

# Resocialization Group Treatment With the Confused Institutionalized Elderly

*Susan H. McCrone*

Confusion and social isolation are major presenting problems among the institutionalized elderly. Wolanin (1981) commented that any discussion of confusion should begin with a definition, but there are no comprehensive and conclusive definitions of confusion. Wolanin and Phillips (1981) identified behavior indicative of confusion as falling into two categories: cognitive inaccessibility and social inaccessibility. Cognitive inaccessibility includes behaviors indicating impaired intellectual functioning, while social inaccessibility includes behaviors that indicate a decrease in social alertness and interpersonal skill. One major treatment modality currently used to treat confusion in the elderly is resocialization. Resocialization is a formal group method which encourages interaction among members by introducing a focal stimulus or topic to facilitate reminiscence. Resocialization was designed to treat problems of confusion and lack of social dynamism by reinforcing small group participation and decreasing social isolation. The purpose of this study was to investigate the effectiveness of resocialization group treatment with a sample of the mildly and moderately confused institutionalized elderly. A review of the literature did not reveal any well controlled studies on the efficacy of resocialization with mildly confused clients nor evidence that resocialization is more effective than extra attention with residents at any confusion level.

## THEORETICAL SYNTHESIS

Among the institutionalized elderly, a major presenting problem is confusion. The proportion of elderly in institutions who suffer from some form

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of cognitive or affective impairment is estimated to be as high as 50% to 70% (Wolanin & Phillips, 1981). As documented in the National Nursing Home Survey (U.S. Bureau of Census, 1977), the third and fourth most common diagnoses of people admitted to nursing homes were "senility" and "chronic brain syndrome."

Traditionally, morphological changes in the brain due to age have been regarded as an inevitable and natural process. These changes were previously believed to be the signal of a deteriorating course and linked causally to emotional, cognitive, and behavioral characteristics manifested by the elderly. Ernst, Beran, Safford, and Kleinhaus (1978), however, proposed that the morphological changes must be mediated by isolation to result in a functional disturbance. They further noted that isolation leading to sensory deprivation could produce morphological changes. Wolanin (1981) identified physiologic as well as environmentally induced causes for confusion in the elderly. Several studies (Burnside, 1976; Gunter & Miller, 1977) have challenged the assumption that confusion among the elderly is inevitable and irreversible.

Citrin and Dixon (1977) suggested that caregivers of the institutionalized elderly reinforce confusion by treating patients as confused. Dolen and Bearison (1982) found that levels of social interaction were a more significant predictor of cognitive decline than age. Such studies demonstrate the importance of future exploration of the interactive process involving environmental stimulation and levels of confusion.

Intervention models with the institutionalized elderly often target group approaches, with clear justification in social theories and in economic realities. Resocialization group treatment was developed as a combination of reminiscence and sensory stimulation. In the past, positive results have been obtained using a reminiscence therapy format (Parsons, 1986; Baines, Saby, & Ehlert, 1987). However, many of these studies have suffered from methodological weaknesses. In a recent study (Goldwasser, Auerbach, & Harkins, 1987), a significant decrease in self-reported levels of depression was found in clients using reminiscence groups, but no significant effects were found for either cognitive or behavioral functioning.

Unlike the studies with reminiscence groups, resocialization groups seem to target cognitive capabilities. In a descriptive study, Brudno and Seltzer (1968) reported that after 8 months of resocialization treatment, 9 of 11 confused and disoriented elderly women demonstrated improvement in functional capacity. Gray and Stevenson (1980) conducted resocialization groups with 17 aged, confused subjects grouped according to confusional levels as subjectively determined by the researchers. All three groups were

found to demonstrate significant improvement, with severely confused subjects registering the greatest improvement (Gray & Stevenson, 1980).

