

SPECIAL SECTION

Recruitment and Retention of Older Minorities in Mental Health Services Research

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Purpose: This article reviews the problems associated with recruiting older minorities into mental health research studies and proposes a consumer-centered model of research methodology that addresses the barriers to recruitment and retention in this population. **Design and Methods:** The authors discuss and compare the results of recruitment and retention interventions for two geriatric mental health studies, one that used traditional methods of recruitment and retention and another that used consumer-centered methods. **Results:** Although the consumer-centered methods result in better recruitment of older minorities in general ($\chi^2 = 54.90, p < .001$), it was not superior to the traditional method in recruiting older minorities ($\chi^2 = 0.82, ns$). However, the consumer-centered approach yielded better retention of older minorities ($\chi^2 = 6.20, p < .05$) than did the traditional method. Within both methods, recruitment through provider referral and face-to-face contact were the superior recruitment methods ($\chi^2 = 6.78, p < .05$). Having an experienced recruiter or a community recruiter resulted in greater agreement to participate than simply having an ethnically matched recruiter ($\chi^2 = 36.00, p < .001$). **Implications:** Although these data are observational, and rigorous

research on the best methods for recruiting and retaining older minorities is still necessary, the results suggest that a consumer-centered model of research yields greater overall recruitment and retention rates than do traditional research methods.

Key Words: Recruitment, Mental health, Older adults

According to the Surgeon General's Report on Mental Health in Older Americans (Satcher, 2000), mental illness in the elderly can be effectively treated with current psychopharmacology and psychotherapy. Unfortunately, older minority adults are unlikely to ever receive these effective interventions because of the access and cultural barriers that interfere with help-seeking behavior and treatment effectiveness (Biegel, Farkas, & Song, 1997; Black, Rabins, German, McGuire, & Roca, 1997; Miller et al., 1997; Swartz et al., 1998). Although underutilization of mental health services by older minorities has been an important focus for Congress, the National Institutes of Health, and numerous professional organizations, this attention has not resulted in changes of utilization patterns in this population (U.S. Department of Health and Human Services, 2001; Fellin & Powell, 1988). According to Hohmann and Parron (1996), the primary purpose of mental health services research is to inform policy-makers and administrators about the best way to care for the mentally ill. Therefore, developing methods to improve mental health service use in older minority adults is sorely needed.

Even though research on mental health services for older minority adults is recognized as a priority, conducting this kind of research is complicated. In particular, recruiting and retaining older minorities into mental health services research is a difficult

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methodological challenge and one that has received considerable attention in the literature. In a comprehensive review, Areán and Gallagher-Thompson (1996) found over 20 journal articles and several more chapters published between 1985 and 1995 that had been dedicated to improving recruitment and retention of older adults into clinical and services research. According to this review, not only do mental health researchers have to contend with the usual barriers encountered in conducting geriatric research (participant health, time, or transportation limitations), but they must also struggle with the stigma concerns and lack of information many older minorities experience with mental health.

Studies that successfully recruit older adults tend to focus on overcoming instrumental barriers, such as increasing knowledge about the study through the media, providing transportation to the research site, providing monetary incentives to complete follow-up assessments, and minimizing participant confusion by having the same interviewer administer baseline and follow-up assessments over time (Thompson & Gallagher, 1984). These strategies have been helpful in recruiting and retaining older adults into mental health studies. However, the typical geriatric sample in mental health studies is 86–90% White (Areán & Gallagher-Thompson, 1996). This suggests that the methods used in traditional geriatric mental health studies are not sufficient to recruit older minority adults.

Experts in minority research agree that the successful recruitment and retention of older minorities into mental health services research must go beyond traditional methods in order to overcome barriers related to fear and mistrust of science and mental health services, stigma of mental illness, and participant burden (Miranda, 1996). For instance, some concerns about research participation in African Americans are rooted in the Tuskegee scandal and discriminatory practices by the medical establishment in the first half of the 20th century (Alvidrez, Azocar, & Miranda, 1996). Various immigrant groups may have misgivings related to war atrocities that were conducted in the name of science in native countries (Areán & Gallagher-Thompson, 1996).

