

AGING AND INTERACTION:
A SURVEY OF DEVELOPMENTAL TRENDS IN
ATTITUDES TOWARD THE ELDERLY IN THE UNITED STATES

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AGING AND INTERACTION: A SURVEY OF
DEVELOPMENTAL TRENDS IN ATTITUDES TOWARD
THE ELDERLY IN THE UNITED STATES.

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Abstract

Developmental trends in American attitudes toward the elderly were examined across the pre-elderly adult lifespan to determine the contribution of quality and quantity of direct personal contact with older persons in shaping attitudes. Respondents were 81 male and 134 female American adults aged 18 - 75 years who completed a questionnaire on elderly people which assessed: (a) the tendency to display a socially desirable response set, (b) attitudes toward institutionalization/segregation (c) attitudes toward interaction, (d) stereotypes and myths, (e) attitudes toward perceived worth, and (f) quality and quantity of interaction.

Although attitudes toward older persons in general were quite positive across all pre-elderly age groups, known elders were only considered moderately similar to elders in general. Attitudes were most negative in the oldest pre-elderly age group, suggesting a tendency to devalue the perceived elderly outgroup in an attempt to maintain positive self-esteem.

Finally, quality of contact with all known elders (and especially elders considered immediate family members) best predicted total attitude scores. Social and practical implications of the results were discussed.

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CHAPTER I

INTRODUCTION

An examination of early philosophy, literature, and folklore enabled Ansello (1977) to analyze attitudes toward the elderly throughout the history of western civilization. According to this analysis, the standards by which the elderly are assessed and the attitudes related to these values apparently have not changed substantially since the time of the ancient Greeks. What has changed, however, is the proportion of people living longer, healthier lives.

For example, Melcher (1988) stated that "one of the most significant demographic trends over the next several decades will be the aging of (the American) population" (p. 643). He pointed to the two year increase in average life expectancy of a 65-year-old American which occurred between 1968 and 1979. This increase was greater than that which occurred in the five decades from 1900 to 1950.

A recent nation-wide census in 1988 reported that 12.3% of the American population or 30,367,000 people were aged 65 years and over, with a life expectancy of 71.4 years for men, and 78.3 years for women (U.S. Bureau of Census, 1990). Current projections estimate that the number of elderly persons in the United States will increase to 39,362,000 by the year 2010. In addition, the over-85 population will increase 60% between 1988 and the year 2000 (Melcher, 1988). Therefore, attitudes toward the elderly will likely become

an increasingly important issue in the near future.

Brian Stevens (1978) presented a paper to the Senior Citizens Bureau, Alberta Social Services and Community Health, in June, 1978. His principal source of information was over 300 journal articles on attitudes toward aging and the elderly. While cautioning that many attitude studies in psychology and sociology appear to be biased, he nevertheless derived the following conclusions:

- 1) Negative attitudes toward the elderly encourage individuals, even some of the old themselves, to avoid contact with the elderly, thus leading to social isolation among this group.
- 2) Negative attitudes and stereotypes affect family relations, particularly the relationships of adult children and their aging parents.
- 3) Social isolation demeans and diminishes the lives of older people and prevents the full use of their valuable skills, experience, and resources.
- 4) Negative views and erroneous perceptions of the elderly mislead the general public about the nature and extent of the needs and problems of this age group, and may similarly affect government policy-making.

Esidorfer (1975) has stated that it is important to study attitudes as they influence judgements or express intentions about how the elderly and the non-elderly should behave, and what is best for elders as a group. Such attitudes influence the formulations of government policies

and programs on the behalf of both the general public and older people, and affect behavior toward older people more generally.

A variety of studies (e.g., Harris, 1975; Kogan, 1961a; Tuckman & Lorge, 1953) have indicated low levels of interaction between older and younger populations, resulting in stereotypes and negative attitudes toward the elderly. In addition, researchers conducting cross-cultural studies in Germany (e.g., Bringmann & Rieder, 1968), Sweden, England, Puerto Rico, and Japan (see Arnhoff, Leon, & Lorge, 1964) have demonstrated a remarkable degree of similarity between negative attitudes in their countries and those found in the United States. This being the case, the attitudes of Americans may prove generalizable across many industrialized societies.

Therefore, the present study examined developmental trends in American attitudes toward the elderly across the pre-elderly adult lifespan. Of particular concern was the contribution of quality and quantity of direct personal contact with the elderly in shaping attitudes.

A common example of past survey research on attitudes toward the elderly is the Tuckman-Lorge Questionnaire, which is one of the most frequently used scales on this topic (Stevens, 1978). Questionnaires of this type often include items which index respondents' knowledge of facts about the elderly (assessing their beliefs) and therefore may not be adequate indices of attitudes. In addition, these measures

tend to combine a large number of statements which attempt to identify stereotypes along several dimensions. In contrast, a valid attitude questionnaire would assess general and enduring positive or negative feelings about some person, object, or issue (Petty & Cacioppo, 1981).

Kogan (1961) developed two sets of 17 statements about old people, the first one containing only positive assertions, and the second, negative assertions which were the logical inverse of the first set. This questionnaire was administered to three different samples of introductory psychology students -- two entirely male in composition and one of mixed gender. Kogan found odd-even Spearman-Brown reliability coefficients between his positively and negatively worded scales of .66 to .83, with a trend toward greater reliability for the negatively-worded scale (.73 - .83).

Respondents tended to disagree significantly more with statements commenting adversely on old people than they agreed with statements praising old people. It would seem that people find harshly negative statements about the elderly offensive, and that effective attitude questionnaires should avoid the use of such statements.

Kogan (1961) had his respondents rate each of his statements in a Likert-scale format, and criticized the study done by Tuckman and Lorge (1953) for making no use of attitude scaling procedures. In addition, the Tuckman and Lorge questionnaire utilized a simple yes-no response format

for statements which were generally highly specific or highly general. Statements pertaining to elderly persons included "They never take a bath," and "They cannot learn new things." These statements are overly specific for use in a survey of attitudes toward the elderly in general. They may also be offensive to respondents.

Fishbein (1967) has criticized several attitudinal studies for their failure to reflect the full dimensional range on which the elderly seem to be evaluated by the general public. These studies are often unable to anticipate accurately the manner in which attitudes may affect forms of behavior toward the elderly and situations in which particular forms of behavior may occur. However, these studies do seem to indicate that across various points in time and contexts, it may be reasonable for elderly persons to expect negative views to be manifested through certain individuals' behavior toward them. For example, Stevens (1978) noted that within a given population a high proportion of individuals exhibiting various negative attitudes toward the aged increases the likelihood of elderly persons encountering negative actions based upon those attitudes.

McTavish (1971) has stated that the earliest studies of stereotyping and public attitudes toward aging and old age indicated a high degree of stereotyping and related negative attitudes. However, Brubaker and Powers (1976) have rightly pointed out the poor generalizability of the 'college

student' samples which most of these studies typically used. These samples have continually reported more negative attitudes than many other groups in the United States (Bennett, 1976). In addition, Kogan (1961) suggested that negative attitudes toward the elderly may have been exaggerated in early research as a result of poor questionnaire construction techniques. Although these criticisms seem to have some validity, early research does consistently suggest that there are some large-scale differences in perceptions of the elderly between younger and older persons (McTavish, 1971).

The present study was concerned with the attitudes Americans hold toward the elderly, particularly those that could exert a detrimental effect upon the integration of this group within their society. It was previously stated that negative attitudes toward a group could potentially be associated with some degree of social isolation of that group. Therefore, attitudinal categories were selected which were felt to impact most directly upon the social integration of elderly Americans. Accordingly, the chosen categories for attitude measurement were as follows:

- 1) attitudes toward institutionalization/segregation of the elderly
- 2) attitudes toward interaction with the elderly
- 3) stereotypes and myths of the elderly
- 4) perceived worth of the elderly

A brief discussion follows concerning the potentially

isolating properties of each of the four selected attitude categories.

Butler (1975) has identified several factual errors in the beliefs that are commonly held about elderly persons. From these he constructed five themes which he felt underlie stereotypes. Three of these themes are of interest to the present study. These are 'the myths of tranquility, chronological aging, and unproductiveness.'

The myth of tranquility holds that old age is a period of serenity, tranquility, and peacefulness -- when one simply relaxes and does not experience trials comparable to those of earlier life. This myth may be involved in the rationalization of institutionalization or segregation of the elderly. If elders have no cares or worries, and merely relax in later life, it may be justifiable to place them in a separate environment which is conducive to such 'non-activity.' The result would be a physical separation of the elderly from a society perceived to be much more active, under pressure, and facing responsibility.

Institutionalization of the elderly may indirectly lead to a lowering of their perceived worth in society. For example, Stevens (1978) has stated that homes for the elderly are generally not places where residents maintain valued, productive roles. In 1988, approximately 2% of the elderly population in America were living in institutions (U.S. Bureau of Census, 1990).

The proportion of American elders aged 65-74 living

alone was 24.3% in 1988 (U.S. Bureau of Census, 1990). The same figure for those individuals aged above 75 was 40.2%. In addition, the proportion of elderly people in America above 75 years of age is projected to increase 36.3% from 1990 to the year 2010. Thus, it appears that a population explosion of seniors of more advanced age is currently underway in the United States.

It seems logical to assume that such elderly persons living alone would generally not be able to move about and interact in society to the same degree as similar persons living with their families. A decreased level of interaction would logically lead to a decrease in a society's familiarity or 'working knowledge' of the elderly -- with the concomitant creation of stereotypes and myths due to ignorance.

In addition, this decrease in the level of interaction could contribute to a decrease in a society's 'interactive familiarization' of older people -- in this case the ease and comfort with which younger people interact with older people. In a sense, this is similar to Sumner's conception of 'ingroups' and 'outgroups' (Sumner, 1906). If younger people have very little contact with elderly people, they may begin to feel uncomfortable around them. Older people would then form a type of 'outgroup' for younger people, which, according to Sumner's theory, would lead to avoidance of this group.

The myth of chronological aging maintains that the

stereotypic characteristics of old age appear at or about a specific age, and are a necessary result of aging. This results in an expectation for older people to show similar characteristics based singularly on their chronological age (Butler, 1975).

The myth of unproductiveness holds that the elderly are generally not involved in society, and that they contribute nothing to it. For example, Stevens (1978) viewed the practice of retiring older persons from the work force at a preset age as a highly visible social practice that decreases the perceived worth of the elderly. Further, the existence of institutionalization, separate housing, and retirement based upon age may jointly contribute to an increased normalization and escalation of these social practices. In America, the 1988 census stated that 16.5% or 2 million men and 7.9% or 1.3 million women beyond the age of 65 were still employed (U.S. Bureau of Census, 1990).

Related to the myth of unproductiveness, Harris (1975) found that large proportions of the general public in the United States (especially younger persons) attributed a much higher degree of private, sedated, and isolated activities to older people than an older sample reported of their own behavior.

According to Blau (1973), North American society does not provide valued social roles for older persons. Such roles are valued as they make a person useful, productive, and independent. In addition, Jones (1977) argued that

Western society tends to force a role of leisure on older people, which is predicated on the institution of retirement and considered a form of enforced disengagement and exclusion.

The monotopic theory of aging was put forward by Ansello, which states that adult aging is a steady process of decline (Ansello, 1977). To the degree that such a theory is accepted within a society which values self-supporting, independent persons, this conception of decline in old age could conceivably lead to a strong value-based rejection of the elderly.

To be realistic, there certainly are losses that occur with old age. Physical limitations naturally occur which make an older individual less able to be independent. Therefore, a societal emphasis on self sufficiency may inevitably result in a devaluation of such people.

Several theories will now be considered which are pertinent regarding the potential effects of age and contact variables on attitudes toward the elderly.

Sumner (1906) was the first to use the terms 'ingroup' and 'outgroup,' which since have largely been utilized as a framework for conceptualizing relations between groups of individuals. In the most basic sense, individuals define an ingroup as a group to which they view themselves as belonging, and an outgroup as a group to which they do not view themselves as belonging.

Brown and Turner (1981) made use of the ingroup-outgroup framework in presenting research on intergroup relations. This research has demonstrated that individuals tend to assign other individuals to their own ingroup when they perceive these 'others' to be generally similar to themselves. Similarity also seems to be an effect, rather than a cause of group membership; one tends to perceive or assume that ingroup members have similar, and outgroup members dissimilar beliefs to oneself (p. 51). Doise, Cespeli, Dann, Gouge, Larsen, and Ostell (1971, 1972) provided evidence that simply being divided into groups without any type of social interaction or contact is sufficient to create ingroup bias toward an outgroup.

Turner (1981) further stated that "ingroup-outgroup membership sometimes seems to cause inter-group differentiation when there is neither cooperative interaction within, nor competitive relations between groups" (p. 75). Ingroup favouritism or bias occurs to a very high extent under conditions of intergroup competition, coaction, independence, or cooperation. Conversely, although intragroup interaction has been shown to increase ingroup favouritism, social categorization itself seems to be both necessary and sufficient for group formation and subsequent intergroup differentiation.

Social categorization has been defined as a discontinuous cognitive division or classification of individuals into distinct groups (Brown & Turner, 1981). A strong link

between social categorization in itself and the creation of ingroup bias has been demonstrated in several separate studies (e.g., Kahn & Ryen, 1972; Rabbie & Horwitz, 1969; Tajfel et al., 1971).

Studies have further illustrated that perceptual and attitudinal biases, and differential attraction toward ingroup and outgroup members are also strongly linked to social categorization (e.g., Brewer & Silver, 1978; Brown & Turner, 1979). Finally, Brown and Turner (1981) concluded that "there are social-psychological processes intrinsic to or stimulated merely by ingroup-outgroup divisions which tend to create discriminatory social relations" (p. 77).

According to Doise (1978), individuals perceive themselves as similar to ingroup members and different from outgroup members; differential intergroup behaviors and attitudes are then produced by these cognitive distinctions. Doise also noted that ingroup bias can be increased by enhancing the salience of social categorization.

Tajfel and Turner (1979) have also proposed that social categorization in and of itself is capable of triggering a self-evaluative social comparison process. They feel that social categorizations are internalized, and affect an individual's level of self-esteem as a group member through comparisons of the ingroup and outgroup. As most individuals desire to maintain a positive sense of self-esteem, positive distinctiveness is sought for the ingroup when comparing it with the outgroup. Tajfel and Turner

therefore hypothesized that attitudinal biases and discriminatory actions are motivated by competitive intergroup processes directly produced by self-evaluative social comparisons.

The present study was concerned with the use of age as a category in the formation of ingroups and outgroups. Obviously, cognitive groupings of individuals formed on this basis are never stable, and continually undergo change as people age. Individuals will likely have a different conceptualization of the age which defines a person as 'old' depending upon their own age at that time.

However, it may be reasonably safe to assume that age is regularly utilized as a salient social category by which individuals are classified. Although the upper subjective limit for classifying individuals as 'old' seems to increase with advancing age, perceived age may still provide a highly salient external factor for social categorization (which is independent of interaction).

According to Doise (1978), as the salience of the distinction between groups increases, the stronger is the cognitive division between ingroup and outgroup members. It may therefore be possible that the magnitude of the age difference between groups increases the salience of the distinction between them. When combined with Tajfel and Turner's (1979) proposal of intergroup comparisons based on self-esteem, the greater the age difference or 'gap' between individuals, the more negative attitudes should be toward

the outgroup. This 'gap' hypothesis therefore also predicts that more positive attitudes toward the elderly should occur as age increases.

With increasing age, the maintenance of a cognitive conceptualization of oneself as 'young' may become more and more difficult, especially when approaching age 65. Festinger, Riecken, and Schachter (1956) have stated that a psychologically noxious state of cognitive dissonance results when a fundamental belief is subjected to undeniable disconfirmation. This dissonance then motivates the individual to actively reduce or eliminate the dissonance.

Festinger et al. (1956, p. 216) proposed that the following conditions must be present for the dissonance effect to occur: (a) there must be a firm conviction; (b) there must be public commitment to this conviction; (c) the conviction must be amenable to unequivocal disconfirmation; (d) such unequivocal disconfirmation must occur; and (e) social support for the changed beliefs must be available to the believer after the disconfirmation. The final condition is necessary for attitude change to serve as the most likely means of dissonance reduction.

According to Cognitive Dissonance theory, attitudes toward the elderly should remain relatively stable (either negative or positive) with increasing age until individuals attain the officially recognized age of a senior citizen. At this point attitudes toward the elderly should become more positive as any conviction of being a young person is

unequivocally disconfirmed. In addition, social support should be available to sustain the changes in attitudes within a society which has incorporated a standardized age for adopting an elderly status.

Unlike the typical dissonance paradigm, however, aging individuals are aware of the fact that their conviction of belonging to the social designation of 'young person' will definitely be disconfirmed within a known amount of time. Therefore, it is possible that attitudes toward the elderly within the oldest surveyed pre-elderly age group will be more positive than those of the other age groups, as these respondents should be experiencing the most powerful dissonance between their ages and what is socially considered to be young. They are also the group which is closest to having their convictions of youth unequivocally disconfirmed.

Although it is possible for individuals over 65 years of age not to consider themselves 'old' or 'elderly,' such a belief would become more and more difficult to support, as the dividing line maintaining a young self conception (or consideration of the elderly as an outgroup) continued to erode with increasing age.

Finally, it may be possible that attitudes toward the elderly become increasingly negative during the years between young adulthood and the official age of the elderly. If ingroup-outgroup distinctions create discriminatory intergroup social relations, and positive self-esteem is

maintained through negative attitudinal biases toward the outgroup, the outgroup will naturally be viewed in a negative manner. However, as group membership is based upon age (which continually advances) members of the 'younger' ingroup will find themselves unavoidably advancing toward membership in the 'older' outgroup. It may be possible that ingroup membership is largely unthreatened until later in life, as one approaches 'old age.'

As self-esteem is deeply rooted within group membership, advancement into a negatively viewed outgroup would naturally threaten this esteem. Individuals may compensate for decreasing self esteem by increasing their attitudinal biases and discriminatory actions toward the outgroup (a reaction which maintains self-esteem according to Tajfel and Turner, 1979).

Rothbart and John (1985) have presented a two-phase cognitive-processing model which focusses on the effects of intergroup contact on social categorization and behavioral episodes. They stated that contact with the elderly could under certain conditions lead to stereotype change in a positive direction, although this would be difficult to achieve. This model builds upon earlier work in the field of attitude change concerning the dynamics of intergroup belief systems, and the realistic probability of belief change (e.g., Cook, 1970; Newcomb, 1947).

The model attempts to account for the effects of intergroup contact on stability and change in intergroup

perception through a general cognitive process by which attributes of category members modify category attributes. Specifically, it states that a stereotype category may be disconfirmed when (a) the stereotypic beliefs themselves are susceptible to disconfirmation, (b) the intergroup contact provides experiences that disconfirm the stereotype, and (c) those experiences become associated with the superordinate stereotypic category.

Beliefs will be susceptible to disconfirmation based on three factors. First, beliefs will be increasingly amenable to disconfirmation the more they are associated with clear and specific behaviors. Rothbart and John (1985) mentioned a few example belief categories including 'messy' and 'devious.' The former term is obviously associated with clear, specific behaviors, while the latter term is not. 'Messy' would therefore be an easily observable behavior and be more amenable to disconfirmation. In the present study, the attitudes in question (such as perceived worth of the elderly, interaction with the elderly, and the degree they are able to live independent lives) would seem to be associated with reasonably clear behavioral referents.

Second, if the belief is held that a group can be described by a particular trait, the number of relevant observations required to establish or disconfirm that belief is important. Specifically, "the more unfavourable the trait, the fewer the number of instances required for confirmation and the greater the number of instances

required for disconfirmation. Therefore, when unfavourable stereotypes are acquired, they may be difficult to lose in part because of the large number of observations necessary for their disconfirmation, particularly when the frequency of intergroup contact is low" (Rothbart & John, 1985, pg. 85).

Third, beliefs may be influenced by the frequency of occasions which permit or encourage disconfirming behaviors. "Since different settings elicit different behaviors... it is extremely important to categorize contact situations in terms of the traits that might find expression" (Rothbart & John, 1985, pg. 85). Therefore, the amount of individual contact with the elderly should not in itself be directly related to overall attitude scores.

Rather, contact of a high quality should be directly related to positive attitudes, given that known elders are perceived to be typical of older people in general. High quality contact would likely take place in settings which permit an elderly person to display a moderate to high frequency of behavioral responses disconfirming a negative categorical stereotype. If the individual holding such a stereotype views this elderly person or persons as typical or similar of older people in general, the disconfirming experiences may be associated to the superordinate category.

In the present study, each respondent was assigned to one of five age groups for the purpose of data analysis. It was expected that the four pre-elderly age groups would

demonstrate the following characteristics when examined in order from youngest to oldest: increasing average levels of contact with the elderly, decreasing quality of contact, and increasingly negative attitudes. This prediction was founded upon the ingroup-outgroup hypothesis which states that individuals compensate for decreasing self-esteem as they age by increasing their attitudinal biases toward the elderly outgroup.

In addition, it may be the case that as pre-elderly individuals age they interact with increasingly older elderly individuals, especially their own parents. These 'older' elderly persons may not be in a position to create or maintain positive attitudes toward the elderly due to their physical health or living conditions. Finally, if attitudes toward the elderly do become more negative with increasing age individuals would require ever-increasing quantities of high quality contact with elderly persons to create positive attitudes or offset those which are negative. Therefore, the most positive pre-elderly attitudes would likely be reported by the younger age groups.

More specifically, the younger pre-elderly age groups were expected to score significantly lower than the older pre-elderly groups on the four attitude domains and therefore demonstrate the following relationships; more negative attitudes toward institutionalization/segregation,

more positive attitudes toward interaction, a higher perceived worth of the elderly, and a lower degree of stereotyping. No differences in attitudes were expected based on sex, but higher levels of education were predicted to be associated with more positive attitudes.

CHAPTER II

METHOD

Participants

Participants were 81 male and 134 female American adults, varying across the following classification variables: age (from 18 to 75 years), sex, education, and quantity/quality of interaction with elderly persons. The sample was largely drawn from the state of Washington in the United States.

Measures

Respondents were administered, either individually or in small groups, a 95 item questionnaire which typically required less than 25 minutes to complete (see Appendix A). The questionnaire was administered to the respondents as they travelled aboard a British Columbia Stena Line ferryboat between Vancouver Island, British Columbia, and Seattle, Washington. Permission to ride the ferryboat and survey its passengers was obtained from the B.C. Stena Line Corporation (see Appendix B).

The measure utilized in the present study was an altered version of Kogan's (1961) questionnaire on attitudes toward old people. Included in the present questionnaire was a measure of the degree to which respondents demonstrated a socially desirable response set, and a measure of various aspects of contact with elderly persons.

The questionnaire instructions identified the purpose of the study, and informed the respondents of their right to

refuse to participate or withdraw at any time. The instructions further delineated the requirements of the study along with aspects of confidentiality and potential benefits, the importance of working independently, and, in addition, provided a contact source for potential complaints.

The Marlowe-Crowne Social Desirability Scale (1964) was administered in the first section of the questionnaire. Briefly, this is a balanced scale composed half of culturally acceptable but probably untrue statements and half of true but undesirable statements. Those respondents who depict themselves in very favorable terms on this scale can be understood as displaying a socially-desirable response set. Of the 33 items, 18 are keyed true and 15 false, making an acquiescence interpretation highly improbable.

Marlowe and Crowne have stated that socially desirable responding on their scale indicates a tendency to conform to social stereotypes of what is good to acknowledge concerning oneself in order to achieve approval from others. Both the internal consistency and test-retest reliability of the scale are .88. It is clearly not socially desirable to express harshly negative attitudes toward the elderly, and respondents would be aware of the researcher's interest in the elderly as a group. Therefore, the Marlowe-Crowne scale was included in the present questionnaire to detect individuals responding to the attitude statements in such a

way as to exaggerate the positive nature of their views.

Of further concern was the degree to which individuals respond to such questionnaires truthfully, and whether this truthfulness varies as a function of age. A brief paragraph was inserted in Part One explaining the inclusion of the Marlowe-Crowne items.

The second section of the questionnaire was comprised of 18 questions which assessed various aspects of contact with the elderly. These questions were constructed by the present author, and were largely based upon Rothbart and John's (1985) theoretical analysis of intergroup contact. In addition to obtaining information on each respondent's sex, age, education level, and citizenship, several factors were of particular concern: 1) amount of contact with elderly persons in general, 2) perceived similarity between known elderly persons and all elderly persons, 3) perception of the age of known elders as compared to the respondent's own age, 4) most representative type and length of relationship(s) with elderly persons and typical contact setting 5) each of the above factors with regard to elderly persons perceived to be members of the respondents' immediate family.

The contact items were constructed in such a manner as to permit an assessment of ingroup-outgroup hypotheses and cognitive dissonance hypotheses. Briefly, it was important to determine whether respondents considered any elderly persons to be a part of their ingroup (assuming that family

membership defines an ingroup) and whether this exerted an influence on attitudes. It was also important to assess both respondents' perceived ages and their perceptions of the average age of most of their elderly acquaintances as compared to their own ages. Therefore, contact items assessed the degree of age-related dissonance experienced by the respondents, and determined whether this dissonance decreases in individuals over 65 years of age.

The present questionnaire yielded separate measures of total contact and quality of contact with elderly persons. Total contact (as assessed in the second section) was measured by responses to items 6 and 7, which were assigned numerical values and multiplied together to yield a score ranging from 0 to 63 points. Total quality of contact was measured by responses to items 8 and 11, which were assigned numerical values and multiplied together to yield a score ranging from 1 to 24. Responses to items 10 and 16 both yielded a score ranging from 1 to 3, reflecting the average or typical age of all known elders and elders considered to be immediate family members, respectively.

Item 8 was based upon Cook's (1984a) set of five conditions of interaction necessary for attitude change. Two of these conditions could be discerned within the framework of types of relationships. These were: (a) equal status in the contact setting, and (b) mutual interdependence. The four categories from 'friend' to 'casual acquaintance' were considered to form a descending scale

(from four points to one) of these two conditions.

Ingroup contact was measured by items 13 and 14, yielding a score ranging from 0 to 84, while ingroup quality of contact was measured by item 17, yielding a score ranging from 1 to 6. Responses to item 16 yielded a score ranging from 1 to 3, reflecting the general age of those perceived to be older immediate family members.

