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MASS MEDIA AND INTERPERSONAL RESOURCES UTILIZED BY ADULT FAMILY MEMBERS FOR ASSISTANCE WITH ROLE RELATED LEARNING IN THE HOME ENVIRONMENT

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MASS MEDIA AND INTERPERSONAL RESOURCES UTILIZED BY ADULT FAMILY MEMBERS FOR ASSISTANCE WITH ROLE RELATED LEARNING IN THE HOME ENVIRONMENT

By

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ABSTRACT

MASS MEDIA AND INTERPERSONAL RESOURCES UTILIZED BY ADULT FAMILY MEMBERS FOR ASSISTANCE WITH ROLE RELATED LEARNING IN THE HOME ENVIRONMENT

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An ecological model was used in this exploratory study to examine resources used by young, middle-aged and older adults to facilitate learning in the home environment. Purposes were to investigate differences in resource use among age categories and relationships between use of the resources and demographic factors. Data used for analyses were collected in 1975 from 36 adult males and 72 adult females representing blue-collar families in Vevay Township, Michigan, as part of the "Home as a Learning Center" study conducted by researchers in the College of Human Ecology, Michigan State University pursuant to contract number 300748735, the Department of Health, Education and Welfare, Office of Education, Occupational and Adult Education Branch (Bobbitt and Paolucci, 1975).

Chi-square procedures were used to analyze nominal responses interviewees gave regarding their use of the following mass media and interpersonal resources: television, radio, newspapers, magazines, books; neighbors,

friends, relatives, and school, library and cooperative extension personnel. Frequency counts for use and non-use were cross-tabulated with the three adult age categories and with the demographic variables of education, income, sex, and number of children in household. Cramer's V and phi coefficients were computed to determine strength of the relationships indicated.

Major findings indicated differences between age categories for use of television, radio, and relatives. Television use was reported more frequently by young (78%) and older (83%) respondents than by those of middle-age (47%). Older respondents reported radio use considerably more often (72%) than middle-aged (47%) and young (42%) respondents. Relatives were reported by 72 percent of the young respondents compared to 28 percent and 36 percent of those in middle-aged and older categories. Findings also indicated relationships between demographic factors and resources used to facilitate home learning: (1) income with use of television, radio, and friends, (2) sex with use of newspaper and friends, and (3) number of children with use of relatives. Although some findings were accepted as statistically significant for this exploratory study, limitations to operational use include low values of Cramer's V and phi coefficients and the limitations imposed on secondary analyses of data.

Although significant differences were not indicated, well over 50 percent of respondents in all age groups used

print mass media for home learning assistance. With the exception of books, over two-thirds of older respondents used each of the broadcast and print mass media. Although relatives were frequently reported as a resource by young spokespersons, use of all other interpersonal resources were infrequently reported across the entire sample, with each type of interpersonal resource reported by fewer than 50 percent of the respondents in each age category. Results should be useful for further investigation to provide data for educators designing programs for delivery to adults in the home environment. Among the ideas recommended for further study were: employment status of married females, social, professional or educational activities outside the home, and time allotted to such activities. The identification of behavioral factors that may influence use of learning resources was also suggested. Collection of data in quantified form would facilitate use of parametric procedures for data analyses. Suggested procedures included multiple and partial correlation and the development of life cycle constructs which involves both correlational and cluster analyses.

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CHAPTER I

INTRODUCTION

Knowledge, skills, and values acquired early in life establish a foundation for the adult years by structuring the contributions one brings to the multiple role structure of adulthood (Riley, et al., 1969). However, in a rapidly changing society this acquisition does not prepare one fully for all future roles. As early learning is rendered obsolete, continued acquisition of knowledge and development of new skills is essential for adapting to changing social demands (Waniewicz, 1972; Brim, 1966) and effectively performing family and occupational roles. The concept of life cycle transitions further suggests the need for continued learning and adaptation to changing conditions throughout life (Bobbitt and Paolucci, 1975). This need can be satisfied through practical, role related education. The importance of practical education throughout life was strongly emphasized by Raines (1974, p. 2):

> Because the complexities of life have increased so much and because the changes in life are so rapid, it is not surprising that the desire for an education focused on life itself has intensified. Education for today's world is simply not adequate for most people unless that education is life-centered and life-long.

Ward, McKinney, and Dettoni (1973) spoke of functional learning as that which bears an immediate and direct

relationship to the learner's lifestyle and has practical usefulness. As a continuous pursuit, it is dependent on the contributions of the individual, such as motivations and abilities, and on the societal contributions of educational facilities, rewards, and sanctions for performance (Riley, et al., 1969).

Carp (1975) found that 77 percent of American adults between the ages of 18 and 60 were interested in learning more about some subject or skill. First preferences of these potential learners focused on vocations, hobbies, recreation and family life. Johnstone and Rivera (1965) reported that 50 percent of the subject matter preferred by adult learners in a national survey focused on occupational and family role related concerns. In contrast, religious, academic, and public affairs topics composed only 27 percent of the total.

Many role related learning activities pursued by adults are undertaken in out-of-school settings such as the home. Recent studies have suggested the increasing importance of the home as a preferred learning environment for adults in various stages of the life cycle (Bobbitt and Paolucci, 1975; Carp, 1974; Coolican, 1973; Simpson, 1973; Snow, 1955). Much of this out-of-school learning is self-planned, a term used by Tough (1971) to define learning in which the adult takes responsibility for planning the content, timing, method and setting. Such learning is intentional and systematic (Kleis, et al., 1974). It is

usually undertaken to increase knowledge or develop skills that can be applied to an area of special interest, a practical problem, or a need situation in one's home environment. The home environment, which provides freedom to experiment with reduced risk (Bobbitt and Paolucci, 1975), is comfortable for adults with low levels of formal education or those for whom mandatory schooling was a negative and threatening experience. The home is convenient for adults with transportation problems caused by remote locations, inadequate public services, young children, limited finances, or physical handicaps. These factors may be either age-specific or apply throughout adulthood.

Deliberate, role related learning efforts undertaken in the home may require input from educational systems which (1) possess in-depth knowledge of the environments which interface with family and occupational role performance (Bobbitt and Paolucci, 1975) and (2) seek to bring about concrete behavioral change in a target population (Paulston, 1973). Educational systems charged with dissemination of knowledge through nonformal programs may facilitate adult learning opportunities by developing programs that can be delivered into the home through mass media channels. Incorporating knowledge of interpersonal community resources and their potential contribution to overall need satisfaction can enhance the effectiveness of mass media programs.

Conceptual Framework

This study is designed within two major conceptual orientations: developmental stage and human ecological.

Developmental stage approach

The developmental framework utilizes interdisciplinary conceptualizations and is useful for examining needs of family members who are confronted with diverse role expectations throughout different stages of the life cycle. Successful development throughout life depends on one's ability to meet these role demands (Rowe, 1971).

Developmental task, a major concept in the framework is the term used to describe role expectations (Havighurst, 1972; Rodgers, 1962; Duvall, 1957; Duvall and Hill, 1948). In the present study the concept is considered basic to examining resources used by adults for assistance with role related, home-based learning experiences. Dynamic interaction of family members with one another and with other social systems (Rowe, 1971), the context for task accomplishment, is considered essential for deliberate, home-based role learning experiences of adulthood. Havighurst, who in 1948[1] was the first to establish a set of developmental tasks for each stage of the total life cycle, established the following definition which is cited in later publications (Havighurst, 1972, p. 2):

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[1]Robert J. Havighurst. Developmental Tasks and Education. (Chicago: University of Chicago Press, 1948).

> A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks.

Duvall (1962) conceptualized the developmental task as a growth responsibility arising at different points in one's life. She specified tasks for both parents and children at different stages and for the family as a whole (Duvall, 1957; Duvall and Hill, 1948).

Havighurst (1972) contended that the crucial time to learn a task is at the point of first need: the "teachable moment" when the individual and society are ready. This learning renders an effective foundation for recurrent tasks which confront individuals throughout adulthood as changes in the personal self interact with environmental changes and create situations demanding an effective response. Havighurst's developmental tasks for adult stages are briefly presented below.

Early adulthood (ages 18-30) was conceptualized as a period full of teachable moments which result from a series of "first" events (marriage, pregnancy, steady employment, illnesses of children, home ownership, and launching children into school) in which responsibilities are heavy and assistance from the surrounding social systems is minimal. The period can represent a stressful transition from an age-graded society to one in which prestige and power are based on skills, knowledge and social connections. Developmental

tasks identified for this period are: (1) selecting and learning to live with a mate, (2) beginning and rearing a family, (3) managing a home, (4) getting started in an occupation, (5) assuming social responsibility, and (6) finding a congenial social group.

It is in the middle years (30-60) that adults reach the peak of influence on society while it is making maximum social and civic demands. Tasks arise from organismic changes, environmental pressures, and self-imposed obligations established within one's occupation or social role complex. Tasks identified for this stage include: (1) helping adolescents become responsible adults, (2) achieving adult social and civic responsibilities, (3) reaching and maintaining satisfactory performance in an occupational career, (4) developing adult leisure activities, (5) relating to one's spouse as a person, (6) accepting and adjusting to physiological changes of middle-age, and (7) adjusting to aging parents. Havighurst (1972) noted that these tasks may be compounded for those who fail to master managerial and role adjustment tasks in the early years of adulthood.

Adults in the later years (over 60) have learned their way through life, yet new situations and experiences still lie ahead and provide a third set of developmental tasks (Havighurst, 1972): (1) adjusting to declining physical strength and health, (2) adjusting to reduced retirement income, (3) adjustment to the death of a spouse,

(4) establishing affiliations with one's age group, (5) adopting and adapting to social roles in a flexible way, and (6) establishing satisfactory living arrangements.

The concept of developmental task provides adult educators with a general framework for considering the total need complex of target audiences and may be useful as a guide for program planning in nonformal education. Although tasks are specified within broad stages of adulthood, factors such as age at marriage, number and spacing of children, occupation, income, transition periods, and perhaps, educational pursuits, are indicators that an individual will simultaneously encounter tasks from different stages of human development (Rowe, 1971). Thus, adults of different chronological ages may share role related needs in addition to having needs which are age-specific.

This recognition of overlapping life cycle stages is well conceptualized by Montgomery (1973), who proposed placing adult needs in the purview of the human potential movement as theorized by Maslow (1959). Maslow, who suggested that basic survival needs must be met before an individual can proceed through a hierarchy of needs, believed self-actualization is frustrated according to the degree of need satisfaction realized. It was Montgomery's belief (1973) that adults of all ages are scattered up and down the hierarchy of needs, with a large number at the bottom who have never achieved a higher level or who have

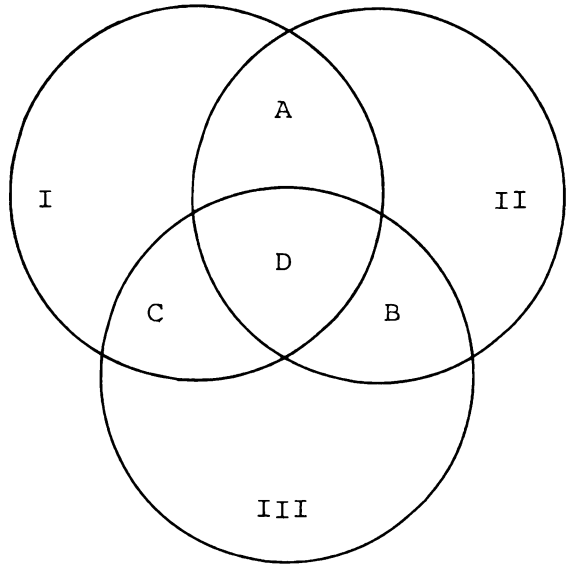
been pushed down by circumstances. This situation was also noted in Waddell's research with older citizens (1975). Montgomery suggested there may be needs within a given stage of adulthood that are shared with adults in the next stage as a result of (1) overlapping developmental tasks, or (2) lifestyle circumstances that create common needs regardless of age. It is proposed that the conceptualizations of Havighurst and Montgomery have application for examining the learning resources of young, middle-aged and older adult family members who have both shared and age-unique role related learning needs.

Human ecological approach

This framework can also be utilized to examine the needs which derive from age-related developmental tasks, but is particularly useful for examining needs which may be shared by two or more of the three major age categories of adulthood. In this view, the family is conceptualized as an open system which allows for energy, information, and materials to be exchanged with the various forces or environments that impinge on that system and on which it is interdependent (Sims, Paolucci, and Morris, 1972). Major impingers include the social, economic, and political systems of the larger society which provide policies, regulations and knowledge for structuring social behavior while placing ever-changing demands on the role complexes of family members. Since these demands require certain levels

of skill, knowledge, and understanding for effective role performance, the adult family member needs to know how given information or knowledge relates to personal situations, how to use that knowledge, and what resources within the home or community environment are available for assistance. Linkages with educational and human service organizations can enable adult learners to develop competencies essential for effective family and occupational role performance while adapting to the dynamics of personal, community and societal change.

Researchers using the human ecological approach may study a single system or study a system's interface or relationship with other systems. In the present study, interfacing is conceptualized between and among three age categories of adulthood with respect to role related learning needs and use of home-based educational resources (Figure 1). Shared needs may result from changed role demands as an individual experiences one stage and is entering the next. For instance, as children approach adolescence, a parent may be simultaneously concerned with understanding the adolescent's physical and social-emotional needs, rearing preschoolers, buying a first home, and perhaps, the onset of retirement. Within the purview of Montgomery's model (Montgomery, 1973), shared needs may be the result of a lifestyle in which the adult is continually preoccupied with the satisfaction of survival needs as well as age related developmental tasks. Adult family members at



Current knowledge:

Needs and utilized learning resources

HOLISTIC PROGRAM MODEL
For delivery of non-formal adult education programs to home environment

Needs and Home-based Learning Resources

I = Age unique, young adult
II = Age unique, middle-aged adult
III = Age unique, older adult

A = Shared by I and II
B = Shared by II and III
C = Shared by I and II
D = Common to all ages

Figure 1. An ecological model of adult role related learning needs and home-based learning resources.

different stages of the life cycle may also share values, physical and spatial resources within the community, the desire to continue role related or other learning throughout life, the utilization of mass media for information and learning, and interpersonal resources which provide nonformal access to the resources of formal educational systems.