Although the stigma associated with having a mental illness is not unique to minority elders, the stigma concerns of older minorities may be different than those of older Whites. Whereas many older White patients may be concerned about what others will think of them if a mental health diagnosis is uncovered, many older minorities may be more concerned with the impact a psychiatric diagnosis will have on their family's reputation. Other cultures also see mental illness symptoms more multidimensionally, for example, encompassing religious, spiritual, and environmental domains, and may see the medical establishment's attempt to pathologize such symptoms as degrading (Lu, Lim, & Mezzich, 1995). Finally, the burden of partici-

pation in research is often reported to be much higher in low-income minorities than middle-class Whites (Mattson, Curb, & McArdle, 1985). Older minority adults may see little utility in committing time and effort to participate in a research study when they are already burdened with multiple psychosocial stressors and limited resources (Demi & Warren, 1995).

Even though researchers must be attentive to these overarching barriers, each culture and community has its own unique barriers and concerns regarding mistrust, stigma, and burden. Thus there is no uniform way to address these issues for all minority communities. For instance, successful recruitment methods for urban African Americans may not be as successful as for rural African Americans. The challenge for investigators who conduct research with minority populations is to develop recruitment methods that address the issues that are specific to the community, rather than trying to develop a one-size-fits-all approach to recruitment and retention.

A number of social scientists have begun to propose models of research that can accommodate variation between minority communities. Levkoff, Levy, and Weitzman (2000) described a matching model of recruitment that balances the needs of research with the community's perspectives on research. Souder (1992) also described a consumer approach to recruiting older adults, which entails understanding the needs of the older community and tailoring the research study to meet those needs. Underlying both these models is the concept of fitting the recruitment and retention strategies to the needs of the community. In order for recruitment and retention to be successful, the research team must work in concert with the community to understand the access barriers that are specific to the target minority group and to the larger community in which that group resides.

These consumer-centered models suggest a framework for conducting successful mental health services research with older adults. In this framework, researchers should have the following components in place. First, researchers should have a means of consulting with community opinion leaders, gatekeepers, and representative consumers when designing their research. This generally takes the form of focus groups and advisory boards made up of members from the target community. Having an advisory board of this nature can result in improving the research groups' ability to better understand the community-specific recruitment/retention barriers and collaboratively develop methods for overcoming the fear and stigma often associated with research in minority communities. Second, the research team should include staff members who are ethnically similar to, have experience working with, or are actual members of the target population. The rationale behind this approach is that potential participants from the target community may feel more comfortable divulging personal information to

someone from their own community. In addition, research staff from the representative community may also be more sensitive to participants' reactions to research methods and can provide feedback to the investigators about how to improve the recruitment and retention methodology. Third, the research team must have a means of anticipating respondent burden so that attrition can be minimized. Although this flexibility should not compromise the integrity of the study, methods for either addressing or alleviating burden that may be specific to the target community must be made to ensure retention. Finally, the research team must provide feedback to the target community so that participants feel they are making a contribution to their community through their role in the research project. A common complaint among minorities who have participated in research is that research teams are only available while data collection is in progress; once data has been obtained, the research team disappears without any feedback to the community. This behavior has resulted in certain communities feeling that they are only valued as long as they can benefit the research team (Areán & Gallagher-Thompson, 1996). It is important to continue a relationship with the community so that their faith in research and science can improve.

Although these methods would certainly be useful in the recruitment of any community of older adults, they are particularly important in the recruitment of older minority populations. By engaging community opinion leaders and gate-keepers in the process of research, and by continuing to inform the community about research and treatment progress, research groups may be able to address the mistrust issues that are specific to minority groups in general and the particular community from which they recruit.

Ideally, having measures to assist the researcher in overcoming the mistrust, stigma, and burden barriers should secure successful recruitment and retention. Unfortunately, these models have only been proposed theoretically and have not been evaluated for their effectiveness. The purpose of this article is to compare consumer-centered methods with traditional methods in the recruitment and retention of older minority adults.

Methods

Sample Description

In this study, we use recruitment and retention data from two mental health research studies on older minority adults conducted by the Over-60 Research Program at the University of California, San Francisco. The first study, called the Psychotherapy Effectiveness Project for Underserved Primary Care Patients (PEPUP), was a randomized trial to study the effectiveness of three types of psychosocial interventions (group cognitive-behavioral

Table 1. Demographic Characteristics of Study Samples

Characteristic	PEPUP (N = 71)			PASS (N = 121)		
	<i>n</i>	%	<i>M</i>	<i>n</i>	%	<i>M</i>
Female	44	62		78	65	
Black	15	21		60	50	
Latino	5	7		6	5	
White	42	59		52	43	
Other	6	9		3	3	
Income <\$10,000	58	82		99	82	
Age			65			75
Illnesses			3.8			3.9

Notes: PEPUP = Psychotherapy Effectiveness Project for Underserved Primary Care Patients; PASS = Patient Access to Social Services project.

therapy, clinical case management, and both treatments combined) for treating depression in older, low-income medical patients. A total of 71 patients were randomized to this study. Table 1 shows the demographic characteristics of this sample.

