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ABSTRACT

While changes in levels of activity and in social relationships in old age have interested researchers for some time, longitudinal studies have only recently begun to yield information about changes in social relationships across time for older adults. Parents (N=74) of the 1928-1929 Guidance Study and Berkeley Growth Study children, who are now involved in the Berkeley Older Generation Study, participated in a follow-up study examining stability and change in social relationships. Interviews conducted in 1968-1969 (young-old) and in 1982-1984 (old-old) collected in-depth information on friendship patterns and involvement in community activities, health, marital status, church attendance, and family relationships. The results regarding social relationships revealed a general pattern of continuing involvement, with 74% of subjects showing no decrease in involvement from young-old (60-75) to old-old age (85+ years). There was continued social involvement with no changes in the amount of club activity or church attendance or in the sociability or importance older persons gave to friendship. Sex differences were found, with men being significantly less likely than women to report that they still wanted friends; they also reported fewer new friends and less contact with friends. A comparison of the old-old (75-84) with the very-old revealed that involvement outside the family was lower for the oldest individuals and that such involvement declined over time for both groups. These results suggest that social relationships are highly variable in the years of old age. While there was stability for the group as a whole, individual differences were striking. (NB)

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Stability in Social Relationships Between Young-Old and Old-Old Age

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Changes in levels of activity and in social relationships in old age have been of interest to researchers for some time. Theories of late life change in social activities include the once-popular disengagement theory (Cumming & Henry, 1961), which posits that aging inevitably leads to reduction of social involvement and a voluntary withdrawal of concern from the wider world. The contrasting activity theory (Havinghurst, Neugarten, & Tobin, 1968) asserts that health, longevity, and life satisfaction are maintained through continuing activity. These theories, however, were based on cross-sectional studies of adult age groups, and examination of change or continuity in the same persons across late adulthood was not possible.

To test these theories and to determine whether observed differences are age or cohort effects, longitudinal data are required. Only recently have longitudinal studies of aging begun to yield information about change in amount, quality, or types of social relationships across time for older adults. The existing longitudinal studies have found little evidence in support of disengagement theory. Although some studies (Duke Longitudinal Studies I and II: Palmore, 1979, 1981) find some diminution of social activity across time, the prevalence of change depends upon the particular activities examined (Bonn Longitudinal Study of Aging: Olbrich & Fisseni, 1975; Olbrich & Lehr, 1976): secondary group activities may diminish, but the more central friendship roles are not relinquished voluntarily,

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and family roles are retained at all cost. Stability has been found in activity level (Duke: Maddox, 1970), leisure behavior (Bonn: Schmitz-Scherzer, 1976), and social interaction and organization of behavior (National Institute of Mental Health: Youmans & Yarrow, 1971). Persistence in life style is the rule.

As activity theory predicts, for most people social activity is associated with life satisfaction and successful aging. Considerable individual differences are apparent, however. Many people remain stable in their level of social activities, some decline, and some even increase their activities as they age. Neither attitude nor age predict activity (Baltimore Longitudinal Study of Aging: Shock et al., 1984), but health is an important factor in frequency of contact and engagement in a variety of activities (Bonn: Schmitz-Scherzer, 1976; Duke: Jeffers & Nichols, 1970).

The Berkeley Older Generation Study comprises data collected across more than 50 years of adulthood at the Institute of Human Development, University of California, Berkeley. Earlier we found impressive consistency in activity level through the 40 years from young adulthood to young-old age (Field, 1982). The most recent follow-up of the surviving participants allows an examination of stability and change in social relationships over the years between young-old and old-old age. The 1968-1969 (young old: YO) and 1982-1984 (old-old: OO) interviews have in-depth information on friendship patterns and involvement in community activities, as well as other information, such as health, marital status, church attendance, and family relationships, that may be pertinent to level of social activity during the years of old age. An examination of these qualitative and quantitative data may yield further information about factors associated with stability or change in these late years.