Statement of the Problem

As support increases for the home as a preferred learning environment, there is a need to identify and develop resources that can be used to deliver role related education into the home to facilitate adult learning endeavors. Since adult participation in learning is voluntary, failure to respond to this need may result in the inability to meet audience needs. The primary purpose of this exploratory research is to examine resources used for assistance with home-based learning by young, middle-aged and older adults in blue-collar families to determine whether differences in use exist between or among age categories. Knowledge of common utilization patterns among the three age stages of adulthood can enhance development of nonformal, home delivered programs to which adults, who share role related needs and learning resources, can respond regardless of age. A secondary purpose, also of importance to nonformal program development, is to examine possible relationships between utilized learning resources and selected demographic characteristics.

Research Objectives

1. To determine whether differences exist between or among young, middle-aged and older adult family members in use of mass media resources to assist with home-based learning.

2. To determine whether differences exist between or among young, middle-aged and older adult family members in use of interpersonal resources to assist with home-based learning.

3. To explore relationships between adult use of mass media resources for assistance with home learning and demographic variables of income, education, sex and number of children in household.

4. To explore relationships between the interpersonal contacts made for home learning assistance and the demographic variables of income, education, sex, and number of children in household.

Assumptions

1. Young, middle-aged and older adult family members, who share role related learning needs, also share in use of mass media resources and interpersonal contacts made for assistance with home learning.

2. Mass media communication channels into the home are important educational delivery systems through which adult learners can enhance their own roles while contributing to the human resource development of dependent family members and the well-being of total family unit.

3. Nonformal program delivery to the home environment through mass media communication may be strengthened by adult educators who have current knowledge of shared learning needs and the mass media and interpersonal resources used for learning assistance by adults in different age categories.

4. Use of mass media and interpersonal resources for information or educational assistance may be influenced by demographic factors of education, income, sex, and number of children in household.

5. Adult spokespersons can (a) understand questions related to use of mass media and interpersonal resources for facilitation of home learning pursuits and can accurately report such information regarding their personal involvement, and (b) accurately report individual and family demographic characteristics.

6. Interpersonal contacts made with various relatives and with school, library, and extension sources, as reported by spokespersons, can be collapsed for data analyses to form major variables of relatives, school, library, and extension.

7. Highest levels of completed education, as reported by spokespersons (Appendices A), can be categorized as follows for data analyses as spokespersons placed within collapsed categories are thought to possess characteristics in common: Zero to 9 years, 10 to 11 years, high school graduation, vocational/technical training, some college, and college completion. The latter category includes those who

reported a bachelor's degree as well as those who reported graduate/professional training.

8. Income, as reported by spokespersons (Appendices A), can be categorized as follows for data analyses as spokespersons placed within collapsed categories are thought to possess characteristics in common: $0 to 5,999, $6,000 to 11,999, $12,000 to 17,999, and $18,000 or above.

9. The total number of children in a given household can be determined by spokesperson's report of the number of children within different age intervals who were living in household at time of interview. The following categories can be established to define number of children for the purpose of data analyses: Zero, one, two, three, and four to six (Appendices A).

Theoretical Definitions

Home-based learning: That which is undertaken to increase knowledge or develop skills that can be applied to an area of special interest, a practical problem or a need situation in one's home environment.

Nonformal educational program: An organized educational effort, with identifiable sponsorship such as a formal agency or institution, in which educators seek to affect specific behavioral change in a target population. Generally presented in out-of-school settings or through mass media channels, and is less structured than a formal classroom approach.

Mass media resources: Audio, visual, and printed communication received in the home environment for purposes of information, education and/or entertainment.

Interpersonal resources: The individuals a person contacts for information and/or assistance with home-based learning.

Blue-collar family: Defined in this study as one in which occupation of household head is identified with Group IV (clerical and salesworkers), V (skilled manual employees), or VI (machine operators and semi-skilled employees) of Hollingshead Two-Factor Index of Social Position (Hollingshead, 1957).

Operational Definitions

Home-based learning: In the "Home as a Learning Center" (HLC) study (Bobbitt and Paolucci, 1975) this was defined as an activity which a spokesperson reported deliberately undertaking at home during the previous year to affect skills, knowledge, attitudes or information. The present study deals only with the learning resources used to assist with those activities.

Mass medium user: A spokesperson who reported use of a given mass medium as follows for home learning assistance:

1. viewing at least one type of television program
2. listening to at least one type of radio program
3. reading at least one type of newspaper article
4. reading at least one type of magazine article
5. reading at least one type of book

Interpersonal resource user: A spokesperson who reported contacting at least one source within a given resource group for assistance with home learning was counted as a user of that resource group. Resource groups for data analyses were: neighbors, friends, relatives, school, library, and cooperative extension. Sources within each group were as follows:

Neighbors, Friends: Each of these groups were considered as a single source of contact

School: administrators, teachers, or other school personnel

Library: librarians or other library resource

Extension: home agent, 4-H agent, agricultural agent, or other extension resource

Relatives: parents, children, siblings, extended family, or other relatives

Young adults: The 12 males and 24 females who were interviewed in the HLC study[1] as spokespersons for sample families in which an adult male, if present, was between the ages of 20 and 34.

Middle-aged adults: The 12 males and 24 females who were interviewed in the HLC study as spokespersons for sample families in which an adult male, if present, was between the ages of 35 and 54.

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[1]The "Home as a Learning Center" (HLC) study reported by Bobbitt and Paolucci (1975) was performed pursuant to Contract Number 300748735, The Department of Health, Education and Welfare, Office of Education, Occupational and Adult Education Branch.

Older adults: The 12 males and 24 females who were interviewed in the HLC study as spokespersons for sample families in which an adult male, if present, was 55 or older.

Education: The highest level or type completed according to spokesperson's report (Appendices A).

Income: The annual amount identified by spokesperson as most representative of family income (Appendices A).

Number of children: The total number of children up to 19 years of age who were reported by spokesperson as living in household at time of interview (Appendices A).

Statement of Limitations

1. This research represents secondary analyses of a limited portion of the existing HLC data base and was conducted within the constraints of the original research design. Questions used in the original study to collect data on mass media and interpersonal resource use were not designed for the objectives of this secondary analyses. Thus, results can only be used in an exploratory manner to provide directions for further research rather than as a direct basis for program development beyond the blue-collar population of Vevay Township, Michigan.

2. The Family Interview Schedule, which was used in the original study for data collection (Bobbitt and Paolucci, 1975), was not structured to provide information on the extent to which the 108 spokespersons personally used the mass media or interpersonal resources reported. It did,

however, provide a basis for establishing that a given resource was used or not used. Although some spokespersons named more selections of a given mass medium or more interpersonal resources than others, there was no way to determine from these data whether the persons naming more than one medium selection or interpersonal source (a) made more frequent use of those resources or (b) made greater application of the information received from them.

3. Categories of collected demographic data were collapsed for efficiency of statistical analyses based on the stated assumptions that spokespersons associated with a collapsed category possessed characteristics in common; therefore, loss of data meaning through collapsing should be minimized. However, anytime collapsing is done the possibility of introducing bias exists and should be recognized when drawing conclusions from the results of the analyses.

CHAPTER II

REVIEW OF LITERATURE

This review includes research studies and related literature in three major sections relevant to home-based, nonformal adult learning experiences: role related needs of adult family members, utilization of mass media and interpersonal resources, and considerations for program planning.

Role Related Needs of Adult Family Members

Theoretical view of needs

A framework was formulated by Leagens (1964) to enhance understanding of need phenomenon: (1) It is not sufficient to leave people to their own initiative and resources. External stimuli are required to activate natural tendencies to improve. (2) Certain needs of a person must be satisfied in order to maintain a balance between energy-produced inner forces and environmentally produced external forces. Imbalance between these forces creates a need or gap between the desirable and the actual situation.

A felt need was identified by Ibsen and Alers-Montalvo (1967) as an articulation of need by an individual respondent. It may refer to an internal state of affairs, to general and specific goals beyond the individual which he or she feels should be pursued, or to tasks or processes which

would likely help one attain a desired goal. London (1960, p. 67) stated that: "The needs of adults which the educators seek to meet are not just 'felt needs' but also the needs which educators impute when they view the gap between what is and what could be if their [clientele] achieved their full potential."

Raines (1974), who emphasized the importance of practical education, proposed the concept of transactional competencies for identifying adult need areas in life centered educational activities. Transactional competency was defined as ". . . investment of self in experience while attempting to satisfy personal needs," (Raines, 1974, p. 17) a process allowing something or someone to have an impact on the individual. Three of Raines' transactional competencies of particular relevance to this review are the family transactional area, career transactional area, and consumer transactional area. The family area includes strengthening of family interaction, comprehending developmental stages, dealing with crises, planning for economic security, and clarifying role expectations. Included in the career area are acquisition of job finding skills, career self appraisal, evaluation of employment opportunities and planning for retirement. The consumer area is comprised of the use of consumer assistance resources, understanding taxes, evaluating goods and services, understanding legal rights, and comparative shopping. According to Raines, the association of knowledge, skills, and values within these specified

functions allows one to determine individual needs for effective performance.

Studies of need identification

Research has identified both felt and professionally assessed needs of male and female adult learners as a basis for planning, nonformal educational experiences. Studies focus on both cross-age and age-specific samples, but vary considerably in classifying age categories. Therefore, the following discussion is organized around the needs of young, middle-aged and older adults according to how researchers specified their samples.

Young adult needs. Bramble and Mertens (1976), who reported priority needs identified in an Appalachian research project, proposed that human resource needs follow a continuum from basic education to development of human potential. Between these two poles are the role related needs of family care, parenting, birth control, consumer education, housing, nutrition, retirement, and vocational and home health control.

Educational needs for high school age parents were specified by Eddinger (1975): practical information and experience to cope with the environment and to gain self-confidence, personal understanding, and a sense of involvement for using knowledge effectively. More specific needs related to household operation and consumer demands, meeting the dual demands of household and labor force, performing

the role of household head as a single parent, and contributing to one's own status while working to put a spouse through school. Shultz and Riggs (1972) were concerned with involving young blue-collar homemakers, ages 21 through 35, in educational programs at a time when family problems were paramount. Identified need areas were food shopping and preparation, clothing construction, management, child care and family relationships, creative crafts, home building or ownership, decoration and furnishing, and assisting children with education. Several of these needs were among those identified by the young homemakers in Gilchrist's low income sample (1968).

Thirty-five percent of non-Extension Club members in Goble's young homemaker sample (1964) could not think of anything they might want to learn, and 50 percent were quite satisfied with their home related roles. Those who did express needs cited community/government, personal development, and special interests. Forty-six percent of the club members were satisfied with present roles, but they expressed interest in the areas of food, clothing, child development and family living. Goble (1964) suggested the inability to specify needs might result from a lack of goals, a lack of knowledge of higher levels of skills or learning, or a failure to recognize uses of knowledge in solving problems of daily living. Johnstone and Rivera (1965) found education to have a definite effect on the ability of adults to specify something they needed to learn more about. Only 43 percent

of the subjects with five years or less education, compared to 87 percent with 16 years or more, were able to identify a learning need.

In a five county survey of the Grand Traverse Bay Region in Michigan (Rieger and Anderson, 1968) adults from 21 to over 65 years of age were asked to identify topics of daily importance about which they found it difficult to obtain information. The highest overall percentage of persons expressing informational needs were younger adults who ranked specific topics from most to least important: (1) financial matters, (2) occupational, professional, or farm problems, (3) community, state, and national affairs, (4) consumer information on products and services, and (5) educational and occupational planning.

Mothers whose children were of pre-school age and who were involved in self-planned learning activities in areas of vocations, self-fulfillment, and social, civic, and personal competencies preferred the home as a learning setting but expressed a desire for outside assistance. A Cramer's V analysis of association between demographic variables, learning projects, and time spent suggested that these factors may have an effect on young adult learning efforts (Coolican, 1973).

Middle-aged adult needs. Middle-aged families have received less attention than younger and older families in role related need research. In a study of adult homemaker education Lee (1962) determined that adults in sub-standard

housing were interested in family health, child development, family life education, and understanding teenagers. An important finding was that consumer education, the subject most desired by homemakers, was not offered to adults by any of the local educational institutions or agencies surveyed for program offerings.

Topics of most interest to mothers of teenagers were new and advanced sewing techniques and efficient meal preparation (Bowyer, 1963). Most homemakers in the study expressed low interest in time and money management, food buying, and decoration. It was noted however, that money management was among the important concerns identified in research by Gilchrist (1968) and Alers-Montalvo, Ibsen and Brown (1966). Alers-Montalvo, Ibsen and Brown found home management and food concerns among the six most important identified by middle-aged housewives. Other priority concerns were related to the home environment, legal and financial affairs, desires for children, and apparel. Interest in quality of life, teen and older adult concerns, and job opportunities was also expressed. In all need areas, the level of interest seemed highest among the younger, the better educated, and those of high occupational status. In Bowyer's study, mothers with previous experience in home economics preferred meeting in high school facilities for role related learning activities, while those without such experience preferred non-school facilities within the community.

Although the findings reported by Johnstone and Rivera (1965) were not primarily concerned with nonformal programs, several findings were noted which provide insight into middle-aged needs and learning pursuits. Learning activities undertaken by males for leisure time interests increased steadily by age: 16 percent in their thirties and 19 percent in their forties had leisure interests in mind. This was not the case, however, for men of low socio-economic status whose educational needs throughout adulthood were focused on skills and everyday living, especially jobs and vocational concerns. Those of higher socio-economic status were able to be concerned with less pressing needs such as enrichment and leisure time use as they proceeded through the stages of adulthood (Johnstone and Rivera, 1965).

The middle-aged adults (ages 36-64), male and female, who composed the largest segment of the cross-age adult sample in research reported by Rieger and Anderson (1968), exhibited a lower level of expressed information need in all five topic areas: financial, occupational, public affairs, consumer information, and educational/occupational planning. However, they were higher than either the younger or older groups in their expressed need for the 15 topics that were classified as "all other" for purposes of analysis. Although these topics were also related to daily living affairs and futuristic planning, they were not specified in the Rieger and Anderson report.