In a study by Ivan (1982), a comparison was made of the efficacy of resocialization and reality orientation small-group treatments on the cognitive and social accessibility dimension of confusion in a population of moderately and severely confused institutionalized elderly. Ivan's study involved 88 nursing home residents (45 severely and 43 moderately confused) who were randomly assigned to the reality orientation, resocialization, and control conditions. The main effect of treatment on cognitive accessibility, as measured by the Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975), was statistically significant. In addition, resocialization was found to more effectively target social accessibility in the moderately confused elderly than was reality orientation. Moderately confused subjects were found to be significantly more responsive to treatment on both dimensions of confusion (cognitive and social accessibility) than were severely confused subjects. The findings demonstrated that gain achieved in scores on the SPMSQ by treated subjects was lost by the second posttest 1 month later.

Many of the early research studies using group treatment with the elderly suffer methodological weaknesses by not including an extra attention or attention control group. Campbell and Stanley (1963) described one threat to internal validity as the Hawthorne effect, the effect on a group of being studied. Adding an attention control group provides some control for this factor.

This study expanded the findings of the Ivan (1982) study by the inclusion of an attention control group to examine the efficacy of resocialization treatment with the mildly confused.

## HYPOTHESES

1. The institutionalized elderly who receive either resocialization or attention control group treatment will demonstrate significantly more improvement in cognitive accessibility, as measured by the SPMSQ than will the subjects receiving standard care (the control group).

2. The mildly and moderately confused institutionalized elderly who receive resocialization treatment will demonstrate significantly more improvement in cognitive accessibility as measured by the SPMSQ than will the attention control subjects.

3. The mildly confused institutionalized elderly who receive resocialization treatment will demonstrate significantly more improvement in cognitive accessibility as measured by the SPMSQ than will the moderately confused subjects who receive the resocialization treatment.

4. The mildly and moderately confused institutionalized elderly who receive resocialization treatment will demonstrate significantly more improvement in social accessibility as measured by quantity of member verbals during the group session than will the attention control groups.

5. The mildly confused institutionalized elderly who receive resocialization treatment will demonstrate significantly more improvement in social accessibility as measured by quantity of member verbals during the group session than will moderately confused subjects.

## DESIGN

A factorial  $3 \times 2 \times 3$  experimental design was used to test the five hypotheses. The three factors included group treatment modality (resocialization, attention control, and control), level of confusion (mild and moderate), and the three time intervals (pretest, Posttest 1, and Posttest 2). The treatment interventions were repeated over three consecutive 6-week time periods using three different nursing homes (A, B, and C). Two groups from each treatment modality (resocialization, attention control, and control) were scheduled in each nursing home. Because of the small number of subjects within each cell, the factor of nursing home was collapsed in the design and data analysis.

## METHOD

### Sample

The sample consisted of 80 nursing home residents from a population pool of 554 in three nursing homes, designated as A, B, and C for purposes of the study. Subjects were selected based on the following criteria: (a) mild confusion level, determined by scoring 3-4 errors on the SPMSQ, or moderate confusion level, determined by scoring 5-7 errors on the SPMSQ; (b) 63 years of age or older; (c) ability to hear and see; (d) ability to speak English;

(e) mobility, including wheelchair mobility; (f) willingness to participate; (g) no documentation of mental retardation; (h) no documentation of brain damage due to trauma; and (i) no documentation of senile dementia (Alzheimer's type; no other form of permanent dementia was excluded).

Each subgroup of 15 mildly or moderately confused patients was randomly assigned for each 6-week period by the throw of a die to the resocialization, attention control, or control groups.

### **Instrument**

The Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975) was used to measure the subject's cognitive accessibility. The SPMSQ has a possible score range of 0 to 10. A subject's score is computed by totaling the number of incorrect responses. The SPMSQ is an easily administered tool with established test-retest reliability ( $r = .82$ ) and predictive validity ( $r = .92$ ; Pfeiffer, 1975).

The SPMSQ was administered by the co-investigator, a registered nurse who remained blind to the experimental conditions. A single rater was used to minimize the source of error. The SPMSQ was used in the initial screening of participants (pretest) and as an outcome measure at the termination of the 6-week group treatment (Posttest 1) and again 1 month after the group ended (Posttest 2).

### **Procedure**

The treatment groups met twice a week for 30 minutes over a 6-week period. The groups met at the same hour in all time blocks and only the days for the group sessions changed. Groups were co-led by junior-level baccalaureate nursing students.