The second study, called the Patient Access to Social Services (PASS) project was a randomized trial to evaluate the effectiveness of a social service model of care delivered in a community geriatric medicine clinic in a predominately African American community (see Appendix, Note 1). The target population was White and African American patients from the clinic who were age 65 and older and met criteria for depression, anxiety, and/or heavy drinking. At the time of this writing, a total of 121 were randomized (see Table 1 for demographic characteristics).

It is important to note that these studies are independent projects. Although participants were randomized within each study, they were not randomized between studies. Data for each project, however, are relatively contemporary. Recruitment for PEPUP took place between 1995 and 1999. Recruitment for PASS took place between 2000 and 2001. Both studies were conducted in the San Francisco Bay area.

Recruitment Procedures

In this study, we compare two models of recruitment, traditional recruitment and consumer-centered recruitment (see Table 2 for summary of recruitment procedures). In the PEPUP study, we relied on opinions of scientific experts who had successfully recruited older adults and minorities into clinical research. On the basis of their suggestions, we used the traditional recruitment model that consisted of two strategies: gate-keeper referral (in this case, primary care providers) and self-referral in response to announcements in local newspapers, magazines, TV, and radio programs. Providers were kept informed of the research study through a series of in-services to the clinics about

Table 2. Recruitment and Retention Methods

Method	PEPUP	PASS	Consumer-Centered?
Research Design			
Scientific consultation	X	X	
Consumer council		X	X
Consumer-driven interviews		X	X
Identified opinion leader		X	X
Recruitment			
Media recruitment	X		
Personalized mailing		X	X
Face-to-face recruitment		X	X
Provider referral	X	X	X
Retention			
Community lectures	X	X	X
Community feedback		X	X
Ethnically matched staff		X	X
Paid transportation	X		
In-home interviews		X	X
Prescheduled interviews		X	X
Patient follow-up	X	X	X

Notes: PEPUP = Psychotherapy Effectiveness Project for Underserved Primary Care Patients; PASS = Patient Access to Social Services project.

depression in late life. Recruiters were post-doctoral fellows and undergraduate students who were trained by the principal investigator to conduct research interviews with older minorities. Although students comprised a mix of ethnicities similar to those represented in our sample, there was no attempt to match recruiter ethnicity to participants.

In the PASS project, which used the consumer-centered model of recruitment, participants were identified through gate-keeper referral (in this case, the primary care provider), targeting mailings, and face-to-face recruitment within the neighborhood primary care clinic. At the suggestion of our consumer council, media recruitment was not used. All recruitment and study procedures were discussed at bimonthly consumer advisory board meetings. Project staff attended weekly primary care clinic meetings to work with physicians around recruitment and study issues. Recruiters consisted of one ethnically matched recruiter, an interviewer who had previous experience conducting research with older minorities, and a community member who was trained by the research staff to recruit and screen participants. The consumer recruiter was recommended by the consumer council and primary care providers because of her standing in the community and her popularity with the patient population.

Retention

In the PEPUP study, we used the following traditional retention devices: provision of transportation to and from the research site, availability

to do research interviews in the patient's home, monetary incentives for continued participation in follow-up interviews, assignment of the same research assistant to follow participants over time (to minimize participant confusion), and identification of significant others who would know the whereabouts of participants should the research team be unable to locate them.

In the PASS study, consumer-centered retention consisted of the methods used in traditional retention (transportation, incentives, contact lists). In addition, we attempted to increase retention by remaining in regular contact with participants between assessment periods, working with primary care providers to help identify changes in patient status (hospitalization, nursing home placement, etc.), and prescheduling assessment interviews to anticipate any periods in which participants might be unavailable (religious holidays, vacations, visits to relatives, anticipated medical procedures). Table 2 summarizes the retention methods for each project.

Data Analysis

In analyzing the utility of recruitment strategies, we first present the recruitment rate for each study, including rates of acceptance and eligibility. Next, we compare the acceptance rates across the different recruitment methods within each study. Using chi-square analyses, we describe the relative success of recruitment by recruiter type: ethnically matched, experienced but not ethnically matched, and community representative. Finally, we will report the relative yield of qualified participants by recruitment method.