Items 5, 9, and 15 reflect the degree to which the perceived age difference between an individual's conceptual ingroup and elderly outgroup (if such an outgroup existed) deviate from a chronological standard. Although some individuals may perceive ingroup-outgroup age differences within strict chronological terms, the perceptions of others may be influenced by contact and quality of contact with the outgroup.

Items 5, 9, and 15 were not utilized to evaluate the difference between chronological and perceived age per se, but rather, to assess the perceived age difference between conceptual ingroups and outgroups. Therefore, if an elderly female respondent conceptually rated her own age as 'very young' and the age of most of the older persons she knows as 'very much older' than herself, she would have received a score indicating that her perceived ingroup-outgroup age difference did not differ from what would be expected chronologically. This is true regardless of the fact that she rated her own age as 'very young.'

If this elderly woman had rated the age of most of the

older people she knows as 'much older' or just 'older' than herself she would have received increasingly higher positive scores, reflecting an increasing degree of logical divergence from the chronological standard. However, had she rated most of the older people she knows as 'about as old, younger than, much younger than,' or 'very much younger than' herself she would have received increasingly higher negative scores, reflecting an increasing degree of illogical divergence from the chronological standard.

It follows that individuals who consider themselves to be very young should logically view an elderly group of people to be older than themselves in a strict chronological sense. To view these elders as being about the same age as oneself, or younger than oneself is illogical in a strict chronological sense. Although such responses may be expected to occur infrequently, chronologically illogical alternatives may reflect enhanced or diminished levels of perceived ingroup-outgroup age difference due to the presence or absence of cognitive dissonance and quality of contact with the outgroup. These differences would then be expected to correlate with observed attitude scores. For example, those individuals obtaining a high, positive perceived ingroup-outgroup age difference score would be expected to demonstrate more negative attitudes toward the elderly than individuals with a high, negative difference.

Table 1 denotes the scoring system utilized in the present study to obtain a pair of scores from items 5, 9,

and 15 which reflect perceived ingroup-outgroup age differences. The system was implemented as follows: First, the column headed by the response to item 5 (a through e) was located horizontally across the top row of the table. The response to item 9 (a through g) was then located by proceeding down that particular column. The numerical result

Table 1. System Utilized to Convert Items 5, 9, and 15 into Two Scores Reflecting Perceived Ingroup-Outgroup Age Differences

Item 5(a)	(b)	(c)	(d)	(e)
Item 9/Item 15				
1(a)	3(a)	4(a)	5(a)	7(a)
2(b)	1(b)	3(b)	4(b)	6(b)
3(c)	2(c)	1(c)	3(c)	5(c)
-1(d)	-1(d)	2(d)	1(d)	3(d)
-2(e)	-2(e)	-1(e)	2(e)	1(e)
-3(f)	-3(f)	-2(f)	6(f)	2(f)
-4(g)	-4(g)	-3(g)	7(g)	4(g)

represents the perceived age difference between one's ingroup and an outgroup composed of all the elderly persons one has contact with at the present time.

The response to item 15 (a through g) was then located within the same column. In this case, the numerical result represents the perceived age difference between one's

ingroup and an outgroup composed solely of elders considered to be part of one's immediate family.

Items 12 and 18 assess the extent to which respondents may be able to generalize attitude-disconfirming behavior performed by familiar elderly persons to the superordinate category of 'elderly people' in general. However, item 12 refers to all older people with which respondents presently have contact, while item 18 exclusively refers to those elders considered to be immediate family members.

Items 11 and 17 assess the extent to which the respondents' usual setting of interaction with the elderly could yield information disconfirming negative stereotypes. The six settings form a six point scale. A workplace was proposed as the setting most likely to produce such disconfirming information, a nursing home least likely. In both items, the response 'usually you don't see them in person,' was assigned a numerical value of 3 points, as indirect forms of contact (such as letters or telephone calls) tend to be largely descriptive, and therefore, in a general sense, are no more likely to be of high than low quality.

However, this category of non-personal contact was felt to be less likely to produce information disconfirming negative stereotypes than actually having personal contact with elderly persons living in their own private residences. Finally, non-personal contact was felt to be more likely to produce disconfirming information than personal contact with

elders living in a private residence owned by others, or in a nursing home for elders.

Responses to items 11 and 12 were assigned numerical values and multiplied together to yield a score ranging from 1 to 30 points -- as were responses to items 17 and 18.

The third part of the questionnaire was comprised of 15 negatively-keyed and 14 positively-keyed statements assessing respondents' attitudes toward elderly persons, and 15 items purportedly assessing knowledge of the elderly. Kogan (1961) constructed items which could be clustered on the basis of their manifest content. These clusters largely overlapped with the present study's selected categories for attitude measurement. As previously mentioned, Kogan incorporated two matched pairs of 17 items expressing either positive or negative sentiments about old people. In order to disguise the presence of logical-opposites, these items were interspersed among additional items from five other attitude scales and various constructed items.

The present measure altered one original item (as Kogan (1961) suggested it should be altered), added three items from other questionnaires, and deleted four pairs of original items which either did not fall within the present study's categories for attitude measurement or had previously demonstrated low item-sum correlations. In addition, each item within a logically-opposite item pair was interspersed among items which purportedly assessed respondents' knowledge of the elderly. In this way, the

manifest content of all the items was directly related to elderly persons.

The knowledge items were selected on the basis of their perceived neutrality with respect to elderly persons. Therefore, the present measure utilized relevant logical-opposite item pairs from Kogan's (1961) questionnaire, and interspersed these attitudinal items with attitudinally neutral knowledge-based items. Accordingly, the present measure was simply entitled 'Knowledge and Attitude Questionnaire,' entailing no deception or hidden purpose.

As Kogan (1961) found higher reliabilities for his negatively-keyed Old Person Scale than for the positively-keyed scale, only negatively-keyed statements were actually scored on the present questionnaire. Therefore, a total of 13 items from Kogan's original questionnaire were actually scored in the present study, with two negatively-keyed items from two additional questionnaires comprising the final set of 15 scored items.

The three items in the third section assessing attitudes toward institutionalization/segregation of the elderly were items 7, 19, and 31. The four items assessing attitudes toward interaction with the elderly were items 2, 14, 26, and 37. The four items assessing stereotypes and myths were items 10, 22, 28, and 40. The four items assessing perceived worth and dependence of the elderly were 5, 17, 35, and 43. Item 17 originated from Palmore's (1977) Facts on Aging Quiz, while item 43 was originally from a

questionnaire developed by Tuckman and Lorge (1953). These two items were believed to reflect the attitude category of perceived worth/dependence to a degree meriting their inclusion on the present questionnaire. Finally, item 23 originated from a questionnaire developed by Cavan (1949), and was utilized as a positively-keyed item to assist in balancing the negatively-keyed items in the perceived worth/dependence attitude category.

Items purporting to assess knowledge of the elderly originated from two separate sources. Specifically, items 3, 6, and 9 were from Palmore's (1977) Facts on Aging Quiz, while items 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, and 44 were originally from a questionnaire developed by the Continuing Education Institute of Gerontology, at the University of Michigan (1976). As this project was initially concerned with the attitudes of both Canadians and Americans, the wording of certain knowledge items was altered slightly to make them more suitable for Canadian respondents (such as substituting the word 'Canadian' for 'American'). Unfortunately, the number of Canadians aboard the B.C. Stena Line ferryboat was minimal. Therefore, all American respondents were told to try their best on the Canadian content knowledge questions.

Kogan's (1961) original six-point Likert scale and scoring format was employed for all items in section three, allowing individuals to select from the following responses: 'Strongly Agree,' 'Agree,' 'Agree only slightly,' 'Disagree

only slightly,' 'Disagree,' and 'Strongly Disagree.' These responses were scored 7, 6, 5, 3, 2, and 1, respectively, with a score of 4 assigned to items left blank.

The items in section three were presented in the following manner: a positively-keyed item followed by a negatively-keyed item, followed by a neutral knowledge item, and so on. Items in a logical-opposite pair were maximally dispersed across the 44 items to discourage the recall of an earlier presented item in the pair. In addition, it was hoped that the inclusion of positively-keyed items and neutral items in the aforementioned pattern would decrease the probability of respondents becoming offended or upset by the questionnaire.

The fourth part of the questionnaire was comprised of 7 items which assessed the degree to which known elders are perceived to be ill, and the level of financial support and physical caregiving these elders typically receive from the respondents. Specifically, items 1 and 2 assessed the total illness of all known elders (the number ill plus the perceived extent/severity of illness). These items were assigned numerical values and multiplied together to yield a score ranging from 0 to 28 points. Items 3 and 4 assessed the degree of illness within those elders perceived to be members of the respondent's immediate family at the present time. These items were also multiplied together yielding a score from 0 to 28 points.

Together, items 5, 6, and 7 assessed the amount of

combined financial support and physical caregiving respondents administer to elders they perceive to be members of their immediate family at the present time. The numerical values for responses to items 6 and 7 were added together, with the resulting sum multiplied by the numerical value for the response to item 5. This yielded a score ranging from 0 to 56. However, if the response to item 3 was '(a) none,' then values for item 6 and 7 were summed and multiplied by the value for item 1, yielding a score representing the combined financial support/physical caregiving respondents administer to elders whom they do not perceive to be family members.

Therefore, the independent or predictor variables measured in the present study were: sex, age, education, tendency to respond in a socially desirable manner, cognitive dissonance regarding all known elders, total contact with all known elders, the total quality of this contact, perceived average age of all known elders, and the degree to which all known elders are perceived to be similar to elders in general.

Additional variables were similar to those just mentioned -- but concerned with elders perceived to be immediate family members. These variables were: contact, quality of contact, cognitive dissonance, perceived average age, and the degree to which elders considered immediate family members are perceived to be similar to elders in general. Other additional variables were: total illness of

all known elders, illness of elders perceived to be immediate family members, total combined financial support/physical caregiving provided to all known elders, and similar support/caregiving provided to elders perceived to be immediate family members.

CHAPTER III

RESULTS

Initially, 276 individuals agreed to participate. However, 61 questionnaires were subsequently discovered to be invalid or incomplete. Of these, 23 were invalid due to citizenship (17 Canadian and 6 international respondents) while 38 were incomplete. While 14 individuals simply stopped responding at some point, 24 missed an entire page but finished the questionnaire. This unfortunate result was clearly due to double-sided duplication of the questionnaire -- requiring extra vigilance on the part of the respondents in completing the entire form.

Incomplete questionnaires were distributed quite evenly across all age groups. This seemed to be the result of carelessness in the younger participants and fatigue in those who were older. For example, one elderly participant who stopped responding after the fourth page commented that the questionnaire was simply too lengthy for him. Therefore, the final sample was comprised of 215 male and female adults between the ages of 18 - 75 years. Composition of the sample by sex and age is depicted in Figure 1.

To assess the internal consistency of the Knowledge and Attitude Questionnaire, the mean, standard deviation, and item-sum correlation (r) was computed for each of the 15 scored attitude items. ^{is} The results are presented in Table 2 for the entire scale (KAQ all items), the scale minus

Figure 1. Composition of the sample by sex and age.

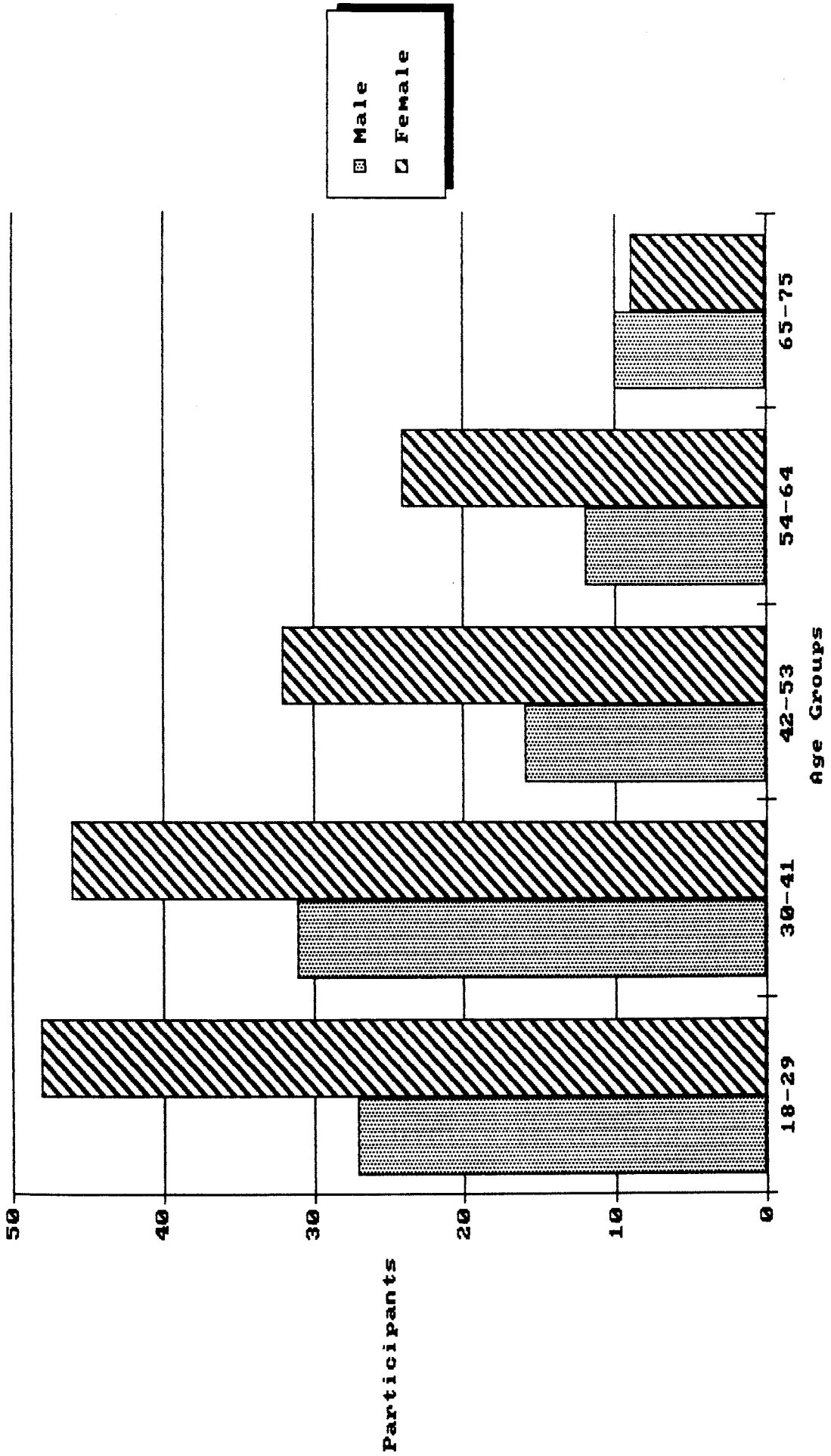


Table 2. Means, Standard Deviations, and Item-Sum Correlations (ris) for Attitude Items on the Knowledge and Attitude Questionnaire (KAQ)

Scored Attitude Item	KAQ all items			KAQ less items 5/7/43		Old People Items		
	M	SD	ris	ris	M	SD	ris	
2	2.43	1.31	.38	.39	3.06	1.47	.48	
5	1.98	1.12	.27	N/A	2.15	1.17	.10	
7	2.13	1.04	.32	N/A	2.28	1.12	.38	
10	2.61	1.62	.47	.46	2.60	1.56	.37	
14	2.97	1.51	.46	.45	3.55	1.56	.53	
17	3.08	1.57	.40	.42	N/A	N/A	N/A	
19	2.93	1.50	.37	.38	3.01	1.54	.40	
22	2.12	.95	.54	.56	2.47	1.22	.46	
26	2.37	1.17	.46	.48	3.01	1.32	.50	
28	4.05	1.58	.48	.49	5.18	1.45	.39	
31	2.13	1.13	.39	.34	2.69	1.65	.25	
35	2.81	1.37	.50	.48	3.96	1.63	.46	
37	2.53	1.20	.44	.45	3.63	1.54	.65	
40	2.39	1.00	.39	.40	3.01	1.36	.44	
43	2.50	1.20	.23	N/A	N/A	N/A	N/A	

Note. 'Old People Items' refers to 13 items from Kogan's (1961) original questionnaire which were utilized in the present study. Reported item-sum correlations for these items were the lowest Kogan obtained from surveys of three independent samples.

items 5, 7, and 43, and Kogan's (1961) original 'Old People' items. Reported item-sum correlations for Kogan's items were the lowest he obtained from surveys of three independent samples. Nevertheless, these correlations are slightly higher on average than those obtained in the present study after items 5, 7, and 43 were excluded due to low item-sum correlations (average r of .45 and .44 respectively for items 2, 10, 14, 19, 22, 26, 28, 31, 35, 37, and 40). The grand mean of the 12 remaining items was 2.7 with a Cronbach's Alpha of .25 and Guttman Split-Half reliability of .83.

Pooled variance t -tests with Bonferroni corrections were utilized to compare means obtained by all five age groups on 21 of the 23 variables measured by the Knowledge and Attitude Questionnaire. In this analysis respondents were grouped according to the two additional variables of age and sex. In addition, an all-subsets type regression was performed of the 18 contact predictor variables on the four attitude scales and combined total attitude scale.

The t -tests generally indicated few significant differences between the various age groups. Those that did occur fell within the domains of total contact with all known elders, and perceived cognitive dissonance regarding both all known elders and elders considered to be immediate family members. There were no significant differences between age groups on any of the attitude scales.

The all-subsets regressions indicated that the best

subset combination of predictor variables accounted for 9.36% of the total variance for respondents' perceived worth of the elderly. The best predictor variable subsets for each of the four remaining dependent variables accounted for the following proportions of total variance: 8.66% for attitudes toward interaction; 8.07% for attitudes toward institutionalization and segregation; 3.90% for stereotypes and myths; and 5.42% for the combined total attitude measure. Deleting the stereotypes and myths scale scores from the combined total attitude scores accounted for an additional 1% of the total attitude variance. Therefore, this scale was not excluded from the overall analysis.

The best predictor variable subset for attitudes toward interaction (along with each variable's contribution to the squared multiple correlation) was: total illness of all known elders (.043) total quality of contact with all known elders (.042); age of the respondents (.036); contact with elders perceived to be immediate family members (.024); perceived average age of all known elders (.016); degree to which all known elders are perceived to be similar to elders in general (.014); combined financial support/physical caregiving provided to elders perceived to be immediate family members (.013); and the degree to which elders considered immediate family members are perceived to be similar to elders in general (.010).

The best predictor variable subset for perceived worth/dependence was: cognitive dissonance regarding elders

perceived to be immediate family members (.055); quality of contact with elders perceived to be immediate family members (.047); degree to which elders considered immediate family members are perceived to be similar to elders in general (.033); and the degree to which all known elders are perceived similar to elders in general (.029).

The best predictor variable subset for attitudes toward institutionalization and segregation was: total illness of all known elders (.029); contact with elders perceived to be immediate family members (.026); cognitive dissonance regarding all known elders (.012); education level of respondents (.011); total combined financial support/physical caregiving provided to all known elders (.011); and sex of the respondents (.010).

The best predictor variable subset for stereotypes and myths was: education level of the respondents (.029); and cognitive dissonance regarding elders perceived to be immediate family members (.019).

Finally, the best predictor variable subset for the combined total attitude measure was: cognitive dissonance regarding elders perceived to be immediate family members (.023); education level of the respondents (.018); total illness of all known elders (.017); and the degree to which all known elders are perceived to be similar to elders in general (.016).

Several adjustments were made to the set of predictor variables in an attempt to account for additional

attitudinal variance. First, the variables concerned with illness (specifically, total illness of all known elders and illness of elders perceived to be immediate family members) and financial support/physical caregiving (total combined financial support/physical caregiving provided to all known elders, and the same support/caregiving provided to elders perceived to be immediate family members) were utilized to adjust reported levels of contact quality downward.

The reported total illness of all known elders was added to the reported level of total combined financial support/physical caregiving provided to all known elders. The resulting sum was then subtracted from the originally reported total quality of contact with all known elders. This produced a measure of total contact quality which was adjusted to account for factors considered detrimental to high quality contact.

Next, the reported illness of elders considered to be immediate family members, and combined financial support/physical caregiving provided to elders perceived to be immediate family members were summed. This sum was multiplied by 0.4 and subtracted from the originally reported quality of contact with elders perceived to be immediate family members. Therefore, the original measure was adjusted in a manner which reflected factors considered detrimental to high quality contact. The initial sum was multiplied by 0.4 to account for the difference in magnitude between total quality of contact with all known elders and

quality of contact with elders perceived to be immediate family members.

As previously noted, the value of total quality of contact was free to vary between 1 and 24 points. However, quality of contact with elders perceived to be immediate family members could not exceed 6 points. Therefore, the initial sum was scaled to render it proportional to the reduced range for contact quality with elders perceived to be immediate family members.

Finally, it was felt that product scores may represent the relationship of total contact and quality of contact with the elderly to attitudes more accurately than either score alone. Therefore, adjusted scores for total quality of contact were multiplied by the square root of the scores for total contact. The result was an omnibus total contact score which reflected both amount and quality of contact. Similarly, adjusted scores for quality of contact with elders perceived to be immediate family members were multiplied by the square root of the scores for contact with elders perceived to be family members. As extreme outliers often result from product scores, it was necessary to take the square root of the scores representing levels of contact with the elderly before calculating products.

In sum, the aforementioned adjustments reduced the number of predictor variables from 18 to 16. Two new variables were added, two adjusted, and four deleted through combination with other variables. T-tests and multiple

regression analyses were performed on the adjusted dataset. An all-subsets type regression was not utilized at this point as interaction or product variables cannot be included in a regression equation without their component or main effect terms. In the following results, the age groups have been numbered from one to five -- one corresponding to the youngest group of respondents, five to the oldest.

The five age groups did not differ significantly by sex, education, level of socially desirable responding, or cognitive dissonance regarding all known elders. As Figure 1 clearly indicates, females constituted the majority of each age group except group five. In addition, group size tended to decrease with increasing respondent age. The average level of education across all age groups was 2.64. Education level peaked in age group two, and slowly declined with increasing respondent age.

As a group, those individuals with a secondary school level of education were, on average, significantly older ($\bar{M} = 2.70$) than the university-educated respondents ($\bar{M} = 2.26$), $t(213) = 2.50$, $p < .05$. In addition, the university-educated respondents reported a significantly lower average level of contact quality with all known elders ($\bar{M} = 9.59$) than the secondary school group ($\bar{M} = 11.52$), $t(213) = 2.67$, $p < .01$, and a significantly lower average omnibus contact score ($\bar{M} = 35.92$) than the secondary school group ($\bar{M} = 44.21$), $t(213) = 215$, $p < .05$.

Respondents with a secondary school level of education

reported a perceived average age of all known elders ($\bar{M} = 2.84$) which was almost significantly younger than that of the university-educated group ($\bar{M} = 2.70$). Finally, the secondary school group demonstrated a significantly higher average score on the stereotypes and myths attitude scale ($\bar{M} = 11.94$) than the university-educated group ($\bar{M} = 10.68$), $t(213) = 2.58$, $p < .05$, and an average score on the total attitude scale ($\bar{M} = 33.69$) which was almost significantly higher than the university-educated group ($\bar{M} = 31.40$).

Respondents with a secondary school level of education in age group four reported a significantly higher average omnibus contact score with all known elders ($\bar{M} = 59.92$) than university-educated respondents in age group one ($\bar{M} = 29.83$), $t(205) = -3.80$, $p < .01$, and age group two ($\bar{M} = 33.09$), $t(205) = -3.46$, $p < .05$.

University-educated respondents in age group four reported a significantly higher average level of contact with elders perceived to be immediate family members ($\bar{M} = 34.07$) than university-educated respondents in age group one ($\bar{M} = 15.24$), $t(205) = -4.05$, $p < .01$, and age group two ($\bar{M} = 17.92$), $t(205) = -3.55$, $p < .05$.

Finally, male respondents with a secondary school level of education demonstrated a significantly higher average score on the stereotypes and myths attitude scale ($\bar{M} = 12.50$) than university-educated female respondents ($\bar{M} = 10.43$), $t(211) = 2.70$, $p < .05$.

Age groups one, two, and three demonstrated near

equivalent levels of socially desirable responding with means approximating 16 points. This closely matched the normative sample means reported by Crowne and Marlowe (1964). There was a slight increase in socially desirable responding by group four which was maintained by group five. Finally, group four demonstrated a higher level of socially desirable responding ($M = 18.20$) than that of group two ($M = 14.99$). This difference was very nearly significant at the .05 level. Values for cognitive dissonance regarding all known elders were highly similar across the five age groups, with a combined group mean of 1.86. Group four exhibited the lowest level of dissonance ($M = 1.50$).

Although the five age groups did not differ significantly on total quality of contact with all known elders, the youngest age group (group one) reported significantly less total contact with all known elders ($M = 10.66$) than group three ($M = 17.85$), $t(210) = -3.20$, $p < .05$, group four ($M = 19.60$), $t(210) = -3.62$, $p < .01$, and group five ($M = 21.06$), $t(210) = -3.43$, $p < .01$. In short, total contact with all known elders steadily increased with the age of the respondents. Total quality of contact with all known elders was very stable across groups one, two, and three (with a combined group mean of 9.75). In contrast, groups four and five reported average total quality figures just slightly above 12 points.

The elevated levels of total contact with all known elders in groups four and five contributed to several

significant group differences on the omnibus total contact measure. Specifically, group one obtained a significantly lower score ($\bar{M} = 31.29$) than group four ($\bar{M} = 54.55$), $t(210) = -3.99$, $p < .001$, and group five ($\bar{M} = 53.94$), $t(210) = -3.16$, $p < .05$. Similarly, group two obtained a significantly lower score ($\bar{M} = 33.80$) than group four ($\bar{M} = 54.55$), $t(210) = -3.62$, $p < .01$, and group five ($\bar{M} = 53.94$), $t(210) = -2.84$, $p < .05$.

These significant differences underscore the large discrepancy in obtained omnibus total contact scores between the two youngest and two oldest age groups. The third age group obtained an average score ($\bar{M} = 40.48$) roughly equidistant to those of the youngest and oldest groups.