This paper addresses itself solely to change in these years. Some study members have always been very active, some have been more aloof. In some cases

even reliable decline still leaves the individual above the mean for the group. We are not examining here characteristics of sociable or detached people. Rather we are looking for reasons for change, or the lack of it, between YO and OO.

Method

Subjects

The subjects are drawn from the Berkeley Older Generation Study, mothers and fathers of the Guidance Study and Berkeley Growth Study children at the Institute of Human Development, University of California. These two studies were begun by Jean W. Macfarlane and Nancy Bayley in 1928-1929 and continue to this day (see, for example, Bayley, 1933; Eichorn, Clausen, Haan, Honzik, & Mussen, 1981; Jones, Bayley, Macfarlane, & Honzik, 1971; Macfarlane, 1938). The Guidance parents were representative of people of child-bearing age in Berkeley at that time, for their children were a sample chosen from every third baby born in Berkeley in 1928 and the first half of 1929. These parents were very similar to their national census cohort at that time, differing only as might be expected in a college town: they had more education and more labor-saving appliances in their homes, but their incomes were lower (Macfarlane, 1938). Approximately 225 families participated in the early years of the study. The smaller BGS group of 74 families, chosen for more intensive study, were for the most part middle-class.

The present study includes all the surviving parents who were interviewed both in young-old (YO) and in old-old (OO) age: 53 women and 21 men. The ages of these 74 individuals at the time of the 1982-1984 follow-up average 83 and range from 73 to 91 for the women and 74 to 93 for the men. Their education ranged across the Hollingshead scale (Hollingshead & Redlich, 1958): 10% have professional degrees and 5% have less than seven years of education. The mean is midway between high-school graduate and some college. The occupations of the

men and the husbands of the women represent all the categories of the Hollingshead occupation scale: 23% are professional or high executives and 3% are unskilled laborers. The mean occupational level is approximately Category 3: administrative, small independent business owners, etc. The SES of these survivors is skewed toward the upper end of the SES continuum, as it is, of course, for the survivors in the general population.

Ratings

The tape-recorded interviews were transcribed verbatim, then read by two independent judges. Absolute agreement in ratings averaged 81% in YO and 79% in OO. Instances in which one judge made a rating and the other felt there was insufficient information were scored as disagreements. All disagreements were resolved in conference. No judge rated the same person at both times, nor did a judge rate both husband and wife.

Analyses

A cluster of six intercorrelated variables constitutes the primary measure of social relationships. They appear in Table 1. Reliable change was calculated using the standard error of measurement of differences for the cluster as a whole (Dudek, 1979). Each person's difference scores were calculated (YO score minus OO score) for the six variables that make up the cluster. Net change in this cluster ranged from -9 to +13. Those individuals whose net change scores exceeded the standard error of difference, 4.89, were deemed to have reliably increased or decreased in their social relationships. Lesser changes were considered random fluctuations.

In addition, each of the social relationship variables was examined separately for change over time for the group by t-tests, and stability of individuals was examined with Pearson correlations.

Finally, comparisons were made of men and women across time as well as comparisons of younger (OO: 73-84) and older (very old or "oldest old": 85 and over) members of this quite elderly group. Two-way analyses of variance with repeated measures were used. We are aware that non-parametric analyses would be more suitable for some of our variables, and we learned too late for inclusion in this paper that a non-parametric test has recently been developed for two-way analysis of repeated ordinal measures (Zwick, Neuhoﬀ, Marascuilo, & Levin, 1982).

Men and women were compared on age, education, occupation, financial resources, and marital status. Men were more likely to be married, and women were more likely to be living alone, not with others, $\chi^2(2) = 7.86, p = .02$. No other significant differences were found, so the sexes are combined in further analyses, except as indicated below.

Results

Social Relationships Cluster

Ten people, nine women and one man, reliably increase in the social relationship cluster between YO and OO; 17 people, eight women and nine men, decline; 44 show no reliable change, as shown in Figure 1. Insufficient information was available for three additional persons who suffered from the effects of stroke or Alzheimer's disease, and they are not included in the cluster scores.

