lee, 1996) perspectives.

The stress process model suggests that caregiver well-being is affected by both primary stressors originating directly from the illness and care of the patient, and resulting secondary stressors such as family conflict, economic problems, and constriction of social activities. Coping style and capacity as well as caregiver appraisal and social support can mediate the effects of these stressors on caregiver well-being (Haley et al., 1996; Pearlin, 1990). Models emphasizing caregiver appraisal have also been important in understanding factors predicting individual differences in caregiver well-being and health (Haley et al., 1987; Schulz, Gallagher-Thompson, Haley, & Czaja, 2000). Moreover, "ethnicity implies specific cultural differences that will directly affect the appraisal of caregiving as stressful and that will change mediating

variables such as coping skills”, thus influencing stress and coping in complex and multi-dimensional ways (Knight et al., 2000, p. 142). As suggested by the stress process model, social support appears to have a protective effect on caregiver health (Goode, Haley, Roth, & Ford, 1998). The perception of available support can affect psychological responses to stress (Shumaker & Brownell, 1984; Stokes & McKirnan, 1989) and reduce depression (Roth et al., 2005). The NYUCI provides both actual support in the form of individual and family sessions, support groups, and ongoing ad hoc counseling, but also offers tools and information to enhance coping style and capacity, and help the caregiver mobilize additional sources of support.

From a family systems perspective, because AD affects all members, interventions are designed to impact the entire family, and not just the patient or caregiver. Focusing on attachment, mutuality, and intimacy, the family and individual sessions provide problem solving and communication techniques highlighting members’ strengths and offering a sense of empowerment, as well as enhancing the family as a source of support. This aspect of the NYUCI may be particularly relevant to Latino caregivers due to the strong cultural value of familism, “a strong identification and attachment of individuals with their families (nuclear and extended), and strong feelings of loyalty, reciprocity and solidarity among members of the same family” (Sabogal et al., 1987, pp. 397–398). Furthermore, research has shown that despite the value of familism, Latino caregivers report a lack of support from the extended family. Thus, the NYUCI, designed to enhance family assistance, may be especially useful and welcome.

Preliminary Studies

The New York University Silberstein Aging and Dementia Research Center (NYU-ADRC) has been conducting a randomized trial of the NYUCI since 1987 with primarily White spouse caregivers of patients with AD. As mentioned, the NYUCI has demonstrated

consistently positive results over long periods of time not only for caregivers on outcomes such as reduced burden and depression, improvements in caregivers' satisfaction with social support and response to patient behavior problems, but also increased time (by as much as 557 days) to nursing home placement (Drentea et al., 2006; Jang et al., 2004; Mittelman et al., 1993; 1995; 1996; Roth, Mittelman, Clay, Madan, & Haley, 2005, Mittelman et al., 2006).

As the first social worker to receive a grant from the NYU-ADRC, I am currently pilot testing the NYUCI with seven Latino family caregivers in their homes to assess its relevance and fit to this population. For five participants the timeframe of the individual/family sessions has had to be extended for reasons related to sociocultural status (for example, frequent travel to country of origin, severe stressors limiting their availability), and almost all participants have required significant amounts of case management. Counseling sessions and an interview regarding the caregivers' experience of the intervention are being analyzed for themes such as how participants make sense of this illness, its management, and its impact on their loved one, themselves, their relationship, the extended family, and the larger community. Building on this pilot study, which indicates that the NYUCI translates to Latinos, the proposed study will explore the feasibility of implementing the NYUCI within existing community-based structures, which has not yet been done, and will systematically assess its impact on Latino caregivers by comparing a variety of measures pre- and post-intervention.

Research Design and Methods

Overview

This two-year exploratory study will assess the feasibility of implementing the NYUCI within a community-based agency setting and will evaluate its potential efficacy with spouse and adult child Latino caregivers in terms of a variety of outcomes (described in detail below).

Based on participant and agency feedback, the NYUCI will be modified as necessary to make it accessible, acceptable, relevant and useful to this population and setting.