The resocialization groups were structured around topics of the leaders' choosing. The topics stimulated the senses through the use of props and promoted patient reminiscence. Patients were encouraged to handle the "props" of the topic in addition to being encouraged to reminisce. The tape recording of every fourth meeting served as a further manipulation check of the independent variable.

Subjects assigned to the attention control group met with the leaders in a structured 30-minute session. The topics of these groups were chosen by the leaders to focus on the "here and now," that is, on topics related to current living circumstances or activities. Neither the staff of the nursing home nor

the coleaders were aware of which subjects were assigned to the experimental or the attention control groups.

The control group received the normal care given by the facility. These people were known only to the investigator because they were randomly assigned from the list given to the co-investigator by the respective nursing staffs. They were contacted only for administration of the SPMSQ at designated intervals.

Prior to leading the groups, all leaders received 45 minutes of instruction on group leadership techniques by the investigator. The leaders conducting resocialization groups were trained separately from the attention control group leaders. The students were told that two techniques were being used and were asked not to discuss the groups with the other students. During the 6-week period of the treatment process, each student leader and coleader dyad received 20 minutes of weekly supervision from the investigator who was blind to the composition (mild or moderately confused) of the group. This study was approved by the Human Subject Committee, University of Colorado and the Internal Review Board, University of Utah.

### **Content Analysis**

Analysis was conducted using change scores generated from the data. Repeated measures were not used in the analysis. Every fourth meeting of the groups was audiotaped. The 64 30-minute tapes of Sessions 1, 4, 8, and 12 were coded for quantity and direction of verbals.

The content analysis data were treated as descriptive data for the purposes of analysis. In coding the tapes, the investigator and co-investigator functioned as a single coding instrument, one person identifying the verbals from the tape and the other recording them.

### **Analysis of Data Findings**

An analysis of covariance was performed on the variables: pretreatment scores, length of institutionalization, years of education, age, nursing home, number of diagnoses, and number of medications. These variables were found not to be contributing significantly to the observed effects. The covariates were maintained within the analyses as a more conservative estimate of the observed effect of treatment.

In the following presentation of the results, the outcome measure for Hypotheses 1 through 3 was the SPMSQ. The SPMSQ pretest is delineated

as Test A, the posttest at the completion of treatment as Test B, and the 1-month follow-up as Test C. Hypotheses 1 through 3 address change scores from Test A to Test B. Hypotheses 4 and 5 address change scores from the first audiotaping Session 1 to the last audiotaping Session 12.

## RESULTS

There was a significant main effect for treatment on the change scores of the SPMSQ outcome measure from Test A to Test B ( $F = 4.694, p < .05$ ; see Table 1).

Resocialization treatment was found to be significantly more effective than the attention control treatment in decreasing cognitive inaccessibility when the Newman-Keuls statistic was used to compare the mean change scores from Test A to Test B. As hypothesized, the mean change for the resocialization groups was .92, which was significantly different by the Newman-Keuls test from both the attention control groups (0) and the control groups (-.15). The effect of treatment, therefore, can be attributed to the treatment modality and not simply to the extra attention effect of treatment.

Hypothesis 3 predicted that mildly confused subjects who receive resocialization treatment would demonstrate significantly more improvement in cognitive accessibility as measured by the A-B change score of the SPMSQ than would the moderately confused subjects. A simple main effects test failed to support this hypothesis ( $F < 1, p > .05$ ). The change, in fact, occurred in the opposite direction, with the moderate resocialization group achieving a mean change score of 1.22 and the mild resocialization group demonstrating a mean change score of .73.

When the groups were tested 1 month after termination of the meetings or sessions (Test C), the effect of treatment was not maintained, and there were no significant differences between the groups at that time ( $F = .492, p > .05$ ). The resocialization groups lost .54 points, while the attention control and control groups gained .06 and .02 points, respectively. Although these are not large gains, the loss by the resocialization groups in light of the gains is important. When the scores from Test A were compared to Test C, no significant differences for either treatment or confusion level were identified between the groups.