Sex differences. Men are more likely than women to decline in the social cluster, $\chi^2(2)=6.95, p = .05$.

Age. Those who increase in their social cluster scores are significantly younger (mean age 77.8) than those who decline (mean age 83.7), $t(23)=3.59, p = .002$.

Health. Health declines significantly for the group in advanced old age, paired- $t(67)=4.44$, $p=.001$, while showing moderate stability over time, $r=.37$, $p=.002$. It is not a straightforward relationship, however. Of those whose self-reported health deteriorates, 25% decrease and 13% increase in their social scores. Also, of those whose social cluster scores increase, 50% are unchanged in health, and 50% have deteriorated in health. Although health of self or spouse clearly has some effect on social activity, it appears that it is not the primary cause of change.

Marital status. Marital status has only a modest relationship to change in social relationships. A comparison of married people (42% of the group), those losing spouses between interviews (29%), and those already widowed or divorced before the YO interview (29%) on change in the social cluster, $\chi^2(4) = 4.05$, NS. The newly widowed increase their social relationships more than chance would predict.

Are married people more socially active than non-married? There is no significant difference in how often they attend their clubs either in YO or OO, nor do they differ in how often they contact their friends in YO. In OO, however, the unmarried are more likely to be in contact with their friends, $t(71)=3.04$, $p = .01$.

To summarize, continuing involvement is the rule. Note that 74% of the group did not show decline in OO. It might be argued that disengagement had occurred earlier, before the YO interview: that is, before the group was on average 69 years old. However, since we have already found that there is very little decline in activity level between middle age and young-old age (Field, 1985), this seems unlikely, especially in view of the generally high level of outside activities observed in the group in OO. All evidence favors activity theory for the group as a whole, even in this late life stage. We do find strong individual differences, however. What might be behind these individual differences?

Sex differences

What differences are apparent in the social relationships of men and women? Figure 2 shows that men are significantly less likely than women to report that they still want friends; they also report fewer new friends in the last 10-15 years and less contact with friends. Amount of club activity follows the same pattern but fails to reach significance, perhaps because of the variability of the men in OO: one 93-year-old goes to the Italian Club every day, and six men never attend club meetings. There are no sex differences in the decline in involvement outside the family, nor are there sex differences in the unchanging church attendance or sociability (although there is more individual stability in sociability for the women, $r=.42$, than for the men, $r=.19$).

Age: Comparing the Old-Old with the Very-Old

Interest has recently focussed (Collins, 1985; Longino, 1984; Siegel, 1984) on differences between people who are old-old (age 75 - 84) and the very-old or "oldest-old" (age 85 and beyond). Results with the Berkeley Older Generation Study confirm the need to examine the effects of greater age within the years of advanced old age.

Figure 3 shows the cross time comparisons of the old-old and very-old groups. The 2-way repeated measures ANOVAs show that involvement outside the family is less for the oldest, as well as declining over time for both groups. Activity in clubs drops for the VO group but not for the OO, but the interaction fails to reach significance, perhaps because of variability in the younger group.

It is impressive that there is no age difference in whether these old people still want friendships: even after age 85, friendships are as important as ever.

Self-reports of Social Activities

Finally, we directly asked the study members: "Do you feel you are seeing more or fewer people than you did 10 or 15 years ago?"

Sixty-one percent report that they are seeing fewer people. The reasons they give are varied: 19% mention their own health or energy, and 9% cite the spouse's health. In addition, many of their friends have died (17%) or moved farther away (4%). They also cite their own lack of mobility (22%) and diminution of work contacts and networks (9%). Finally, they refer to changing interests (19%).

Fifteen percent report seeing more people than they did earlier. Of their reasons, 47% say they have more time, 16% have increased their contacts (e.g., "I've been joining things") and 16% report that they or their friends have moved, for example to a retirement community such as Leisure World, so they are now closer together. Eleven percent report that in YO spouse's health prevented them from socializing very much, but now they are able to see more people.