Project Site

Participants will be recruited and seen at Fort Washington Houses Services for the Elderly (FWHSE), a community-based agency in the Washington Heights neighborhood of Manhattan, where nearly 75% of inhabitants are Hispanic and 24% of households have one or more persons 65 years of age and over (U. S. Bureau of the Census, 2001). FWHSE offers a senior center for well-elderly, adult day program for memory-impaired clients, and case management services. Ongoing weekly support groups for caregivers are offered, but the agency is interested in implementing and evaluating the full NYUCI and assessing its impact on clients and the agency's capacity to provide all components within existing resource constraints.

Sample

While we hope to have a sample size of 20 to 30 spouse and adult child (including sons- and daughters-in-law) caregivers seeking services at FWHSE, we are cognizant of the well-documented challenges of recruiting Latinos and other minority groups to participate in research (Arean et al., 2003; Arean & Gallagher-Thompson, 1996; Armstrong et al., 1999; Gallagher-Thompson et al., 2003b; Tarlow & Mahoney, 2000). In addition, an average of 25 new people meeting criteria seek services at FWHSE each year, so 15 participants may be a more realistic sample size. However, in collaboration with FWHSE, we will undertake recruitment efforts based on FWHSE's existing strategy of forging partnerships with community leaders and agencies serving Latino elders, and using creative and culturally-sensitive outreach methods (Fitten et al., 2001; Gallagher-Thompson et al., 2003b; Henderson & Gutierrez-Mayka, 1992). For example, informational flyers distributed in the community regarding this project will refer

to memory and thinking problems, rather than dementia, since the Spanish translation, demencia, can connote “craziness.”

Inclusion criteria include self-identification as Latino and as a primary caregiver of a relative diagnosed with AD who is still residing in the community, being 18 years of age or older, and not having received formal caregiver counseling prior to entry into the study.

Diagnosis of AD will be determined by ascertaining that the care recipient has been evaluated by a medical doctor who has made this diagnosis. When this is not the case, potential subjects will be referred for assessment and diagnosis.

The intake worker at FWHSE will briefly describe the project to any caregiver making contact. Those expressing interest will be given additional verbal information and invited to come in for more detailed information and, if they so choose, participation in the project through the signing of informed consent forms and the completion of an assessment battery.

Data Collection

All participants agreeing to take part in the study will be asked to provide informed consent and to complete an assessment battery available in both English and Spanish, depending on participant preference, with a bilingual research assistant. Participants will complete this assessment battery, requiring about 90 minutes, again at six months and at 12 months. As part of the effort to assess the sustainability and cost-effectiveness of the NYUCI in a community setting and minimize bias in evaluation, a bilingual MSW-level clinician (rather than I) will implement parts one (two individual and four family sessions) and three (case management throughout the duration of the research study) of the intervention, and participants will be referred to FWHSE’s existing support group (component two of the intervention).

Careful track of caregiver participation and required staff time, particularly in terms of

the case management component, will be kept. This data has not been recorded for participants in the original NYU-ADRC study, and will provide important information about the cost of the intervention in terms of agency resources and required staff time, and differential use by caregivers. Monitoring the amount of help used and the extent of compliance with referrals will enable us to understand the relationship between treatment implementation characteristics (delivery, receipt and enactment), the amount of treatment received, the characteristics of the caregiver or patient, and the outcome, possibly allowing for the development of a form for future rapid assessment of caregivers requiring more intensive intervention.

At an exit interview conducted by the researcher in the last three months of the project, caregivers will be asked about their expectations and needs, how effectively the NYUCI met them, and what could be done to improve this intervention. Specific questions include: What did you think of the intervention? What aspects were most helpful, least helpful? What do you need that this doesn't provide? What are specific needs of Latinos caregivers? How can they be addressed?

Based on this, the NYUCI may be modified to address issues uniquely affecting these Latino caregivers. The intervention and exit interview will be conducted in English, Spanish, or both, depending on each caregiver's choice. Key agency personnel, including the program director and the clinical director, who also runs the support groups to which participants will be referred, will be interviewed by the researcher every three months throughout the duration of the project in order to assess how NYUCI implementation is fitting with the agency's existing structure, culture, and resource capacity and whether its cost and impact is such that it is feasible for community-based agencies to implement it within existing financial and staff constraints (see Appendix A for study timeline). Our purpose is to get feedback on the process of the

NYUCI implementation, in addition to doing evaluations of its impact.