There were no significant differences between age groups on the degree to which all known elders were perceived to be similar to elders in general. All age groups obtained highly similar scores on this scale with a combined group mean of 14.84. Similarly, there were no significant differences concerning the perceived average age of all known elders or cognitive dissonance regarding elders perceived to be immediate family members. The reported perceived average age of all known elders was highly similar across age groups with a combined group mean of 2.75. Group means for cognitive dissonance increased slightly with increasing age from group one ($\bar{M} = 1.49$) to four ($\bar{M} = 1.83$). However, this figure dropped to its lowest reported level in group five ($\bar{M} = 1.29$).

Group one reported significantly less contact with elders perceived to be immediate family members ($\bar{M} = 15.98$) than group four ($\bar{M} = 26.10$), $t(210) = -2.90$, $p < .05$. This type of contact generally increased with age -- the largest increase occurring between groups two ($\bar{M} = 18.08$) and three ($\bar{M} = 24.15$).

The age groups did not differ significantly on their reported quality of contact with elders perceived to be immediate family members. The reported quality slowly increased from group one ($\bar{M} = 2.23$) to three ($\bar{M} = 2.84$), and decreased in group four ($\bar{M} = 2.72$) and five ($\bar{M} = 2.47$). Similarly, no significant differences were found for the omnibus contact measure regarding elders perceived to be immediate family members.

In fact, all age groups obtained similar average scores on this omnibus measure with a combined group mean of 12.11. Similar scores were also obtained across groups on the degree to which elders considered immediate family members are perceived to be similar to elders in general, and on the perceived average age of these elders. The combined group means for these two scales were 10.34 and 2.16 respectively.

Finally, no significant differences were found between the age groups on any of the five attitude scales. In fact, obtained group means tended to be highly similar. The combined group means were as follows: 10.23 for attitudes toward interaction; 5.87 for perceived worth; 4.99 for attitudes toward institutionalization/segregation; 11.13

for stereotypes and myths; and 32.22 for total attitude.

The respondents were then grouped according to age and sex. This created two sets of five groups differentiated by sex and numbered from age one to five. Only significant group differences were reported as division by age and sex reduced most sample sizes to less than 30. Again, as all group sample sizes were unequal, only pooled variance T-tests were examined for significance.

Female group four reported significantly more total contact with all known elders ($\bar{M} = 21.17$) than female group one ($\bar{M} = 10.23$), $t(205) = -3.46$, $p < .05$. In addition, female group four obtained a significantly higher omnibus total contact score regarding all known elders ($\bar{M} = 62.94$) than male group one ($\bar{M} = 32.44$), $t(205) = -3.68$, $p < .05$, male group two ($\bar{M} = 32.62$), $t(205) = -3.76$, $p < .05$, female group one ($\bar{M} = 30.65$), $t(205) = -4.34$, $p < .01$, and female group two ($\bar{M} = 34.50$), $t(205) = -3.87$, $p < .01$.

Male group four reported a significantly higher level of cognitive dissonance regarding elders perceived to be immediate family members ($\bar{M} = 2.75$) than male group two ($\bar{M} = 1.16$), $t(205) = -3.80$, $p < .01$, female group one ($\bar{M} = 1.41$), $t(205) = 3.41$, $p < .05$, and female group four ($\bar{M} = 1.22$), $t(205) = 3.44$, $p < .05$.

The multiple regression analysis indicated that the best combination of predictor variables from the adjusted dataset accounted for 6.4% of the total attitude variance for the combined total attitude measure. Therefore, the

original and adjusted datasets accounted for an equivalent proportion of total variance. However, the best predictor variable combination from the adjusted dataset included the omnibus total contact score for all known elders (with a contribution to the squared multiple correlation of .012) and quality of contact variables for both all known elders (.018) and elders perceived to be immediate family members (.022).

In addition, the proportions of total variance accounted for on each of the four remaining dependent attitude variables were largely equivalent to those found for the original dataset. Therefore, although both datasets accounted for similar proportions of variance, the adjusted set was considered a more parsimonious and logical representation of the variables pertaining to contact and quality of contact with the elderly. Therefore, all further analyses utilized this dataset.

The entire sample was next divided by sex, and additional multiple regression analyses performed of all 16 predictor variables on the combined total attitude measure. The best predictor variable combination for the female respondents was comprised of one variable, which accounted for 4.2% of their total attitude variance. This was cognitive dissonance regarding elders perceived to be immediate family members. For the male respondents a large set of predictors accounted for 15.5% of their total variance. These variables and their contributions to the

squared multiple correlation were: age of the respondents (.070); total quality of contact with all known elders (.069); degree to which all known elders are perceived to be similar to elders in general (.062); total contact with all known elders (.045); perceived average age of all known elders (.036); omnibus total contact measure regarding all known elders (.034); and the degree to which elders considered family members are perceived to be similar to elders in general (.025). Scatterplots of the obtained total attitude scores versus predicted scores for the male/female subsamples are presented in Figure 2. These plots clearly indicate the poor relationship between predicted and obtained attitudes.

In an attempt to account for this poor level of prediction, all pairwise scatterplots of the predictor and dependent variables were examined for outliers and/or unusual curvilinear relationships. In addition, standardized and deleted residuals were examined along with the Mahalanobis distances resulting from the multiple regression of all predictors on the combined total attitude measure. Finally, a principle components analysis was performed with a varimax rotation. The obtained set of components were compared with the best predictor subsets obtained by multiple regression.

An examination of all pairwise scatterplots did not reveal any unusual relationships between the 21 scales. However, approximately five to 10 moderate outliers were

Figure 2a. Scatterplot of Predicted versus Observed Total Attitude Scores for the Male Subsample.

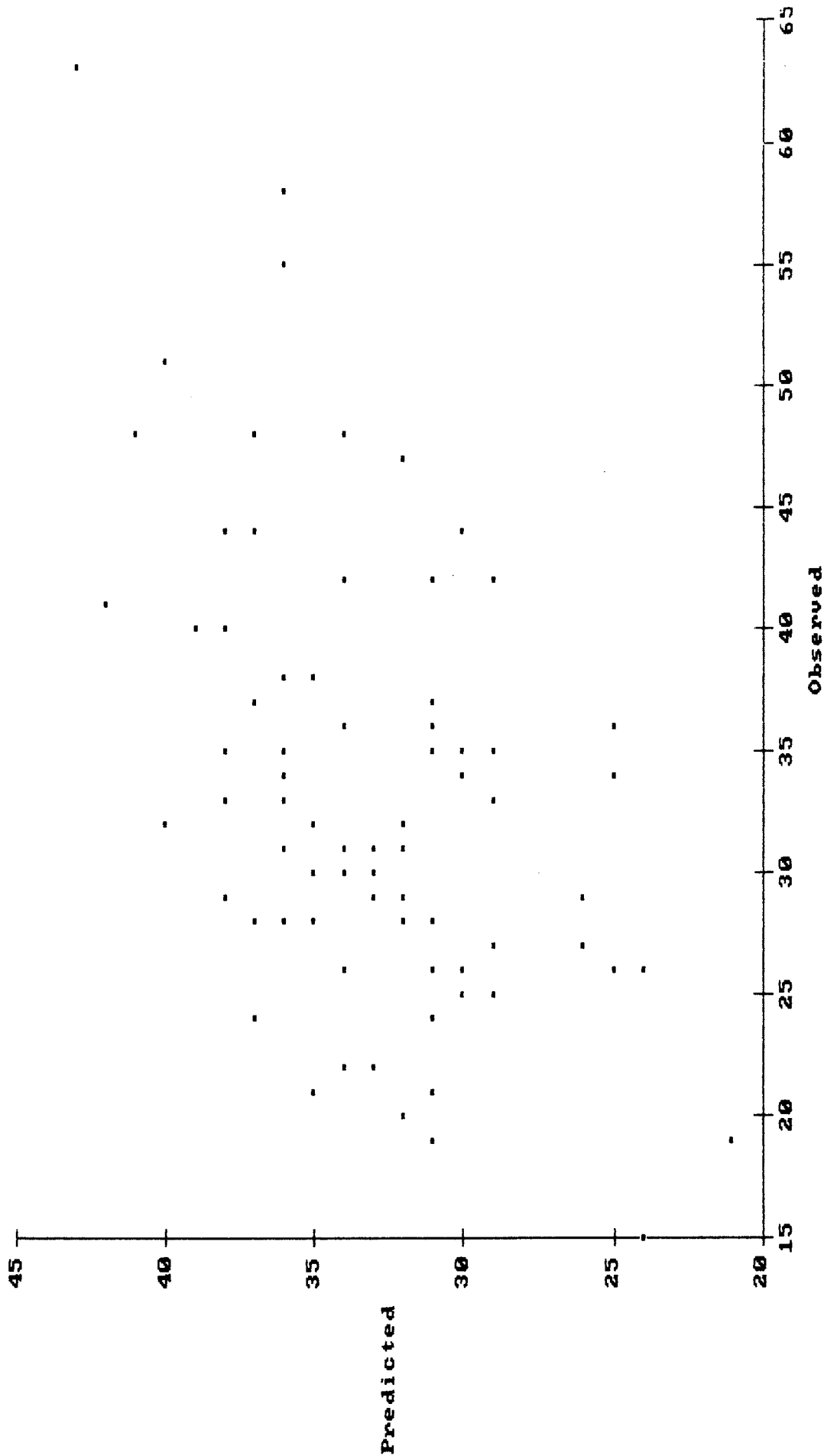
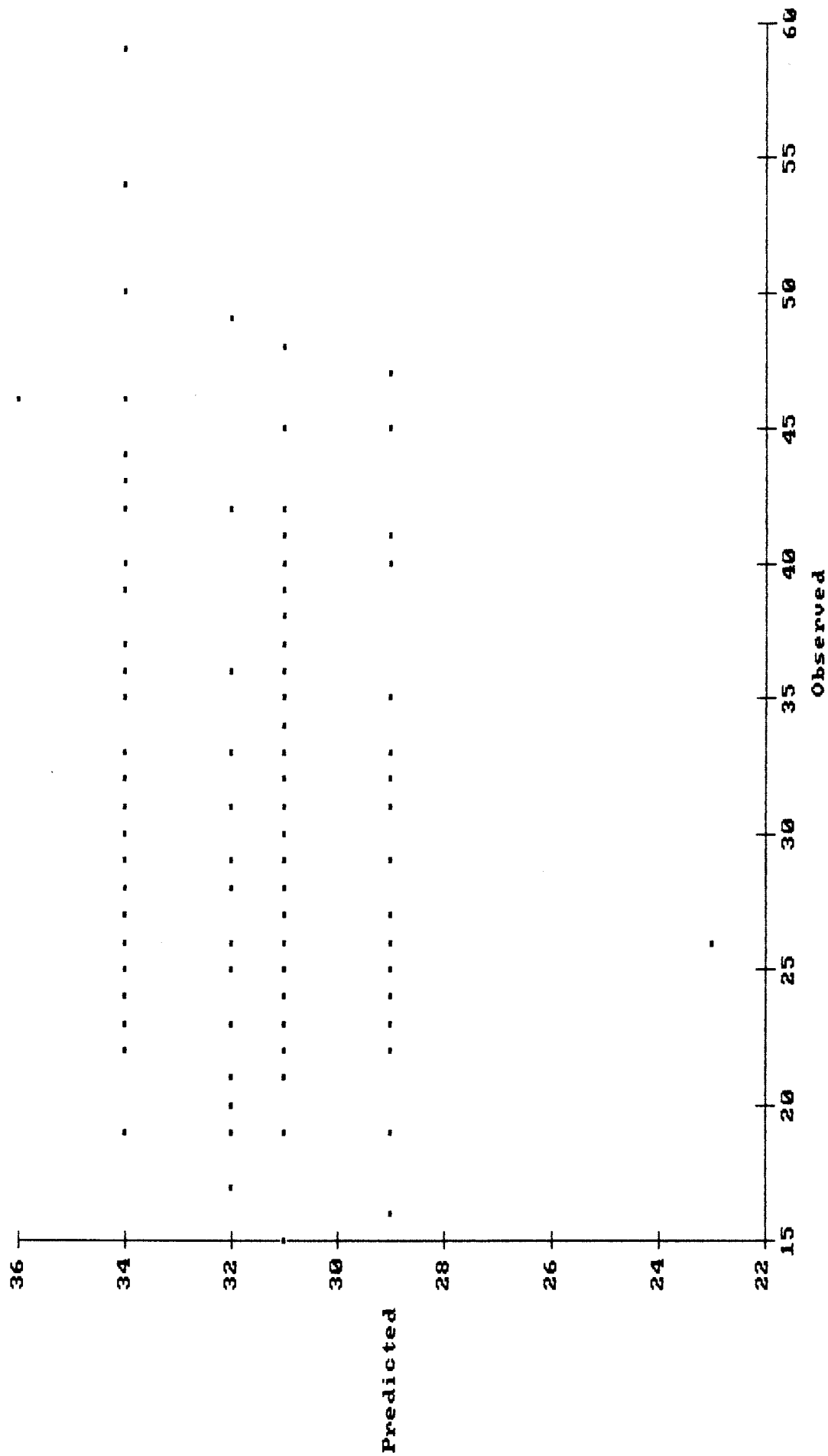


Figure 2b. Scatterplot of Predicted versus Observed Total Attitude Scores for the Female Subsample.



noted on plots which included any variable measuring levels of contact. These were total contact with all known elders and elders perceived to be immediate family members, as well as the omnibus total contact measure for all known elders and elders perceived to be immediate family members.

Those respondents with elevated contact scores also obtained elevated Mahalanobis distances, of which the maximum was 39.14. There were 10 additional cases with Mahalanobis distances elevated above 25. These were spread evenly across the five age groups with the exception of group three, which had four such cases (group five had one; all others had two each).

The largest standardized-deleted residual difference was 2.92 standardized, 26.21 deleted. This also represented the largest standardized residual (in absolute value) among cases with a positive case weight. There were 16 cases with similarly large differences between residuals, representing the most positive and negative attitude scores. The highest number of these outlier scores was found in age group two, with four negative and three positive scores. Group one had four negative scores and two positive. Finally, two negative scores were found in group four, and one (the most negative score in the entire sample) was found in group five. Group three had no outlier attitude scores.

In sum, there were several moderate outliers located along the dimensions of total contact and omnibus total

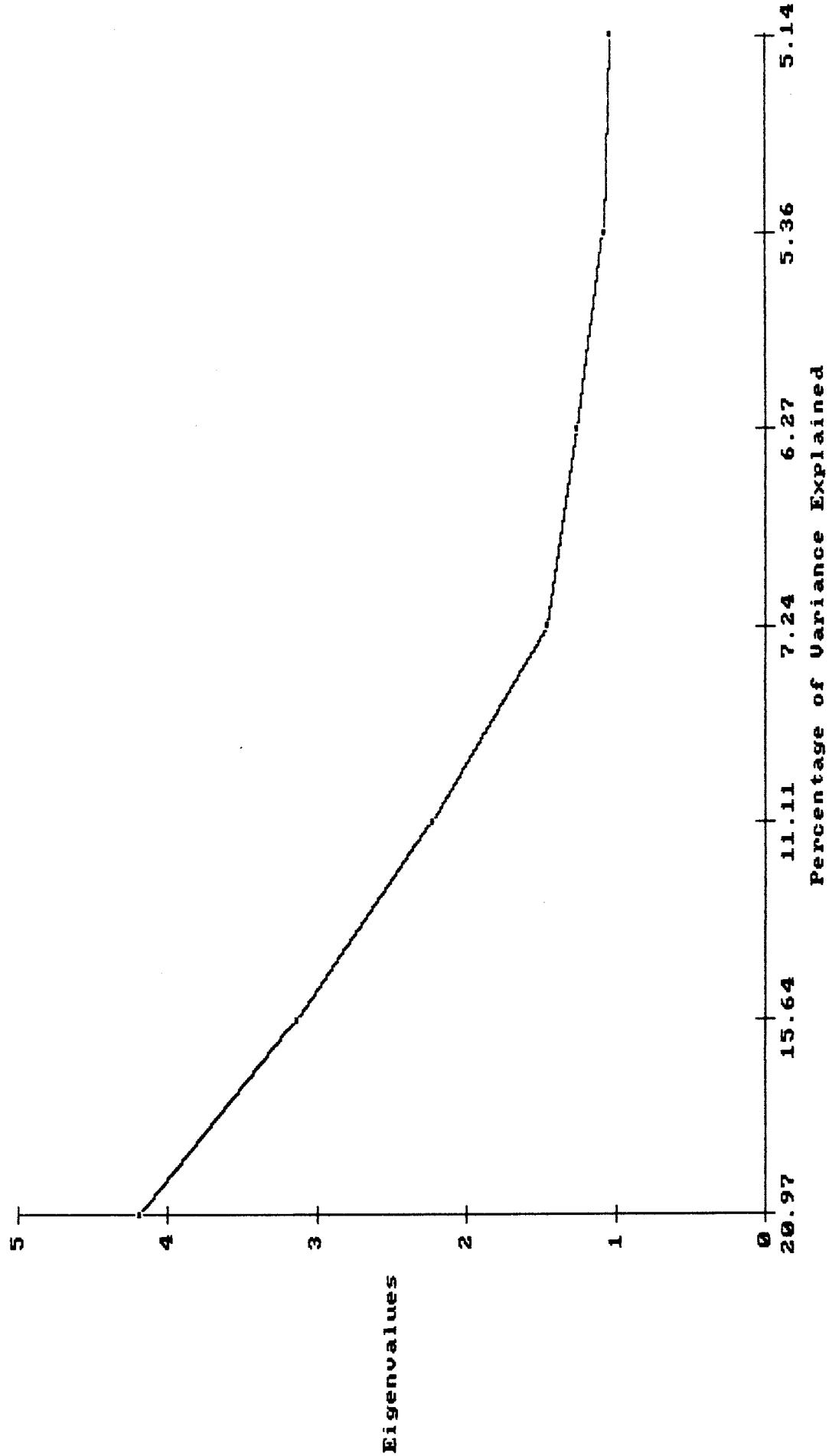
contact with the elderly. These cases were distributed evenly across the four oldest age groups. The poor prediction of attitudes was therefore not due to a small number of extreme outliers occurring in isolation.

To prevent singularity of the correlation matrix the institutionalization/segregation scale was initially removed from the principle components analysis. This was necessary as the four independent attitude scales are a linear combination of the total attitude scale. Therefore, two principal components analyses were performed -- one without the institutionalization/segregation scale, the other without the stereotypes and myths scale.

The initial analyses both reported seven factors which accounted for approximately 73% of the total attitude variance. However, a scree test indicated four factors should be included -- accounting for approximately 57% of the total variance. The scree test plot of eigenvalues against percentage of variance explained has been reproduced in Figure 3. The cutoff point clearly occurs at factor number four, which accounted for 7.24% of the total variance. Therefore, the principle components analyses were re-run, limiting the number of factors to four. In general, the analyses which excluded one of the two aforementioned attitude scales were largely similar.

The squared multiple correlations (SMC) of each variable with all other variables indicated a clear dichotomy between the demographic/social desirability

Figure 3. Scree test plot of eigenvalues against percentage of variance explained.



variables and all other variables. Specifically, the SMC for sex, age, education, and social desirability ranged from .07 (sex) to .27 (age) with a combined average SMC of .17. The SMC of all remaining variables (which were concerned with elderly persons in some manner) ranged from .37 (perceived average age of all known elders) to .97 (combined total attitude score) with a combined average SMC of approximately .72.

The same demographic/social desirability variables demonstrated low communalities, or SMC with the four factors. These ranged from .01 (sex) to .31 (age) with a combined average communality of .19. Communalities of most remaining variables ranged from .35 (perceived average age of all known elders) to .97 (combined total attitude score) with a combined average communality of .69. Finally, a low communality of .27 was obtained for the degree to which all known elders were perceived to be similar to elders in general.

The eigenvalues and proportion of variance accounted for by each of the four factors are presented in Table 3. The reported figures are slightly conservative as they were derived from a principle components analysis which excluded the institutionalization/segregation attitude scale.

Table 3. Eigenvalues and Proportion of Variance Accounted for by Principle Components One through Four

Factor	Variance Explained	Cumulative Proportion of Variance in Data Space	in Factor Space
1	4.1944	0.2097	0.3699
2	3.3791	0.3787	0.6678
3	2.3229	0.4948	0.8727
4	1.4441	0.5670	1.0000

Note. Reported figures are slightly conservative as they were derived from a principle components analysis which excluded the institutionalization/segregation attitude scale.

Tables 4 and 5 contain the unrotated and rotated factor loadings for principle components, respectively. The reported institutionalization/segregation (INS) factor loadings were obtained from a separate principle components analysis which excluded the stereotypes and myths (SM) scale. Therefore, these INS loadings do not contribute to the reported eigenvalues. Their inclusion in Tables 4 and 5 permit an analysis of the factor loadings across all variables in the present study. The following is a list of the variable abbreviations and their explanations:

SD -- socially desirable responding

COGDISS -- cognitive dissonance regarding all known elders

GEN -- the degree to which all known elders are perceived to be similar to elders in general

Table 4. Unrotated Factor Loadings for Principle Components

Variable Name	Factor 1	Factor 2	Factor 3	Factor 4
1. Sex	0.067	-0.100	-0.017	0.002
2. Age	0.323	0.054	0.394	-0.210
3. Education	-0.132	-0.109	-0.331	-0.143
4. SD	0.191	-0.010	0.277	0.384
5. COGDISS	-0.044	0.245	-0.147	0.755
6. Total Contact	0.544	-0.112	0.320	-0.224
7. Total Quality of Contact	0.347	-0.331	0.651	0.223
8. Omnibus Total Contact	0.540	-0.278	0.656	-0.013
9. Generalization (GEN)	0.322	-0.160	0.279	0.244
10. AGECON	0.327	-0.050	0.346	0.353
11. ICOGDISS	0.314	0.445	-0.399	0.473
12. ICON	0.685	0.118	-0.164	-0.298
13. IQCON	0.792	0.165	-0.273	-0.021
14. ICONINT	0.823	0.078	-0.144	-0.135
15. IGEN	0.766	0.271	-0.297	0.031
16. AGEFAM	0.761	0.251	-0.330	-0.015
17. INT	-0.138	0.783	0.251	-0.171
18. WD	-0.162	0.767	0.126	0.039
19. SM	-0.102	0.798	0.382	-0.070
20. INS	0.087	0.574	0.376	-0.129
21. Total Attitude Score	-0.128	0.920	0.319	-0.099
Eigenvalues	4.194	3.379	2.323	1.444

Note. The reported INS (institutionalization/segregation) factor loadings do not contribute to the reported eigenvalues.

Table 5. Rotated Factor Loadings for Principle Components

Variable Name	Factor 1	Factor 2	Factor 3	Factor 4
1. Sex	0.038	-0.109	0.031	-0.022
2. Age	0.184	0.150	0.333	-0.373
3. Education	-0.004	-0.173	-0.360	0.006
4. SD	0.011	0.009	0.473	0.191
5. COGDISS	-0.025	0.102	0.189	0.779
6. Total Contact	0.364	-0.062	0.389	-0.417
7. Total Quality of Contact	-0.051	-0.172	0.795	-0.201
8. Omnibus Total Contact	0.164	-0.126	0.763	-0.417
9. Generalization (GEN)	0.105	-0.134	0.487	0.018
10. AGECON	0.099	-0.024	0.575	0.110
11. ICOGDISS	0.475	0.177	-0.009	0.650
12. ICON	0.736	-0.024	0.015	-0.236
13. IQCON	0.845	-0.064	0.101	0.049
14. ICONINT	0.817	-0.095	0.171	-0.128
15. IGEN	0.851	0.025	0.081	0.133
16. AGEFAM	0.860	0.001	0.036	0.103
17. INT	0.021	0.847	-0.059	-0.055
18. WD	0.011	0.772	-0.064	0.178
19. SM	-0.005	0.887	0.102	-0.024
20. INS	0.099	0.689	0.069	-0.074
21. Total Attitude Score	0.031	0.986	0.012	0.009
Eigenvalues	3.833	3.262	2.500	1.745

Note. The reported INS (institutionalization/segregation) factor loadings do not contribute to the reported eigenvalues.

AGECON -- perceived average age of all known elders

ICOGDISS -- cognitive dissonance regarding elders perceived to be immediate family members

ICON -- contact with elders perceived to be immediate family members

IQCON -- quality of contact with elders perceived to be immediate family members

ICONINT -- omnibus contact with elders perceived to be immediate family members

IGEN -- the degree to which elders perceived to be immediate family members are considered similar to elders in general

AGEFAM -- perceived average age of elders considered to be immediate family members

INT -- attitudes toward interaction with the elderly

WD -- perceived worth of the elderly

SM -- stereotypes and myths concerning the elderly

Factor 1 accounted for 20.9% of the total attitude variance. Although the rotated and unrotated factor loadings patterns are highly similar, the former clearly indicates that most variables concerned with elders perceived to be immediate family members loaded highly on this factor. Factor 2 accounted for approximately 17% of the variance. Each of the five attitude scale variables loaded highly on this factor. Factor 3 accounted for 11.5% of the variance. Two variables related to total quality of contact with all known elders loaded most highly on this factor. However, three additional unrelated factors loaded highly on the rotated pattern.

Finally, Factor 4 accounted for approximately 7% of the

variance. Two variables loaded highly on both patterns. These were cognitive dissonance regarding all known elders, and cognitive dissonance regarding elders perceived to be immediate family members.

Residual correlations were elevated for sex (.99), age (.69), education (.84), socially desirable responding (.74) total contact with all known elders (.54), degree to which all known elders are perceived to be similar to elders in general (.73), and the perceived average age of all known elders (.65). All remaining residual correlations fell at or below .40.

As previously noted, a low communality of .27 was obtained for the degree to which all known elders are perceived to be similar to elders in general (hereafter abbreviated 'GEN' for 'generalization'). In addition, the grand mean for GEN was 14.84 on a scale ranging from 0 to 30 points. The similar variable concerned with elders considered to be immediate family members (hereafter abbreviated 'IGEN' for 'ingroup generalization') yielded a grand mean of 10.34 on an identical scale range.

The GEN and IGEN scales indicate the degree to which known elders are perceived to be generalizable or similar to elders in general. The Knowledge and Attitude Questionnaire measured attitudes toward the elderly in general, and moderately low average scores were obtained on the GEN and IGEN scales. Therefore, as a final analysis, respondents were divided into six groups based upon their scores on the

GEN and IGEN scales. The distribution of scores on these scales are presented in Figure 4. Cutoff points for the low, moderate, and high categories are clearly marked. These roughly divide each distribution into thirds, and do not violate any natural breaks.