Twenty-four percent report no change. Only a few of these feel that conditions are unchanged, however. Rather, they mention combinations of factors, such as, "Well, of course at my age, I have lost some of my friends, but since I have more time I am able to spend it with my remaining friends."

Conclusions

We have shown that social relationships are highly variable in the years of old age. There is continuing social involvement, with no change in the amount of club activity (30% go to meetings once a week and 61% at least once a month) or church attendance (although 53% say they are attending church less). There is little change in how often these old people contact their friends and no change in the importance they give to friendship. The rating of sociability also is unchanged. There is, then, stability for the group as a whole, but individual differences are striking: 38% of the group show reliable change in the social cluster, 14% up and 24% down.

We looked at possible reasons for change: for example, changing health. Both Bonn (Schmitz-Scherzer, 1976) and Duke (Jeffers & Nichols, 1970) showed

that a decrease in activity tends to occur with a decline in health. Of course health has an influence on how often one can see one's friends or attend club activities, but it does not necessarily affect how one feels about the importance of friendship. Case studies can show individual differences even here. For example, one man was retired from the directorship of an important Institute. He was wracked with cancer and died within six months of the interview. His wife cared for him very well indeed, but the professional colleagues with whom they had been so closely intertwined no longer came to call. In contrast, a woman, also cancer-ridden, dying only about three months after the interview and also well cared for by her husband, had the satisfaction of seeing her friends, long-term as well as more recent, rally round. Not a day went by but one or another came to call, to bring cookies, soup, etc., and to maintain the close ties that were so important to them. Her social relationships score did not drop at all.

There are fewer differences attributable to age than expected, although the social cluster scores were significantly lower for the oldest people. Like the Bonn study (Olbrich & Fisseni, 1975; Olbrich & Lehr, 1976), the Berkeley study found that peripheral activities such as attendance at clubs and involvement beyond the family decline for many. But in the Berkeley group the closer ties of friendship do not drop even in advanced old age.

Sex differences are the most pronounced, as was also found in the Duke study (Palmore, 1981). Men are likely to report that they have made fewer new friends and that their contacts with friends are less. The importance the men give to these friendships also has dropped.

It is interesting that the overall rating of involvement beyond the family declines, even though the group reports that contact with friends, activity in clubs, and church attendance remain stable. The raters made their judgments based on reading the whole interview, and they were reading something beyond the direct

responses of the study members. This variable is qualitative, as Table 1 shows; it measures enthusiasm and degree of commitment to outside involvements, not simply level of activity. It appears that intensity of commitment is lacking for many people in advanced old age, even though participation may continue.

There are still unanswered questions about the observed individual differences. Case studies may provide more information on the reasons for extreme change in the social relationships cluster or in involvement beyond the family, or for the variability found in the men's activities and attitudes. Field (1985), examining change in sociability between middle age and young-old age, found that case studies can reveal what statistical analyses cannot: each individual showing extreme change has two or more factors changing in the same direction as the change in sociability, and at least one of these factors is some circumstance external to the person. Case studies will be valuable for a closer examination of the causes of change between young-old and old-old age, as well.

In common with other longitudinal studies of aging, the Berkeley Older Generation Study has found no support for disengagement theory (Cumming & Henry, 1961) and ample evidence in favor of activity theory (Havinghurst, Neugarten, & Tobin, 1968). We hope this will help to shatter the common stereotype of the elderly as withdrawn, listless, or centered in the past. Instead, we have presented a group who, despite the handicaps of declining health, lack of mobility, and repeated experience of deaths of friends or spouse, have maintained their activities, their friendship patterns, and their contacts with the world.