Assessment Battery

The assessment battery (see Appendix B for measures and brief descriptions) will include a psychosocial section with items such as caregiver and care recipient age, ethnicity, and health status. Other measures were selected to assess constructs considered to be significant based on the stress process model and the sociocultural stress and coping model underpinning the NYUCI, and for the purposes of evaluating the overarching goal of improving caregiver well-being. In addition, these measures have been extensively used in other caregiver studies.

- 1) Global Deterioration Scale (GDS, Reisberg et al., 1982). The authors report significant positive correlations between the GDS and multiple psychometric measures used with patients with dementia.
- 2) Revised Memory and Behavior Problems Checklist (RMBPC, Teri et al., 1992). The authors report good reliability: $\alpha = .84$ for patient behavior, $\alpha = .90$ for caregiver reaction and good validity in comparison with well-established indexes of depression, cognitive impairment, and caregiver burden.
- 3) Center for Epidemiologic Studies Depression Scale (CES-D, 10-item, Radloff, 1977) has $\alpha = .85$ for general population, $\alpha = .90$ patient sample.
- 4) Perceived Stress Scale (PSS, Cohen, Kamarck, & Marmelstein, 1983). The authors report adequate internal and test-retest reliability, $\alpha = .85$.
- 5) Caregiver Burden Interview, brief (Bedard et al., 2001; Zarit, Todd, & Zarit, 1986). The ZBI has an internal consistency of $\alpha = .89$, and the brief version correlates from 0.92 to 0.97.
- 6) Positive Aspects of Caregiving (PAC, Tarlow et al., 2004) has an $\alpha = .89$.

- 7) Family Conflict Scales (Semple, 1992) has an $\alpha=0.90$.
- 8) Mutuality Scale (Archbold, Stewart, Greenlick, & Harvath, 1990). No psychometric data is available.
- 9) Lubben Social Network Scale- Abbreviated (LSNS-6, Lubben & Gironde, 2000) has an $\alpha = .78$.

Spanish translations for all of these instruments, many done for the REACH study, exist, but psychometric properties for the Spanish instruments are mostly not available.

Treatment Fidelity

Researchers have underscored the importance of using theory-based interventions that are protocol driven, with proper monitoring of treatment implementation, so that outcomes can be appropriately interpreted and the intervention can be replicated (Dumas, Lynch, Laughlin, Smith, & Prinz, 2001). A book describing the NYUCI will be used as the basis for training the interventionist (Mittelman, Epstein, & Pierzchala, 2003). The MSW implementing the NYUCI will be supervised weekly by me (I have provided the NYUCI over the past two years), and I will continue consulting with social workers with over 15 years' experience with the NYUCI. Project members will meet every two weeks to discuss the research. Careful and complete notes regarding participant attendance, length of interactions, and use of referrals will be kept. In addition, we will request permission from participants to audiotape sessions so that the principal investigator can monitor the implementation of the intervention, as well as use this material in supervision of the interventionist.

Data Analysis

The primary purpose of this study is to explore the feasibility of implementing a multi-component intervention for caregivers within existing community-based structures, which has

not yet been done. The next step, if results from this study warrant it, will be a randomized clinical trial comparing the NYUCI to “usual care” and a control group undergoing no care. The amount of time spent with each caregiver in the different intervention components will be carefully tracked in order to determine the approximate cost of the intervention in terms of staff time and effort. The exit interviews in the present study are particularly important in learning how the caregivers and agency staff react to the intervention and in using their suggestions to judge the feasibility of implementing the NYUCI in community settings, to make improvements in future applications of NYUCI to Latino family caregivers, and to plan subsequent research. These interviews with caregivers and staff will be transcribed and analyzed using a categorical-content approach (Leiblich, Tuval-Mashiach, & Zilber, 1998) to identify key themes regarding the experience of caring for a loved one with AD, the experience of receiving this intervention, and the way the intervention may need to be modified to maximize its relevance and impact with these Latino caregivers within the confines of agency practice.