Respondents were placed in one of six groups differentiated by major category (GEN or IGEN) and minor category (low, moderate, or high) as follows: Each respondent's scores on the GEN and IGEN scales were examined. Assignment to a major category was based upon the highest obtained score. If scores were equal, respondents were assigned to the IGEN major category. Assignment to a minor category was based upon where a score fell on the major category distribution. For example, scores of 20 on both the GEN and IGEN scales would place a respondent in the IGEN high score group. A score of 12 on the GEN scale and 10 on the IGEN scale would place a respondent in the GEN moderate score group and so on. Three respondents (one male and two females), were excluded from the final analysis, as they scored zero on both major category scales.

The aforementioned divisions greatly reduced sample sizes in three of the resulting six groups as depicted in Figure 5. In addition, the GEN and IGEN moderate score groups were mostly comprised of female respondents. Multiple regression analyses were performed of all predictor variables on the combined total attitude scale for all six groups. Where sample sizes permitted, these groups were

Figure 4a. Distribution of scores on the Generalization Scale

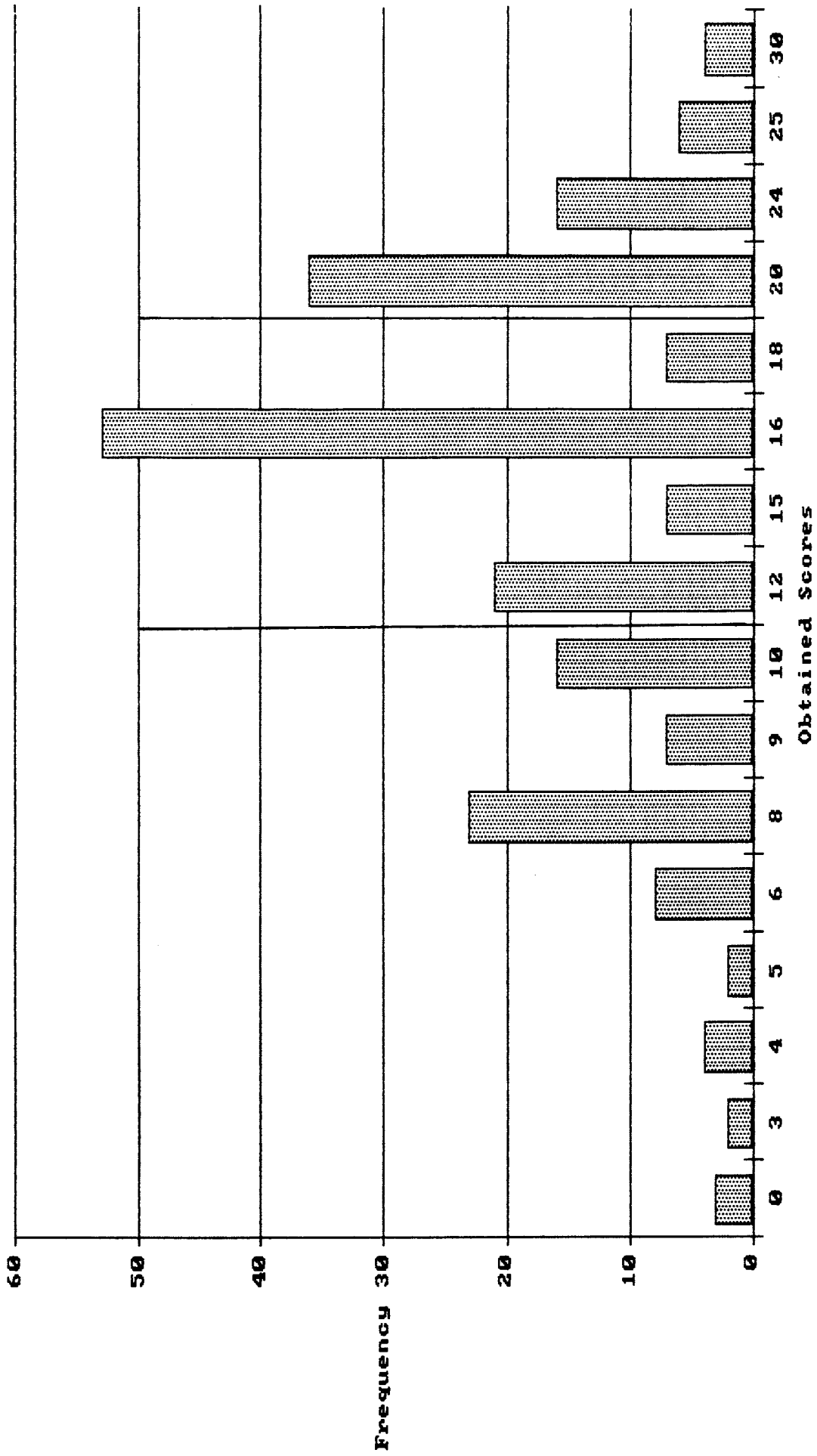


Figure 4b. Distribution of scores on the Ingroup Generalization Scale

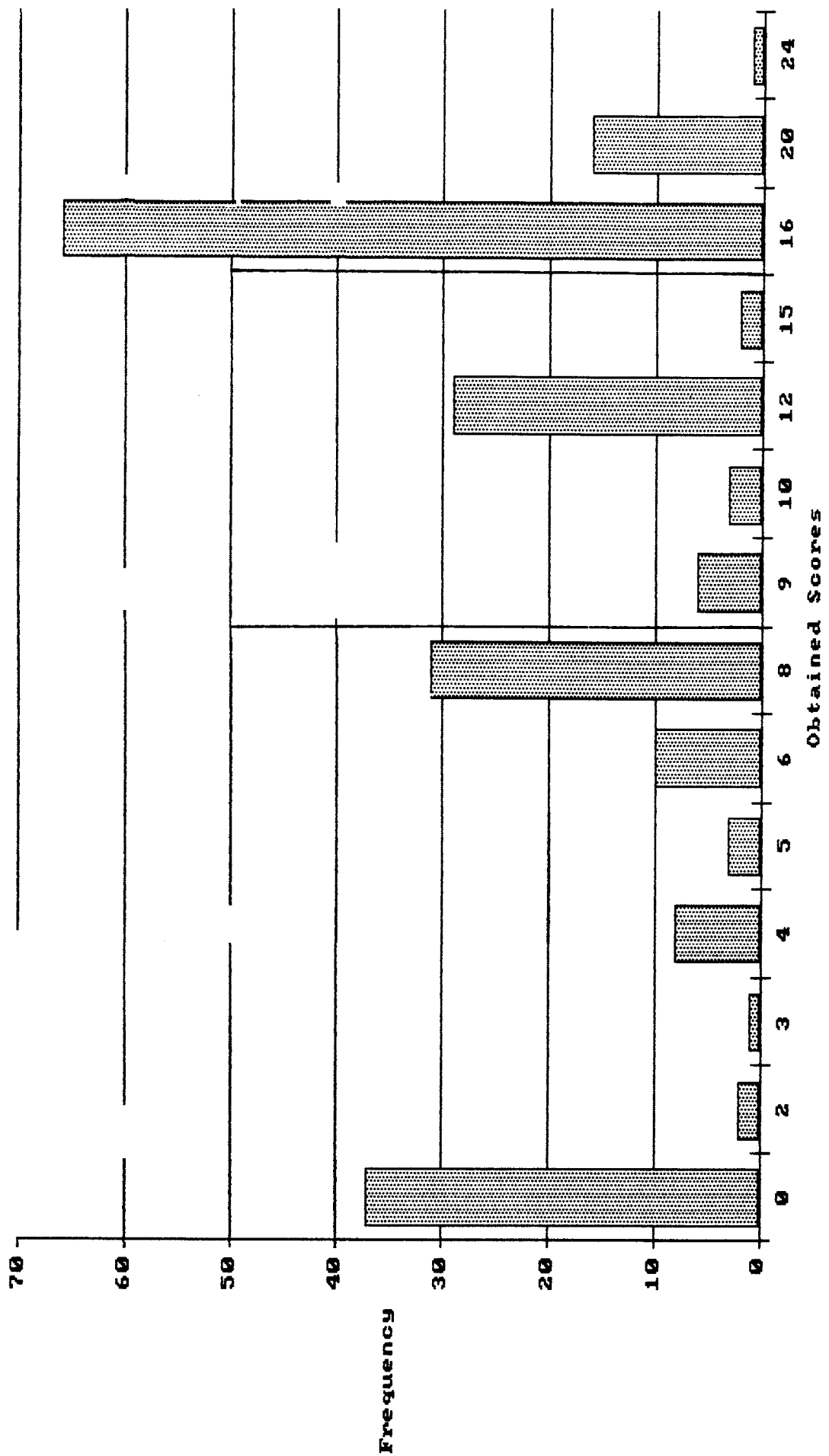
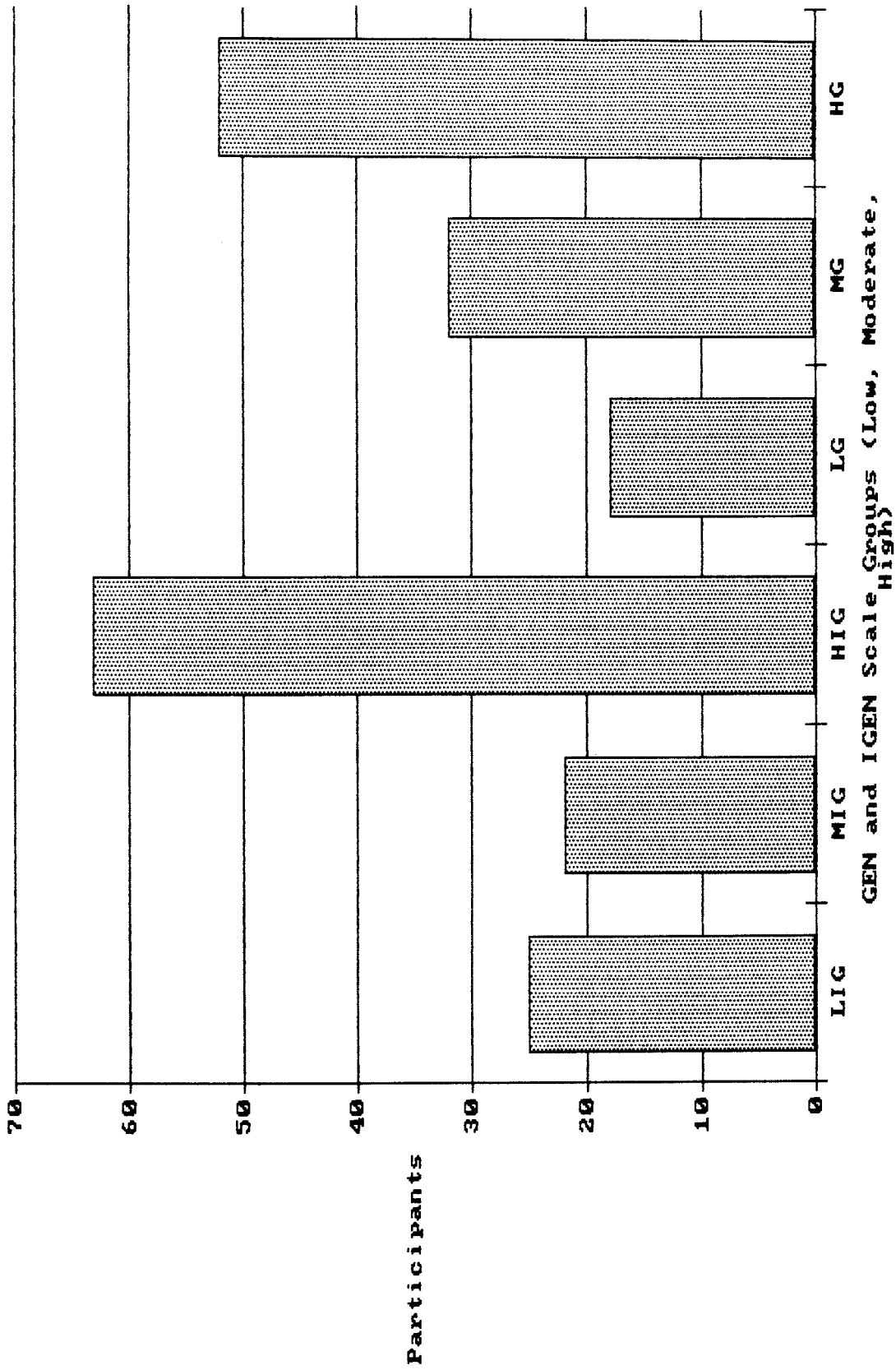


Figure 5. GEN and IGEN Scale Group Sample Sizes



further divided by sex and subjected to the same multiple regression analysis. Finally, pairwise pooled variance t -tests with Bonferroni corrections were performed on all variables across the six groups. T -tests were utilized as they are specially adapted for sample sizes less than 30. Variances were pooled as all group sample sizes were unequal.

No significant differences were found between the six groups on the following variables: sex, age, education, socially desirable responding, cognitive dissonance regarding all known elders, total contact with all known elders, omnibus total contact regarding all known elders, and all five attitude scale variables.

The GEN moderate score group reported significantly more positive total quality of contact with all known elders ($M = 12.03$) than the IGEN low score group ($M = 8.08$), $t(206) = -3.00$, $p < .05$. Most groups differed significantly on GEN and IGEN beyond the .001 level of probability. The IGEN low score group reported a significantly higher perceived average age of all known elders ($M = 2.44$) than the IGEN high score group ($M = 2.78$), $t(206) = 3.16$, $p < .05$. In addition, the IGEN low score group reported a significantly younger perceived average age of all known elders ($M = 2.44$) than the GEN high score group ($M = 2.94$), $t(206) = -4.56$, $p < .001$, and GEN moderate score group ($M = 2.94$), $t(206) = -4.12$, $p < .001$.

With regard to cognitive dissonance pertaining to

elders perceived to be immediate family members, the GEN low score group reported a level of dissonance (\underline{M} = .67) which differed significantly from that of the IGEN high score group (\underline{M} = 1.87), $\underline{t}(206) = 3.90$, $\underline{p} < .01$, the IGEN moderate score group (\underline{M} = 1.82), $\underline{t}(206) = 3.13$, $\underline{p} < .05$, and the IGEN low score group (\underline{M} = 2.16), $\underline{t}(206) = 4.17$, $\underline{p} < .001$. The dissonance scores of the IGEN low score group (\underline{M} = 2.16) and the GEN high score group (\underline{M} = 1.29) also differed significantly $\underline{t}(206) = 3.09$, $\underline{p} < .05$.

The IGEN high score group reported significantly more contact with elders perceived to be immediate family members (\underline{M} = 24.52) than the GEN moderate score group (\underline{M} = 14.34), $\underline{t}(206) = 3.06$, $\underline{p} < .05$, the GEN low score group (\underline{M} = 9.0), $\underline{t}(206) = 3.35$, $\underline{p} < .05$, and the IGEN low score group (\underline{M} = 23.92), $\underline{t}(206) = 3.15$, $\underline{p} < .05$.

The IGEN high score group reported significantly more positive quality of contact with elders perceived to be immediate family members (\underline{M} = 3.61) than the IGEN moderate score group (\underline{M} = 2.63), $\underline{t}(206) = 3.05$, $\underline{p} < .05$, the IGEN low score group (\underline{M} = 2.52), $\underline{t}(206) = 3.57$, $\underline{p} < .01$, the GEN high score group (\underline{M} = 2.19), $\underline{t}(206) = 5.82$, $\underline{p} < .001$, the GEN moderate score group (\underline{M} = 1.72), $\underline{t}(206) = 5.82$, $\underline{p} < .001$, and the GEN low score group (\underline{M} = .99), $\underline{t}(206) = 7.54$, $\underline{p} < .001$. The GEN low score group also obtained significantly lower scores on this variable (\underline{M} = .99) than the IGEN moderate score group (\underline{M} = 2.63), $\underline{t}(206) = 3.97$, $\underline{p} < .01$, the IGEN low score group (\underline{M} = 2.52), $\underline{t}(206) = 3.79$, $\underline{p} < .01$, and

the GEN high score group ($\underline{M} = 2.19$), $\underline{t}(206) = 3.38$, $\underline{p} < .05$.

The IGEN high score group also obtained significantly higher omnibus contact scores for elders perceived to be immediate family members ($\underline{M} = 18.07$) than the IGEN low score group ($\underline{M} = 11.70$), $\underline{t}(206) = 3.01$, $\underline{p} < .01$, the GEN high score group ($\underline{M} = 10.81$), $\underline{t}(206) = 4.32$, $\underline{p} < .001$, the GEN moderate score group ($\underline{M} = 7.57$), $\underline{t}(206) = 5.40$, $\underline{p} < .001$, and the GEN low score group ($\underline{M} = 4.73$), $\underline{t}(206) = 5.57$, $\underline{p} < .001$.

Finally, the IGEN high score group reported a significantly lower perceived average age for elders considered to be immediate family members ($\underline{M} = 2.71$) than the GEN high score group ($\underline{M} = 2.0$), $\underline{t}(206) = 3.91$, $\underline{p} < .01$, the GEN moderate score group ($\underline{M} = 1.81$), $\underline{t}(206) = 4.26$, $\underline{p} < .001$, and the GEN low score group ($\underline{M} = .83$), $\underline{t}(206) = 7.22$, $\underline{p} < .001$. In addition, the GEN low score group reported a significantly higher perceived average age for elders considered to be immediate family members ($\underline{M} = .83$) than the IGEN moderate score group ($\underline{M} = 2.50$), $\underline{t}(206) = 5.38$, $\underline{p} < .001$, the IGEN low score group ($\underline{M} = 2.44$), $\underline{t}(206) = 5.33$, $\underline{p} < .001$, the GEN high score group ($\underline{M} = 2.0$), $\underline{t}(206) = 4.37$, $\underline{p} = .001$, and the GEN moderate score group ($\underline{M} = 1.81$), $\underline{t}(206) = 3.41$, $\underline{p} < .05$.

The initial multiple regression analysis utilized all 102 respondents grouped under the GEN major category. The best subset of predictor variables accounted for 15.04% of their total attitude variance. The variables and their

contributions to the SMC were: total quality of contact with all known elders (.092), GEN (.061), and education (.054). The GEN major category was then divided by sex and reanalyzed.

There were 36 male GEN respondents. A very large set of predictor variables accounted for 41.12% of their total attitude variance. These variables were: total quality of contact with all known elders (.206), quality of contact with elders perceived to be immediate family members (.100), contact with elders perceived to be immediate family members (.088), cognitive dissonance regarding elders perceived to be immediate family members (.087), education (.084), omnibus contact regarding elders perceived to be immediate family members (.053), perceived average age of all known elders (.052), perceived average age of elders considered to be immediate family members (.043), IGEN (.036), and GEN (.031).

There were 66 female GEN respondents. The best predictor variable subset was comprised of three variables which accounted for 17.74% of their total attitude variance. These variables were: cognitive dissonance regarding elders perceived to be immediate family members (.180), quality of contact with elders perceived to be immediate family members (.077), and GEN (.028). Scatterplots of predicted versus obtained total attitude scores for the GEN major category are presented in Figure 6.

The best predictor variable subset for the 52 GEN high

Figure 6a. Scatterplot of predicted versus observed total attitude scores for all subjects in the GEN major category.

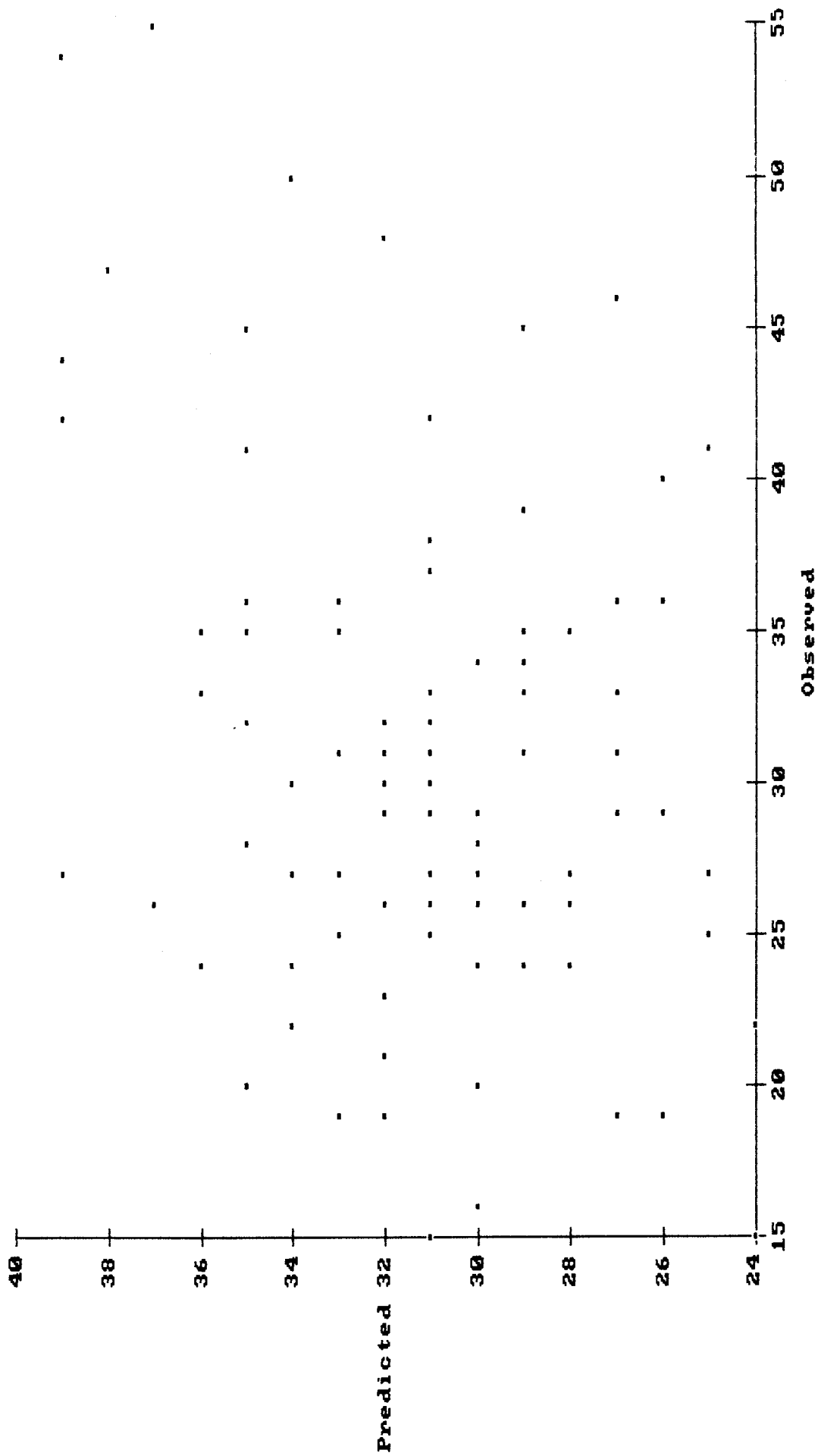


Figure 6b. Scatterplot of predicted versus observed total attitude scores for all male subjects in the GEN major category.