Research by Clarkson (1975) investigated home-centered learning activities of 30 blue-collar families in which there were two parents and one or more teenagers living in the household. The 30 adults reported a total of 40 activities in which one or both parents had been involved during the previous year. The areas of household care and management, leisure, and recreation accounted for 75 percent of reported activities.

Consideration of the totality of needs expressed by middle-aged adults indicates a definite interest in improving performance in such roles as breadwinner, homemaker, mother or father and consumer. However, personal development is infrequently mentioned as an educational pursuit. This observation is supported by research in which family groups (N=173) were asked to assess women's role performance in four areas: wife, homemaker, mother and individual-person. The resultant scores indicated that women may be neglecting to develop the individual-person role during the years of child rearing. Canaday (1970), who reported this research, suggested this area as fruitful for program orientation.

Needs of older adults. "The economic and social changes in our society which have impacted on the family in general have impacted on the elderly with a magnified force" (Craig, 1977, p. 2b). However, the importance of not viewing older adults as a homogeneous mass was emphasized by Hoffman (1973) and Maddox (1974). There are important differences in

cultural, social, and economic backgrounds as well as the fact that mental and physical capabilities may differ more than those of younger ages. Many have middle-aged vigor and youthful curiosity about the world and life around them. According to Maddox (1974), offering simple, standard solutions to complex problems will not work. The problems of the aged such as medical attention on modest incomes, enforced leisure, self-worth in face of changing values, and personal and social changes may also be the general problems of society. Program efforts should provide information to facilitate decision making and enable older adults to help themselves within their own restraints (Hoffman, 1973).

Review of role related and daily living needs of the older population reveals a definite relatedness among the major areas of concern. This is particularly evident in economic and consumer problems which may be dealt with independently; yet they permeate and are significant contributors to most other major problem areas such as health, nutrition, housing, and retirement.

Factors rendering the older population highly susceptible to deceptive consumer practices include: social isolation, desire for health and security, low income, low education, helplessness, and grief. Many are ill-informed, are isolated from the decisionmaking feedback systems of family and friends (Waddell, 1975), and are most vulnerable to a multiplicity of fraudulent acts imposed on them by pre-need funeral plans and by medical, health and food

quackery schemes (Atchley, 1972). Inflation has eroded the purchasing power of those on fixed incomes, making them not only poor in relation to others, but poor in relation to their own pre-retirement years. Many have reached the top of Maslow's need hierarchy and have returned to the bottom to struggle for sustenance (Waddell, 1975; Atchley, 1972).

Health problems of older adults include increased disability restrictions, increased duration and recovery time for chronic conditions, and conditions resulting from inadequate nutrition and housing. The subsequent catastrophic medical expenses can be afforded by few who live on fixed incomes. According to Osborn (1970), major physiological changes in the later years necessitate the importance of making adjustments in nutritional intake to maintain a state of good health. Another health problem of increasing concern among the elderly is drug abuse (Cohen and Lipscomb, 1976). Cohen and Lipscomb contended that the aged respond to drugs differently than younger persons as age alters the body's response to medications. Reading and understanding label directions and administering prescribed medications may also cause problems for those who have certain health disabilities.

Housing needs identified by Vivrett (1970) and Rose (1970) include new arrangements necessitated by family or life cycle changes, improvement of substandard conditions and more convenient structural designs for those with health deficits or increased vulnerability to accidents. Waddell (1975)

reported that housing and housing related improvement schemes were number one complaints cited in surveys of organizations involved in consumer concerns of the elderly.

Social-psychological needs include assistance in learning to cope with the anxiety and depression that often accompany the retirement event, a traumatic personal and emotional experience for many (Christrup, 1973). Thurnher (1968) stressed the importance of goals, values and life evaluations in anticipating and adjusting to the retirement years. Adjustments to new family and societal roles, and changing life needs were identified by Giordano (1974).

Shared concerns across the adult life cycle. The foregoing review by life cycle stage has indicated a number of areas in which needs are shared by all adults: nutrition, housing, home management, family relationships and consumer problems. Data from 91 families on financial goals, decisions, and patterns across the family life span were reported by Oberly (1967) who defined life span stages as the number of years married. Goals common to all families were: establishing and rearing a family, obtaining and furnishing a home, health, business, financial security, and recreation. Security was the most persistent concern throughout the life span. Between the eleventh and thirty-fifth years, family relation concerns decreased while education of the child increased in importance. Although housing decisions persisted throughout adulthood, most were

made in the first five years of marriage. The researchers noted a dependency between husband's education and the number and kinds of decisions made. They found that lower educational levels were associated with more family related and security concerns.

The Johnstone and Rivera (1965) findings suggested that men at all stages of the adult life cycle were typically more interested than women in vocational interests and women tended to be most interested in home and family life as well as activities outside the home. Gilchrist's study (1968) showed that clothing needs were shared by both young and middle-aged homemakers.

Mass Media and Interpersonal Learning Resources

This section will indicate the educational importance of mass media and will review research pertinent to adult patterns of mass media and interpersonal resource utilization for information or learning assistance.

Educational importance of mass media

Mass media have significantly altered the amount of information available and contributed to the ease and effectiveness of acquiring practical skills outside the classroom (Coleman, 1973). Lipson (1976) stated that mass media have potential to teach persons who want to learn without credentials or red tape and may be extremely cost effective, a bargain for both the individual and society. The importance of adult education in a rapidly changing

society reinforces the potential for mass media to be used to intensify existing efforts (Fougeyrollas, 1967). Waniewicz (1972) declared that the mass media provide the most powerful and accessible means for linking educational methods with real problems faced by individuals and society in an effort to achieve common happiness and well-being. Hiebert, Ungurait, and Bohn (1974) suggested that the educational functions of mass media, both socialization and formal instruction, comprise three major zones on a continuum: directive, maintenance, and restorative messages. Directive messages point toward learning and new understanding, must come from authoritative figures, and require substantial deliberative efforts by the learner. Maintenance messages provide information for the business of daily living. Restorative messages renew the human capacity for productive social relationships.

Several authors have commented on the educational importance of specific mass media channels. Groombridge (1966) stated that television has diverse potential for shaping and educating individuals with diverse educational needs, but he emphasized the importance of recognizing differences in programs that "happen" to educate and those that are "designed" to do so. The importance of this distinction was supported by Niemi (1972). In contrast to other informative media, television requires little effort on the part of the viewer and can be used to supplement other conventional means of education (Flamant, 1973).

The educational contributions of both broadcast and print mass media have been recognized. According to Hiebert, et al. (1974, p. 380), "Television is the medium that contributes most to the socialization of Americans, because it is the medium used by more people most of the time. . . ." However, Hiebert, et al. contended that educational radio and instructional television have been less successful than commercial programming. Educational radio has done little more than serve as a classical juke-box for an elite audience, and instructional television has been developed without sufficient consideration of learning theory and the inherent qualities of the medium. Johnson (1960) criticized programs of these two media as confined to the "intellectual ghetto" of Sunday afternoon. His view of newspapers was more favorable: They provide special educational content, series on issues of public concern, and cooperate with educational agencies to supplement other media. "Without a doubt, newspapers provide a wide variety of information necessary for carrying out day-to-day living. . . ." (Hiebert, et al., 1974, p. 377). Regarding books and magazines, Hiebert, et al. believed that economic assessibility, ease of use, and lack of disruption to non-users, renders them an invaluable source of information and insight for skill development.

Patterns of mass media utilization

Literature indicates that adults make considerable use of mass media for both information and role related learning content. Bower (1973) reported results of national surveys done in 1960 and 1970 to determine television viewing patterns in the adult population. In the ten-year period, viewing hours per week increased from 25 to 28 for respondents over age 60, while program satisfaction for the older viewers substantially decreased. Viewing patterns for public television showed that a third of the older adults compared to two-fifths of the younger group viewed at least once per week. Bower attributed this to the presence of young children at home. In the Bower study and others (Davis, 1971; Schramm, 1964; Steiner, 1963), education was identified as a key variable in adult use of mass media for educational purposes.

Educational influences. Distinct, positive relationships were reported between (1) level of education and preference for more programming on social problems, politics, and education, and (2) between education and preference for informational material (Bower, 1973). Results of educational television (ETV) research reported by Schramm (1964) indicated an audience profile skewed heavily toward the higher educated; lecture, meeting and concert attenders; book readers, the politically active, and opinion leaders. However, these "regular" viewers who

could "tune in" and "turn off" tended to be intellectually curious rather than desirous of information that could contribute to skill development. Steiner (1963) noted in his national sample of adult viewers that mention of news and public affairs, as favorite programs, rose steadily with increased education while an inverse relationship was noted between preference for light entertainment and educational level. Important findings in the Steiner study were considerably low viewing time for the higher educated viewers who identified themselves as ETV viewers, and a discrepancy between what was reported as viewed and what was actually enjoyed or identified as a favorite. This discrepancy was apparent in results showing substantial proportions at all educational levels requesting more entertainment, with the higher educated exceeding the request rate of the mass audience. Samuelson, Carter, and Ruggles (1963) suggested that as a result of increased education, role demands may be imposed on one's time which could reduce the time that might otherwise be available to spend with a given media.

Influence of age. In research reported by Davis, Edwards, Bortel and Doren (1976) results showed television viewing to increase with age. Younger men and women (ages 19 to 30) spent more than one hour less time per day than men and women over age 61. However, Hoar's findings (1960) suggested a curvilinear relationship across the adult life

cycle. He noted that within the older age group, viewing time actually decreased with age, with inconsistent differences between men and women. In a cross-age sample (N=544), Chaffee and Wilson (1975) determined that adults over age 65 were well above the overall mean in television news viewing time and more exposed than younger adults to news content. In contract to Hoar's findings, however, viewing time in the Chaffee and Wilson study consistently increased from age 40 to over 80. Newspaper reading time for the older group was also above the cross-age mean, peaking at age 65 and sharply declining after age 70. Steady declines were noted for both magazines and radio time after age 60. In Sears' research (1975) with senior citizens, 89 percent reported daily television viewing.

Newspaper reading behavior. Schramm and White (1949) reviewed Illinois research in newspaper reading patterns in which indices were established between reading patterns and age, education and socio-economic status. They concluded that use of newspapers for information and serious public affairs viewpoints definitely increased with age, educational level, and higher socio-economic status. Younger readers and those with less education and socio-economic status tended to read more for entertainment, sensational news or pictorial material. In a more recent national study (N=1700), adult newspaper readership steadily increased with age (ages 18 to over 64); however, content

preferences differed somewhat from the Schramm and White report. Sensational news was more widely read than either editorials or public health and welfare content (American Newspaper Publisher's Association, 1973). Danowski (1975) reported that daily reading time for both newspapers and magazines was considerably lower than television time for middle class residents of a Michigan retirement community where females were a majority. Divale (1976) contended that the average American confines most reading to newspapers; a major source of science information.

Media behavior as function of leisure. Several researchers have investigated leisure time pursuits of the older adult population and found a predominence of mass media behavior. Cowgill and Baulch (1962) utilized data from a cross-age adult sample to study a subsample of male and female adults over age 60. Just over half had viewed television for leisure reasons on the previous day and had spent about one hour more in daily viewing time than younger adults. Older men spent more time listening to radio than their female counterparts. In another study, television, radio, reading and records, collectively, consumed nearly half of the available leisure of 5000 social security beneficiaries (Beyer and Woods, 1963).

Graney (1974) was interested in finding an explanation for previous research findings which showed mass communication as a chief leisure activity of the aged. He

hypothesized that as a form of social participation, the media may serve as a substitute or compensation for other social activities. However, results of Graney's research with female public housing residents failed to show an inverse relationship between media use and social participation. Results were so consistently negative for newspaper, television, and radio that he recommended exploring additional participation modes.

Havighurst (1975) considered that increased leisure and higher educational levels might limit expansion of mass media use among future cohorts of older adults. He predicted increases in working around the home, travel, arts, educational enrichment, and voluntary service to others in the home setting. However, the two lifestyles he predicted for future aged cohorts both included television viewing. Lifestyle is one of several social and psychological factors receiving considerable attention by researchers concerned with adult mass media use. Many have emphasized the need to go beyond utilization patterns and consider the function of consumption and the effects of mass media on the consumer (Chaffee and Wilson, 1975; Graney, 1974; Atkin, 1972; Rees and Paisley, 1968; Schalinske, 1968).

Social-psychological factors. Rees and Paisley (1968) used multivariate analysis to determine the comparative strength of various life cycle, lifestyle, and psychological

attributes to identify the pattern best accounting for information-seeking behavior as related to current events, occupations, and family activities. They concluded that life cycle attributes of age and sex were predominant predictors of selected adult educational behaviors, that lifestyle attributes of income and education predicted newspaper and magazine reading, and that education strongly predicted general book reading and recency of library use. The strongest predictor of informational radio listening was age, a finding inconsistent with other research including that of Chaffee and Wilson (1975). Rees and Paisley suggested this might be a function of informational radio use as opposed to entertainment listening reported in other studies. The only significant predictors of serious television viewing in the Rees and Paisley study were the psychological attributes: perception of education in the media, achievement motivation, and attitudes toward new media technology. Interpersonal information-seeking was most strongly predicted by attributes of organizational membership and income. Rees and Paisley viewed these findings as useful profiles for administrators of adult educational programs.

It was hypothesized by Atkin (1972) that people seek out mass media informational content for later discussion with others. He referred to this as communicatory utility, which is anticipated usefulness of information for future informal interaction with friends, family, or associates.

Results of secondary analysis of two data sets showed that those who spent most time reading newspapers and magazines also spent more time discussing it with others and experienced having others ask their opinions about it. This analysis combined with earlier correlational studies, producing similar results, may demonstrate the potential of communicatory utility in understanding mass media information seeking.

Schalinske (1968) interviewed men and women in a senior citizen community to determine the use of television within the total range of available activity patterns. Respondents, who viewed three and a half hours per day, indicated a devotion to television and an appreciation for it. The companionship factor was given moderate to strong recognition in Davis' research with members of the American Association of Retired Persons (Davis, 1971).