The content analysis data served two purposes: the measurement of the social accessibility dimension and the demonstration that the manipulation of the treatments was effective. Before discussing the findings, the limitations

**TABLE 1: Analysis of Variance and Covariance of Short Portable Mental Status Questionnaire (SPMSQ) Change Scores From Test A to Test B.**

<i>Source of Variation</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Significance of F</i>
Covariates	12.577	7	1.797	1.030	.420
Length of institutionalization	.292	1	.292	.292	.684
Education	5.379	1	5.379	3.083	.084
Age	1.286	1	1.286	.737	.394
Gender	.547	1	.547	.314	.578
Nursing home	.651	1	.651	.373	.544
Number of diagnoses	3.475	1	3.475	1.992	.163
Number of medications	1.189	1	1.189	.682	.412
Main effects	16.772	3	5.591	3.205	.029
Treatment	16.379	2	8.189	4.694	.013
Confusion	1.949	1	1.949	1.117	.295
Two-way interaction	1.326	2	.663	.380	.685
Treatment x Confusion	1.326	2	.663	.380	.685
Explained	30.675	12	2.556	1.465	.163
Residual	106.419	61	1.745		
Total	137.095	73	1.878		

in drawing inferences from this data must be noted, for there was much variability within each treatment condition for each of the group sessions. The evidence for heterogeneity of variance, together with the small number of data sets (total  $N = 14$ ; for each group,  $n = 4$ ), dictated that the content analysis would best be treated as descriptive data. Although the original design described an  $N$  of 16, two groups were eliminated from analysis because of technical problems with the tapes. The raters functioned as a single coding instrument with interrater reliability of 93% across categories. Because of the characteristic of the tool, the data were a measure of group behavior.

The main effect for treatment on the social accessibility dimension of confusion as measured by the total member verbals was not statistically supported ( $F = .16, p > .05$ ; see Table 2). When the change score from the first to the last session was calculated on the total member verbals (member-to-member and member-to-leader verbals combined), the means for the resocialization and attention control groups did not differ significantly on the



**TABLE 2: Analysis of Variance of Mean Total Member Verbals (Member-to-Member and Member-to-Leader Verbals Combined) Change Score Time 1 to Time 4 for the Social Accessibility Dimension**

<i>Source of Variance</i>	<i>df</i>	<i>ss</i>	<i>ms</i>	<i>f</i>
Resocialization and attention control				
Between	1	9,559	9,559	.16*
Within	12	695,477	57,957	
Mild and moderate resocialization groups				
Between	1	32,088	32,008	.7245*
Within	7	354,244	44,288	

\* $p > .05$ .

ANOVA. When a dependent *t* test was performed on the change scores from Time 1 to Time 4, both groups (resocialization and attention control) increased significantly on the social accessibility dimension of confusion.

When the simple main effect for confusion on the social accessibility dimension was analyzed, as measured by the total member verbals, the results on the ANOVA were nonsignificant ( $F = .278, p > .05$ ; see Table 2). There was no support for the hypothesis that the mildly confused institutionalized elderly who received resocialization treatment would demonstrate significantly more improvement in social accessibility than the moderately confused group. Indeed, the mean increase in verbals for the moderate group ( $x = 269$ ) was slightly higher than for the mild group ( $x = 201$ ).

## DISCUSSION

The present study supports the effectiveness of small group treatment on altering the cognitive and social accessibility dimensions of confusion in the institutionalized elderly. It specifically supports the efficacy of resocialization treatment on the cognitive accessibility dimension. The findings also demonstrate that the gain on the cognitive accessibility dimension by the treated subjects is lost within 1 month after treatment is terminated. The study did not identify a significant improvement difference on the social accessibility dimension of confusion between the resocialization and attention control groups. The findings did not support the hypotheses that level of confusion would be differentially responsive to treatment.

Resocialization group treatment received statistical support for effectively targeting the cognitive dimension of confusion in the institutionalized elderly. When the Newman-Keuls procedure was used to compare mean change scores from Test A to Test B, not only did subjects treated with resocialization improve significantly more than those treated with extra attention but the mean of the subjects treated with extra attention was not significantly different from the control group.