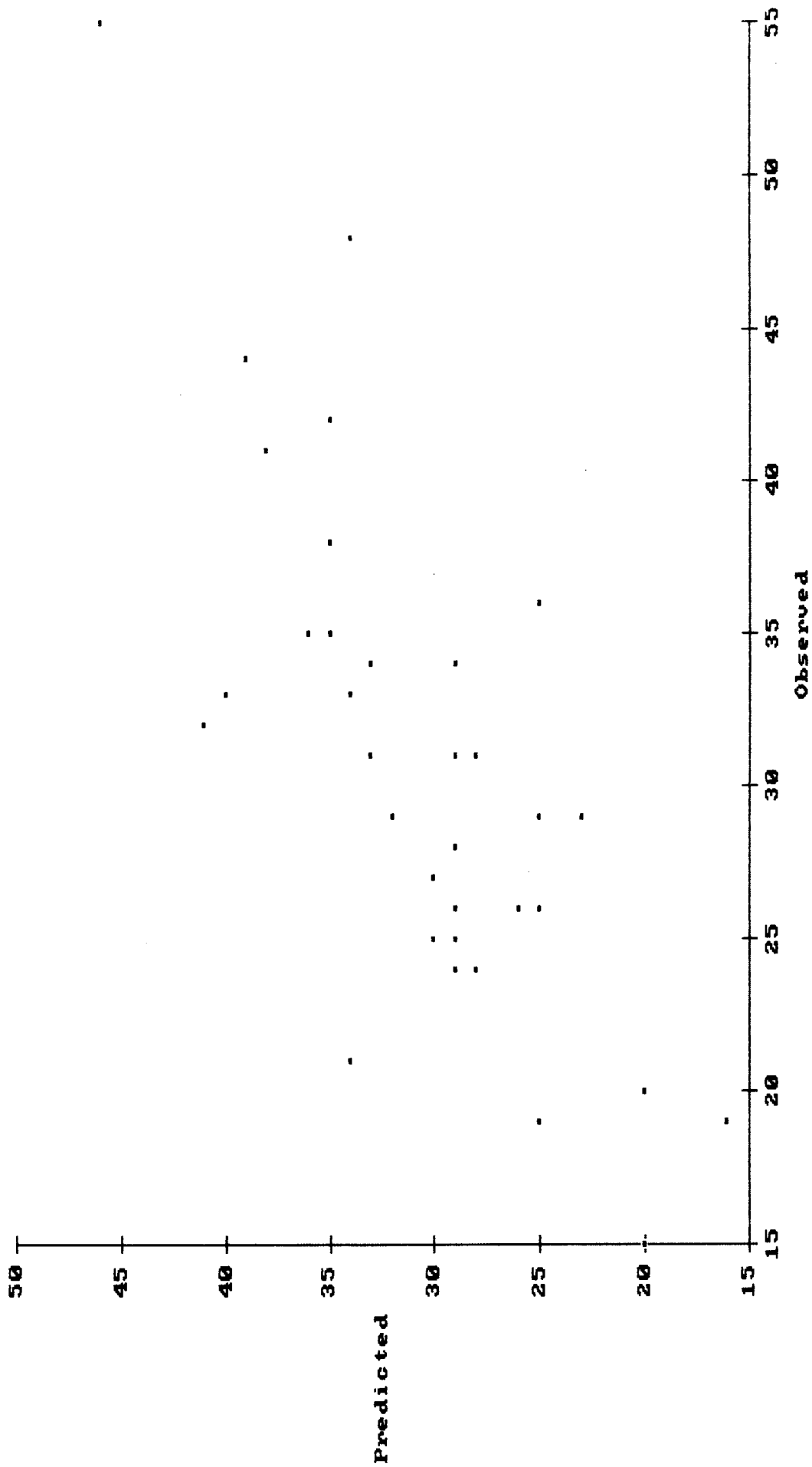
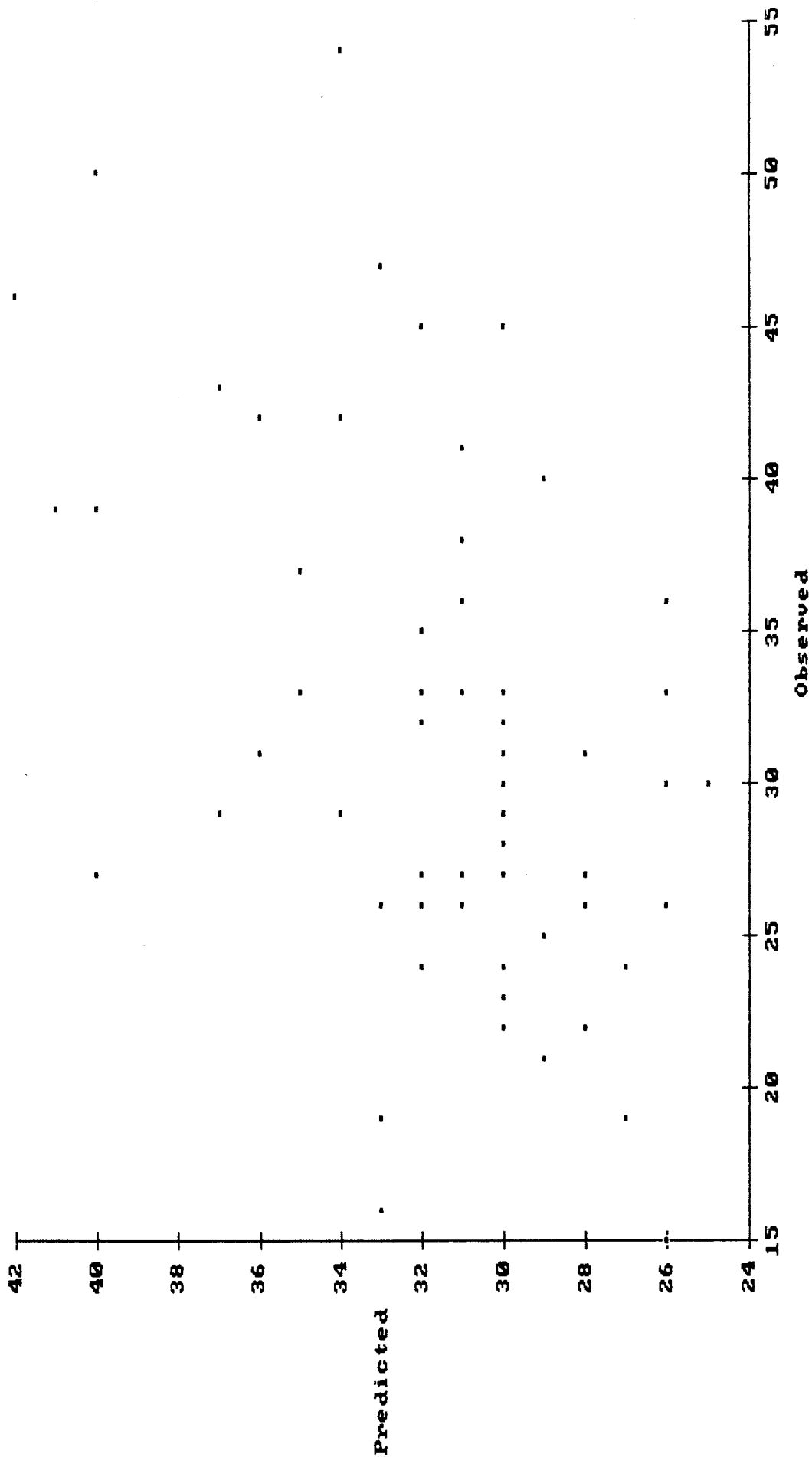


Figure 6c. Scatterplot of predicted versus observed total attitude scores for all female subjects in the GEN major category.



score respondents accounted for 2.88% of their total attitude variance. These variables were: GEN (.038) and education (.033). This group was also divided by sex and reanalyzed. There were 20 male GEN high score respondents. The best predictor variable subset was comprised of six variables which accounted for 39.94% of their total attitude variance. These variables were: IGEN (.340), quality of contact with elders perceived to be immediate family members (.287), total contact with all known elders (.213), socially desirable responding (.190), perceived average age of elders considered immediate family members (.176), and age (.106).

There were 32 female GEN high score respondents. The best predictor variable subset was comprised of 11 variables which accounted for 36.66% of their total attitude variance. These variables were: socially desirable responding (.202), education (.169), GEN (.158), total contact with all known elders (.092), omnibus contact regarding elders perceived to be immediate family members (.077), contact with elders perceived to be immediate family members (.075), age (.074), total quality of contact with all known elders (.063), cognitive dissonance regarding elders perceived to be immediate family members (.033), IGEN (.022), and quality of contact with elders perceived to be immediate family members (.017). Scatterplots of predicted versus obtained total attitude scores for the GEN high score respondents are presented in Figure 7.

The best predictor variable subset for the 33 GEN

Figure 7a. Scatterplot of predicted versus observed total attitude scores for all high-scoring subjects in the GEN Major category.

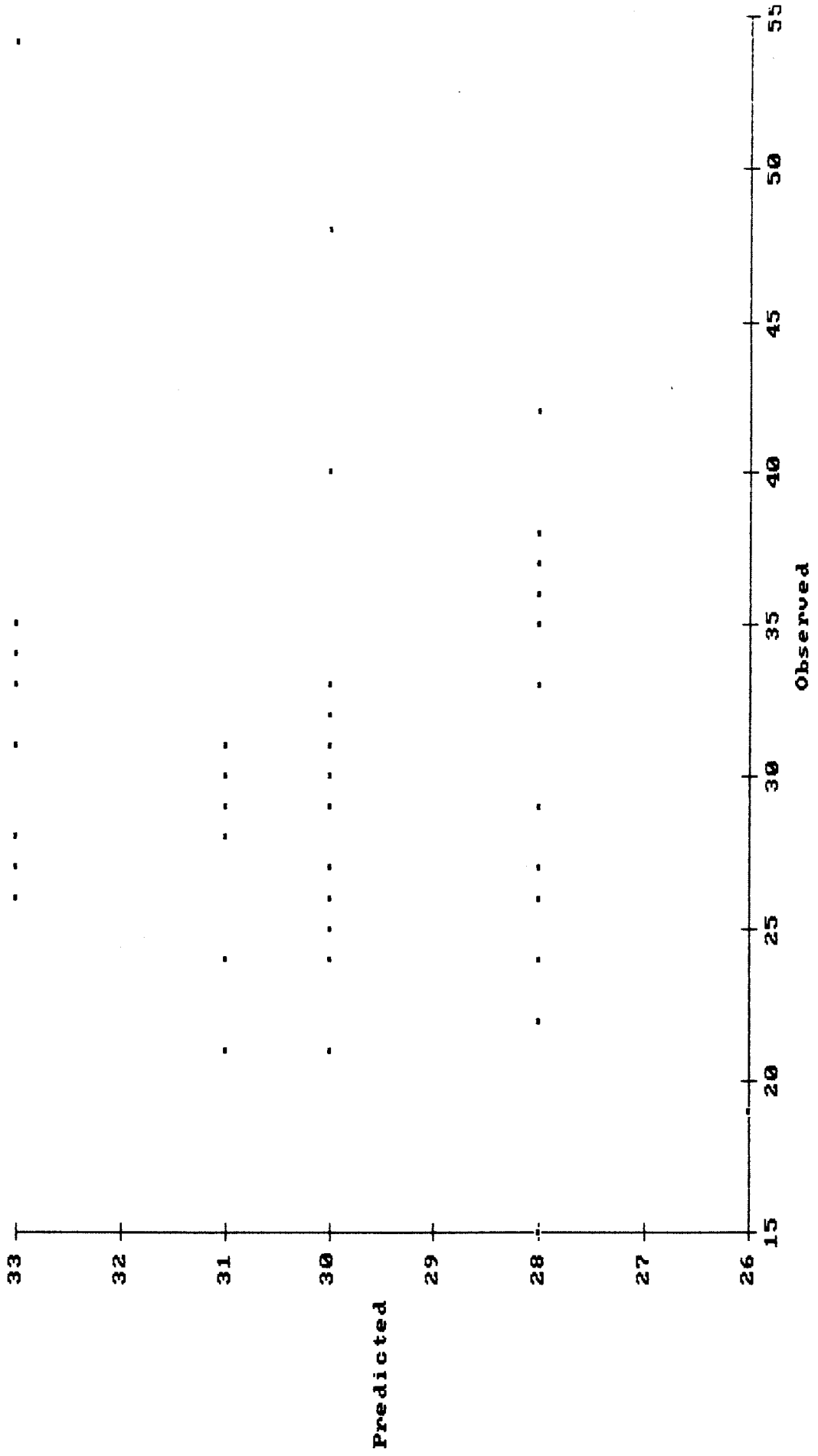


Figure 7b. Scatterplot of predicted versus observed total attitude scores for all high-scoring male subjects in the GEN major category.

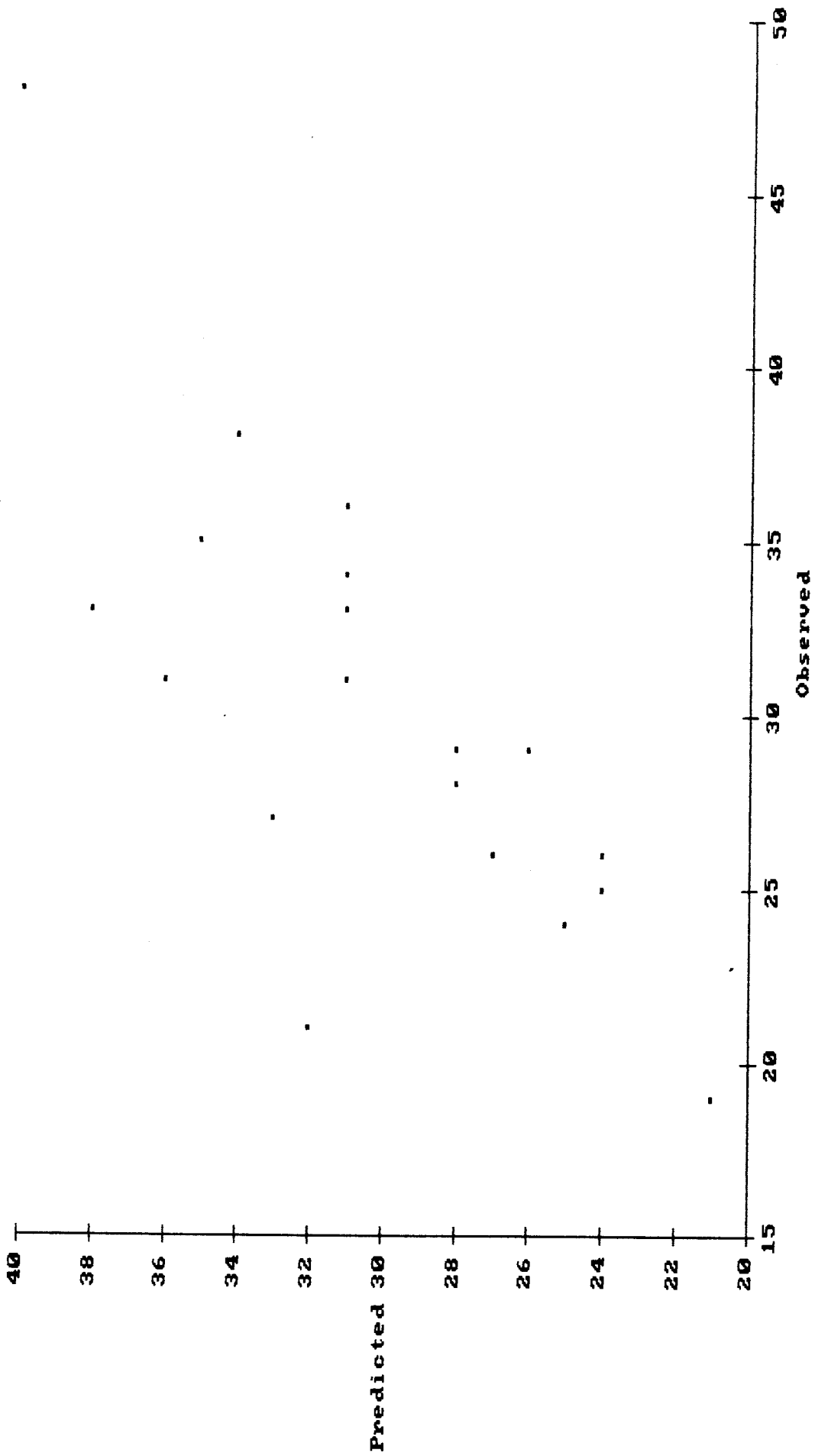
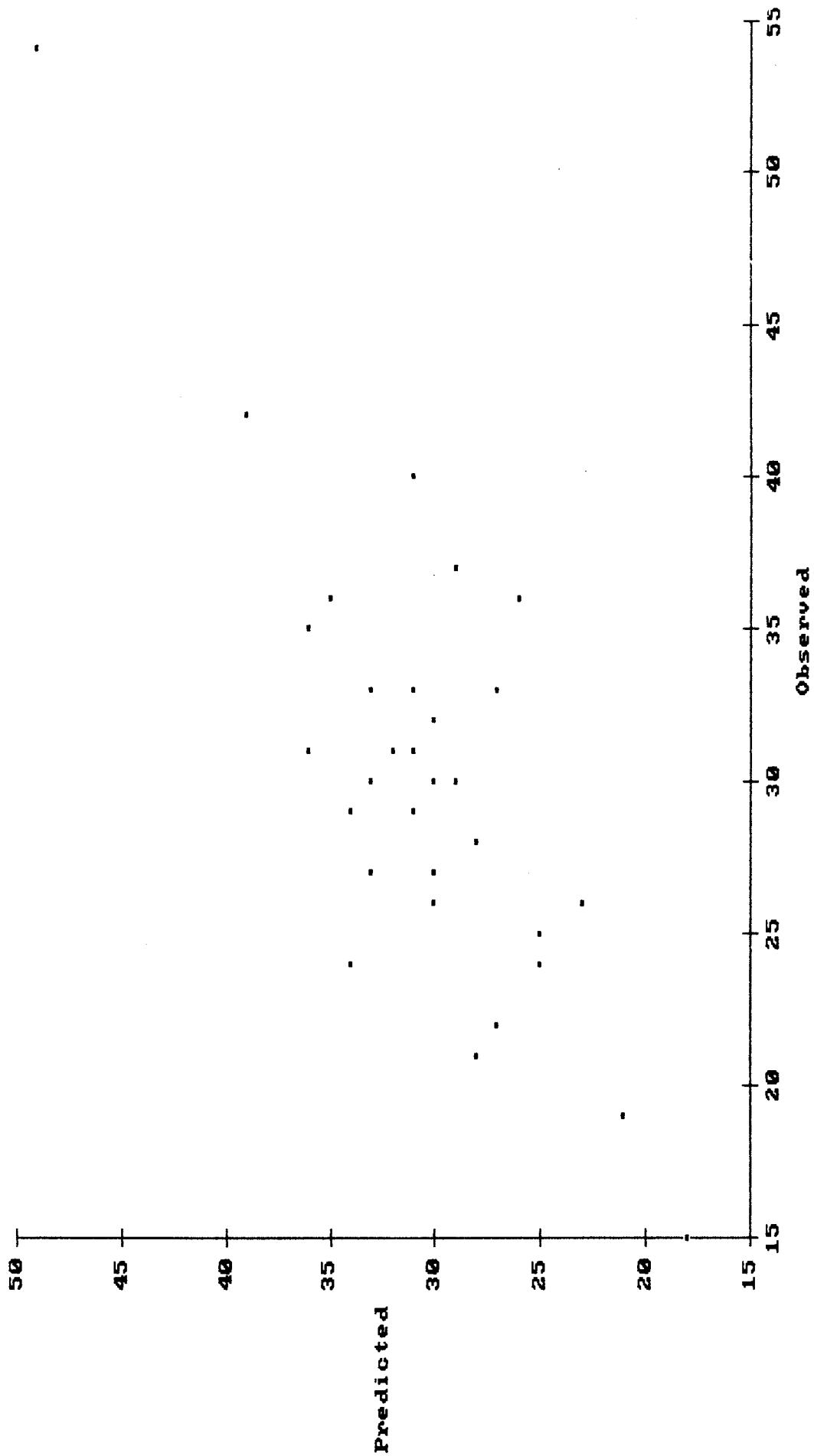


Figure 7c. Scatterplot of predicted versus observed total attitude scores for all high-scoring female subjects in the GEN major category.



moderate score respondents accounted for 47.54% of their total attitude variance. These variables were: age (.142), GEN (.123), cognitive dissonance regarding all known elders (.117), omnibus contact regarding elders perceived to be immediate family members (.116), sex (.104), total quality of contact with all known elders (.092), cognitive dissonance regarding elders perceived to be immediate family members (.085), perceived average age of elders considered to be immediate family members (.075), contact with elders perceived to be immediate family members (.060), quality of contact with elders perceived to be immediate family members (.049), and the perceived average age of all known elders (.038).

The best predictor variable subset for the 18 GEN low score respondents accounted for 83.15% of their total attitude variance. These variables were: total quality of contact with all known elders (.469), socially desirable responding (.362), education (.210), IGEN (.149), contact with elders perceived to be immediate family members (.137), cognitive dissonance regarding all known elders (.130), and total contact with all known elders (.066). Scatterplots of predicted versus obtained total attitude scores for the GEN medium and GEN low score respondents are presented in Figure 8.

The best predictor variable subset for all 110 respondents grouped under the IGEN major category accounted for 7.74% of their total attitude variance. These variables

Figure 8a. Scatterplot of predicted versus observed total attitude scores for all moderate-scoring subjects in the GEN major category.

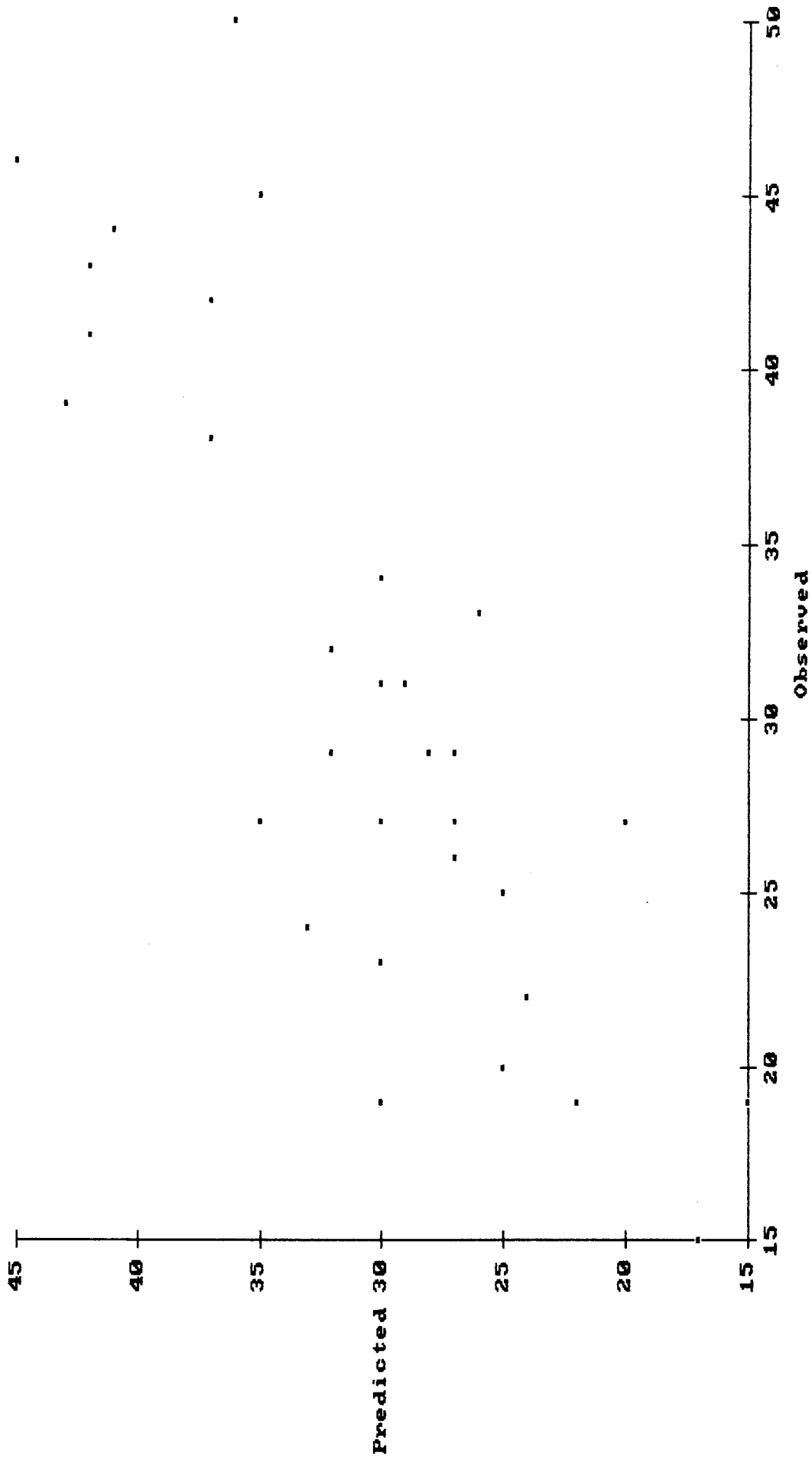
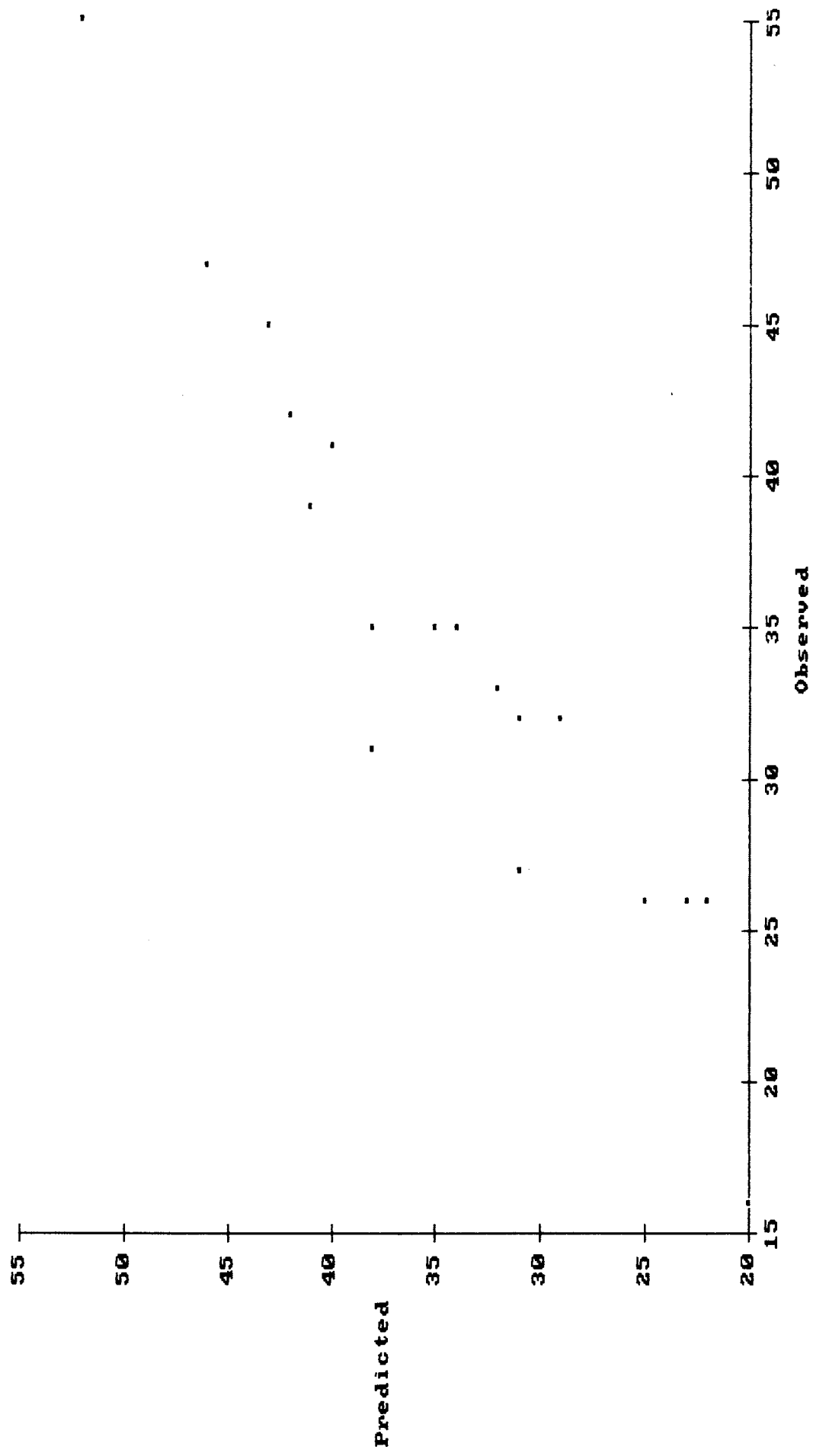


Figure 8b. Scatterplot of predicted versus observed total attitude scores for all low-scoring subjects in the GEN major category.



were: total contact with all known elders (.043), age (.042), cognitive dissonance regarding elders perceived to be immediate family members (.027), IGEN (.027), quality of contact regarding elders perceived to be immediate family members (.027), and cognitive dissonance regarding all known elders (.016). There were 44 male IGEN respondents. The best predictor variable subset was comprised of four variables which accounted for 32.32% of their total attitude variance. These variables were: IGEN (.257), quality of contact with elders perceived to be immediate family members (.184), contact with elders perceived to be immediate family members (.112), and omnibus contact regarding elders perceived to be immediate family members (.062).