Urban studies. The multivariate approach has been useful for studying large urban audiences and was used by Greenburg and Dervin (1970) to investigate mass communication behavior of the urban poor. Attitudes and media use were examined in three adult samples: general population, low income whites and low income blacks. Considerable differences between low income and general populations in media behavior, and a similarity between both low income groups was hypothesized. Findings related to ownership, use, and content showed that television ownership

predominated in all samples, that all other types of mass media were more accessible to the general population, and that few ownership differences existed between the two low income groups. Examination of both use and content for television and newspapers showed striking differences between the general population and the low income groups but no consistent differences between the two low income groups. Greater use of radio and magazines was made by the general population sample.

On all measures of media attitudes, Greenburg and Dervin (1970) found the low income audience consistently more favorable than the general population toward television, particularly for news content. The general population preferred radio and written media for news. Again, differences were negligible between the two low income samples. The researchers recommended further research into the area of interpersonal communication behavior to determine which people and media are used by the urban poor to serve various functions.

Repeated research findings showing heavy radio and television use among the poor and alienated led to speculation by Sargent and Stempel (1968) as to which factors primarily affected media use. A small urban study compared a poverty and a general population sample on responses to media questions and values from Srole's five-question anomie scale. Differences were as predicted. The general population sample read more newspapers and the

poverty sample watched more television. In terms of anomie, high and low subgroups of the poverty sample exhibited only slight differences in radio use. However, a finding of special significance to the authors, in terms of the importance usually attached to television as an escape medium, was that the low anomie group was substantially higher than the high anomie group in overall television viewing. They concluded that the critical variable in the sampled community was poverty rather than alienation.

Expressed preferences for mass media programs. Respondents in a number of research studies have expressed specific concerns for mass media program content. Self-reported preferences of older adults in studies reported by Davis (1971) and Atkins (1976) included news and public affairs, musicals, and travelogue programs. Program concerns reported by the metropolitan American Association of Retired Persons (AARP) sample with education predominantly beyond high school were education, information, and philosophy (Davis, 1971). In another metropolitan sample reported by Davis (1976) those with a median educational level of eighth grade preferred news and public affairs, comedy, and variety shows. More older performers and soap operas designed for senior citizens were desired programming changes noted by the retirement community respondents, in the Danowski research reported by Atkin (1976). Although the American Association of Retired Persons audience studied

by Davis (1971) seemed to place value on practical program concerns, they were vague in their specifications for needed information.

Magazines, newspapers, books, and television were ranked in that order as important sources of nutrition information in a North-Central region study reported by Fox, et al. (1970). Extension/government bulletins and a variety of lay resources were considerably lower in importance. Desired media for home and family program preferences of young homemakers were newspapers, pamphlets, magazines and television (Shultz and Riggs, 1972). This choice of learning was for convenience and avoidance of travel and child care arrangements. Shultz and Riggs (1972, p. 36) stated:

> It's to an educator's advantage when the audience prefers to receive their [sic] educational information by mass media. If educational programs in home economics are to be conducted for the ever increasing urban population, meetings and personal visits alone won't do the job effectively.

Self-report vs. measurement of utilization. Davis (1976) made an interesting comparison between the two previously cited metropolitan studies which used self-report methods and preliminary findings of later research in which viewing patterns were directly measured. Although content preferences were generally consistent, results showed significant disparity between the number of hours per week. Both metropolitan studies of self-report showed approximately five hours or less compared to a measured mean time

of 23.87 hours per week in the later study. Davis concluded that self-report is unreliable when the dependent variable is physical viewing time rather than content or preference statements and indicated the importance of these findings for those concerned with fragmented, rather than mass audiences.

Interpersonal sources contacted

A multiplicity of persons and organizations are available in communities and urban structures to assist adults seeking information and educational programs related to concerns of daily living. Two major providers are the tax supported programs of the public school system and the Cooperative Extension Service. Others include membership organizations, libraries, churches and numerous private and public agencies. Social service agencies, which once were primarily limited to problem related family service, now provide educational inputs to help alleviate recurrence of family problems (Lyle, 1960). Researchers have found the intimate system of relatives, friends, and neighbors to be another important source for information on home and family interests (Bobbitt and Paolucci, 1975; Coolican, 1973). Also, information from one's own reference group is usually considered potent or trustworthy as it tends to be consistent with previous beliefs (Reeder, LeRay, Jr., and MacKenzie, 1974). Reeder, et al. (p. 45) stated, "An expert's opinion on a subject will have special potency only for those who accept the authority of the source."

Brown (1965) identified the "professional intermediary" as a most important information source for urban households and named the garden shop, hardware store, florist, and landscaper as examples for outdoor home care. He underscored the importance of knowing information seeking habits and preferences in order to establish effective communication between educator and audience and suggested providing intermediaries with specialized publications.

Contacts identified in audience research. A more formal group of "most important" community sources was identified by Rieger and Anderson (1968) and varied according to topic of concern and demographic characteristics of user as follows: (1) bankers, brokers and finance companies for all adult age groups regarding financial concerns, (2) cooperative extension for all males in occupational, professional and farm concerns, (3) public and other administrators for community, state and national affairs, and (4) various school personnel for all ages in educational and occupational concerns. All age groups identified retail stores as primary sources for product and service information. Personal and family friends was the second choice for older and younger adults, and cooperative extension was the second choice for middle-aged adults. Further analysis by Rieger and Anderson revealed that place of residence, education, age, and sex were factors associated with difficulty in obtaining given types of information.

Obtaining information on financial matters was most difficult for all ages, but to a lesser degree for females, those with less than high school education, and rural people. The lesser degree of difficulty among those with lower education was found for all specified areas of concern and this factor was suggested as a function of lesser seeking activity.

Although young homemakers in Coolican's study (1973) named several large public institutions as important information sources, the sources they ranked highest for actual use were television (42%), business and industry (39%), and religious institutions (19%). Of the mothers engaged in self-planned learning, 40 percent either were unaware of sources of assistance or thought projects were too personal to request help. Other mothers involved in self-planned learning either considered a variety of sources important or felt qualified themselves and requested help only when needed.

Libraries. According to Stevenson (1960), the public library as a nonformal educator not only assists individuals with continuing self-education but also serves as a resource for communication agencies and organizations by lending assistance in program planning and presentation.

A multiple regression analysis revealed education, a function of lifestyle, as the strongest predictor of recency of library use (Rees and Paisley, 1968). Other predictors

in decreasing rank order were attitudes toward new media and educational technology, number of organizational memberships, and achievement motivation. An interesting and complex interaction was noted between the predictors, education and age. Since the majority of the sample had less than four years of college, age was a negative partial predictor in that percentage of use decreased with age. Among the college educated that trend was clearly reversed.

A recent innovation in library services is the NICHE program[1]: a catalyst or link between persons who need information and those who can supply it (Smith and Winnick, 1976). The outgrowth of a recent response by librarians to observations that adults were not getting answers to a multiplicity of commonplace questions regarding the affairs of daily living, NICHE is developing nationwide and includes several major metropolitan areas. The program taps a broad range of non-traditional resources throughout the community by using people and publications from community agencies and groups. Special files of current medical, dental, legal and educational information are maintained by the NICHE staff, who go into the community to locate problems and the resources that can contribute to solutions. One of several current efforts entails the provision of budgeting, child care and nutrition information to disadvantaged families.

In a study of blue-collar families (Bobbitt and Paolucci, 1975) adult spokespersons were asked to indicate

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[1]Neighborhood Information Center Helps Everyone.

persons outside the home who had been contacted by adult family members to facilitate home-based learning. According to males, the librarian was the source most frequently contacted by male adults, and neighbors were the source most frequently contacted by females. Females, however, identified friends as the source most frequently contacted by both adult sexes, and reported a negligible number of male contacts with library sources.

The previous studies show that the public library serves an important role in both adult learning and information seeking behavior. In the case of NICHE the outreach continues to multiply. Axford (1969) challenged adult educators to work cooperatively with local librarians in providing continued adult learning experiences directed toward practical living needs.

Public service agencies. Use of public service agencies by the rural poor[1] was one of several survey concerns in research conducted by the Cooperative Extension Service in Oregon (Nelson and Coppedge, 1974). Household heads who ranged in age from under 24 to over 65 were interviewed. Findings supported the hypothesis that low income persons do not have a tendency to take advantage of services offered by public agencies nor the programs of cooperative extension. Comparisons between households with

[1]Poverty was operationally defined by level of income with "minimum adequate" income set at $5,330 for a family of four.

above-adequate and below-adequate incomes showed that the below-adequate group made more contacts with county welfare agencies, while the above-adequate group made more contacts with all other public agencies such as Farmer's Home Administration, Soil Conservation Service, State Employment Service, and community colleges. Contacts with the health department were made about equally by both groups. The above-adequate group made more contacts with cooperative extension (40%) than the below-adequate group (27%). However, cooperative extension contacts once made by the latter group tended to recur and were primarily through 4-H and Expanded Food and Nutrition Education Program channels. Primary extension channels for the higher income households were 4-H, family living and agriculture. Reasons proposed by the researchers for lack of contacts were: (1) absence of knowledge regarding services, (2) attitudes against participation, and (3) inappropriateness or inaccessibility of services.

Racial factors in interpersonal contacts. Greenberg and Dervin (1970), who studied mass communication behavior of a racially mixed low income population (N=281), found that "people" ranked fourth (14%) as a preference for local news. However, when making racial comparisons, nearly one-quarter of the blacks compared to seven percent of the whites identified people as a local news source. The researchers speculated inadequate news coverage of the black ghetto by prime media and suggested a need for

enhanced understanding of communication exchanges between the majority culture and poverty subcultures.

Racial differences were also identified in Block's research (1970) with inner-city residents in St. Louis, Missouri. More than 60 percent of the total sample said they would not ask another person for advice in selecting a major market product. Racial comparison showed newspapers and television as the two most useful sources for both blacks and whites, with blacks ranking friends third, salesclerks sixth, and social workers least desirable of all. However, nearly one-quarter of the blacks mentioned personal sources in general as being helpful compared to only 15 percent of the whites. Whites overwhelmingly favored social workers as a useful source and ranked friends sixth.

Snow (1955) challenged administrators of adult education programs to identify and tap resource persons who can facilitate the learning process and bring them together with people who desire to learn. If properly planned, the building of educational values into activities customarily pursued by adults in convenient settings can provide opportunity to learn with minimal disruption in normal living patterns (Snow, 1955).

Considerations for Nonformal Program Planning

Linkages between provider and learner

Knowledge of adult learning needs, mass media utilization patterns, and sources contacted outside the home for learning assistance provides a challenge to educators responsible for delivering nonformal programs to hard-to-reach adult audiences. As adult family members continue to opt for the convenience or desirability of home-based learning, linkages must be established between educational providers and the diverse, yet unique, audiences of potential learners. According to Simpson (1973) audience diversity, which applies to appropriate modes of learning as well as to defined needs, demands new avenues of outreach. Linkages between home-bound audiences and community educational opportunities may be the only way to enhance personal development and realize improvements in occupational, home, and family-related skills.

The importance of linking adults with essential information resources was emphasized by Schlossberg (1974) who contended that stocktaking is a common thread among adults of all ages. Involved in multiple role transformations, many are unsure of what they want in life or of where and how to get it. They ask "what if" and "if only" questions, are outsiders to the educational system, suffer from information voids, and are faced with making critical decisions in a vacuum. Schlossberg suggested using community based guidance counselors to serve as brokers between

clients and resources who would focus on informational skills rather than on academic attributes.

An inconsistency between the recognized importance of home delivery linkages and the attention given them by educational institutions was noted by Walton (1974). He reported research in which the innovations in adult learning programs of several hundred institutions were focused primarily on regional, field, or community centers. Radio and television were seldom used, and the learner's home was regarded as a primary learning site in only five percent of the cases. Walton concluded that the learner's needs must be held paramount over institutional convenience and noted that present technology has potential for viable delivery in this regard: " . . . Television will be the key instrument for telecommunications and for purveying knowledge in the foreseeable future" (1974, p. 108). Quoting the Carnegie Commission on Higher Education, Walton (1974, p. 105) stated: "Informational technology better than ever before can bring education to the sick, the handicapped, the aged, . . . persons in remote areas, and to the many adults . . . who will find instruction at home more convenient."

Niemi (1972) and Groombridge (1966) have suggested that mass media can be utilized to help persons learn by "design" who are now learning by "chance." Niemi questioned whether television was being used to its potential in this regard and challenged educators to understand the strengths

and limitations of various media that may be considered for program purposes. Several innovative programs have been identified in the literature and deserve mention as important contributions to the development of nonformal programs that can be delivered to adults via mass media channels into the home.

Innovations in mass media programming

An eight part series on educational television (ETV) in Georgia addressed several facets of retirement planning and provided state-wide reinforcing seminars (Thorson, 1968). The purpose was to provide middle-aged and older adults the opportunity to plan ahead for inevitable stresses of older adulthood and take steps to minimize them. Each session treated a specific issue (inflation, quackery, loss of spouse, and use of leisure) and was hosted by an internationally known gerontologist. Follow-up seminars provided viewers opportunities to discuss important concepts with peers and university-based discussion leaders and reinforced the importance of combining mass media efforts with interpersonal experiences for effective learning. This combination is widely supported by educators and researchers (Lipson, 1976; Rogers and Shoemaker, 1971; Mishra, 1970; and Fougeyrollas, 1967).

Pickarts (1969), a strong supporter of family education via television, described a family life television series for adults that addressed several life cycle concerns.

Programs were designed for 20 or 30 half hour sessions and utilized a variety of formats: specialist lecturers, guest panels, discussion-lecture, skits, and teen-adult dialogues. Pickarts contended that family life television education is an essential tool contributing to human potential development in adult populations who have no other way to learn.