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Table 1

Variables used in the Social Relationship Cluster

1. You made any new friends in the past 10-15 years?

- 1. yes, many new friends
- 2. yes, a few new friends
- 3. not really any new friends

2. Tell me about some of your friends: How often do you contact with them?

- 1. contacts some friend daily
- 2. contacts some friend twice a week at least
- 3. contacts some friend at least once a week
- 4. contacts some friend at least twice a month
- 5. contacts some friend at least once a month
- 6. contacts some friend at least every two months
- 7. contacts some friend at least every three months
- 8. contacts some friend at least every six months
- 9. less than that

3. How do you feel about your friendships?

- 1. yes, more now
- 2. yes, same as ever
- 3. lessening importance
- 4. not important

4. How often do you participate in total activity in clubs and informal organizations?

- 1. once a week or more
- 2. twice a month
- 3. once a month
- 4. two or three times a year
- 5. once a year
- 6. less than one a year

Table 1 (continued)

5. How often do you participate in involvement in other than parental and familial roles. (e.g., friends, political, organizational, charity, religious, occupation, hobby)

1. very highly involved in one or more interests and activities; expresses high enthusiasm, much energy and time directed toward these activities or roles; these activities are as highly important in person's life. Zest.
2. highly involved in one or more interests but not as highly important as #1; interested and enjoys activities, but not as enthusiastic or energetic in relation to activities.
3. moderately involved; derives some satisfaction from one or more of above activities; does not express much enthusiasm or expend much energy, activity may be regarded as routine.
4. some slight involvement; little participation although membership may be sustained; routine activities; casual friends; little meaning left in the activities.
5. virtually no interests; may see friends on occasion; time spent at home without activity or interest; little affect, enthusiasm, or interest; may be attributed to physical or psychological difficulty.

Social adjustment (Sociability) at present

1. exceptionally easy and quick social contacts
2. shows quick willingness to be friendly
3. easy with certain types of people, not with all, even with those people
4. shy, stands off, detached, more interested in ideas than people
5. exceptionally shy, acute discomfort at meeting new people, complete indifference to people.

Table 2

What is Associated with Change in the Social Relationships Cluster?
Is it Health?

	<u>Social Relationships Cluster</u>		
	Increase	No Change	Decline
<u>Health</u>			
Better	0	7	0
No Change	5	17	9
Deteriorated	5	20	8

$\chi^2(4) = 4.99$, NS. A change in health is not associated with a change in the social cluster score.

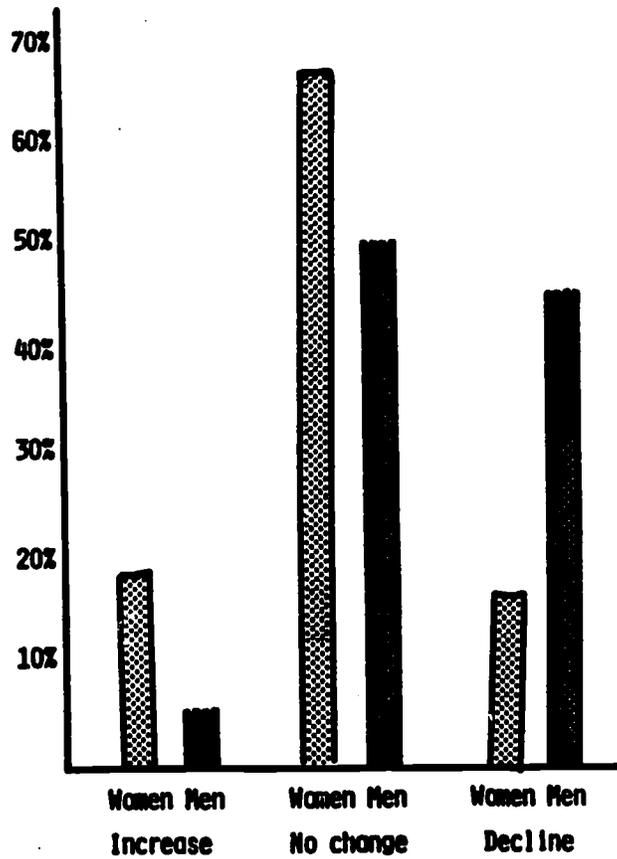
Is it Marital Status?

	<u>Social Relationships Cluster</u>		
	Increase	No Change	Decline
<u>Marital Status</u>			
No change: Still married	2	18	9
Change: Became widowed	4	12	5
No change: Already widowed/ divorced	3	14	2

$\chi^2(4) = 4.05$, NS. A change in marital status is not associated with a change in the social cluster score.