Although both treatments clearly affected the institutional environment of the subjects, they were designed to do so in very different ways. Resocialization was developed as a modality specifically to use reminiscence and sensory stimulation with the goal of decreasing confusion and increasing group interaction. The attention control group was designed to focus on the "here and now" through group participation in an activity or project. Clearly, the leader expectations, interaction versus participation, were very different, yet the results indicated that both groups significantly increased interaction. The resocialization treatment provided a structure in which the leaders could encourage self-disclosure through reminiscence which may account for the change in cognitive accessibility.

Although previous research supported the idea that the type of intervention with the elderly is nonsignificant, this research clearly supported the superiority of resocialization over extra attention on the cognitive accessibility dimension of confusion in the institutionalized elderly for short-term treatment.

This study documented the short-term nature of the treatment effect, as the subjects returned to baseline in 1 month's time. A recent study by Baines et al. (1987), however, described a reasonably high level of functioning being maintained with a combination of reminiscence and reality orientation after formal sessions had ended and documented that losses were made up once groups were restarted. This suggests that groups might be run intermittently.

To accept the hypothesis that there was indeed a significant difference between treatment modalities on the cognitive accessibility dimension outcome measure, certain design criteria must be met: Manipulations must be strong, the samples truly randomized, there must be no experimental bias, the outcome measures must be reliable and valid, and the therapist characteristics must not bias the results. Because of the low level of interaction among residents, the potential for a diffusion effect of the treatment was minimal.

The treatment manipulations were strong and decisive. The continual presence of the investigator at the facility, the original training sessions, the

weekly clinical supervision, and the taping of every fourth session served as manipulation checks. Subjects all met criteria for inclusion in the study and were randomly assigned by the throw of a die to one of the three groups. They did not differ significantly on pretest scores, age, or other variables. The investigator administered none of the tests. Use of the Short Portable Mental Status Questionnaire (Pfeiffer, 1975) was based on its having well established validity and reliability. All of the leaders were novice group leaders and were randomly paired and assigned to the groups. Characteristics which appeared equivalent across treatment conditions were warmth, genuine caring, and empathic abilities.

One weakness of the study was the use of change scores. This type of analysis was used for replication purposes. As explained by Burckhardt, Goodwin, and Prescott (1982), a major statistical problem with change scores is low reliability when measuring individual differences.

With the development of a variety of intervention strategies to combat confusion in the institutionalized elderly, nurses must determine the specific effect of treatment. Only by the identification of how treatment interventions target cognitive accessibility can a definitive approach to the treatment of confusion be developed. Having the most consistent and comprehensive data on residents in nursing homes, nurses are in a unique position to determine a baseline of mental status and to measure changes. As the guardians of the environment within nursing homes, nurses must evaluate treatment models to prevent and treat the symptoms of confusion. With the latest research supporting a more individualistic and positive approach to cognition in the elderly, it is important for nurses to document improvement in cognitive accessibility through group treatment as a means of preventing institutionalization or improving the self-care capabilities of residents within institutions.

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## Commentaries

### Commentary by Buckwalter

This study uses an experimental methodology to evaluate the effectiveness of a resocialization group treatment with mildly and moderately confused residents. The author is to be commended for this research effort on an understudied population. Too often, confused elderly persons are dismissed as hopeless by staff and family who view their condition as one of inevitable deterioration not worthy of rehabilitative efforts (Buckwalter, in press).

Desocialization occurs and results in passive behaviors such as interpersonal detachment, apathy, decreased initiative and interest in the environment, and deterioration of personal habits (Zusman, 1967). However, diminished levels of engagement may be due more to lack of opportunity for socialization than to disability (McCormack & Whitehead, 1981). The use of an attention control group is also a welcome aspect of this design, especially in light of recent research (Buckwalter et al., 1988) which has demonstrated that systematic attention for as little as 10 minutes per shift can profoundly influence behavioral and psychosocial variables in

a long-term care population. The effort to statistically control (using ANCOVA) for differences among pretreatment variables is also noteworthy.