Soap opera formats. Educators have expressed concern for development of a television format capable of reaching audiences most in need of role related education. The soap opera format has been suggested frequently because of its apparent popularity among adult daytime television viewers. Operation Gap-Stop employed this format to transmit socially ameliorative information regarding daily living concerns to residents of urban public housing in Denver (Mendelsohn, 1968). The program was preceded by a preliminary analysis of audience needs and television viewing behavior. The random sample, which was predominantly female, consisted of household heads (N=649) who represented different races and were socially isolated; who lacked adequate employment skills, education, and income; who were deficient in coping with health, financial and food concerns; who preferred television for keeping informed; and who had no clear ideas of where to seek help. Psychologically supportive reasons for television viewing were prevalent but subordinate to the learning-information functions mentioned. However, since a majority had requested

"real" educational programs, and soap operas were most frequently identified as first program preference, it was assumed that these programs were being used as learning material and should be considered in program design.

The program entitled, "Our Kind of World," was an eight-part family series with "bits" of information from eight role related categories woven into the dramatic context of the script and information on local helping resources provided through station commercials. Actors were cast from the target audience, where possible, and assisted in developing family situations that accurately depicted cultural and ethnic uniqueness plus the daily frustrations and problems encountered by the viewing audience. Post-evaluation of the original sample showed that 90 percent thought the shows were "very believable," and 79 percent thought they were "like my own life." Mendelsohn (1968) believed the soap opera format is unfettered by disfunctional tradition and is a more effective way to deliver ameliorative messages to disadvantaged audiences than through mass media of print or radio. He recommended the approach be tried with larger audiences over extended periods of time and defined it as a "rifle approach" that picked out " . . . a specific target population and hit it successfully with exactly the kind of material it needed in exactly the kind of format preferred (p. 22)."

Cable innovations. Recent innovations in television programming were reviewed by Kay and Gerendasy (1976) who reported results of a seven region experimental study in the home delivery of social and administrative services via cable television. Programs delivering specific services to specialized audiences are of particular interest for this review. A 23-week series for senior citizens in New York City provided information to increase self-help capacity, facilitate contacts with providers, and deliver quality of life services. Increased morale and decreased isolation were reflected in preliminary evaluations. Teens and older adults in Lynwood, Washington, were brought together in high school lunchroom interaction as one facet of a weekly television series which provided high school based entertainment, information, and exercises for the older adults. Foster parent training was given in an experimental five-part cable series to home and small group viewers in Michigan. Home viewers in Casper, Wyoming, called the public library with information requests which were responded to on the screen as channels were cleared of other programs (Kay and Gerendasy, 1976).

Kay and Gerendasy concluded that the advantage of cable television lies in its multiplicity of channels and its ability to "narrow cast" or focus on small target audiences. They recommended placing priority on the information and referral applications of this technology.

As use of radio and television for adult education increases, programs are moving beyond tradition and addressing diverse concerns of home and family life for specialized audiences such as middle-income, middle-aged, aged and ethnic groups (Rudd, 1973). Rudd noted a trend toward increased cooperation among community professionals delivering programs and information to adult populations. This trend is an important factor toward enhancing overall effectiveness of those concerned with adult educational activities.

Cross-age and non-professional factors in program design. Tyler (1975), who contended that learning happens and role transitions are enhanced when youth and adults are provided continued opportunity for interaction, challenged educators to utilize local resources in developing nonformal program designs that utilize both professional and non-professional personnel. The importance of meaningful contact among persons of all ages was supported by Bronfenbrenner (1973) who suggested that interests, skills, and human traits of cooperation, tolerance and compassion are learned through interaction and exposure to persons of all ages. He placed emphasis on cross-age, rather than age-segregated, learning activities in which persons of different generations have opportunity to become involved in the lives of others through sharing of talents and skills. He stated further (1973, p. 445):

> The . . . power of parents, and other adults to function as constructive forces in the lives of children depends in substantial measure on the degree to which the surrounding community provides the place, time, example, and encouragement for persons to engage in activities with the young.

Although Bronfenbrenner's focus was on providing youth with a multi-age peer group, his proposal has important implications for those engaged in adult program planning and concerned with identifying effective combinations of mass media, interpersonal contact, and use of non-professional program assistants. These factors were strongly emphasized as important by a number of researchers and educators (Tyler, 1975; Rogers and Shoemaker, 1971; Mishra, 1970). According to T.H. Bell, former U.S. Commissioner of Education, adults need help in converting the home environment into a powerful learning laboratory. This need can be satisfied by " . . . using to the maximum extent possible local resources and involving to the maximum extent possible those for whom it is designed: all family members . . . " (National Advisory Council on Adult Education, 1975, p. 17).

Media research with older television audiences indicated a perceived lack of older persons in major acting roles. This situation was attributed to society's youth orientation and age-segregated functions. The school lunchroom-television program cited by Kay and Gerendasy (1976) is an example of an effort to alleviate age-segregation. Other programs of this nature were described by Whitley (1976), Scott (1974), Norman and Smith (1975),

and Naylor (1974). Naylor indicated that older adults have much to offer younger learners. They can provide a rich knowledge of the community, its resources, traditions, cultural preferences, and the wisdom of a lifetime. As volunteers they can help others reach full potential in ways that cannot be purchased. Younger adult learners, who often lack the preparatory experiences and mature judgment for essential family role responsibilities, could also benefit from interactional learning experiences with older adults. The problem to society of age segregation was cogently stated by Madden (1975, pp. 32-33):

> Age segregation is probably the most prevalent and pernicious form of discrimination in America today. Even racial segregation at its worst does not attack family relationships as viciously as does the displacement of elderly in our society. It is not uncommon these days to find children of school age who have never met their living grandparents. . . . When educators finally realize that every year we are moving one step closer to creating America's elderly scrap pile, perhaps we will see the urgent need to devote some attention to this important issue . . . "

The National Advisory Council on Adult Education (1975) strongly emphasized the importance of a total community effort to educate adults for the developmental tasks of parenthood and stressed the contribution made by the family and home environment. The Council stated (pp. 13-14):

> A healthy family environment is essential to the well-being of all its members, . . . It can become a primary role of the adult educator to facilitate the attainment of this healthy environment through existing or new resources, combinations of resources, or delivery systems. . . . Parents are seeking assistance, and finding it in nooks and corners of their communities--but few find the resources to fully meet their needs.

> Adult education cannot always provide solutions, but it can provide delivery systems, existing resource identification and coordination structures, and processes for finding solutions.

Several critical questions must be examined: What types of delivery systems and resources can be identified and utilized? What structures can be combined for increased effectiveness and efficiency? What new or unused resources can be tapped? Adult educators must ask these questions again and again as they seek solutions together (National Advisory Council on Adult Education, 1975).

CHAPTER III

METHODOLOGY

This research was part of a larger study entitled, "The Home as a Learning Center" (HLC), conducted by researchers in the Department of Family Ecology, College of Human Ecology, at Michigan State University, pursuant to contract number 300748735, the Department of Health, Education and Welfare, Office of Education, Occupational and Adult Education Branch (Bobbitt and Paolucci, 1975). As a feasibility study it was concerned with how blue-collar families, with access to similar educational resources, used the home as a center for learning. Data from that survey were used by the researcher to (1) answer questions related to use of mass media and interpersonal learning resources by adults in three age categories of the life cycle and to (2) explore relationships between use of those resources and selected demographic variables. This chapter includes descriptions of the sampled community, the sampling design and selection procedures used in the feasibility study, the survey instrument, the sample as used in the present research, and the procedures for data analyses.

Description of Sampled Community

Vevay Township, Michigan, the geographical location for sample selection has a diversified blue-collar socio-economic population which provided the potential for a random sampling of families. The township is the seat of county government, has several service agencies and small industries, and is near a number of major employers including the state government in Lansing, the automobile industry, and Michigan State University. Vevay Township, a part of the Lansing Standard Metropolitan Statistical Area, is located between the cities of Lansing and Jackson, Michigan, and is surrounded by a diversified agricultural sector.

Sampling Design and Selection Procedures As Used in Feasibility Study

The Probabilities Proportional to Size method (PPS) was used for sample selection (Kish, 1965) to ensure that the sample would reflect population characteristics as well as provide for interviewing of both male and female spokes-persons within blue-collar occupational categories. This method made it possible to control for wide size variation in both rural sections and individual city blocks, assured representation of sample elements from larger areas, and gave each element in the population an equal chance for selection. Rural sections and city blocks, the primary sampling units, were first selected by systematic sampling with random start. Next, households were randomly selected from primary units to ensure an equal number of contacts

in each. This two-stage process increased the probability for selection in smaller areas and equalized probabilities for the total sample (Bobbitt and Paolucci, 1975; Babbie, 1973; Kish, 1965).

Field procedures included screening identified households for eligibility and determining whether the spokesperson for a given household would be a male or female adult. Criteria for final household selection were a blue-collar occupation for head of household and one year in residence as a family unit. From a total of 368 contacted households, the screening process and household refusals resulted in a final sample of 108 families who were divided equally into three age groups: young, middle-aged and older. Within each age group of 36 families there were 12 male and 24 female spokespersons. After completion of a pilot study, data were collected from February to April 1975 with an average interview time of 100 minutes. In response to pre-structured questions, a spokesperson specifically provided the interviewer with information regarding his or her personal involvement in home learning activities as well as providing information on the learning involvements of other family members.

Complete details regarding sampling design, selection, interviewer training, screening, and field procedures are on file in the Department of Family Ecology, College of Human Ecology, Michigan State University.

Description of Survey Instrument

In the HLC study, the survey instrument was administered to adult spokespersons by a research team of faculty and graduate students from the College of Human Ecology, Michigan State University, who were trained in data collection procedures. The instrument included an interview schedule and a demographic questionnaire which are a part of the original research report (Bobbitt and Paolucci, 1975). The interview schedule was designed to elicit response to a variety of questions regarding the home learning activities of all family members, adults and children. Both fixed alternative and open-ended questions were asked and probe techniques were used to help spokespersons recall individual and family learning activities undertaken and learning resources used during the previous one-year period.

The instrument questions of concern in the present research were those related to the adult spokesperson's personal use of mass media and contacts made with interpersonal resources for assistance with home-based learning activities. Specifically, mass media and interpersonal resource variables selected for analyses included those for which preliminary frequency analysis (Bobbitt and Paolucci, 1975) showed substantial utilization across all age categories. Mass media selected were television, radio, newspapers, magazines and books. Interpersonal resources selected were relatives, neighbors, friends, and school, library, and extension sources. Because of the numerous

sources identified under major categories of school, library extension and relatives, the responses given under each major category were combined for statistical analyses.

The demographic portion of the survey instrument was designed to obtain information on the ages and highest completed educational levels of all family members, the occupation and income of adult members, and the previous experience of family members in home economics classes and 4-H work. Portions of the demographic data were used in the present study to explore relationships between adult demographic characteristics and the use of home-based learning resources as stated in objectives three and four.

Prior to data collection the research team conducted a pilot interview with five families who met the criteria of sample families in order to pre-test the survey instrument. Responses to the tape recorded pilot interviews were analyzed and the instrument revised accordingly.

Description of Sample as Used in Present Research

Units of analysis for this research were the 36 adult male and 72 adult female spokespersons representing the 108 young, middle-aged, and older families surveyed in the HLC study. Each age category included 12 male and 24 female spokespersons. Their responses concerning personal utilization of mass media and interpersonal learning resources were analysed to determine if differences in use existed between

or among the three age groups and (2) to explore relationships between use of learning resources and selected demographic variables. The following discussion describes demographic characteristics of the total sample of 108 spokespersons and of subgroups within that sample.

Age ranges of spokespersons

In the original HLC study, classification of sample families into age categories (life cycle stages) was determined by age of adult male, if living in household (Chapter I). However, the ages of a few females who were selected as spokespersons for the middle-aged and older families did not fall within the defined age ranges for family classification (Table 1) which were: 20 to 34 for young families, 35 to 54 for middle-aged families, and 55

TABLE 1.--Age range of spokespersons, in years, by sex and life cycle stage.*

Sex	Young	Middle	Older
Female			
Range	20 - 33	24 - 53	39 - 80
Median	26.5	41.0	63.5
Male			
Range	23 - 34	36 - 49	55 - 79
Median	28.5	42.0	60.5

*N = 24 females and 12 males per stage

or above for older families. Thus, while the ages of all young spokespersons did fall within the 20 to 34 range, the range for middle-aged and older spokespersons was 24 to 53 and 39 to 80, respectively as shown in Table 1.

Education

Spokespersons were requested to indicate the highest level of education completed. Table 2 shows this level as high school graduation for the largest single proportion of the total sample (43%). Ten percent had completed less than 9 years of schooling and 6 percent had completed college.

TABLE 2.--Highest level of completed education by total sample.

Education	Total sample (N=105)* %
0 - 9 yrs.	10
10 - 11 yrs.	12
H.S. grad.	43
Voca. or tech.	12
Some college	17
College grad.	6
TOTAL	100

*No response = 3

Educational level according to sex. Males more frequently than females reported completed education beyond high school. Fifty-one percent of the 70 females who reported, compared to 26 percent of the 35 males who reported, identified high school as the highest level of completed education. However, 51 percent of the males and only 27 percent of the females reported vocational or college training (Table 3).

TABLE 3.--Highest level of completed education by sex of spokesperson.

Education	Males (N=35)* %	Females (N=70)* %
0 - 9 yrs.	11.43	8.57
10 - 11 yrs.	11.43	12.86
H.S. grad.	25.71	51.43
Voca. or tech.	14.29	11.43
Some college	28.57	11.43
College grad.	8.57	4.29
TOTAL	100.00	100.00

*No response = 2 females, 1 male

Education and life cycle stage. Although high school was the single level of highest education most frequently reported by those in all three stages, 44 percent of the young spokespersons, 36 percent of middle-aged

spokespersons, and 26 percent of the older spokespersons reported vocational and/or college training (Table 4). More

TABLE 4.--Highest level of completed education by age category of life cycle.

Education	Young (N=34)* %	Middle (N=36) %	Older (N=35)* %
0 - 9 yrs.	3	3	23
10 - 11 yrs.	9	14	14
H.S. grad.	44	47	37
Voca. or tech.	3	22	11
Some college	32	11	9
College grad.	9	3	6
TOTAL	100	100	100

*No response = 2 young, 1 older

than half of those with less than a high school education were in the older life cycle stage (Table 4). However, of the spokespersons reporting college completion, an older female was the only one with graduate/professional training (Table 31, Appendices A).