Results

Recruitment

Recruitment success varied by type of methods used. In PEPUP, 401 people were either referred by primary care providers or self-referred over a 4-year period. As shown in Table 3, of the 401 potential participants, 178 agreed to participate (44%). By contrast, recruitment was more successful for the PASS project. Over a 1-year period, we approached 620 clinic patients. Of those who were approached, 420 (68%) agreed to participate in the initial screening. Chi-square analyses revealed that the PASS project had a greater overall acceptance rate than did PEPUP ($\chi^2 = 54.9, p < .001$).

With regard to recruitment, although the PASS project was able to identify more older minorities overall, both PASS and PEPUP had a large proportion of older minorities agreeing to participate in the screening ($\chi^2 = 0.82, ns$; see Table 3). Of the 342 minorities identified in the PASS project, 246 (72%)

agreed, and in the PEPUP project, 78 of 102 (76%) minorities identified agreed to participate in the screen.

Recruitment methods yielded differential results in both the PASS and PEPUP projects. In the PASS project, mailings resulted in a 64% acceptance rate, provider referral yielded an 82% acceptance rate, and face-to-face recruitment produced a 68% acceptance rate (see Table 4). In PEPUP, provider referral resulted in a greater number of elderly agreeing to be screened (75%) than did media recruitment (38%; $\chi^2 = 9.64, p < .01$).

In comparing methods between ethnic groups, we found that in PASS, mailings yielded a higher rate of acceptance among minorities (69%) than Whites (59%), and provider referrals yielded a higher rate of acceptance among Whites (89%) than minorities (78%). Additionally, Whites were far less likely to agree to participate through face-to-face recruitment than minorities. Only 42% of Whites in PASS agreed to be screened when approached in the waiting areas, whereas 86% of the minorities agreed to be screened. For both the total sample and the minority sample, provider referrals and face-to-face recruitment yielded the largest acceptance rate (total $\chi^2 = 6.78, p < .01$; minority $\chi^2 = 7.40, p < .01$). In PEPUP, minorities only responded to provider referrals. None of the minorities who were identified in PEPUP were identified through media recruitment (see Table 4).

The different staff members had similar rates of recruitment. For the ethnically matched recruiter, 64% agreed to participate in the study. For the experienced recruiter, 70% agreed, and for the community member recruiter, 77% agreed. Although rates are relatively similar, chi-square analyses indicate that the community recruiter was significantly more successful than the other two recruiters ($\chi^2 = 37.00, p < .001$). Rates of recruitment and randomization among minorities and Whites did not differ among the three staff members.

Generalizability of the Sample

As can be seen from the demographic make-up of these two samples, both studies were able to recruit a largely minority, low-income, and frail population of older adults, populations that typically do not participate in research (Areán & Gallagher-Thompson, 1996; Spoth, Goldberg, & Redmond, 1999). In both samples, nearly 50% were minority, 82% lived below the poverty line, and there was an average of 3–4 chronic illness conditions. Thus, regardless of method, we were able to adequately represent the population of older adults we wished to study in each project. However, there were still differences in the relative generalizability of the two samples. In the PEPUP study, 17% of the available sample met study criteria, whereas 20% of the eligible PASS participants met criteria ($\chi^2 = 7.04, p < .01$). Differences

Table 3. Recruitment and Retention

Status	PEPUP	PASS	χ^2
Total Sample Recruitment			
Identified	401	620	
Accepted	178 (44%)	420 (68%)	54.90***
Qualified	71 (17%)	121 (20%)	7.04**
Minority Sample Recruitment			
Identified	102	342	
Accepted	78 (76%)	246 (72%)	0.82
Qualified	26 (33%)	69 (28%)	16.35***
3-month Retention			
Total	49 (69%)	69 (84%) ^a	4.94*
Minority	25 (96%)	38 (93%)	0.34
6-month Retention			
Total	42 (59%)	48 (91%) ^b	15.00***
Minority	11 (55%)	22 (88%)	6.20*

Notes: PEPUP = Psychotherapy Effectiveness Project for Underserved Primary Care Patients; PASS = Patient Access to Social Services project.

^a $n = 82$ available for 3-month assessment at this writing.

^b $n = 53$ available for 6-month assessment at this writing.

* $p < .05$; ** $p < .01$; *** $p < .001$.

were also found in the number of available minority participants who met eligibility criteria. Thirty-three percent of the available minorities in PEPUP were eligible for the study, whereas only 28% of the available minorities in PASS met eligibility criteria ($\chi^2 = 16.35, p < .001$; see Table 3).