The quantitative data analysis plan is provisional at this stage. We expect to receive further consultation. Given the exploratory nature of this study and the small sample size, the data analysis plan is also a way of piloting data analysis for future studies. Quantitative data analysis will focus on observed improvements (or lack thereof) among study participants, and, if possible given the small sample size, on comparing differences between spouse and adult child caregivers. Each outcome is a time series of three measurements (before the treatment, at six months, and at 12 months). Scores from the various measures (depression, social support, positive aspects of caregiving) will be added, reversing scales when necessary to have an aggregate score that can be compared on average pre and post for each individual and then across participants. We will obtain standardized values of difference between baseline and follow up by dividing the difference score for each participant by the common standard deviation of that

difference score across all participants. Scatterplots and correlations of pairs of outcome measurements to assess their reliability will also be done.

These total scores (and also each outcome individually) will be analyzed in three ways: using graphical displays, t-statistics, and linear regression. The graphical displays will be time series of the individual respondents' trajectories, along with plots of averages and residuals, which provide an opportunity to see unexpected patterns in the data (Tukey, 1977). The t-statistics will be average differences between the measurements at time 1 and time 0, and average differences between time 2 and time 0. In each case, a one-sample t-interval will be obtained to get an estimate and uncertainty for the average improvement. From the standard power calculations, a sample size of 15 has sufficient power to have an 80% chance of statistical significance if the average change has a magnitude of 0.75 standard deviations. Such an improvement is possible (for example, we observed statistically significant improvement in a cognitive-behavioral therapy group with just five participants; Rosenthal Gelman, López, & Pérez Foster, 2005), but cannot necessarily be attributed to a treatment effect since there is no control group. Nonetheless, statistical analyses of the data will be performed in order to corroborate participants' subjective impressions of improvements and thus validate qualitative findings.

Multilevel regression analysis (Raudenbush & Bryk, 2002) will be performed, estimating a linear trend from the three observations for each person and then modeling the intercepts and, particularly, the slopes (i.e., time trends) in a regression on individual-level characteristics such as gender, age, and care recipient condition. With only 15 participants statistical significance is not expected, but this analysis will offer a sense of the relation between improvement and pre-existing conditions, and will also demonstrate the feasibility and serve as a pilot testing of this

sort of analysis for future studies of the NYUCI. Residuals from the model will be checked to examine potential departures from linear time trends.

Ethical Issues and Protection of Human Participants

Human subjects approval will be sought from NYU's University Committee on Activities Involving Human Subjects prior to commencement of this study, and all participants will provide informed consent. Individuals under the age of 18 will not be included as the primary participants. However, because any family member is invited to participate in family counseling, if individuals under the age of 18 wish to do so, formal consent will be obtained from a parent or guardian, as well as from the minor in an age-appropriate way. All identifying information will be removed from participant data, and materials kept in locked files. Participants will also be asked for written permission to tape record the exit interviews, and no identifying information will be on these tapes. All material will be kept for a period of 5 years after analysis and will then be destroyed.

The risks of participating in this study are minimal and relate primarily to the emotional sensitivity of the topic and/or fears of breach of confidentiality. However, the MSW implementing the intervention is experienced and will be supervised weekly. If significant problems arise for a participant the intervention will be discontinued and referrals made as appropriate. The research assistant administering the assessment battery will receive extensive training and will participate in bimonthly meetings. Participants' confidentiality will be protected through the procedures outlined above.

Implications for Social Work Practice, Policy and Research

This project has several potential implications for practice, policy and research with Latino vulnerable older adults and their families, the type of population historically served by

the social work profession. The study aims to evaluate the relevance and efficacy for Latinos of an intervention that has already demonstrated a significant public health impact by decreasing depression in caregivers and delaying institutionalization of persons with AD. From a policy perspective, we are assessing the feasibility of providing this multi-component intervention within existing community-based structures in a cost-effective way that would maximize access and impact to an underserved population. From a research perspective, this pilot study would lay the foundation for more rigorous testing of the intervention using a randomized clinical trial model.

The NYUCI, with its biopsychosocial approach and strength and empowerment focus, and this proposed project assessing its efficacy and viability in community settings, provide an opportunity to commit the knowledge, values and skills of the social work profession to exploring better ways of supporting Latino older adults and their caregivers.

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