Income characteristics

Total sample. Family incomes between $6,000 and $17,999 were reported by 62 percent of the total sample (Table 5). Nearly two-thirds of the remaining 38 percent reported incomes of $18,000 or above.

TABLE 5.--Family income by total sample.

Income range*	Total sample (N=103)** %
$ 0.0 - 5.9	13.59
$ 6.0 - 11.9	26.22
$12.0 - 17.9	35.92
$18.0 and above	24.27
TOTAL	100.00

*In thousands

**Not known = 1, no response = 4

Income according to sex. Those reporting family incomes between $6,000 and $17,999 included 65 percent of 68 female spokespersons and 57 percent of 35 male spokespersons (Table 6). Family incomes reported by 18 percent of the female spokespersons and by 6 percent of the male spokespersons were under $6,000. Family incomes of $18,000 or above were reported by 37 percent of the males and by 18 percent of the females.

Incomes by age category of life cycle. Table 7 shows that 64 percent of the spokespersons from young families, 58 percent from middle-aged families, and 64 percent from older families reported family incomes between $6,000 and $17,999. There was a higher proportion of incomes over

TABLE 6.--Family income by sex of spokesperson.

Income range*	Male (N=35)** %	Female (N=68)** %
$ 0.0 - 5.9	5.72	17.64
$ 6.0 - 11.9	19.99	29.41
$12.0 - 17.9	37.15	35.29
$18.0 and above	37.14	17.64
TOTAL	100.00	99.98

*In thousands

**No response = 1 male, 3 females; not known = 1 female

TABLE 7.--Family income by age category of life cycle.

Income range*	Young (N=36) %	Middle (N=36) %	Older (N=31)** %
$ 0.0 - 5.9	8.33	13.89	19.35
$ 6.0 - 11.9	16.67	27.78	35.48
$12.0 - 17.9	47.22	30.56	29.03
$18.0 and above	27.78	27.77	16.13
TOTAL	100.00	100.00	99.99

*In thousands

**No response = 4, Not known = 1

$17,999 reported by both young and middle-aged spokespersons, 28 percent for both groups, than by those in the older life cycle stage (16%). A higher proportion of older spokespersons (19%) reported incomes below $6,000 than did spokespersons in young and middle-aged categories, 8 percent and 14 percent respectively (Table 7).

Family income by education. Table 8 shows family income reported according to the highest level of completed education. Of those with incomes under $6,000, 50 percent

TABLE 8.--Family income by highest level of completed education.

Income Range*	0-9 yrs. %	10-11 yrs. %	H.S. grad. %	Voca. tech. %	Some college %	College grad. %
$ 0.0 - 5.9	29	21	36	7	7	0
$ 6.0 - 11.9	4	15	37	11	26	7
$12.0 - 17.9	9	9	51	11	17	3
$18.0 and above	4	12	36	20	16	12

*In thousands

reported 11 or less years of formal education compared to 14 percent who reported education beyond high school as the highest level completed. Among those earning $18,000 or above, only 16 percent reported 11 or less years of education, while a total of 48 percent reported education beyond

high school and 12 percent of these had completed college. Although Table 8 suggests a trend toward higher incomes with higher education, the large proportions at the high school level across all income categories renders an inconsistency to this trend. This may be a function of higher sample representation at the high school level and a much lesser representation at the college levels (Table 2). It may also be a function of blue-collar occupational status in which college training is usually not required.

Number of children in household

Table 9 shows, by age category of life cycle and total sample, the number of children up to 19 years of age who were living with spokesperson at time of interview.

TABLE 9.--Number of children living in household by age category of life cycle and total sample.

No. of children	Young (N=36) %	Middle (N=36) %	Older (N=36) %	Total (N=108) %
0	14	33	89	45
1	31	19	5	18
2	36	14	3	18
3	14	19	3	12
4 - 6	5	14	0	7
TOTAL	100	99	100	100

Nearly half of the total sample (45%) indicated the absence of children living in the household. The majority of total sample who did have children living at home were one and two-child families. Two-thirds of the young families and one-third of the middle-aged families were in this category. The majority (89%) of older spokespersons reported no children living at home.

Residential location

Although spokespersons resided in both urban and rural households, 64 percent of the total sample were urban as shown in Figure 2. As shown in Table 10, female

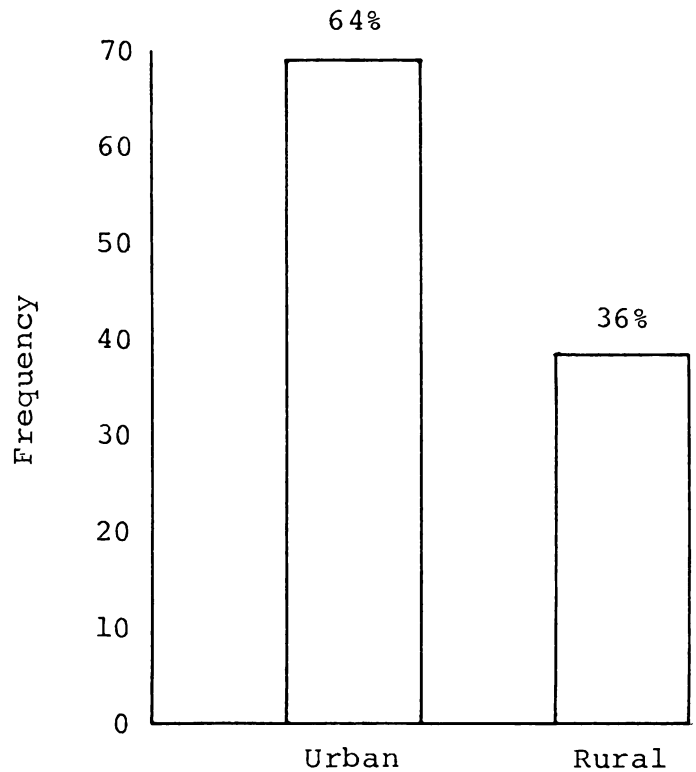

Figure 2. Residential location according to frequency of sample (N=108).

spokespersons were predominantly urban (69%), but male spokespersons were about equally distributed between the urban and rural households. The urban location was also

TABLE 10.--Household location by sex of spokesperson.

Location	Males (N=36) %	Females (N=72) %
Urban	53	69
Rural	47	31
TOTAL	100	100

predominant among young and middle-aged spokespersons, 72 percent and 67 percent respectively, while older spokespersons resided about equally in both (Table 11).

TABLE 11.--Household location by age category of life cycle.

Location	Young (N=36) %	Middle (N=36) %	Older (N=36) %
Urban	72	67	53
Rural	28	33	47
TOTAL	100	100	100

Type of family dwelling

Figure 3 shows that the majority (86%) of the total sample lived in single family dwellings. As indicated in Table 12, the single unit was also the predominant dwelling

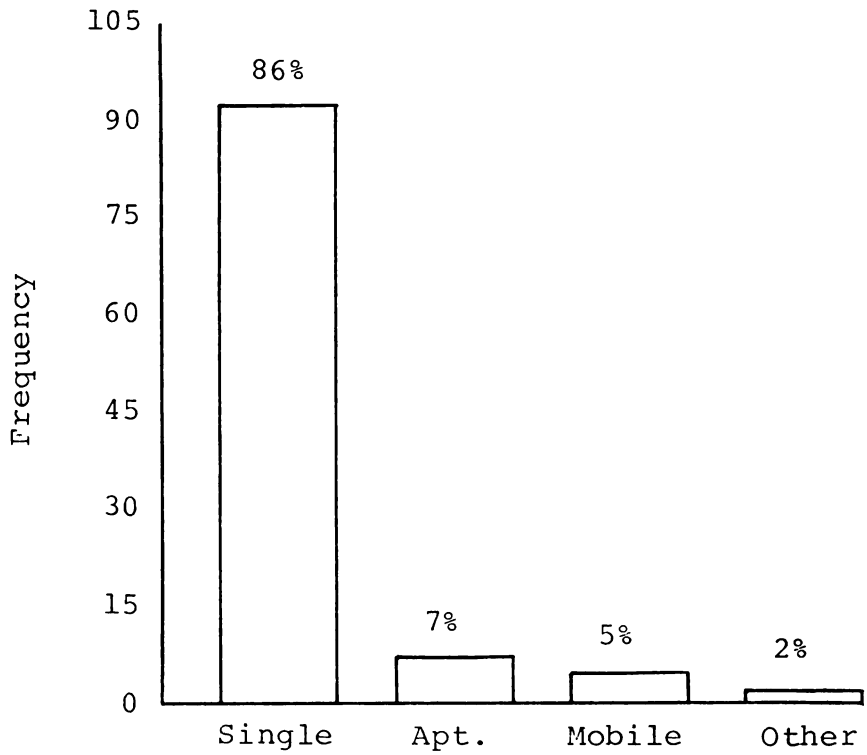

Figure 3. Type of dwelling according to frequency of sample (N=108).

type for both male and female spokespersons, 81 and 89 percent respectively. It was also predominant (80% to 90%) for spokespersons in each of the three age categories of the life cycle (Table 13).

Previous experience in home economics classes

Previous experience in home economics classes was reported by 60 percent of the total sample. Figure 4 shows

TABLE 12.--Family dwelling type by sex of spokesperson.

Dwelling type	Males (N=36) %	Females (N=72) %
Single	81	89
Apartment	8	7
Mobile	8	3
Other	3	1
TOTAL	100	100

TABLE 13.--Family dwelling type by age category of life cycle.

Dwelling type	Young (N=36) %	Middle (N=36) %	Older (N=36) %
Single	86	89	83
Apartment	11	0	11
Mobile	0	8	6
Other	3	3	0
TOTAL	100	100	100

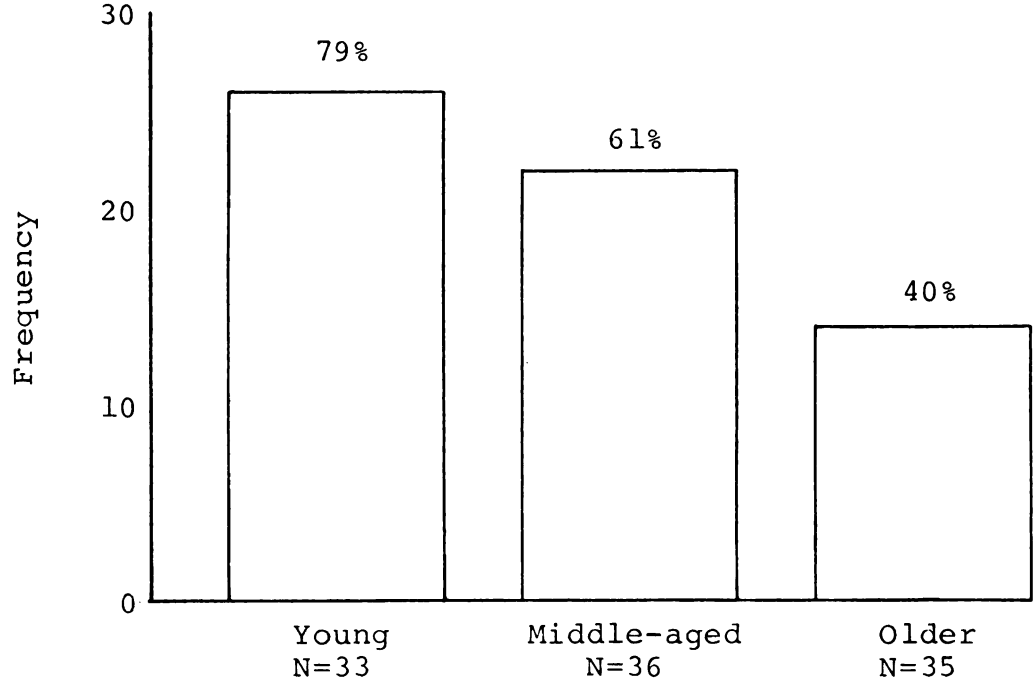

Figure 4. Previous experience in home economics classes by age category of life cycle.

that this experience was reported most frequently by young and middle-aged spokespersons, 79 percent and 61 percent respectively, with only 40 percent of the older spokespersons indicating involvement. Figure 5 shows that experience in home economics classes was reported by just 20 percent of the 35 males who responded to the question compared to 80 percent of the 69 females who responded.

Previous experience in 4-H work[1]

Only a third of the total sample reported previous involvement in 4-H work. As shown in Figure 6, this

[1]Educational youth program of Cooperative Extension Service, U.S. Department of Agriculture.

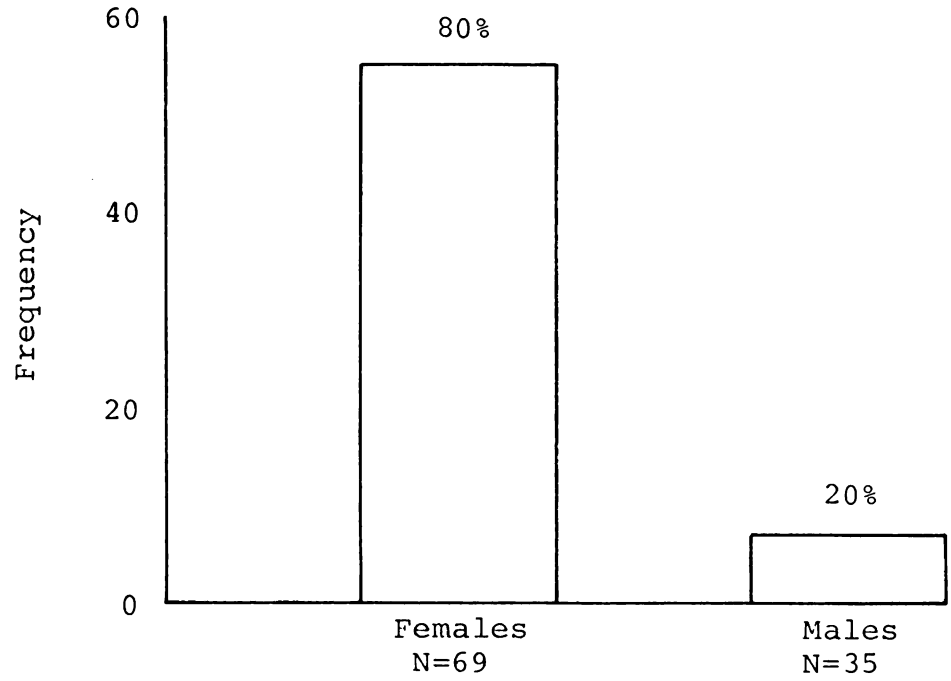

Figure 5. Previous experience in home economics classes by sex of spokesperson.