There were 66 female IGEN respondents. Their best predictor subset was comprised of one variable -- cognitive dissonance regarding elders perceived to be immediate family members (.019). This variable accounted for 0.33% of their total attitude variance. Scatterplots of predicted versus obtained total attitude scores for the IGEN major category respondents are presented in Figure 9.

The best predictor variable subset of the 63 IGEN high score respondents accounted for 13.3% of their total attitude variance. These variables were: quality of contact regarding elders perceived to be immediate family members (.131), total contact with all known elders (.074), total quality of contact with all known elders (.037), sex (.033), and IGEN (.028).

Figure 9a. Scatterplot of predicted versus observed total attitude scores for all subjects in the IGEN major category.

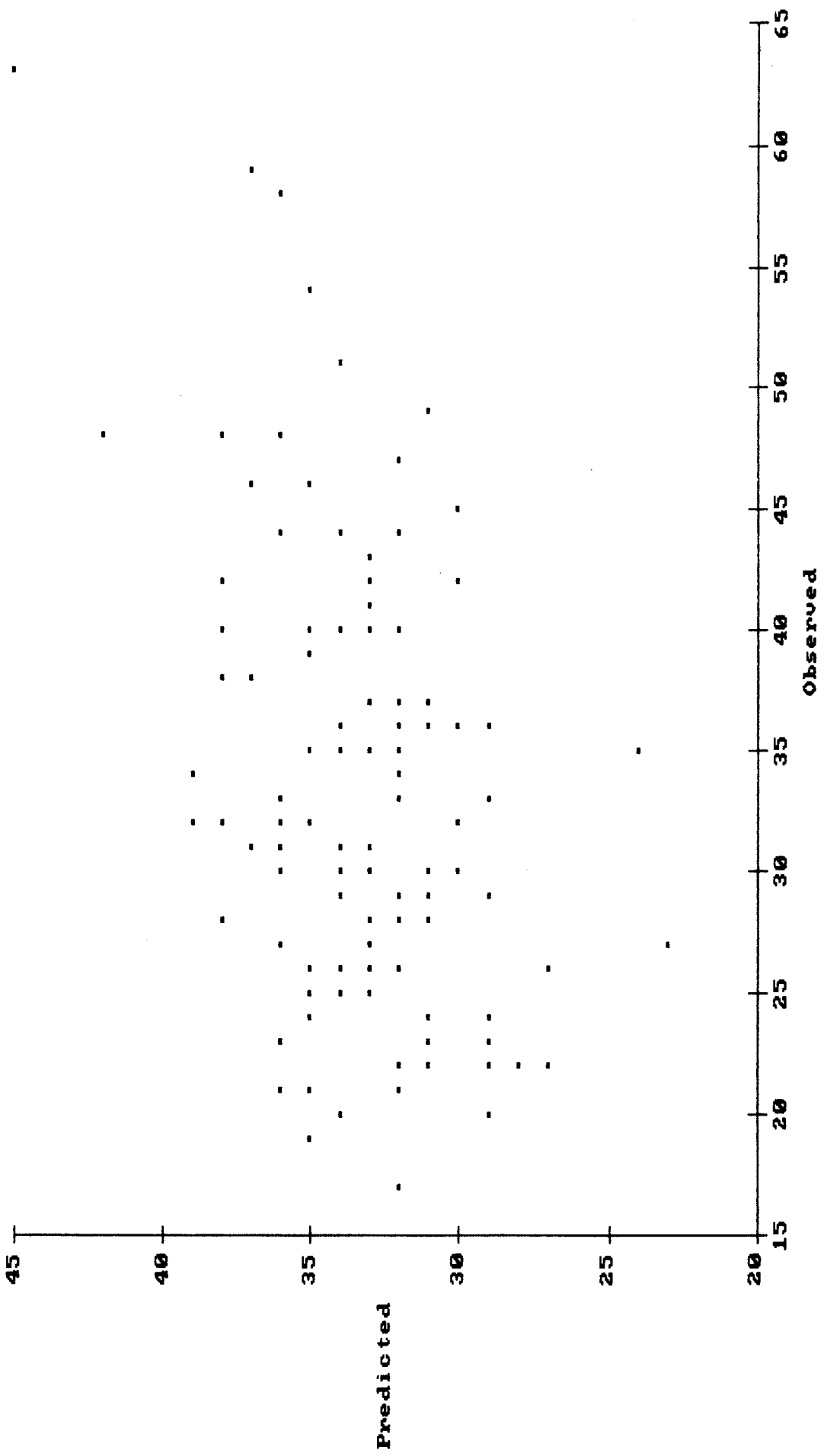


Figure 9b. Scatterplot of predicted versus observed total attitude scores for all male subjects in the IGEN major category.

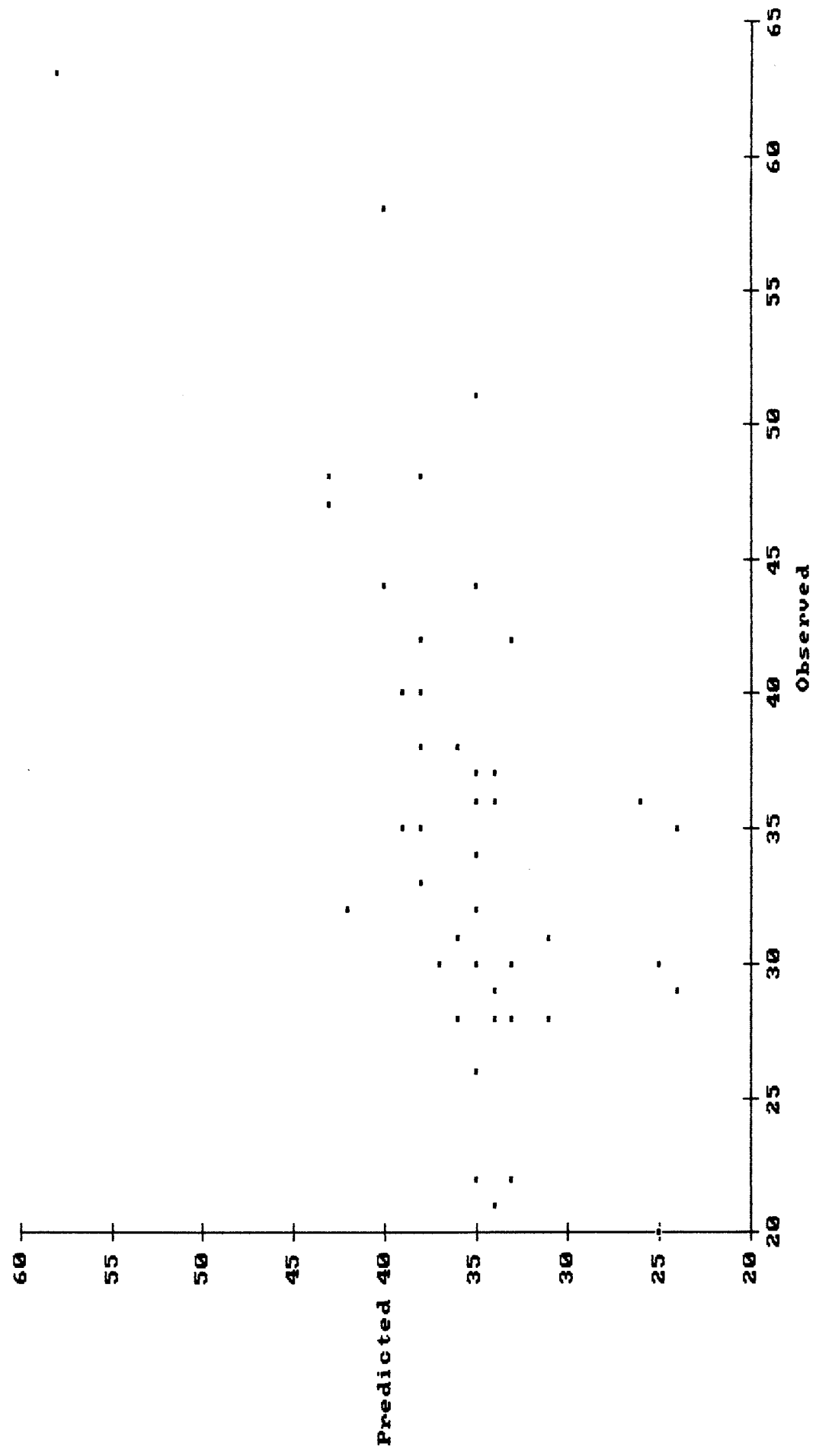
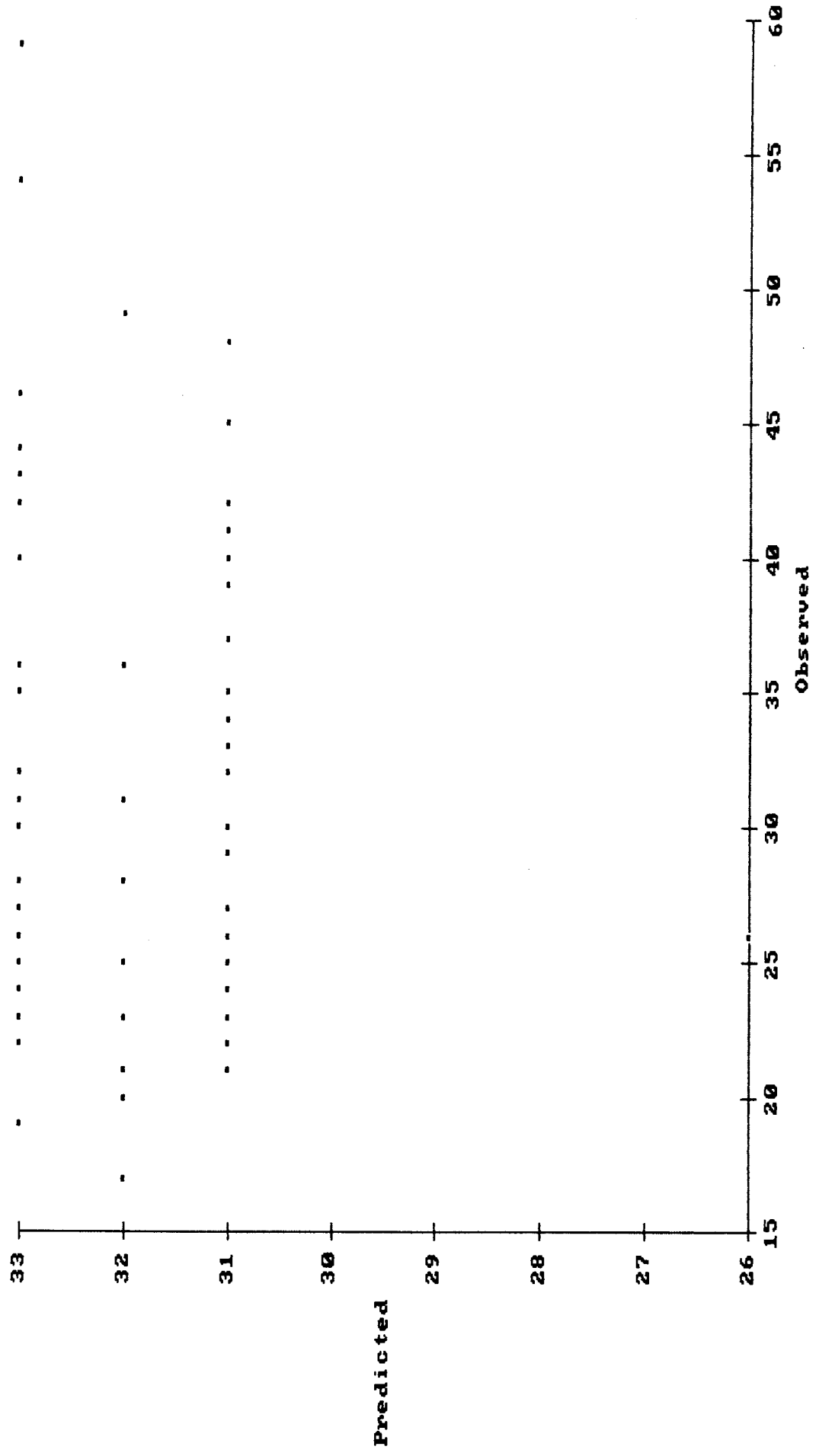


Figure 9c. Scatterplot of predicted versus observed total attitude scores for all female subjects in the IGEN major category.



There were 30 male IGEN high score respondents. The best predictor subset for these individuals was comprised of eight variables which accounted for 36.52% of their total attitude variance. These variables were: quality of contact regarding elders perceived to be immediate family members (.280), IGEN (.202), contact with elders perceived to be immediate family members (.195), omnibus contact regarding elders perceived to be immediate family members (.141), cognitive dissonance regarding all known elders (.049), GEN (.044), cognitive dissonance regarding elders perceived to be immediate family members (.041), and age (.031).

There were 33 female IGEN high score respondents. Their best predictor subset was comprised of five variables which accounted for 24.77% of their total attitude variance. These variables were: socially desirable responding (.182), total quality of contact with all known elders (.145), age (.039), education (.038), and cognitive dissonance regarding all known elders (.027). Scatterplots of predicted versus obtained total attitude scores for the IGEN high score respondents are presented in Figure 10.

The best predictor variable subset for the 22 IGEN moderate score respondents accounted for 53.44% of their total attitude variance. These variables were: perceived average age of elders considered to be immediate family members (.503), education (.240), total quality of contact with all known elders (.191), omnibus total contact

Figure 10a. Scatterplot of predicted versus observed total attitude scores for all high-scoring subjects in the IGEN Major category.

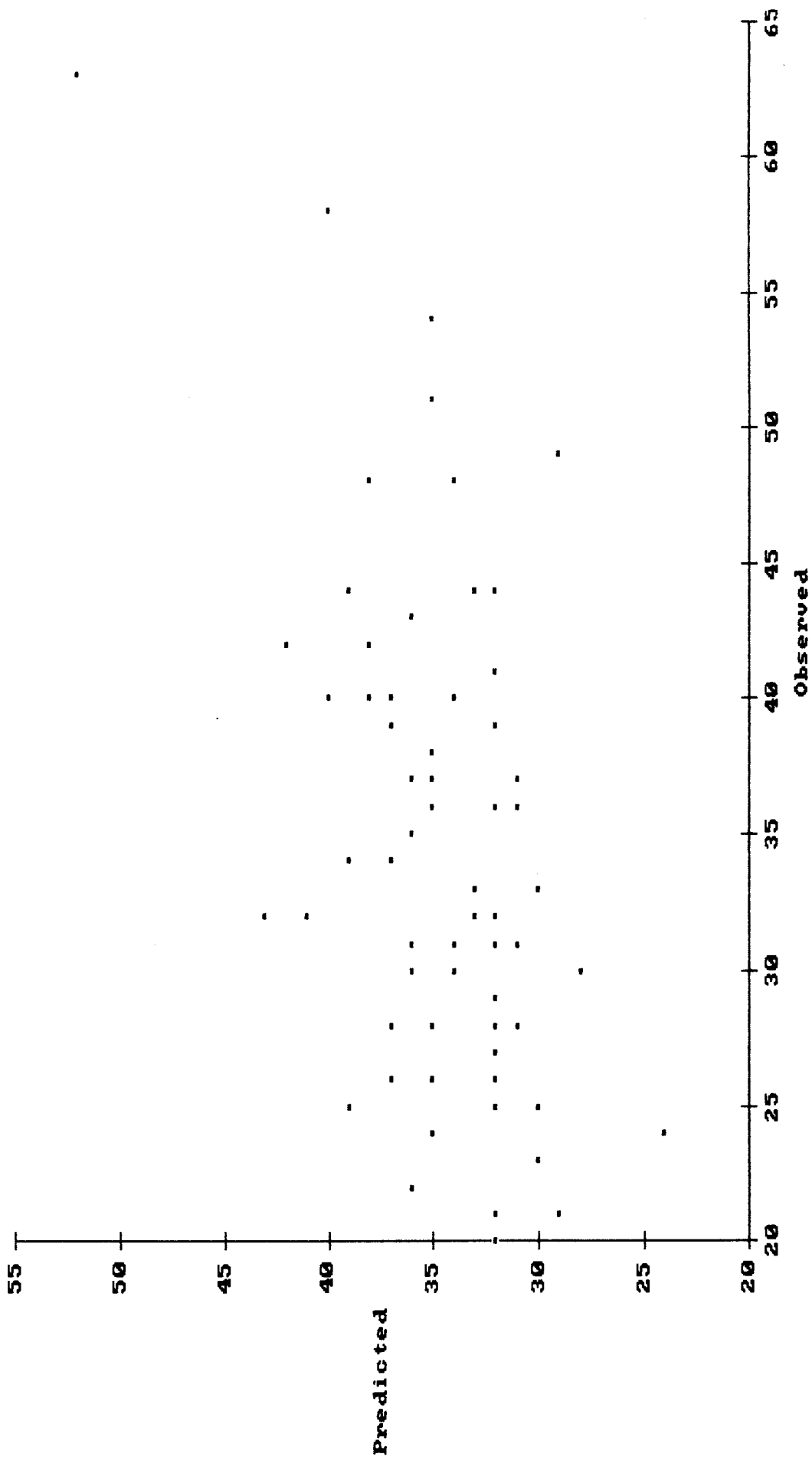


Figure 10b. Scatterplot of predicted versus observed total attitude scores for all high-scoring male subjects in the IGEN major category.

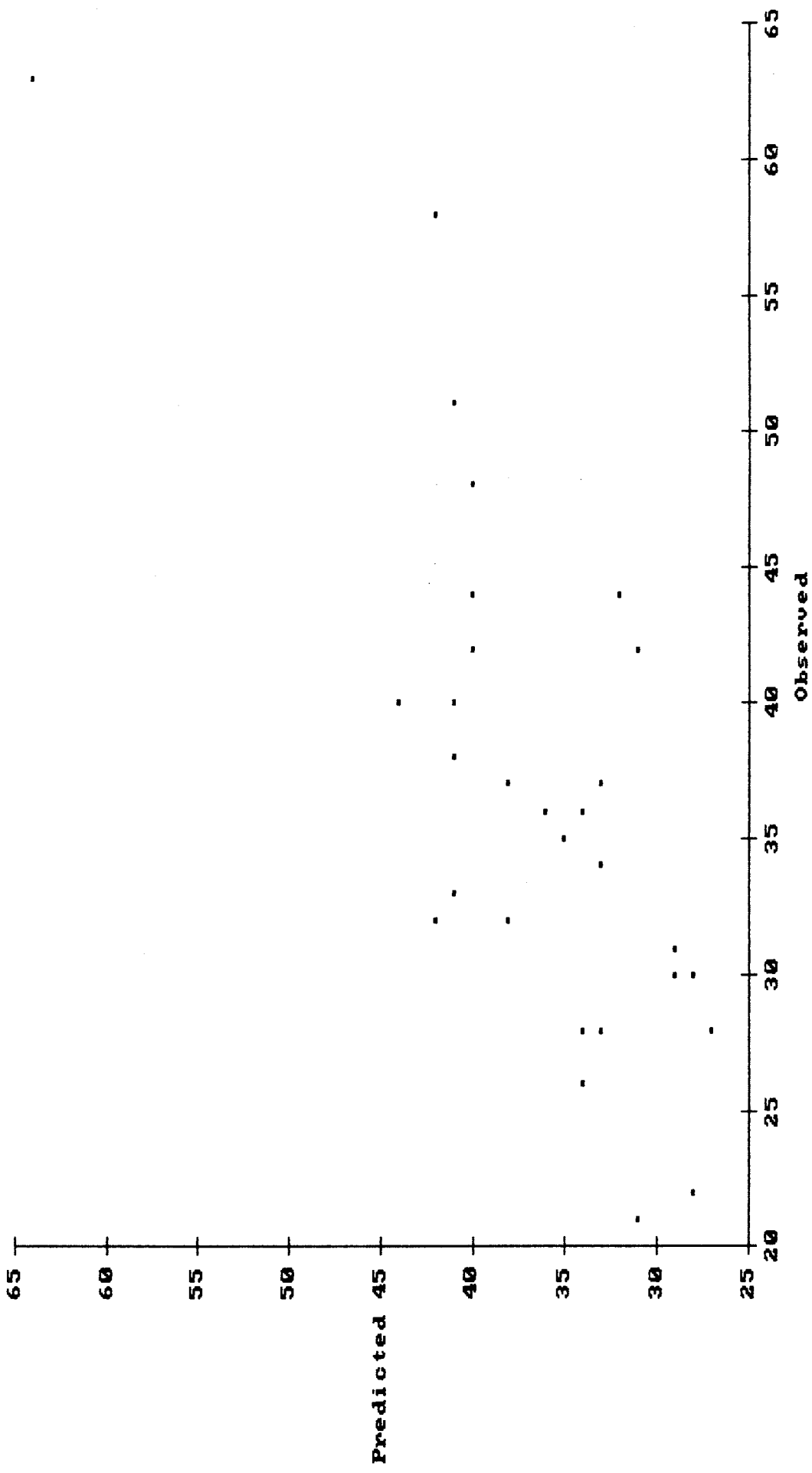
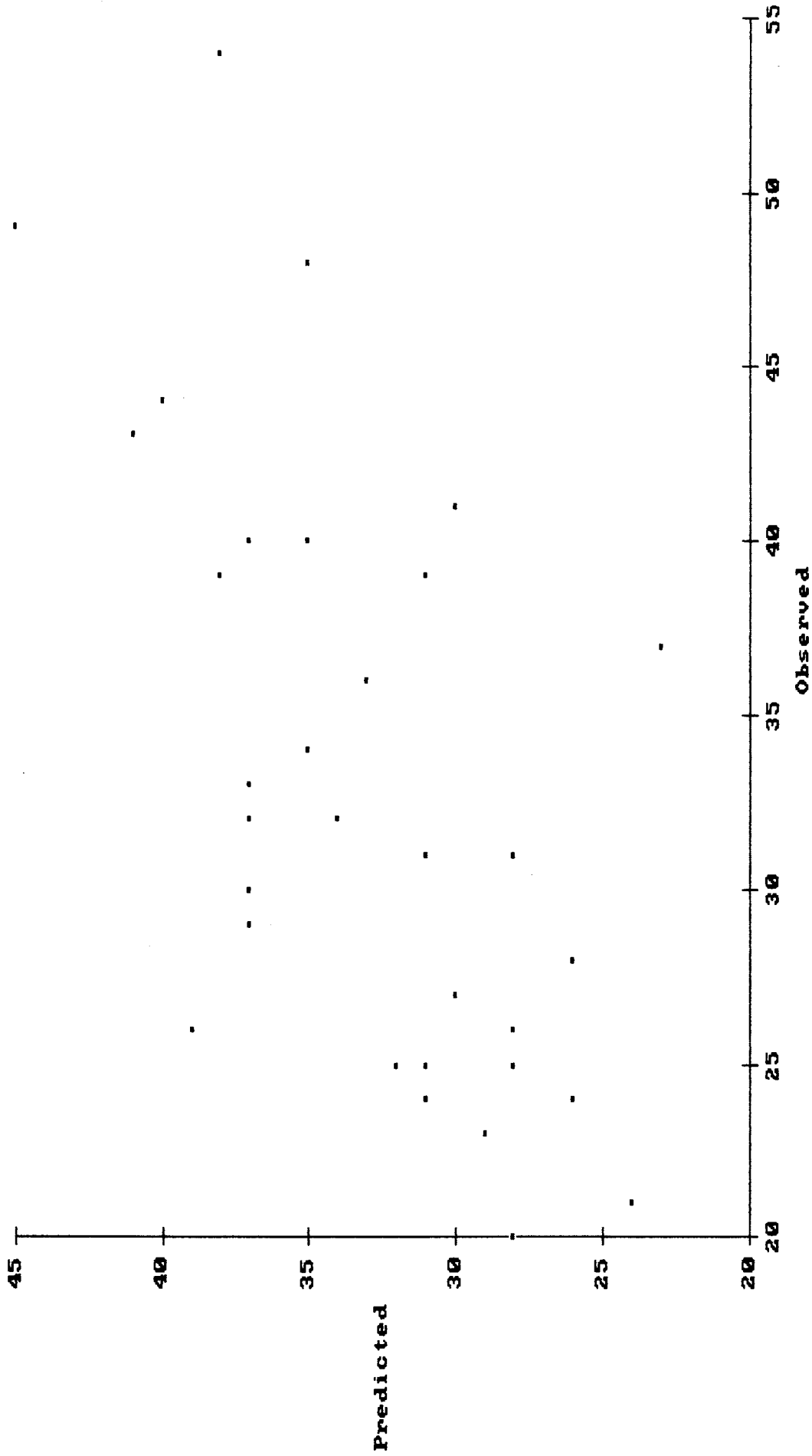


Figure 10c. Scatterplot of predicted versus observed total attitude scores for all high-scoring female subjects in the IGEN major category.



regarding all known elders (.139), cognitive dissonance regarding elders perceived to be immediate family members (.127), contact with elders perceived to be immediate family members (.124), total contact with all known elders (.111), omnibus contact regarding elders perceived to be immediate family members (.097), socially desirable responding (.090), sex (.090), and GEN (.040).

Finally, the best predictor variable subset for the 25 IGEN low score respondents accounted for 53.08% of their total attitude variance. These variables were: cognitive dissonance regarding all known elders (.266), cognitive dissonance regarding elders perceived to be immediate family members (.189), age (.063), quality of contact with elders perceived to be immediate family members (.061), and socially desirable responding (.055). Scatterplots of predicted versus obtained total attitude scores for the IGEN medium and low score respondents are presented in Figure 11.

Figure 11a. Scatterplot of predicted versus observed total attitude scores for all Moderate-scoring subjects in the IGEN major category.