Figure 1

Change in the Social Relationships Cluster:
Comparing Men and Women

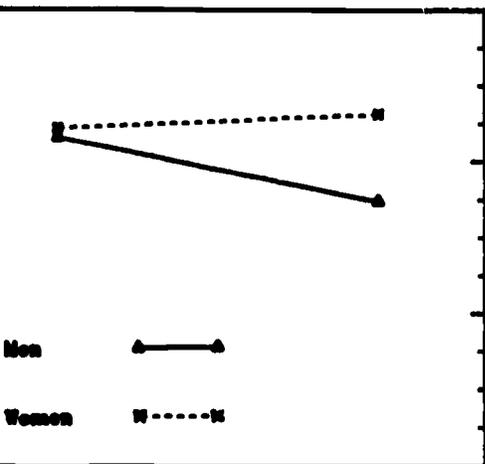


Note that 74% of the group do not decline

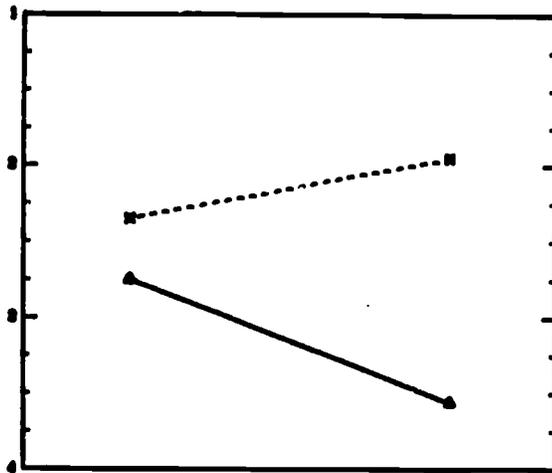
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Figure 2

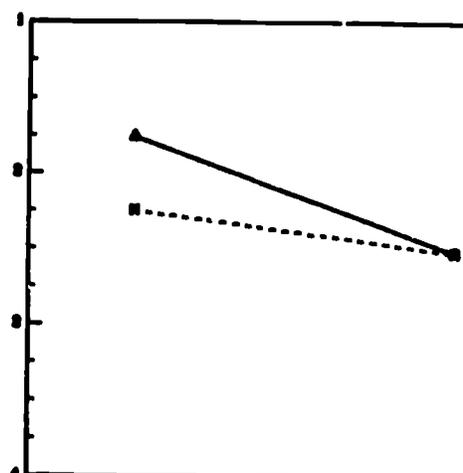
Comparing Men and Women Over Time



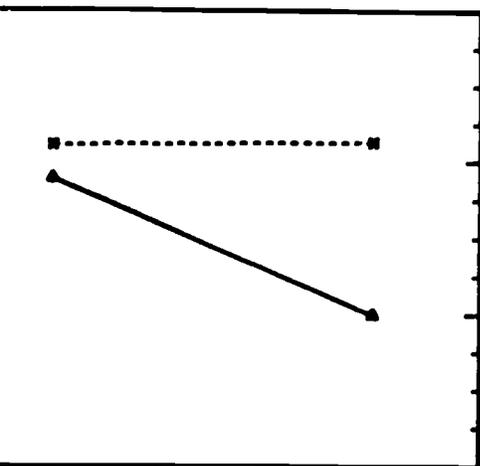
YO OO
you made new friends in the last 10-15 years?
[1,66] = 3.81, p = .055
NS
Interaction: [1,66] = 3.92, p = .052