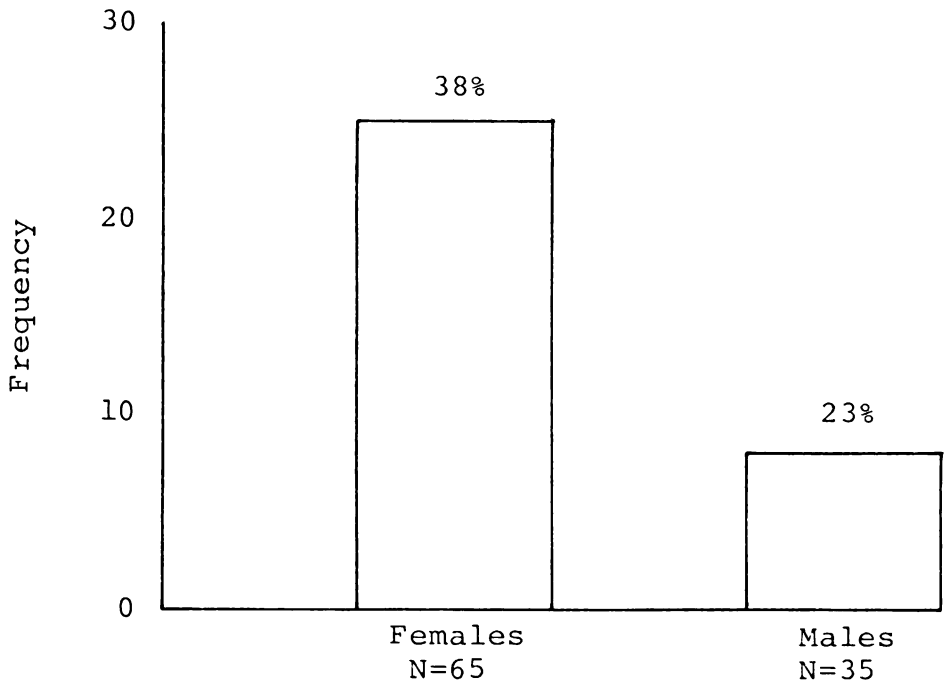

Figure 6. Frequency of experience in 4-H according to sex.

involvement was reported by comparatively fewer males than females, 23 percent and 38 percent respectively. Figure 7 shows that less than 20 percent of the older spokespersons reported previous involvement in 4-H work; whereas, between a third and a half of both the middle-aged and younger spokespersons reported such involvement.

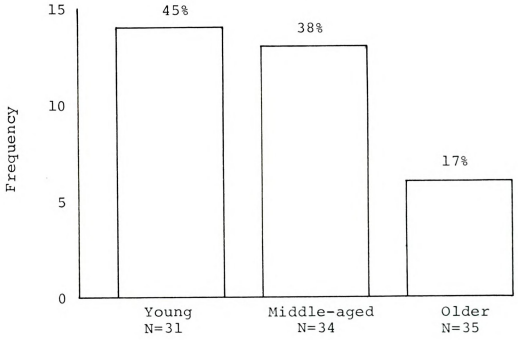

Figure 7. Frequency of 4-H experience according to age category of life cycle.

Methods for Data Analyses

Selection of statistical procedures

Data used to analyze present research objectives are nominal scale measurements and do not meet the primary assumptions of parametric statistics as specified by Borg (1971). The Family Interview Schedule (Bobbitt and Paolucci, 1975) was designed to determine (1) mass media and interpersonal resources which adult spokespersons had used during the previous year for assistance with learning activities in the home environment and (2) demographic characteristics. Nominal categories were established from spokespersons' responses and frequency counts were made. Since parametric techniques are not applicable for analyzing nominal scale data (Siegel, 1956), chi-square (X^2) was selected as the appropriate nonparametric procedure to (1) compare the three adult age groups directly with one another in expressed utilization of mass media and interpersonal resources and (2) to explore relationships between use of those resources and demographic characteristics.

The Chi-square Test of Independence which is computed against the null hypothesis of either no relationship or no discrepancy, was computed in this research by the Statistical Package for Social Science (SPSS) research procedures (Nie, et al., 1975). The test computes the frequencies that would be expected if a relationship or discrepancy did not exist among the variables being tested. These frequencies are then compared to the frequencies actually observed in

the sample. As deviations between the two sets of frequencies increase in size, there is less probability that discrepancies or relationships are attributable to errors of sampling or measurement.

A dichotomous table structure shows a given attribute as either present or not present (Hagood and Price, 1952). In this research dichotomies were constructed for chi-square analyses by classifying each spokesperson as either a user or a non-user of a given mass medium or interpersonal resource group. Use classification is specifically defined in Chapter I under Operational Definitions. The same use criteria were applied to explore relationships between utilization of resources and demographic factors.

Limitation of chi-square. A major limitation to the use of chi-square procedures is that expected cell frequencies must satisfy certain size criteria to render a meaningful test result. As expected frequencies approach zero, the assumption of normality is violated since observed frequencies can be well above the expected frequencies but not well below them without becoming negative values. Statistical references used in this research vary with regard to the exact number of cells in which expected frequency sizes can be low and/or fall below five and still produce a valid chi-square test (Nie, et al., 1975;

Conover, 1971; Freeman, 1965; Siegel, 1956).[1] Although this variability was considered important for interpreting results in terms of further research, the following criteria specified by Siegel (1956) were used as the primary guideline for chi-square analyses: (1) If degrees of freedom are greater than one, then fewer than 20 percent of the cells should have expected frequencies of less than five and no cell should be less than one. (2) If data as originally collected do not meet these criteria, categories may be combined to the extent that data meaning is not lost. (3) If combining cells cannot be justified, chi-square procedures should not be used as results cannot be considered valid.

Computer program procedures. The SPSS program used in this research applies Yates' correction for continuity in all 2 x 2 tables where the number of total cases (N) is greater than 21. The correction tends to make the chi-square value somewhat smaller and avoids overestimating the true value of chi-square (Nie, et al., 1975). Isaac and Michael (1971) however, indicated that this correction is optional when the number of cases exceeds 100. Other researchers suggested applying Yates' correction to 2 x 2 tables when expected frequencies are between five and ten (Walpole, 1974) and when the expected frequency of any cell is below ten

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[1]Since chi-square distribution tables are based on large sample sizes, the most accurate results are achieved when tables have a large number of total cases (Nie, et al., 1975).

(Bruning and Kintz, 1977). Since the number of cases was 108 in all 2 x 2 tables used in this research to analyze relationships between sex and learning resources, chi-square was recomputed by researcher without Yates' correction if the SPSS Yates' corrected value was at or near an acceptable level of significance and if expected frequencies were above ten.

Magnitude of relationships. A statistically significant chi-square value is only an indicator that a relationship is unlikely zero. It does not measure strength of relationship nor is it an index of degree or correlation (Fisher, 1970). Tests used to measure the magnitude or strength of relationship are based on statistically significant chi-square values and thus are significant without further testing.

Present SPSS procedures utilize the phi (Ø) coefficient on 2 x 2 tables to determine magnitude of relationship by adjusting the chi-square value to correct for the fact that the value of chi-square is directly proportional to that of N. Phi values can be interpreted as Pearson r (Welkowitz, Ewen and Cohen, 1972) and will range from zero, in the absence of a relationship, to a value of one when the relationship is perfect.

For tables larger than 2 x 2, SPSS procedures utilize the Cramer's V index to determine the magnitude of the chi-square relationships indicated (Nie, et al., 1975;

Welkowitz, Ewen and Cohen, 1972). A large value of V suggests a high degree of association but does not indicate the manner in which the variables are related (Nie, et al., 1975).

Computer program and analyses procedures

Chi-square analyses of research objectives were accomplished on the Control Data Corporation (CDC) 6500 Scope Hustler Computer at the Michigan State University Computer Institute for Social Science Research using the SPSS cross-tabulation program. In addition to computing values for chi-square and indices of association magnitude, the program provided exact probability figures which indicate the level on which the differences or relationships between observed and expected frequencies can be considered significant. The frequency distributions used to describe demographic characteristics of the sample (Chapter III) were computed by the researcher using the Hewlett Packard 55 programmable calculator. Frequency distributions used in discussion of results (Chapter IV) were also hand tabulated by the researcher from coded raw data output of the CDC 6500 Computer.

Test Hypotheses

Null hypotheses used for chi-square analyses are listed below according to research objective:

Research objective 1: To determine whether differences exist between or among young, middle-aged and older adult family members in use of mass media resources to assist with home-based learning.

H_o1: There will be no difference among young, middle-aged and older adult spokespersons in use of each of the following mass media resources for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

Research objective 2: To determine whether differences exist between or among young, middle-aged and older adult family members in utilization of interpersonal resources to assist with home-based learning.

H_o2: There will be no difference among young, middle-aged and older adult spokespersons in contacts made with sources from each of the following contact groups for assistance with home-based learning: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

Research objective 3: To explore relationships between adult utilization of mass media resources for assistance with home-based learning and demographic variables of education, income, sex and number of children in household.

H_o3: There will be no relationship between highest level of completed education and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o4: There will be no relationship between level of family income and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o5: There will be no relationship between sex of spokesperson and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o6: There will be no relationship between number of children in household and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

Research objective 4: To explore relationships between the interpersonal resources used for home learning assistance and the demographic variables of education, income, sex and number of children in household.

H_o7: There will be no relationship between highest level of completed education and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

H_o8: There will be no relationship between level of family income and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

H_o9: There will be no relationship between sex of spokesperson and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (e) friends.

H_o10: There will be no relationship between number of children in household and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

CHAPTER IV

RESULTS AND DISCUSSION

The ecological model shown in Figure 1 (Chapter I) conceptualized interfacing between and among adults in three age categories of the life cycle with respect to learning needs and use of home based learning resources. Based on this conceptualization, the purpose of this exploratory study was to examine the reported use of two types of learning resources by the adults interviewed in the HLC study (Bobbitt and Paolucci, 1975) to determine whether differences existed between or among the three age categories. A secondary purpose was to explore relationships between use of the resources and demographic characteristics. This chapter reports results of statistical analyses and discusses findings under the following headings which identify research objectives: (1) age and use of mass media, (2) age and use of interpersonal resources, (3) mass media use and demographic factors, and (4) interpersonal resource use and demographic factors.

Chi-square procedures (Chapter III) were used to analyze data for each research objective. The null hypotheses used for testing purposes, which are stated in Chapter III by research objective, will be referred to in this

section by the appropriate number and letter. In order to avoid overlooking factors that may warrant further investigation, an exploratory study allows the researcher to consider a more liberal level of probability than is commonly used (Isaac and Michaels, 1971; Borg, 1971). Therefore, results will be reported in this chapter for relationships found significant up to .10[1] in order to provide direction for further research that will contribute to the development of home delivery systems for nonformal adult education. Because of the limitations imposed on this secondary analyses of the existing HLC data base (Chapter I), decisions regarding null hypotheses will be made only with regard to the stated objectives of the present study. A summary of chi-square results, coefficient values, and exact probability levels is provided in Table 32, Appendices B.

Results of Statistical Analyses

Age and use of mass media

Objective one was to determine whether differences existed between or among young, middle-aged and older adult family members in utilization of mass media resources for facilitation of home-based learning. For each of five mass media, frequency categories were established for use[2] and

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[1]Only in cases where expected frequency sizes for table cells satisfy criteria stated in Chapter III.

[2]Operational definition of use is in Chapter I.

non-use and were cross-tabulated with the three adult age categories to test the null hypothesis of no difference.

> H_o1: There will be no difference among young, middle-aged and older adult spokespersons in use of each of the following mass media resources for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

Television. A chi-square value of 12.829 indicated a difference among age groups in use of television which was significant at the .0016 level of probability (Table 14). Therefore, null hypothesis 1a was rejected for research objective one. Spokespersons in the young and older age

TABLE 14.--Use of television by age category of life cycle.*

Age	Users %	Non-users %
Young	77.8	22.2
Middle	47.2	52.8
Older	83.3	16.7

*X^2 = 12.829 (2 d.f.), p = .0016, Cramer's V = .3447

categories more frequently indicated use of television for home learning assistance, 78 percent and 83 percent respectively, than did middle-aged adults (47%). Middle-aged adults were more equally divided between use and non-use.

Radio. Examination of differences among age categories in the use of radio resulted in a chi-square value

of 7.671 which was significant at the .0216 level of probability (Table 15). Thus, null hypothesis 1b was rejected for research objective one. The largest proportion of spokespersons indicating radio use for learning assistance were in the older age category (72%). Considerably less use of radio was indicated by young (42%) and middle-aged (47%) spokespersons.

TABLE 15.--Use of radio by age category of life cycle.*

Age	Users %	Non-users %
Young	41.7	58.3
Middle	47.2	52.8
Older	72.2	27.8

*X^2 = 7.671 (2 d.f.), p = .0216, Cramer's V = .2665

Differences among age categories were not indicated at acceptable levels of probability for use of newspapers, magazines and books (Table 32, Appendices B). Therefore, null hypotheses 1c, 1d, and 1e were not rejected for research objective one.

Age and use of interpersonal resources

The second objective was to determine whether differences existed between or among young, middle-aged and older adult family members in the interpersonal resources used to assist with home-based learning. Frequency

categories of use[1] and non-use for each interpersonal resource group were cross-tabulated with the three adult age categories to test the null hypothesis of no difference.