Interestingly, specific recruitment methods resulted in better identification of qualified participants. In the PEPUP project, overall, 33% of those referred by providers were eligible for the study, whereas only 27% of those identified via advertisements were eligible ($\chi^2 = 16.40, p < .001$). Because no minorities responded to advertisements, we could not calculate the relative effectiveness of recruitment method for the minority participants in PEPUP.

We found similar results in the PASS study. More of the patients who were recruited via physician referral were eligible (40%) than those recruited via face-to-face (27%) or mail (16%; $\chi^2 = 11.73, p < .001$). In the minority sample, 15% of the mail-recruited sample were eligible, 27% of the provider-referred sample were eligible, and 29% of the face-to-face recruited participants were eligible for the study. Chi-square analyses indicate that neither method resulted in a greater proportion of eligible participants ($\chi^2 = 3.80, ns$).

Retention

Because data collection is still ongoing in the PASS project at the time of this writing, only 82 of the 121 participants represented here were available for follow-up evaluations. Thus, data comparing PASS to PEPUP on retention only uses a subset of the PASS project participants. Retention rates varied by type

Table 4. Recruitment Rate by Method

Method/Status	Mail	Media	Provider Referral	Face to Face	χ^2
PEPUP					
Total Sample					
Identified	—	198	203	—	
Agreed	—	75 (38%)	153 (75%)	—	45.1***
Qualified	—	20 (27%)	51 (33%)	—	16.4***
Minority Sample					
Identified	—	0	102	—	
Agreed	—	—	78	—	
Qualified	—	—	26	—	
White Sample					
Identified	—	198	101	—	
Agreed	—	75	75	—	
Qualified	—	20	25	—	
PASS					
Total Sample					
Identified	506	—	55	59	
Agreed	326 (64%)	—	45 (82%)	40 (68%)	6.78**
Qualified	83 (16%)	—	22 (40%)	16 (27%)	11.73***
Minority Sample					
Identified	270	—	37	35	
Agreed	187 (69%)	—	29 (78%)	30 (86%)	7.4***
Qualified	40 (15%)	—	10 (27%)	10 (29%)	3.8
White Sample					
Identified	236	—	18	24	
Agreed	139 (59%)	—	16 (89%)	10 (42%)	9.64***
Qualified	43 (31%)	—	12 (75%)	6 (60%)	14.4***

Notes: PEPUP = Psychotherapy Effectiveness Project for Underserved Primary Care Patients; PASS = Patient Access to Social Services project.

** $p < .01$; *** $p < .001$.

of strategy. As shown in Table 3, in the PEPUP study 69% of the entire sample was available at the 3-month assessment and 59% at the 6-month assessment. Reasons for attrition were 2% deceased, 1% incarcerated, 20% too sick, 30% refused to continue participation, and 20% unable to locate. In the PASS project, 84% of the eligible subsample were retained at the 3-month evaluation and 91% at the 6-month evaluation (see Table 3). The larger retention rate at the 6-month follow-up reflects the fact that a number of participants who missed the 3-month evaluation were seen at the 6-month evaluation. Of those who were completely lost to follow-up at both time points, 22% refused to be contacted further, 33% had died, 11% were unreachable, and 11% missed the assessment window, although some were eventually contacted at the 6-month assessment. Chi-square analyses indicate that PASS was more successful in retaining participants at both the 3-month assessment ($\chi^2 = 4.94, p < .05$) and the 6-month assessment ($\chi^2 = 15.05, p < .001$).

For the ethnic minorities at the 3-month assessment, PEPUP was able to retain 96% of the sample, and PASS was able to retain 93% of the minority sample ($\chi^2 = 0.34, ns$). At the 6-month assessment, PASS was more successful at retaining minorities than PEPUP ($\chi^2 = 6.20, p < .05$). PASS retained

91% of the minority sample and PEPUP 55% (see Table 3). Thus, whereas PEPUP had identified a greater proportion of qualified minority participants at recruitment, PASS was able to retain substantially more minorities throughout the project.