Several questions do come to mind on review of this article, however. First, why was the 1977 National Nursing Home data set used when more recent survey data is available, especially when this outdated survey employs the clinically useless and misleading terms “senility” and “chronic brain syndrome”? Second, why were residents with SDAT excluded when they constitute more than 60% of the irreversible dementias? Why weren’t residents with frontal lobe dementias excluded? And why were subjects with MID included when, except for pattern of disease progression, they are behaviorally almost identical to persons with SDAT? Surely, this exclusion criteria seriously threatens the generalizability of these findings. If subject selection was predicated on the notion of replication of the Ivan (1982) study, one must question the wisdom of continuing to repeat methodological flaws for the sake of replication. This same criticism applies to the use of change scores versus repeated measures analysis of variance. Further, although this study purports to build on the work of Ivan (1982), the discussion section is void of any reference to this work when the reader would have expected a discussion comparing/contrasting findings of the two studies. A third issue relates to the author’s contention that staff were “blind” to subject condition. I find it difficult to believe that the day staff was unaware of who was attending which group. In most long-term care facilities where I have conducted research, this admirable goal (staff blind to treatment condition) is seldom an achievable reality, and contamination is a research “fact of life” that must be considered. Fourth, I suggest that establishment of interrater reliability using an independent outside rater on a random 10% of the transcribed tapes would have strengthened the content analysis section. Finally, the small number of subjects per cell in this  $3 \times 2 \times 3$  design constitutes a serious limitation.

Because this is such a potentially important and neglected area of research, I was disheartened by the statistically significant but clinically irrelevant findings. What in many ways was a well-executed study is essentially clinically useless when all gains are lost in 1 month. This is particularly true in light of the high turnover of LTC staff so that there is seldom continuity in treatment of this nature. Clinicians and researchers must therefore consider alternative means to sustain treatment gains. Among the most promising and affordable seems to be the use of family members to colead groups such as the resocialization strategy tested in this study (Buckwalter & Hall, 1987).

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### **Commentary by Whall**

In past studies addressing confusion in institutionalized elderly, the majority of confounding variables were rarely adequately controlled. This study for the most part accomplishes adequate control and as such hopefully is representative of a new wave of methodologically superior studies in gerontological nursing. It is a truism, however, that there are no perfectly controlled studies, and there are a few aspects of this study which if addressed might make one's confidence in the results and the replicability possibilities stronger. Nevertheless, this study is vastly superior to those which precede it and the results are encouraging for this population.

Some of the strengths of the study are the size of the sample, the use of a control group addressing attention as a possible rival hypothesis, categorization of confusion into mild as well as moderate categories, separating the study groups into different nursing homes, recognizing the problem of change scores, analyzing via covariance procedures the effect on outcomes of such factors as length of hospitalization. This study is, therefore, a major improvement over earlier related studies.

Some of the factors which hopefully may be more thoroughly addressed in future studies are the following. The clarification and explication of the theoretical basis for the resocialization treatment (i.e., the principles being addressed and/or tested) need to be discussed in more detail. The clarity of this treatment approach, therefore, needs to be more thoroughly described in terms of assumptions, principles, procedures, and projected outcomes. The clarity of this explication and how this treatment is like/unlike other treatments approaches needs to be carefully addressed. Those who spend years preparing to conduct group therapy are painfully aware of the multiple therapy, group dynamics, and group process principles that affect one's "treatment" of groups. Although there is a difference in the depth with which one may approach such treatment, the careful explication of the theoretical basis of treatment, close supervision of such treatment by those knowledgeable in it, and ongoing consultation during treatment is needed by therapist and nontherapist alike, so as to maintain consistency. Unless this is done, resocialization treatment both in content and process will vary so

from one study to the next that outcomes may be uninterpretable. One criterion of science is reproducibility, and thus intervention research must be very clear on the specific content, process, and outcomes of all treatments.

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### **Response by the Author**

I am grateful for the opportunity to respond to the commentaries written by Drs. Buckwalter and Whall. I would like to respond point by point to Buckwalter's questions and then address Whall's concerns.