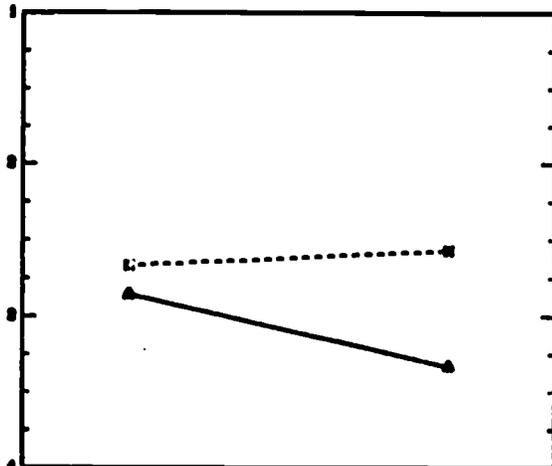
YO OO
How often do you have contact with your friends?
Sex: [1,57] = 8.08, p = .006
Time: NS
Interaction: [1,57] = 5.03, p = .03



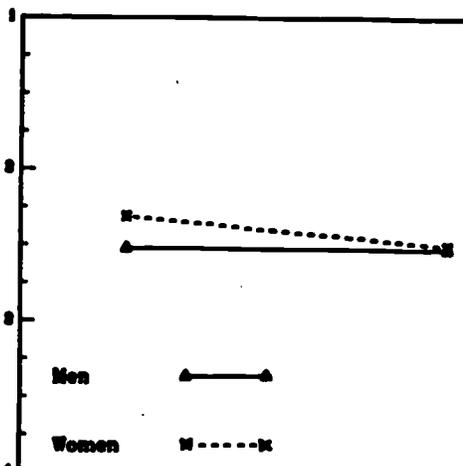
YO OO
Involvement beyond the family
Sex: NS
Time: [1,71] = 7.73, p = .007
Interaction: NS



YO OO
do you still want friendships?
[1,62] = 7.77, p = .007
[1,62] = 5.37, p = .013
Interaction: [1,62] = 6.87, p = .013



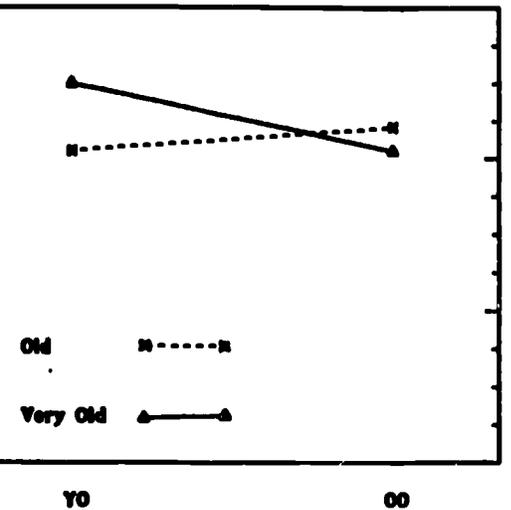
YO OO
Attendance at clubs and other organizations
Sex: NS
Time: NS
Interaction: NS



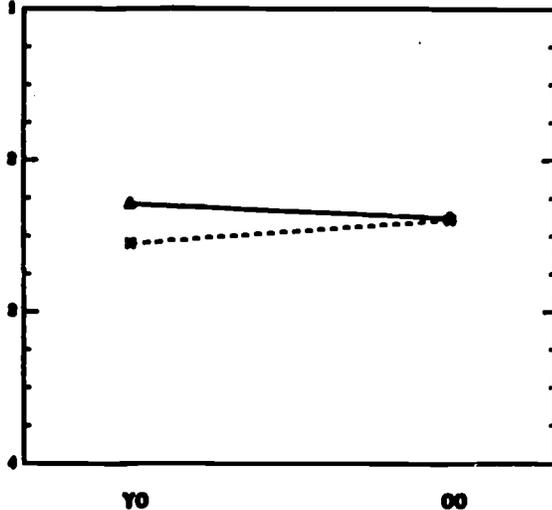
YO OO
Sociability
Sex: NS
Time: NS
Interaction: NS