Discussion

The aim of this study was to determine whether consumer-centered research methods improve recruitment and retention of older minorities into longitudinal mental health research. Too few studies have been able to successfully recruit this population into mental health trials, and thus information about the best methods for treating mental illness in older, ethnic minorities is greatly lacking (U.S. Department of Health and Human Services, 2001). Although preliminary, the results from the data presented here suggest that using consumer-centered methods may result in greater recruitment and retention rates in mental health services research with older adults than traditional recruitment and retention methods. Although the consumer-centered method did not result in a greater proportion of older minorities agreeing to participate in longitudinal research, it did result in reaching a greater number of interested

minorities overall and was more successful in retaining older minorities over time.

Recruitment

The research studies presented here used distinctly different recruitment methods to identify minority elderly. In the PEPUP study, we relied on the expert opinion of other researchers who had successfully recruited both minority participants and older adults into clinical research to inform our methods, and thus we created a recruitment strategy that was minimally informed by the culture of the community we were recruiting. Hence, we were only able to recruit a total of seventy-one people over a 4-year period of time. As Levkoff and colleagues (2000) pointed out, scientists should not assume that successful methods for one community would work in all other, similar communities. By failing to understand the specific culture of the target population, we had inadvertently distanced ourselves from the community and the gate-keepers, doing little to overcome attitudes about research and mental health.

In the PASS project, we relied on our consumer council, opinion leaders, and providers to help us create our recruitment methods. Using methods informed by the community we recruited from, we had a greater overall acceptance rate. Although we were not able to directly assess the impact these methods had on community perception of research, these procedures likely overcame the stigma and mistrust barriers associated with research and thus were responsible for the increased number of people willing to participate in the study. Although no one has formally tested consumer-centered recruitment strategies, the literature indicates that even within minority groups, the success of recruitment strategies varies by community. For example, although some studies have been able to successfully recruit African American participants into clinical trials by providing the experimental intervention in churches (Hatch, 1991), Yeattes, Crow, and Folts (1992) found that in their community recruitment from churches was not efficient or reliable. Because of congregational loyalty, participants were reluctant to participate in services provided in a church they did not belong to. Because resource limitations precluded the investigators from conducting their trial in every church in the target community, Yeattes and colleagues were able to improve their recruitment by conducting the study on neutral ground (the local senior center). As we were able to demonstrate in this study, there is no one-size-fits-all approach to recruitment. Recruitment should be tailored to the needs of the community in order to be successful.

Although both projects had relied on gate-keeper referrals (in this case, primary care providers), it is important to note that how the research team interacted with the providers differed between

studies. In PEPUP, providers were kept abreast of the project through reminders and in-services. In PASS, the research team became members of the clinic community by attending weekly team meetings. Thus, becoming members of the clinic was a more efficient means of reminding providers about the study, which resulted in a larger number of referrals to our project.

It is important to note that although the consumer-centered method did not yield a greater proportion of minorities agreeing to participate, both methods resulted in two-thirds of the identified minorities participating. It appears that once older people are willing to discuss participation in research, they are more willing overall to eventually participate, and thus stigma and trust barriers may have already been weakened by the time research assistants approached participants. The important point here is that the consumer-centered method resulted in a greater overall yield of older minorities willing to be approached about the study through greater community penetration and education about the project.

Retention

The results from this study also confirm that consumer-centered methods result in better retention of older minorities than do traditional retention methods. Although both studies had overlapping retention strategies, the PASS project incorporated additional features recommended by our consumer council, such as shorter, less burdensome follow-up interviews, flexibility around location of assessments, and regular information gathering regarding the health status of participants due for assessments from providers and families. As with recruitment, these methods helped us work collaboratively with research participants and gate-keepers so that they could dictate how they participated in the study. In addition, we were able to improve retention rates between assessment periods. We did not assume that if participants were not available for the 3-month appointment they would not be available at the 6-month appointment. We made every effort to contact all participants who had not overtly refused to continue participation in the study. Although no research has formally evaluated consumer-centered retention methods, many researchers have provided descriptive information about the usefulness of flexible approaches to retention of minorities in research (Miranda, 1996). Our data support previous descriptive studies.

Generalizability

Although increased recruitment is an important step in improving the number of older minorities represented in clinical trials, it is also important to

note whether increasing the absolute number of available participants necessarily improves how representative the sample will be of the target community. Interestingly, our study shows that both the traditional and consumer-centered methods can produce representative samples. Both methods enrolled low-income, frail older adults from various ethnic groups. However, there are two significant advantages to the results of consumer-centered methods. First, according to this study, consumer-centered methods result in a greater number of people participating in research overall. Although recruiters have to screen more people to identify eligible participants, the final number of participants will likely result in a better powered study than traditional methods would. Second, consumer-centered methods seem to result in better retention of participants. In PEPUP, it is likely that only those most motivated to participate in research remained in the study, which may have resulted in a biased final sample. In PASS, retention rates are such that the final sample will be representative of the original sample. Therefore, although both studies were able to recruit participants who do not typically participate in research (Spath et al., 1999), consumer-centered approaches result in greater retention and hence a potentially less biased sample.