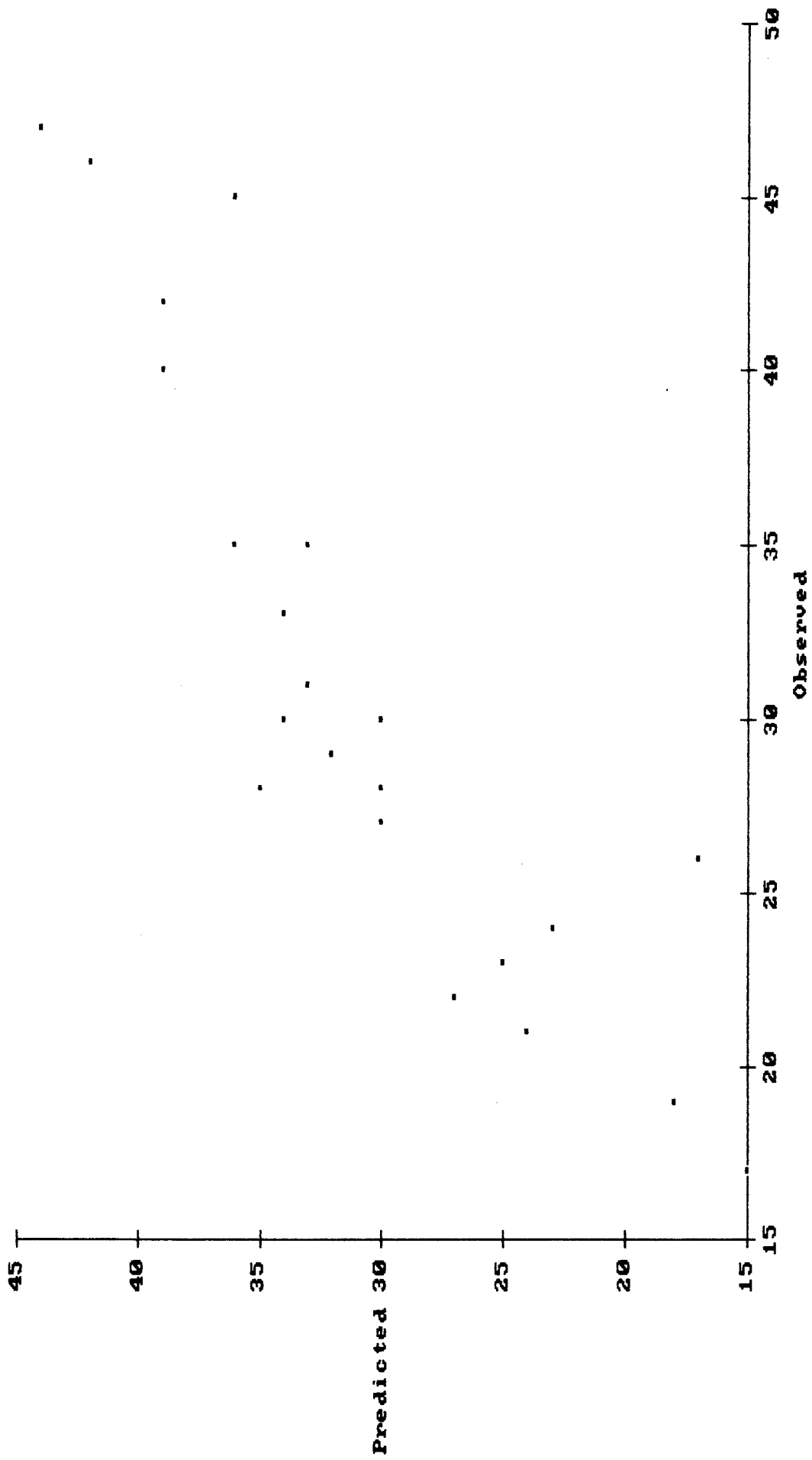
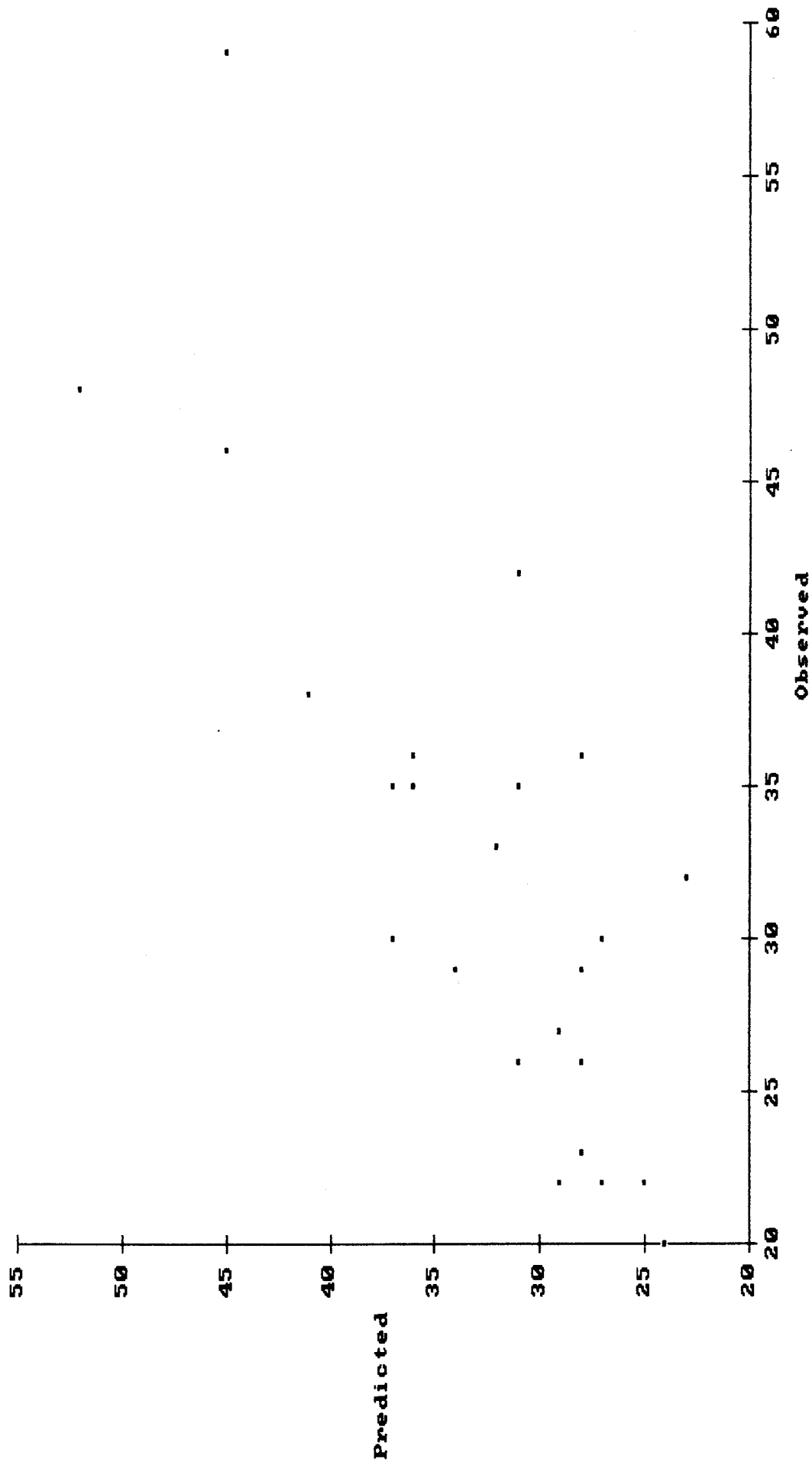


Figure 11b. Scatterplot of predicted versus observed total attitude scores for all low-scoring subjects in the IGEN major category.



CHAPTER IV

DISCUSSION

The purpose of the present study was to examine developmental trends in American attitudes toward the elderly across the pre-elderly adult lifespan. Of particular interest was the contribution of quality and quantity of direct personal contact with older persons in shaping attitudes.

To this end, no significant differences were found between age groups on any of the attitude scales. In fact, obtained group means tended to be highly similar, even when the age groups were divided by sex. The average total attitude score for the entire sample was 32.22 on a 72 point scale, with scores ranging from 12 to 84 points (higher scores indicated more negative attitudes). It is clear that on average, attitudes toward the elderly were found to be moderately positive.

In addition, total attitude scores falling within one standard deviation above the grand mean were also positive in nature. Therefore, this result contradicts earlier findings (e.g., Harris, 1975; McTavish, 1971; Tuckman & Lorge, 1953) of negative attitudes toward the elderly in younger populations.

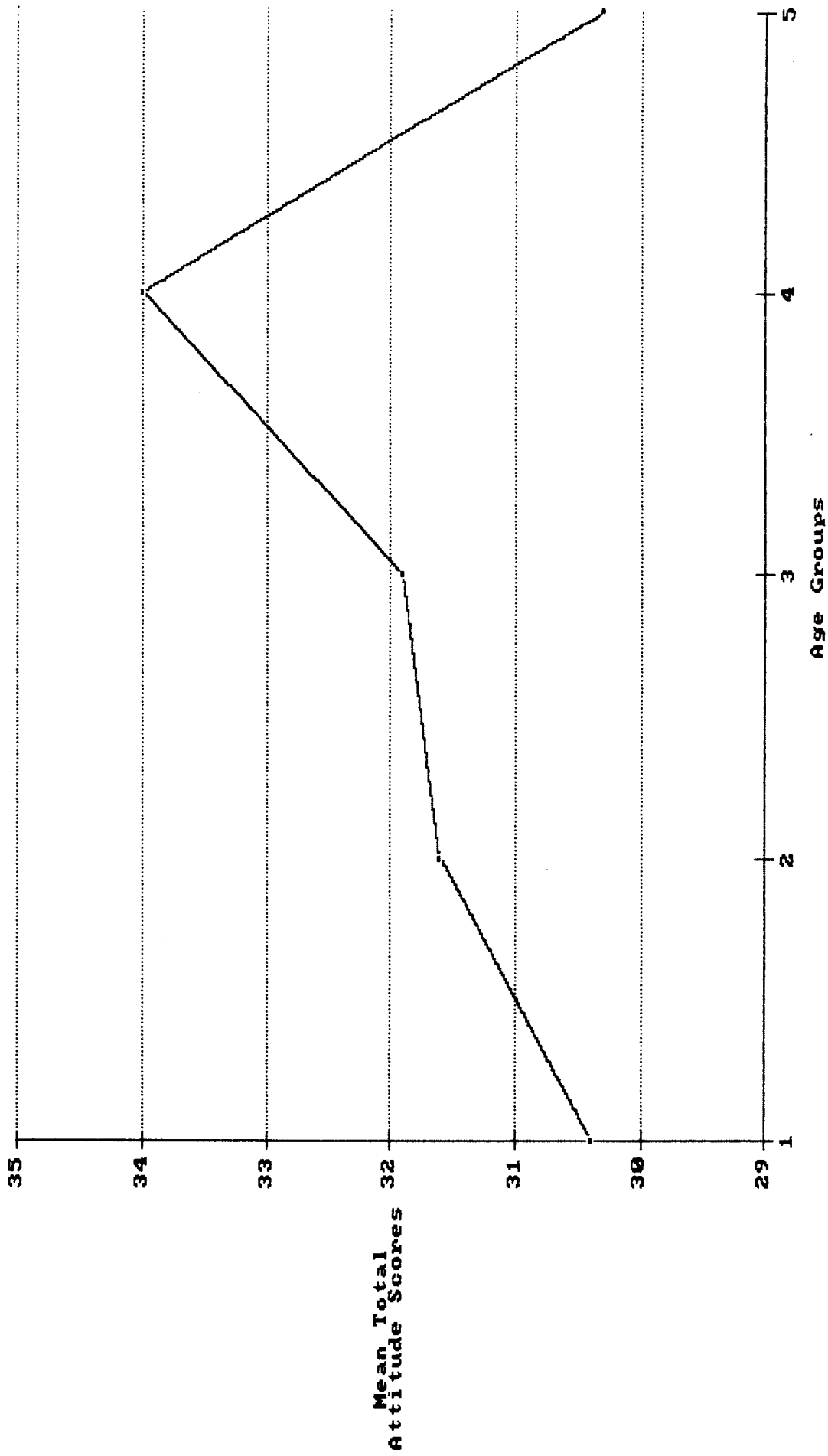
Although average total attitude scores were highly similar across age groups, a pairwise scatterplot of these variables clearly indicated the presence of three extreme outliers in both the youngest and oldest age groups. These

outlier scores were removed and average total attitude scores recalculated. The resulting set of average scores were then replotted against age groups in Figure 12.

This plot would seem to support the self-esteem hypothesis presented earlier. On average, pre-elderly attitudes were most positive in the youngest age group. They then became increasingly negative in the second and third groups, rising to their most negative level in those individuals aged 54-64 years. This negative progression of attitudes with age could represent attempts to maintain positive self-esteem by increasing attitudinal biases toward elders. Based on the self-esteem hypothesis, such an occurrence would be the result of ingroup-outgroup distinctions which create discriminatory intergroup social relations. As expected, attitudes tended to be most negative in age group four, indicating this group's struggle to maintain self-esteem in the face of a rapidly approaching elderly status. Finally, self-esteem was again bolstered in the elderly age group itself through the expression of more positive attitudes toward the age category to which they now belonged. This average level of positive attitude approached that of the youngest age group.

Although interesting, this finding must be interpreted with caution as sample sizes of the various age groups were small (especially that of the oldest group), as were the variations in level of average total attitude across groups. However, should this result be replicated with larger

Figure 12. Mean total attitude scores across all age groups, adjusted for outliers.



numbers, it would represent a tangible demonstration of increasing negative attitudes with age in pre-elderly individuals within American society.

It was previously mentioned that attitudes toward old people in general were found to be moderately positive in the present study. However, an additional result raised some concern regarding attitudes toward elders known on a personal basis -- that on average, respondents considered all known elders to be very moderately similar to elders in general. This raises the possibility that attitudes toward known elders may differ from those toward elders more generally. It would therefore be interesting to determine whether such a difference exists, and whether attitudes toward known elders are more or less positive than those toward elders in general.

The total attitude scores obtained in the present study did not seem to be directly related to the amount of individual contact or quality of contact with elderly persons. This was most clearly the case with the pre-elderly groups -- although average levels of contact and quality of contact both increased with age, average total attitudes remained quite stable (becoming more negative in the 54-64 age group).

Rothbart and John's (1985) cognitive-processing model indicated that this should be the case, as experiences with the elderly must be associated with a superordinate stereotypic category to affect attitude change. To test

this idea further, two groups of respondents were created -- both with moderate to high levels of contact, and quality of contact in the top third of the present sample (contact level of 12 or greater, quality of 14 or greater). These groups differed on the degree to which they perceived known elders to be similar to elders in general.

Respondents in group one were in the top third of the sample on this dimension (GEN of 19 or greater) while respondents in group two were in the bottom third (GEN of 10 or less). Computed average total attitude scores for the low and high GEN groups were 35.25 and 31.33 respectively. Although the difference between these two means was not significant (and was based upon 29 respondents), it very tentatively suggests that generalization may play a role in influencing attitudes.

Clearly, numerous factors interact in a very complex manner to produce observed attitudes. It is important to note that Rothbart and John's (1985) model is dynamic in nature, focussing on attitude change. As the present study represents a static measure of attitudes, these could only be expected to differ in magnitude between the two groups mentioned above. However, Rothbart and John would focus on the potential for attitude change within the same individuals over time.

Item-sum correlations (r) on the Knowledge and Attitude Questionnaire were generally lower than those obtained by Kogan (1961). This was likely a result of the

highly diverse sample utilized in the present study. Kogan's respondents were introductory psychology students, and two of his three samples were entirely male. However, the present r did approximate Kogan's most conservative findings, which ^{is} were significant beyond the .01 level of probability (for Kogan's largest sample of 186 respondents, the magnitude of the r ^{is} required for statistical significance were .14 at the .05 level, and .19 at the .01 level).

Finally, it is interesting to note that with one exception (item 10) respondents in the present study demonstrated more positive attitudes toward the elderly than Kogan's (1961) original samples. This may represent a trend toward more positive attitudes since the time of Kogan's study. Although this issue is clouded by discrepancies in sample composition, it is encouraging to note that the youngest age group in the present study (comparable in age to Kogan's college students) reported the most positive attitudes toward the elderly.

The reliability of the present questionnaire was excellent. As expected, the obtained Cronbach's Alpha of .25 indicated that the attitudinal items did not measure a single construct. Although the KAQ measured attitudes toward the elderly, four relatively independent domains were investigated.

As previously mentioned, the five age groups in the present study did not differ significantly by sex or level

of education. However, as Figure 1 clearly illustrates, there were more females in all but the oldest age group. This does not represent a bias on the part of the present researcher. The large proportion of females aboard the ferryboat on both trips was immediately noted, especially within the younger age ranges. The present researcher was careful to survey all areas of the boat excluding the casino and formal dining lounge. The survey process continued for most of the sailing time (approximately 5 hours per trip) to allow passengers initially seated in non-surveyed areas an opportunity to participate as they moved about the boat.

The average level of education across all age groups was high at 2.64, indicating that a large proportion of the respondents had attended college or some other post-secondary institution. This was not surprising, as the survey occurred during a three-day holiday weekend for students in the United States. The result was a highly educated sample which was unrepresentative of the general United States population in this regard.

It is interesting that education level was the only variable in the present study to produce a significant difference on any attitude scale. Respondents with an education at the secondary school level reported significantly higher average levels of contact quality and omnibus contact with all known elders, and, on average, had contact with younger elders than the university-educated respondents.

Despite these differences, the university-educated respondents demonstrated a significantly lower average level of stereotypes and myths, and an average total attitude score which was almost significantly more positive than those respondents with an education at the secondary school level. Thus, these attitudinal differences appear related to significant differences in average levels of age and education.

To this end, the university-educated group of respondents had an average age which approximated that of age group two (30-41 years) while this same figure for respondents with a secondary school education approximated that of age group three (42-53 years). As previously noted, in the present study average total attitudes tended to become more negative with increasing age. Thus, the more positive attitudes of the university-educated respondents could be the result of younger age or continued education, or some combination of both.

However, two factors point to the importance of education level on attitudes regardless of age. First, education level figured more prominently than age in the prediction of total attitude scores -- especially after subjects were divided on the basis of GEN and IGEN. Second, education level significantly differentiated respondents on the stereotypes and myths attitude scale. This was expected, as myths and stereotypes typically result from a lack of knowledge regarding the target object or group.

However, it may not be the case that the university-educated have learned more factual information about the elderly. Exposure to such information would likely be restricted to students of the humanities, especially those concerned with human development. Instead, these individuals have probably internalized the idea that beliefs and attitudes should be founded upon empirical facts, and that an absence of such knowledge precludes or tempers the formation of strongly held beliefs and attitudes. Therefore, the difference between these groups may be found in their learned method of viewing the world about them. However, other variables likely differentiate these two groups (such as socio-economic status), and to suggest that the obtained attitudinal difference was purely a result of education would obviously be erroneous.

It is interesting that socially desirable responding was slightly elevated in age group four. This is the group which demonstrated the most negative average total attitude score. It is possible these individuals experienced the greatest level of discomfort with the present questionnaire. As it would be socially undesirable to express strongly negative attitudes toward the elderly, this group may have compensated by responding in a more favorable manner.

Thus, the increase in socially desirable responding within group four suggests that the reported attitudes of this group may be spuriously positive. Finally, although there were no significant differences across age groups, the

overrepresentation of younger adults in the current sample almost certainly influenced the obtained total attitude grand mean in an overly positive direction.

The present results suggest that total contact and quality of contact with elders are not directly related to attitudes. Total contact steadily increased with age while quality of contact remained stable across groups 1 to 3, rising slightly in groups 4 and 5. The omnibus total contact scores significantly differentiated the two youngest and oldest groups. Yet average total attitudes remained relatively stable with increasing age. In addition, groups four and five demonstrated the largest intergroup difference in average total attitudes, with nearly identical omnibus total contact scores.

The perceived average age of all known elders across the five age groups was very young, which is not surprising if one assumes that mobility and the ability to maintain contact with other persons decreases in old age. However, based on the present study, an elderly person's level of contact with younger persons would be expected to decrease rapidly after age 70. Considering that the average lifespan of elders in the United States was 74.9 years in 1988 (U.S. Bureau of Census, 1990), the present finding is somewhat disturbing.

Reported levels of contact with elders perceived to be immediate family members generally increased with age, particularly in group three. This group represents middle-

aged individuals whose parents are likely within the 65-75 year age range. It is possible that the slight rise in negative attitudes toward the elderly in group four is the result of further aging of elderly parents with a corresponding decrease in level of mobility and increased illness. However, groups four and three reported highly similar levels of contact quality, which had been adjusted for level of illness and required caregiving/financial support. Therefore, of the theoretical positions examined in the present study, the self-esteem hypothesis remains the best explanation of the observed results.

Levels of cognitive dissonance were generally stable across the five age groups, and therefore did not correlate with observed attitude scores. However, males in group four reported significantly higher levels of cognitive dissonance regarding elders perceived to be immediate family members than males in group two, or females in groups one and four.

It was expected that those individuals obtaining a high, positive perceived ingroup-outgroup age difference score would demonstrate more negative attitudes toward the elderly than those with lower scores. This appears to have been the case with the group four males, whose average total attitude score was the most negative obtained in the present study (36.3). However, the relationship between cognitive dissonance and total attitude is far from perfect. Although the groups noted above differed significantly on cognitive dissonance, they were not most discrepant on average total

attitude.

The initial attempt to predict respondents' scores on the four attitude domains and combined total attitude score produced very disappointing results, consistently accounting for less than 10% of the total variance. Adjustments made to the set of predictor variables produced a more parsimonious dataset but little improvement in predictive power. However, the prediction of total attitude scores for males was somewhat more successful. A large set of predictors accounted for 15.5% of the total variance for the male respondents, while one variable accounted for 4.2% of the female respondents' variance. The unusual shape of the plotted relationship in Figure 2b was a result of the one variable (cognitive dissonance regarding elders perceived to be immediate family members) found to predict attitudes to any extent. For the most part, scores on this cognitive dissonance variable ranged from 0 to 3 points.

The analysis of all pairwise scatterplots of the predictor and dependent variables, and examination of standardized/deleted residuals and Mahalanobis distances revealed no unusual relationships which could account for the poor prediction results.

The principle components analysis and scree test suggested that the rather large set of variables in the present study could reasonably be reduced to four uncorrelated principle components accounting for approximately 57% of the total variance. These components

were: 1) contact with and various perceptions of elders considered immediate family members; 2) attitudes toward the elderly; 3) total quality of contact with all known elders; 4) cognitive dissonance regarding all known elders.

The demographic and social desirability variables were expected to demonstrate low squared multiple correlations (SMC) and communalities compared to the remaining variables (which were expected to relate to attitudes in some manner). However, the generalization variable (GEN) also demonstrated a low SMC and very low communality, indicating its uniqueness vis-a-vis more attitude-related variables. As such, this variable could potentially behave in a manner similar to the more demographic variables on which subjects were grouped. In sum, the principle components analysis indicated that nearly all of the attitude-related variables (excluding perceived age of all known elders and GEN) were contributing to the total variance.

As a final attempt to predict total attitude scores, respondents were divided into six groups based upon their scores on the GEN and IGEN scales. Rothbart and John (1985) theorized that one of the factors necessary in affecting belief or attitude change is the association of experiences with a target group to a superordinate stereotypic category. The uniqueness of GEN as a variable, and the tentative finding that it may play a role in influencing total attitudes contributed to the rationale for this analysis. Finally, although IGEN did not demonstrate a low SMC and

communality vis-a-vis attitude related variables, it was also utilized as a grouping variable based on its conceptual similarity to GEN.

GEN/IGEN Group Differences

As an initial result, it was interesting that the moderate GEN and IGEN groups were mostly comprised of female respondents. If these generalization variables do play a role in attitude formation and change, the high proportion of females scoring in the moderate range on GEN and IGEN may partially explain the previous difficulty in predicting their attitudes.

Three of the six GEN/IGEN groups differed significantly from a fourth on the perceived average age of all known elders. Based on this result, it seems the perceived average age of known elders differed significantly between individuals scoring in the moderate to high range on the GEN scale and individuals scoring similarly on the IGEN scale. Specifically, the GEN respondents considered all known elders to be significantly older on average than the IGEN respondents' perception of the average age of elders considered immediate family members.

Quite simply, ingroup elders were perceived to be young when considered similar to all elders. However, when ingroup elders were perceived to be older, all known elders were considered similar to elders in general. This result suggests that respondents were less willing to identify elders as members of their ingroup as the age of these

elders increased.

Doise (1978) stated that individuals perceive themselves as similar to ingroup members and different from outgroup members. If advanced age and an elderly status are devalued by younger people, these individuals would be less and less likely to consider aging elderly family members a part of their ingroup over time. Thus, positive distinctiveness would be maintained for the ingroup when comparing it with the outgroup (Tajfel & Turner, 1979).

The obtained significant differences between GEN/IGEN groups on cognitive dissonance pertaining to elders perceived to be immediate family members are less clear in meaning. Those groups with lower cognitive dissonance scores were expected to demonstrate lower, more positive average total attitude scores. Such was the case between the GEN high score group and IGEN low score group. However, this relationship was reversed in two of the three remaining significant group differences.

The IGEN high score and GEN low score group provided most of the remaining significant group differences. Considering that these two groups were significantly different on amount of contact, quality of contact, omnibus contact, and perceived age of elders considered to be immediate family members, it was curious that they both demonstrated highly similar average total attitude scores -- the most negative of the six groups.

However, most of the GEN/IGEN group means were

influenced by moderate outliers to various extents. In the case of the IGEN high score group, there were three such outliers, including the most negative total attitude score in the sample. In addition, the size of the IGEN high score group was more than three times that of the GEN low score group. Thus, these intergroup comparisons were extremely tenuous at best.

The division of respondents by GEN and IGEN produced several encouraging results in predicting scores on the total attitude domain. However, as mentioned above, these findings remain highly tentative as they were based upon inadequate sample sizes.

Prediction of total attitude scores was more successful in the GEN major category group (approximately 15% of the total variance accounted for) than the opposing IGEN major category group (7.7% of the total variance). A similar result was obtained when these two groups were divided by sex.