Although the results of this study are being published in the 1990s, the preliminary work for the research was begun in the early 1980s; hence the 1977 data set was the most current data available at the time that this study was initiated. I certainly agree that the terms "senility" and "chronic brain syndrome" are indeed clinically useless. Unfortunately, in a recent study (1990) I found that 34% of the charts reviewed at a long-term care facility affiliated with a major research and teaching center still contained this terminology.

The second point of Buckwalter's commentary addresses the exclusion of residents with a diagnosis of SDAT and the inclusion of patients with frontal lobe and multi-infarct dementias. In one of the three nursing homes used in the study, patients with a diagnosis of SDAT were segregated into their own unit. In the second home, they were simply not admitted. Patients with a diagnosis of frontal lobe and multi-infarct dementias were not segregated at these institutions so they were, therefore, included in my study. The exclusion of patients with a diagnosis of SDAT clearly does limit the generalizability of the findings to this population.

With regard to the third point, as indicated in the article, I am aware of the limitations of change scores. In response to this, data were reanalyzed using repeated measures. In the new analysis, there was a significant difference across time for the treatment groups ( $F = 5.48, p < .006$ ). Specifically, the resocialization group showed a significant improvement in mental status from the attention control and control groups at Posttest 1 with no significant differences among groups at pretest. The power was .835.

The fourth point of the commentary questions the lack of reference in the discussion section to the Ivan study. I welcome the opportunity that this commentary provides to address this issue. My study addresses some of the methodological flaws of the Ivan study while replicating some of the results. The Ivan study did not include an attention control group so therefore did not control for the Hawthorne effect. In

my study, the improvement could be clearly attributed to the effect of resocialization treatment. Because the severely confused showed no improvement in the Ivan study, these patients were not included in my study; instead, a mildly confused group was used. All pre- and posttest scores were determined by the administration of the Pfeiffer Short Portable Mental Status Questionnaire (Pfeiffer, 1975), which has delineated score ranges for mild, moderate, and severe levels of confusion.

As in the Ivan study, the resocialization groups showed a significant improvement. In my study, there was no difference between the improvement of the mildly and moderately confused groups. Also analogous to the Ivan study, the groups returned to baseline by the second posttesting.

Point 5 addresses the issue of whether the staff were blind to group membership of subjects. The staff at each facility knew only that the patients would be attending group to help nursing students learn about the older adult. They did not know that there were two modalities. My experience in the many facilities in which I have conducted research has evidently been very different from Buckwalter's experience. Not only did the nursing staff never question to which group the patient had been assigned but most often forgot from week to week that the patients would be going to group at all.

I certainly agree with Buckwalter's comment that the establishment of interrater reliability on the transcribed tapes would have strengthened the content analysis portion. Because the scores were reflective of the group rather than individuals, this data was treated as descriptive.

The commentary cites the small number of subjects per cell as a serious limitation of the study. I believe that the fact that a significant difference was found with a small number of subjects speaks not to a limitation but to the strength of the intervention.

Finally, I do not believe that the findings of the study are clinically irrelevant. Clearly, the study identifies the necessity of continuing the groups to maintain the gains, perhaps even intermittently. I agree with Buckwalter's suggestion that family members be included as group coleaders within the facility. Certainly, within the facilities in which I have conducted research, there has been a tremendous turnover of staff.

In light of the difficulty of getting nurses' aides to run groups in nursing homes, my most recent pilot study (1990) investigated the use of nurses' aides to work with residents on a one-to-one basis. Although the sample size was very small, the results were promising.

I definitely agree with Whall's commentary that the clarification of the theoretical basis for resocialization is necessary for scientific reproducibility. Both in the Ivan study and in mine, the orientation to conceptual models for the groups as well as the supervision of the group leaders was done by a master's-prepared psychiatric nurse with many years of group leadership experience. However, the groups were co-led by novices. I believe that the audiotaping also provided a further check on the manipulation of the independent variable. Certainly, further studies using specific group modalities need to be conducted with this very important population of patients.