Successful Components of the Consumer-Centered Model

It is important to highlight that although the consumer-informed interventions can be quite successful in meeting recruitment and retention goals, these methods are costly in terms of time and effort. For instance, finding ethnically matched recruiters can often be very difficult, and training community members to assist in recruitment can take longer than training staff with research experience. It is for this reason we looked at the relative success of the strategies we used in the PASS project. As can be seen in our data, hiring staff members with experience recruiting and retaining participants from the target population worked just as well as having ethnically matched recruiters. Our finding is supported by other studies that have found experience outweighs ethnic matching when conducting research with minority populations (Thompson, Neighbors, Munday, & Jackson, 1996). In the PASS Project, the method of recruitment was more important than the characteristics of the recruiter, with face-to-face recruitment and provider referral being the most effective strategies. These strategies also resulted in a higher proportion of those recruited ultimately being randomized. Recruitment mailings appear to be less effective to recruit eligible patients in this population. Although we were unable to test the direct impact of having a community advisory board on recruitment and retention, we

believe their involvement helped shaped our methods and made a major contribution to our ability to recruit and retain participants in the PASS project.

Our experience with the PEPUP study is also informative in streamlining recruitment. The study revealed that media recruitment is ineffective in getting older minority adults to participate; none of the minorities identified in the PEPUP project heard about the study via the media, despite extensive coverage in local newspapers and radio. Interestingly, this finding was confirmed by the opinion of the consumer council in the PASS project. Provider referral and face-to-face recruitment was the most successful method of the traditional recruitment methods in not only identifying potential minority participants, but in identifying participants in general in both the PASS and PEPUP studies. This particular finding is noteworthy. Although research suggests that providers tend to underrecognize mental health problems in older adults (Callahan, Nienaber, Hendrie, & Tierney, 1992) and minorities (U.S. Department of Health and Human Services, 2001), it appears that when kept informed about research to which they can refer patients, providers can accurately identify participants for a research project.

Application of the Consumer-Centered Methods

It is important to note that although we were able to identify which consumer-suggested recruitment strategies were most successful for our project, we do not mean to imply that these specific methods (i.e., face-to-face recruitment) would be successful in other communities. Instead, the data presented here serve as an illustration of how consumer-centered methods are useful in generating successful recruitment and retention strategies for a specific community of older minorities. By identifying key gatekeepers, working with opinion leaders and consumers, and working within the community, we were able to design research strategies that were useful in engaging older minorities from the San Francisco Bay area. The strategies we developed through consumer-centered methods may be useful for recruiting urban minorities into research studies, but perhaps not minorities living in rural areas.

It is also true that consumer-centered models can be useful in recruiting any population into research, not just minority populations. Consumer-centered methods are necessary because traditional models have tended to fail in recruiting minorities into research. Consumer-centered methods have the potential to overcome the recruitment and retention barriers that have plagued past research.

Limitations

This analysis is one of the first attempts to assess the relative utility of consumer-centered interven-

tions in recruitment and retention of older minority adults into mental health services research. It is also a first attempt to compare this method with traditional recruitment and retention methods. However, this study is descriptive in nature. Recruitment rates were compared across two different studies, and thus, the differences we found may also be explained by differences in the patient populations or the case-identification method (self- and physician-referral vs. consecutive screening of eligible primary care patients). Recruitment rates were also compared within each study across different recruitment methods. However, patients were not randomized to different recruitment strategies in either study, so differences may be explained by other factors that we did not include in our analysis.

Conclusions

This study is an important first step in informing researchers about how to improve their recruitment and retention of older minorities. The data from these two studies highlight the importance of community and consumer involvement in research design. Future studies should continue to focus on identifying the successful elements of minority recruitment into mental health research and the utility of consumer-centered methodologies.