The IGEN group members considered elders perceived to be immediate family members similar to elders in general. The GEN group members were less specific as they considered all known elders to be similar to elders in general. Thus, the attitudes of IGEN respondents tended to be based upon smaller numbers of elderly individuals, creating more idiosyncratic relationships between known elders and attitudes toward the elderly in general. As a result, attempts to predict the attitudes of IGEN respondents were

less successful than for GEN respondents.

To summarize, respondents were initially divided into one of six groups -- high, moderate, and low GEN, or high, moderate, and low IGEN. Sample sizes in the high GEN and high IGEN groups permitted a division by sex, creating a total of eight groups collectively representing all respondents. In addition, the high male/female, moderate, and low groups for GEN and IGEN were separately combined into two major category groups. These were also divided by sex. Therefore, a total of 14 GEN/IGEN groups were submitted to regression analysis. Proportions of variance explained and best predictor subsets were previously described for each group individually.

A final analysis utilized 12 of these 14 GEN/IGEN groups in determining best predictor variables and proportions of variance explained in predicting total attitude scores across all respondents in general. Specifically, the GEN and IGEN major category male/female groups (four in total) were analyzed separately from the high male/female, moderate, and low GEN/IGEN groups (eight in total). These two sets of groups each represent all of the respondents in the present study.

The predictor variables were analyzed across two sets of GEN/IGEN groups to produce a very broad picture of prediction. This seemed most logical at the present time, as low sample sizes would render a group-by-group analysis of predictors highly ungeneralizable.

The average proportion of variance explained in predicting total attitude scores was higher in the two GEN/IGEN male major category groups (36.7%) than the categorically identical female groups (9.0%).

Despite greater variability across the female groups, results for both sexes followed the same general pattern outlined above -- that is, a lower proportion of variance accounted for in IGEN versus GEN groups. Specifically, proportions of variance accounted for in the female IGEN and GEN major category groups were 0.33% and 17.7% respectively. Figures for the categorically identical male groups were 32.3% and 41.12% respectively. Therefore, although factors contributing to the attitudes of male or female IGEN respondents may be more idiosyncratic than those of GEN respondents of the same sex, this appears to be less the case for males than females.

However, this finding must remain tenuous as the GEN/IGEN female high score groups did demonstrate higher, stable proportions of explained variance. Unfortunately, the moderate and low score groups could not be divided by sex due to low sample sizes.

An additional problem with the GEN/IGEN predictive results was the extent to which explained proportions of variance corresponded to sample sizes across groups. For example, in the IGEN high score, moderate score, and low score groups proportions of variance accounted for were 13.3%, 53.4%, and 53.1% respectively. Corresponding group

sample sizes were 63, 22, and 25 respondents. This clearly illustrates the degree to which low GEN/IGEN sample sizes were a liability in the present study.

Predictor Variable Results

Most of the variables in the present study tended to predict total attitudes in both GEN and IGEN categories to some degree. For example, the six variables pertaining to elders considered immediate family members comprised 51.6% and 35.1% of the best predictor variable subsets for the high male/female, moderate, and low IGEN and GEN groups respectively. This was not unexpected, as most respondents registered scores on both major categories, suggesting that a mix of 'ingroup' and 'outgroup' related variables should best predict total attitudes.

Variables accounting for the highest average proportions of variance explained across the four GEN/IGEN major category groups are presented in Table 6. Similar variables and proportions of variance for the eight high male/female, moderate, and low GEN/IGEN groups are presented in Table 7.

In examining the variables which best predicted total attitude scores across the two sets of GEN/IGEN groups, it is apparent that total quality of contact with all known elders, quality and quantity of contact with elders perceived to be immediate family members, and IGEN regularly accounted for relatively sizable proportions of the total variance.

Table 6. Variables Accounting for the Highest Average Proportions of Variance Explained Across the GEN/IGEN Major Category Groups

Variable Name	Average Across all subsets	Average Across inclusive subsets
1. IQCON	9.0%	12.0%(3)
2. IGEN	8.0%	16.0%(2)
3. ICOGDISS	7.2%	9.5%(3)
4. TOTAL QUALITY OF CONTACT	5.2%	20.6%(1)
5. ICON	5.0%	10.0%(2)

Note. Figures in parentheses indicate the number of subsets in which a particular variable appeared (maximum of four).

Table 7. Variables Accounting for the Highest Average Proportions of Variance Explained Across the High Male/Female, Moderate, and Low GEN/IGEN Groups

Variable Name	Average Across all subsets	Average Across inclusive subsets
1. SD	13.5%	18.0%(6)
2. TOTAL QUALITY OF CONTACT	12.0%	19.2%(5)
3. AGEFAM	9.4%	25.1%(3)
4. IGEN	8.9%	17.6%(4)
5. IQCON	8.7%	13.9%(5)
6. EDUCATION	8.2%	16.4%(4)
7. ICON	7.2%	11.8%(5)

Note. Figures in parentheses indicate the number of subsets in which a particular variable appeared (maximum of eight).

This suggests a relationship between quality of contact with elders (both in one's ingroup and outgroup), quantity of contact with elders in one's ingroup, the degree to which these ingroup elders are considered similar to elders in general, and attitudes toward elders in general. The central role of ingroup elders on general attitude formation is further suggested by the preponderance of ingroup variables in Tables 6 and 7.

Quality of contact with elders perceived to be immediate family members (IQCON) was the variable which occurred most frequently in the best predictor variable subsets across the two sets of GEN/IGEN groups. In addition, this variable accounted for the highest average proportion of variance across the four GEN/IGEN major category groups (9.0%), and the fifth highest average proportion of variance across the eight high male/female, moderate, and low GEN/IGEN groups (8.7%).

Total quality of contact with all known elders also emerged as a major predictor variable, particularly across the eight high male/female, moderate, and low GEN/IGEN groups. This variable typically accounted for 12% of the variance in each of these subsets (an average of 19.2% in each of the five subsets in which it appeared as a predictor).

The emergence of these contact quality variables as best predictors of total attitudes suggests that positive attitudes toward the elderly may in fact be related to the

nature, frequency, and setting of contact, as well as level of illness. Specifically, frequent contact with elders considered close family members or friends, who are not seriously ill and are within an environment which encourages their maximum independence should foster positive attitudes and discourage negative stereotypes. However, it seems that these elders must additionally be considered similar to all elders in general. As previously noted, most respondents considered all known elders only moderately similar to elders in general. This raises the possibility that attitudes toward known elders may differ from those toward elders more generally.

IGEN accounted for an average proportion of variance equal to 8.0% across all subsets for the four major category groups, or an average of 16.0% in both of the subsets in which it appeared as a predictor. In addition, this variable accounted for an average proportion of variance equal to 8.9% across the high male/female, moderate, and low GEN/IGEN groups, or an average of 17.6% across the four subsets in which it appeared as a predictor.

This would ordinarily be problematic, as grouping variables should not additionally appear as predictors, and respondents were initially grouped on GEN and IGEN. However, this result again reflects the manner in which the GEN and IGEN groups were constructed.

Respondents were typically assigned to a major category on the basis of their higher score on GEN or IGEN.

Therefore, as most individuals registered scores on both major categories, there was not a highly stringent division into low, moderate, and high scorers on both categories within individual respondents.

For example, if a respondent scored higher on GEN than IGEN, that individual was assigned to the GEN major category. However, IGEN would be free to vary below the GEN score. Therefore, two respondents could have very high identical scores on GEN and be assigned to the GEN high score group. Their IGEN scores, however, could be vastly different.

As previously discussed, the method utilized in forming the six GEN/IGEN groups was theoretically based and not intended to create exact divisions between groups. Thus, the degree to which a respondent considered elders perceived to be immediate family members similar to elders in general (IGEN) played a role in predicting total attitudes. This was especially the case for males in the GEN and IGEN high score groups, suggesting that ingroup elders had a large influence on attitudes for these men.

Socially desirable responding accounted for an average proportion of variance equal to 13.5% across all subsets for the high male/female, moderate, and low GEN/IGEN groups, or an average of 18% in each of the six subsets in which it appeared as a predictor. These groups did not differ significantly on this variable, which figured most prominently in the female GEN high score group and the

female IGEN high score group. This variable did not appear as a predictor for the major category groups.

The perceived average age of elders considered immediate family members (AGEFAM) accounted for an average proportion of variance equal to 9.4% across the high male/female, moderate, and low GEN/IGEN groups, or an average of 25.1% in each of the three subsets in which it appeared as a predictor. It is interesting that AGEFAM emerged as one of the best predictor variables considering its logical relationship to illness and contact setting. Specifically, age of family members and degree of illness may be related to a moderate degree, which could additionally affect the environment in which contact occurs.

For example, in 1988, the Chairman of the Senate Special Committee on Aging reported on the institutionalization of elderly persons in America (Melcher, 1988). He discussed the relationship between increases in average life expectancy, more elders suffering from chronic illness, and the potential for these elders to be institutionalized. It is Melcher's contention that elders should be cared for in the community for both financial and humanitarian reasons. Based on the results of the present study, community care should also promote positive attitudes to the degree institutionalization decreases contact quality.

Respondents' level of education accounted for an average proportion of variance equal to 8.2% across the high male/female, moderate, and low GEN/IGEN groups, or an

average of 16.4% in each of the four subsets in which it appeared as a predictor.

Cognitive dissonance regarding elders perceived to be immediate family members (ICOGDISS) accounted for an average proportion of variance equal to 7.2% across the four GEN/IGEN major category groups, or an average of 9.5% in each of the three subsets in which it appeared as a predictor. This variable accounted for 8.7% and 18% of the variance in the male and female GEN major category groups, respectively. These figures for the similar IGEN groups were 0% and 1.9%. Clearly, cognitive dissonance played a far greater role in predicting attitudes among GEN than IGEN group members.

It was previously noted that individuals tend to assign other individuals to their own ingroup when they perceive these 'others' to be generally similar to themselves (Brown & Turner, 1981). In addition, Tajfel and Turner (1979) proposed that positive levels of self-esteem are maintained by perceiving positive distinctiveness for an ingroup in comparison with an outgroup.

The GEN respondents considered their ingroup elders less similar to elders in general than all the elders they know. It is therefore interesting to note that the average ICOGDISS scores for the GEN male/female major category groups were 1.08 and 1.29, respectively. These average scores reflect little divergence from chronologically-standard perceptions of an individual's own age in

comparison to that of ingroup elders.

However, the average ICOGDISS scores for the IGEN male/female major category groups were 2.02 and 1.86, respectively. These individuals considered their ingroup elders more similar to elders in general than all the elders they know. The average ICOGDISS scores for these respondents reflect a higher degree of logical divergence from a chronological standard, or a reduction in perceived age difference between an individual's own age and that of ingroup elders.

This could indicate an attempt to maintain the positive distinctiveness of one's ingroup. If ingroup elders are considered very similar to elders in general, this is tantamount to equating members of one's ingroup and outgroup. Decreasing the perceived age difference between oneself and one's ingroup elders (but not outgroup elders) may serve to enhance the positive distinctiveness of one's ingroup. If this was the case, the degree of value attached to old age by these respondents is clearly implied.

As ICOGDISS did not predict IGEN total attitude scores, it seems that the tendency to consider ingroup elders more similar to elders in general than all known elders has a more unpredictable effect on total attitudes.

The tendency to view ingroup elders as less similar to elders in general than all known elders seems to maintain chronologically accurate perceptions of ingroup elders' age, and is also related to total attitudes. It may be the case

that GEN respondents more fully consider ingroup elders to be members of their ingroup, with similar characteristics to themselves. Although numerous other factors are undoubtedly involved in the formation of attitudes, the tendency to view ingroup elders as more dissimilar to elders in general (the GEN category) may be related to more predictable, positive attitudes. For example, although the total attitude scores of the GEN and IGEN female major category groups were highly similar (31.25 and 32.18 respectively), related figures for the male groups were 30.75 and 35.27. Additional research is clearly required to illuminate distinctions between these two respondent types.

Finally, age and sex of the respondents predicted little total attitude variance across all GEN/IGEN groups. Therefore, the best predictor variables in the present study were: quality of contact with elders perceived to be immediate family members, total quality of contact with all known elders, degree to which elders perceived to be immediate family members were considered similar to elders in general, contact with elders perceived to be immediate family members, socially desirable responding, perceived average age of elders considered immediate family members, education level of the respondents, and cognitive dissonance regarding elders perceived to be immediate family members.

Conclusion

The focus of the present study was developmental trends in attitudes toward the elderly across the pre-elderly adult

lifespan. Based on the results discussed above it appears that attitudes toward older persons in general are quite positive in the United States at this time.

However, other results suggested that while general attitudes are positive, attitudes toward known elders may be more or less positive to some degree. In one sense it was encouraging that elders perceived to be immediate family members were generally not considered similar to elders in general. This may represent an acceptance of elderly persons into one's ingroup, and result in positive attitudes toward these elders.

However, a positive distinction for one's ingroup is often maintained by devaluing one's outgroup. This could produce more negative attitudes toward elders in general (some support was found for this position, especially in male respondents). Therefore, future research could focus upon this perceived difference between ingroup and outgroup elders, to determine the extent to which it translates into attitudinal differences.

The finding that most known elders were considered only moderately similar to elders in general may emphasize the value of a realistic understanding of what older people are really like. Such understanding would come through sustained personal contact with older people, and realistic portrayals of old people in the media and other mass communication systems (such as television). It would be tragic if Americans were receiving very positive images of a

few well known older people on television and in politics, and reacting by devaluing the real-life elders they are in contact with every day.

Attitudes were most negative in the oldest pre-elderly age group, suggesting a tendency to devalue the perceived elderly outgroup in an attempt to maintain positive self-esteem. Should this result be replicated with larger sample sizes, it would represent a tangible demonstration of increasing negative attitudes with age in pre-elderly individuals within American society.

The present findings also suggest that education may reduce the acceptance of myths and stereotypes of the elderly to some degree. The previously mentioned factors of sustained personal contact with elders and realistic portrayals in the mass media would also assist in this regard. The present author is aware of mass advertising campaigns directed against discrimination based on race -- perhaps these could be expanded to include age.

The prevalence of contact quality in predicting total attitudes underscores the connection between types of relationships formed with older persons, contact settings, and attitudes. For their part, institutional settings should actively encourage contact with younger people (not just contact among elders) and insist that their residents be as self-sufficient as possible.

The appearance of socially desirable responding as a predictor of total attitudes reflects the sensitive nature

of the present subject matter. Future studies in this area should make every effort to neutralize the apprehension inherent in expressing attitudes toward old people, particularly when these attitudes are negative.

Finally, the present findings suggest that while the ingroup-outgroup, self-esteem hypothesis may play a role in attitudinal change with age, this remains an overly simplistic explanation. Future research could more clearly delineate various dimensions of contact quality, and examine the effects of education, race, and socioeconomic status on attitudes. This would hopefully culminate in a general model encompassing aging, interaction, and attitudes toward the elderly.

CHAPTER V

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CHAPTER VI

APPENDIX A

KNOWLEDGE AND ATTITUDE QUESTIONNAIREInstructions

My name is Jordan Hanley, and I am a graduate student at Simon Fraser University. I am interested in your knowledge and attitudes about the elderly of our society. Your participation in this study only requires the completion of this questionnaire, which takes about 20-25 minutes to finish. I am assuming that your consent to fill out this questionnaire is given by your completion of it. You are under no obligation to complete this questionnaire, and have the right to refuse to participate, stop at any point, or not complete certain sections or particular questions. Please do not put your name on the questionnaire. All answers are anonymous and confidential, and no individual's responses will be identified. I think that you will find the questionnaire to be interesting and thought-provoking. Please work quickly and on your own, indicating the answers that most represent your own viewpoint. If you have any major concerns or problems regarding the way this research project is being conducted, please feel free to contact Dr. Roger Blackman, Department Head of Psychology, Simon Fraser University, at 291-3354. When you are finished, please return this questionnaire to me.

PART ONE

Although this is a study about the elderly, I need to know about some of your own general attitudes in order to evaluate this questionnaire. As I previously mentioned, all responses are completely confidential, and the following statements are only included to help me interpret this questionnaire.

Instructions

Listed below are a number of statements concerning personal attitudes and traits. Please read each item and circle the response that pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates.

T F

Note. In Part One of the questionnaire, socially desirable responses have been underscored. In Parts Two and Three, responses assigned numerical values appear in parentheses.

2. I never hesitate to go out of my way to help someone in trouble. T F
3. It is sometimes hard for me to go on with my work if I am not encouraged. T F
4. I have never intensely disliked anyone. T F
5. On occasion I have had doubts about my ability to succeed in life. T F
6. I sometimes feel resentful when I don't get my way. T F
7. I am always careful about my manner of dress. T F
8. My table manners at home are as good as when I eat out in a restaurant. T F
9. If I could get into a movie without paying and be sure I was not seen, I would probably do it. T F
10. On a few occasions, I have given up doing something because I thought too little of my ability. T F
11. I like to gossip at times. T F
12. There have been times when I felt like rebelling against people in authority even though I knew they were right. T F
13. No matter who I'm talking to, I'm always a good listener. T F
14. I can remember "playing sick" to get out of something. T F
15. There have been occasions when I took advantage of someone. T F
16. I'm always willing to admit it when I make a mistake. T F
17. I always try to practice what I preach. T F
18. I don't find it particularly difficult to get along with loud-mouthed, obnoxious people. T F
19. I sometimes try to get even, rather than forgive and forget. T F
20. When I don't know something I don't at all mind admitting it. T F
21. I am always courteous, even to people who are disagreeable. T F

3. Are you presently a Canadian citizen?
 (a)yes (b)no (please specify your citizenship_____)
4. Please indicate the level of education you most recently completed, or are in the process of completing.
¹ (a)elementary ² (b)secondary (c)university or other ³
 (grades 8-12) post-secondary studies
5. Which of the following terms best describes your own age?
 [This question is scored with Table 1]
 (a)very young (b)young (c)middle-aged (d)old (e) very old
6. About how many people aged 65 years and over do you know who meet the following requirements:
 1) you could recognize them if you saw them
 2) you know their first name
 3) you presently have some type of personal contact with them about once a month (in person, or by telephone, or letter, and so on)
⁰ (a)none ¹ (b)1-5 ² (c)6-10 ³ (d)11-20 ⁴ (e)21-30 ⁵ (f)31-40
⁶ (g)41-50 ⁷ (h)more than 50 (please specify number _____)

If you answered '(a)none' in question 6, please proceed directly to PART THREE of the questionnaire on Page 6.

7. What is the average or typical length of time you have known the older people you presently have personal contact with at least once a month?
¹ (a)less than 1 month ² (b)1-6 months ³ (c)7-11 months
⁴ (d)1-3 years ⁵ (e)4-6 years ⁶ (f)7-9 years ⁷ (g)10-20 years
⁸ (h)21-30 years ⁹ (i)more than 30 years
8. Which of the following terms best describes most of the older people that you presently have personal contact with about once a month?
⁴ (a)friend ³ (b)relative ² (c)work acquaintance
¹ (d)casual acquaintance

14. What is the average or typical length of time you have known these older members of your immediate family that you presently have personal contact with about once a month?
- (a) less than 1 month (b) 1-6 months (c) 7-11 months
 (d) 1-3 years (e) 4-6 years (f) 7-9 years (g) 10-20 years
 (h) 21-30 years (i) 30-40 years (j) 40-50 years
 (k) 50-60 years (l) more than 60 years (number _____)
15. Which of the following statements best describes the age of most of these older immediate family members as compared to your own age?
 [This question is scored with Table 1]
- (a) they are very much older than myself
 (b) they are much older than myself
 (c) they are older than myself
 (d) they are about as old as myself
 (e) they are younger than myself
 (f) they are much younger than myself
 (g) they are very much younger than myself
16. Which of the following age groups best describes the average or typical age of these older immediate family members you presently have personal contact with about once a month?
- (a) 65-70 (b) 70-75 (c) 75-80 (d) 80-85 (e) 85-90
 (f) over 90
17. Which of the following best describes the usual type of setting where you presently see most of these immediate family members in person at least once a month?
- (a) usually you don't see them in person
 (b) in a nursing home or group residence for elderly persons
 (c) in the older person's own private residence
 (such as a house or apartment)
 (d) in a private residence not owned by the elderly person
 or persons
 (e) in a public place
 (f) in a workplace
18. Do you think that these older persons you consider to be part of your immediate family at the present time are similar or typical of older people in general?
- (a) highly similar (b) similar (c) unable to say (d) not similar (e) highly dissimilar

PART THREE

Listed below are a number of statements about older people. Please read each statement and circle the response to each which best expresses your own opinion.

[Items left blank in this section receive a score of 4]

1. It would probably be better if most old people lived in residential units that also housed younger people.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

2. There is something different about most old people: it's hard to figure out what makes them tick.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

3. At least 12 percent of Canada's elderly are living in long-stay institutions (i.e. nursing homes, mental hospitals, homes for the aged, and so on).

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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4. Most old people are capable of new adjustments when the situation demands it.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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5. Most old people would prefer to quit work as soon as their children can support them.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

6. Over 15 percent of the Canadian population is now age 65 or over.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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7. Most old people tend to let their homes become shabby and unattractive.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

8. Most old people are very relaxing to be with.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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9. The remaining life expectancy of Canadians who have reached 65 years of age has not increased greatly since 1900.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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10. There are a few exceptions, but in general most old people are pretty much alike.

7 Strongly Agree	6 Agree	5 Agree only slightly	3 Disagree only slightly	2 Disagree	1 Strongly Disagree
------------------------	------------	-----------------------------	--------------------------------	---------------	---------------------------

11. Most old people need no more love and reassurance than anyone else.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

12. Older people often feel the need to use more seasonings on their food than they did when younger.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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13. You can count on finding a nice residential neighborhood when there is a sizeable number of old people living in it.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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14. Most old people bore others by their insistence on talking about the "good old days."

7 Strongly Agree	6 Agree	5 Agree only slightly	3 Disagree only slightly	2 Disagree	1 Strongly Disagree
------------------------	------------	-----------------------------	--------------------------------	---------------	---------------------------

15. The life expectancy of a baby boy born in Canada in 1989 is 79 years.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

16. Most old people seem to be quite clean and neat in their personal appearance.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

17. Most older workers cannot work as effectively as younger workers.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

18. Ten percent of the population of Canada is 65 years of age and older.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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19. It would probably be better if most old people lived in residential units with people of their own age.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

20. Most old people tend to keep to themselves and give advice only when asked.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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21. About 20 percent of Canadians over 65 live in their own households.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

22. Most old people are irritable, grouchy, and unpleasant.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

23. In general, the lives of older people are busy and useful.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

24. Less than 5 percent of Canadians over 65 live in institutions.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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25. Most old people can generally be counted on to maintain a clean, attractive home.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

26. Most old people make one feel ill at ease.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

27. Medicare paid for approximately 40 percent of the health expenses of Canadians over 65 in 1989.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

28. Most old people get set in their ways and are unable to change.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

29. Most old people would prefer to continue working just as long as they possibly can rather than be dependent on anybody.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

30. About 15 percent of Canadians over 65 live in institutions.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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31. In order to maintain a nice residential neighborhood, it would be best if too many old people did not live in it.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

32. Most old people are really no different from anybody else: they're as easy to understand as younger people.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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33. Approximately 50 percent of men 65 and over are married and living with their spouse.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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34. It is evident that most old people are very different from one another.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

35. Most old people make excessive demands for love and reassurance.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

36. Approximately 35 percent of women 65 and over are married and living with their spouse.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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37. Most old people spend too much time prying into the affairs of others and giving unsought advice.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

38. Most old people are cheerful, agreeable, and good humored.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

39. The majority of persons aged 65 and over have a high school education.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
-------------------	-------	------------------------	---------------------------	----------	----------------------

40. Most old people should be more concerned with their personal appearance; they're too untidy.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

41. One of the most interesting and entertaining qualities of most old people is their accounts of their past experience.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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42. Human physical development proceeds at an even pace.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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43. It is not important for families to seek advice from elderly members when making decisions.

7	6	5	3	2	1
Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree

44. A person's appetite changes throughout his or her life.

Strongly Agree	Agree	Agree only slightly	Disagree only slightly	Disagree	Strongly Disagree
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PART FOUR - Instructions

Please circle the letter of the answer that is correct or is most correct for you.

1. Of the older people that you know, about how many do you consider to be ill at the present time?

0	1	2	3	4	5
(a)none	(b)1-5	(c)6-10	(d)11-20	(e)21-30	(f)31-40
6					
(g)41-50	(h)more than 50 (please specify number _____)				

If you answered '(a)none' in question 1, you have finished the questionnaire.

2. Which of the following terms best describes how ill these older persons are in general?

1	(a) mildly ill	(they care for themselves completely)
2	(b) moderately ill	(they need a small amount of assistance)
3	(c) seriously ill	(they need a lot of assistance)
4	(d) very seriously ill	(completely unable to care for themselves)

3. About how many of these older ill persons do you consider to be a part of your immediate family at the present time?

0	1	2	3	4	5	6	7
(a)none	(b)1	(c)2	(d)3	(e)4	(f)5	(g)6	(h)more than 6 (number_____)

If you answered '(a)none' in question 3, please proceed to question 6.

4. Which of the following terms best describes how ill the older persons in your immediate family are in general?

1	(a) mildly ill	(they care for themselves completely)
2	(b) moderately ill	(they need a small amount of assistance)
3	(c) seriously ill	(they need a lot of assistance)
4	(d) very seriously ill	(completely unable to care for themselves)

APPENDIX B

April 3rd, 1990

Mr. Jordan Hanley,
205, 5343 Yew Street,
Vancouver, B. C.
V6M 3X7

Dear Mr. Hanley,

Re: Permission to Survey Ferry Passengers

Referring to your letter of March 22nd, 1990, requesting permission to conduct an in-depth analysis on board our "Vancouver Island Princess" of the attitudes of Canadians and Americans toward the elderly.

I am happy to make arrangements for you to travel on the "Vancouver Island Princess" on April 13th, leaving Ogden Point at 5:30 p.m., returning from Seattle on April 14th, leaving Pier 48 at 10:00 a.m.

Your complimentary passage tickets and meal vouchers will be available for you to pick up at our Ogden Point Ticket Office. Your booking number is 1080439.

Yours truly,

Claes Stigne
Director,
Commercial Operations.

cc: Dr. Ronald Roesch
Hotel Manager, "V.I.P."