Figure 3

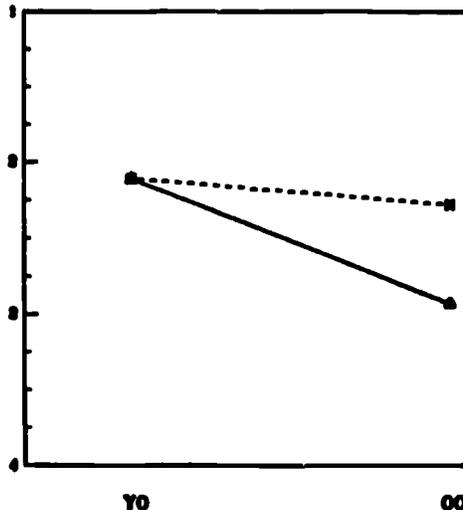
COPY AVAILABLE Comparing the Old-Old and the Very Old Over Time



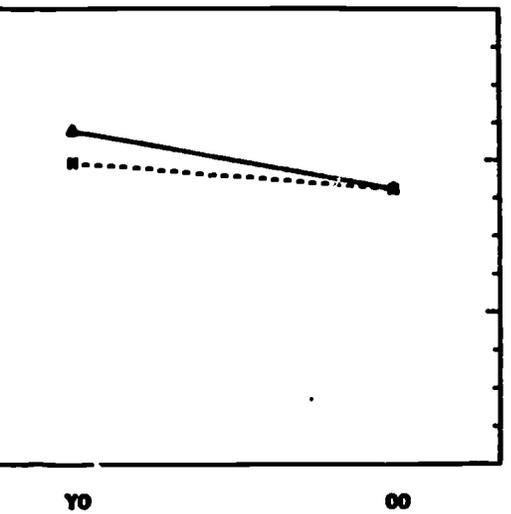
How many new friends made in the last 10-15 years?
 Age: NS
 Time: NS
 Interaction: $F(1,66) = 7.00, p = .01$



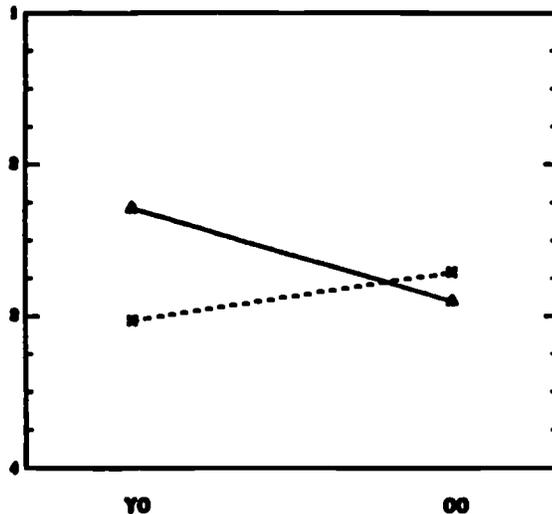
How often do you have contact with your friends?
 Age: NS
 Time: NS
 Interaction: NS



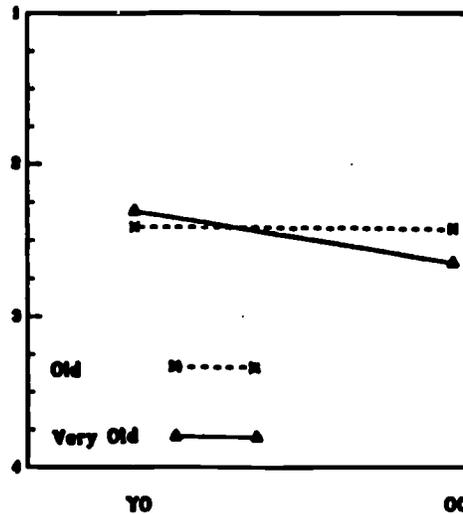
Involvement beyond the family
 Age: $F(1,71) = 2.83, p = .097$
 Time: $F(1,71) = 8.23, p = .005$
 Interaction: $F(1,71) = 3.43, p = .066$



Do you still want friendships?
 Age: NS
 Time: NS
 Interaction: NS



Attendance at clubs and other organizations
 Age: NS
 Time: NS
 Interaction: NS



Sociability
 Age: NS
 Time: NS
 Interaction: NS