References

- Alvidrez, J., Azocar, F., & Miranda, J. (1996). Demystifying the concept of ethnicity for psychotherapy researchers. *Journal of Consulting and Clinical Psychology, 64*, 903–908.
- Areán, P. A., & Gallagher-Thompson, D. (1996). Issues and recommendations for the recruitment and retention of older ethnic minority adults into clinical research. *Journal of Consulting and Clinical Psychology, 64*, 875–880.
- Biegel, D. E., Farkas, K. J., & Song, L.-Y. (1997). Barriers to the use of mental health services by African American and Hispanic elderly persons. *Journal of Gerontological Social Work, 29*, 23–44.
- Black, B. S., Rabins, P. V., German, P., McGuire, M., & Roca, R. (1997). Need and unmet need for mental health care among elderly public housing residents. *The Gerontologist, 37*, 717–728.
- Callahan, C. M., Nienaber, N. A., Hendrie, H. C., & Tierney, M. (1992). Depression of elderly outpatients: Primary care physicians' attitudes and practice patterns. *Journal of General Internal Medicine, 7*, 26–31.
- Demi, A. S., & Warren, N. A. (1995). Issues in conducting research with vulnerable families. *Western Journal of Nursing Research, 17*, 188–202.
- Fellin, P. A., & Powell, T. J. (1988). Mental health services and older adult minorities: An assessment. *The Gerontologist, 28*, 442–447.
- Hatch, L. R. (1991). Informal support patterns of older African American and White women: Examining effects of family, paid work, and religious participation. *Research on Aging, 13*, 144–170.
- Hohmann, A., & Parron, D. (1996). How the new NIH guidelines on inclusion of women and minorities apply: Efficacy trials, effectiveness trials, and validity. *Journal of Consulting and Clinical Psychology, 64*, 851–855.

- Levkoff, S. E., Levy, B. R., & Weitzman, P. F. (2000). The matching model of recruitment. *Journal of Mental Health & Aging, 6*, 29–38.
- Lu, F. G., Lim, R. F., & Mezzich, J. E. (1995). Issues in the assessment and diagnosis of culturally diverse individuals. *Cross-Cultural Psychiatry, Section IV*, 477–509.
- Mattson, M. E., Curb, J. D., & McArdle, R. (1985). Participation in a clinical trial: The patients' point of view. *Controlled Clinical Trials, 6*, 156–167.
- Miller, B., Campbell, R. T., Furner, S., Kaufman, J. E., Li, M., & Muramatsu, N., et al. (1997). Use of medical care by African American and White older persons: Comparative analysis of three national data sets. *Journal of Gerontology: Social Sciences, 52B*, S325–S335.
- Miranda, J. (1996). Introduction to the special series on recruiting and retaining minorities in psychotherapy research. *Journal of Consulting and Clinical Psychology, 64*, 848–850.
- Satcher, D. (2000). Mental health: A report of the Surgeon General—Executive summary. *Professional Psychology: Research and Practice, 31*, 5–13.
- Souder, J. E. (1992). The consumer approach to recruitment of elder subjects. *Nursing Research, 41*, 314–316.
- Spoth, R., Goldberg, C., & Redmond, C. (1999). Engaging families in longitudinal preventive intervention research: Discrete-time survival analysis of socioeconomic and social-emotional risk factors. *Journal of Consulting and Clinical Psychology, 67*, 157–163.
- Swartz, M. S., Wagner, H. R., Swanson, J. W., Burns, B. J., George, L. K., & Padgett, D. K. (1998). Comparing use of public and private mental health services: The enduring barriers of race and age. *Community Mental Health Journal, 34*, 133–144.
- Thompson, E. E., Neighbors, H. W., Munday, C., & Jackson, J. S. (1996). Recruitment and retention of African American patients for clinical research: An exploration of response rates in an urban psychiatric hospital. *Journal of Consulting and Clinical Psychology, 64*, 861–867.
- Thompson, L. W., & Gallagher, D. (1984). Efficacy of psychotherapy in the treatment of late-life depression. *Advances in Behaviour Research and Therapy, 6*, 127–139.
- 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: Author.
- Yeatts, D. E., Crow, T., & Folts, E. (1992). Service use among low-income minority elderly: Strategies for overcoming barriers. *The Gerontologist, 32*, 24–32.

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Appendix

Notes

1. PASS is 1 of 11 sites in the PRISMe project, a multisite trial funded by SAMHSA, CMHS, and the Department of Veterans Affairs. The aim of PRISMe is to evaluate the integration of mental health services into primary care medicine in treating depression, alcohol abuse, and substance abuse in older adults. The data reported in this presentation represents a time-limited, site-specific subset of data collected within the framework of PRISMe. The PRISMe study results will be available in 2002. These data should not be viewed as representing results from the larger study.