> H_o2: There will be no difference among young, middle-aged and older adult spokespersons in contacts made with sources from each of the following contact groups for assistance with home-based learning: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

Relatives. Analysis of hypothesis 2d yielded a significant difference among age groups in the use of relatives as a resource for home learning assistance (Table 16). The

TABLE 16.--Use of relatives for assistance by age category of life cycle.*

Age	Users %	Non-users %
Young	72.2	27.8
Middle	27.8	72.2
Older	36.1	63.9

*X^2 = 16.213 (2 d.f.), p = .0003, Cramer's V = .3874

chi-square value of 16.213 was significant at the .0003 level of probability and thus null hypothesis 2d was rejected for research objective two. Nearly three-fourths

[1]Definition of use and specification of sources within interpersonal resource groups are given in Chapter I.

(72%) of the younger spokespersons indicated use of relatives as resources for home learning assistance compared to only 36 percent of the older spokespersons and 28 percent of those who were middle-aged.

Null hypothesis 2c, used to examine differences among age groups in contacts made with extension sources, yielded a chi-square value of 5.010 at a probability level of .0784. However, this result was determined invalid as a test of the null hypothesis because expected frequencies in 50 percent (3) of the table cells were less than five and two of these three cells contributed a total of 4.33 to the chi-square value.[1]

Null hypotheses 2a, 2b, 2e and 2f were not rejected as chi-square did not indicate differences significant at acceptable levels of probability between age and contacts with each of the following resource groups: school, library, neighbors, and friends.

Mass media use and demographic factors

Objective three was to explore relationships between adult utilization of mass media resources for assistance with home learning and demographic variables of income, education, sex and number of children in household. Sex, number of children, the highest level of completed education, and family income as reported by spokespersons are

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[1]In cells with low expected frequencies the discrepancies between these and the observed frequencies are heavily weighted in the X^2 computation, thus rendering an overestimate of the true X^2 value.

shown in Tables 29 to 31 (Appendices A). However, because of the large number of categories involved for three of the variables, collapsing was done through recoding to facilitate data analyses. Education was reduced to six categories and income reduced to four. Since only one spokesperson in the sample had six children and no one had five, the final category for number of children was recoded as four to six. This made a total of five categories for number of children. The different categories of each variable were then cross-tabulated with use and non-use categories for each of the five mass media to test the following null hypotheses:

H_o3: There will be no relationship between highest level of completed education and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o4: There will be no relationship between level of family income and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o5: There will be no relationship between sex of spokesperson and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

H_o6: There will be no relationship between number of children in household and use of each of the following mass media for assistance with home-based learning: (a) television, (b) radio, (c) newspapers, (d) magazines, and (e) books.

Results did not indicate relationships at acceptable levels of probability between education and any of the mass

media resources examined under null hypothesis 3 (Table 32, Appendices B). Therefore, null hypotheses 3a-e were not rejected for research objective three.

Income and television. A chi-square result of 7.155 indicated a relationship between family income level and use of television for home learning assistance that was significant at .0671 (Table 17). Therefore, null hypothesis 4a

TABLE 17.--Use of television by family income.*

Income range**	Users %	Non-users %
$ 0.0 - 5.9	85.7	14.3
$ 6.0 - 11.9	74.1	25.9
$12.0 - 17.9	70.3	29.7
$18.0 and above	48.0	52.0

*X^2 = 7.155 (3 d.f.), p = .0671, Cramer's V = .2636

**In thousands

was rejected for research objective three. Use of television for learning at home was indicated most frequently (86%) by spokespersons with incomes below $6,000 and least frequently (48%) by those with incomes of $18,000 or above. The difference in use between spokespersons with incomes of $6,000 to $11,999 and those with incomes of $12,000 to $17,999 was slight, 74 percent and 70 percent respectively.

Income and radio. Results indicated a relationship between income and use of radio for home-based learning that was significant at the .0682 level of probability (Table 18).

TABLE 18.--Use of radio by family income.*

Income range**	Users %	Non-users %
$ 0.0 - 5.9	42.9	57.1
$ 6.0 - 11.9	66.7	33.3
$12.0 - 17.9	56.8	43.2
$18.0 and above	32.0	68.0

*X^2 = 7.120 (3 d.f.), p = .0682, Cramer's V = .2629

**In thousands

Thus, null hypothesis 4b was rejected for research objective three. Spokespersons with family incomes between $6,000 and $11,999 and between $12,000 and $17,999, indicated use of radio for home learning more frequently, 67 percent and 57 percent respectively, than those in the lowest and the highest income groups. Spokespersons with incomes of $18,000 or above indicated the lowest proportion of radio use.

The other relationships examined under null hypothesis 4 were not found significant at acceptable levels of probability (Table 32, Appendices B). Therefore, null hypotheses 4c, 4d, and 4e were not rejected for research objective three.

Sex and newspaper use. The chi-square test for examining the relationship between sex and newspaper use was computed without Yates' correction for continuity[1] since the expected frequencies in the 2 x 2 table were all greater than 10 and in three cells they were greater than 20 (Walpole, 1974; Isaac and Michael, 1971). The resulting chi-square value of 3.752 was significant at the .0540 level of probability (Table 19) and thus, null hypothesis 5c was rejected for research objective three. Although

TABLE 19.--Use of newspaper by sex of spokesperson.*

Sex	Users %	Non-users %
Male	58.3	41.7
Female	76.4	23.6

*X^2 = 3.752 (1 d.f.), p = .0540, Phi = .1864

newspaper use was indicated more frequently than non-use by both sexes, it was more frequently indicated by female spokespersons (76%) than by male spokespersons (58%).

With the exception of null hypothesis 5c, the relationships examined between sex of spokesperson and mass media resources were not found significant at acceptable levels of probability (Table 32, Appendices B). Thus, null

[1]See Chapter III.

hypotheses 5a, 5b, 5d, and 5e were not rejected for research objective three. None of the relationships examined under null hypothesis 6 for number of children and mass media use were found significant at acceptable levels of probability (Table 32, Appendices B) and therefore, null hypotheses 6a-e were not rejected for research objective three.

Interpersonal resource use and demographic factors

Objective four was to explore relationships between the interpersonal resources used for home learning assistance and the demographic variables of education, income, sex and number of children in household. Use was defined the same as for other objectives. Categories of each demographic variable were cross-tabulated with use and non-use categories for each of the six interpersonal resource groups[1] to test the following null hypotheses:

H_o7: There will be no relationship between highest level of completed education and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

H_o8: There will be no relationship between level of family income and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

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[1]Sources and groups are defined in Chapter I under Operational Definitions.

H_o9: There will be no relationship between sex of spokesperson and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

H_o10: There will be no relationship between number of children in household and contacts made with sources from each of the following interpersonal resource groups: (a) school, (b) library, (c) extension, (d) relatives, (e) neighbors, and (f) friends.

None of the relationships examined under null hypothesis 7 were significant at acceptable levels of probability (Table 32, Appendices B). Therefore, null hypotheses 7a-e were not rejected for research objective four.

Income and friends. A chi-square value of 8.848 indicated a relationship at the .0314 level of probability between family income level and use of friends for assistance with home learning (Table 20). Thus, null hypothesis 8f was rejected for research objective four. The highest

TABLE 20.--Use of friends by family income.*

Income range**	Users %	Non-users %
$ 0.0 - 5.9	64.3	35.7
$ 6.0 - 11.9	44.4	55.6
$12.0 - 17.9	21.6	78.4
$18.0 and above	40.0	60.0

*X^2 = 8.848 (3 d.f.), p = .0314, Cramer's V = .2931

**In thousands

proportion of spokespersons indicating use of friends for assistance with home learning (64%) had family incomes under $6,000 while those in the other income categories reported less use of friends for assistance. Use was reported by 44 percent of the spokespersons with incomes between $6,000 and $11,999, by 21 percent with incomes between $12,000 and $17,999, and by 40 percent with incomes of $18,000 or above.

Examination of the relationship between family income and use of school sources for home learning assistance yielded a chi-square value of 10.866 that was significant at the .0125 level of probability (Table 32, Appendices B). However, since expected frequencies in greater than 20 percent of the table cells were less than five, the results were not considered a valid test of null hypothesis 8a. Since no significant relationships were found between income level and use of the other interpersonal resources, null hypotheses 8b, 8c, 8d, and 8e were not rejected.

Use of friends according to sex. Chi-square was recomputed without Yates' correction for continuity to test null hypothesis 9f. The resulting chi-square value of 4.383 indicated a relationship between sex and use of friends for home learning assistance that was significant at the .0396 level of probability (Table 21). Thus, null hypothesis 9f was rejected for research objective four. The optional use of Yates' correction when the number of cases (N) exceed

TABLE 21.--Use of friends by sex of spokesperson.*

Sex	Users %	Non-users %
Male	25.0	75.0
Female	45.8	54.2

*X^2 = 4.383 (1 d.f.), p = .0396, Phi = .2015

100 and expected frequency sizes exceed 10 is discussed in Chapter III. Although the larger proportion of each sex had not contacted friends for assistance, use was indicated more frequently among the females (46%) than among the males (25%).

Relationships between sex of spokesperson and the other interpersonal resources were not found significant at acceptable levels of probability. Thus, null hypotheses 9a-e were not rejected.

Relatives as resource by number of children. Test of null hypothesis 10d indicated a chi-square relationship of 9.702 that was significant at the .0458 level of probability between number of children in household and the use of relatives for learning assistance (Table 22). Therefore, null hypothesis 10d was rejected for research objective four. None of the spokespersons with four to six children indicated they had used relatives to assist them with home learning activities. However, of the spokespersons who had used relatives for this purpose, use was indicated most

TABLE 22.--Use of relatives for assistance by number of children in household.*

No. of Children	Users %	Non-users %
0	42.9	57.1
1	65.0	35.0
2	52.6	47.4
3	38.5	61.5
4 - 6	0.0	100.0

*X^2 = 9.702 (4 d.f.), p = .0458, Cramer's V = .2997

frequently by those with only one child living in the home (65%) and least frequently by those with three children (38%). Use of relatives as a learning resource was reported by 43 percent of those without children living in the household.

As shown in Table 32 (Appendices B), examination of the relationship between number of children and use of school resources resulted in a chi-square value of 14.636 which was significant at the .005 level of probability. However, since 4 of the 10 table cells contained expected frequencies of less than 5, with one such cell contributing a value of 9 to the chi-square result, this was not considered a valid test of null hypothesis 10a. The remainder of relationships examined under null hypothesis 10 were not found significant at acceptable levels of probability

(Table 32, Appendices B) and thus, null hypotheses 10b, 10c, 10e, and 10f were not rejected for research objective four.

In the above discussion, all null hypotheses that were not rejected were specified (Table 32, Appendices B). Of those null hypotheses, the following cannot be considered valid representations of no relationship since the number of expected frequencies falling below five exceeded 20 percent of the cross-tabulation cells:[1] H_o2c, H_o3a-e, H_o6a-e, H_o7a-f, H_o8a, 8c, H_o9c, and H_o10a, 10c, and 10e. For the remaining null hypotheses that were not rejected, dichotomy cell sizes did satisfy the expected frequency criterion and thus, the results of no difference or no relationship can be considered valid within the limitations stated in Chapter I.

Discussion of Findings

The results of chi-square analyses reported in the preceding section will be discussed below using findings of other research and frequency data from the present study to provide insight into the relationships observed. Although the chi-square results reported were considered significant for the purpose of exploratory research, the associations were low on a scale of 0 to 1 as indicated by Cramer's V and phi coefficients.[2]

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[1]See Chapter III.

[2]Low to slight relationship = $\pm$ .20 to $\pm$ .40 (Best, 1970).

Age and use of mass media

Television. A significant difference was indicated among adult age categories in use of television for home based learning activities. Indications of use were considerably more frequent among young and older spokespersons than by those of middle-age (Table 14). Reports of other research suggest that restricted mobility may be a factor in this use pattern. Bower (1973) attributed greater television viewing by young adults to the presence of children in the home. Convenience and the avoidance of travel and child care arrangements were reasons given by young respondents for naming television as one of several home-based programming media (Shultz and Riggs, 1972). Mothers who had pre-school children and who preferred learning at home ranked television highest as an important information source (Coolican, 1973). While researchers have not specifically identified restricted mobility as a factor in heavy media use by the aged, the following factors, often associated with the aged, do restrict mobility and may contribute to the patterns of television use indicated in this study and in other research: limited finances, physical restraints, and inadequate travel arrangements.

Daily viewing of television was reported by 89 percent of the senior citizens interviewed by Sears (1975). Other researchers found that television use increased with age for

both men and women (Davis, Edwards, Bortel, and Doren, 1976) and that those over age 65 were well above the mean in viewing time with consistent increases from age 40 to age 80 (Chaffee and Wilson, 1975). Hoar (1960) reported a curvilinear relationship in television use across the life span with use declining in the later years. In addition to restricted mobility, other factors that may contribute to television use among the aged are decreased physical energy, decreased household responsibility, and occupational retirement. Companionship was a factor given moderate to strong support in research reported by Davis (1971).

Factors which may contribute to the less frequent use of television by middle-aged spokespersons are: the increased likelihood of school age children and involvement with employment, school, and/or community activities. It may also be that time demands during evening hours are greater and more diversified for both parents when children are school age and involved with activities both inside and outside the home.

Radio. Results showed a difference among age categories in use of radio with use indicated more frequently by older spokespersons than by young and middle-aged spokespersons (Table 15). This finding is consistent with research by Beyer and Woods (1963) and Cowgill and Baulch (1962) in which radio was identified as one of several media predominant in the leisure behavior of older persons.

Daily radio listening was reported by 87 percent of the senior citizens in Sears' study (1975) and was reported more frequently by older men than by older women in research by Cowgill and Baulch (1962). Although Rees and Paisley (1968) identified age as a significant partial predictor of informational radio listening, they found that overall listening decreased with age. It may be that older persons, for whom radio was an important medium prior to the advent of television, have continued to rely on radio as a source of information for daily living role needs. Radio may also be used in place of television for older persons with declining vision.

Tables 23 and 24 show the types of television and radio programs which spokespersons indicated they viewed or listened to for learning purposes. With slight variation, the program selections identified most frequently were the same for all age categories. Although television news and current event programs were specific selections identified most often by all age categories, other television programs reported by all spokespersons were family and variety, kid's shows, and sports (Table 23). News, music and current events were specific radio programs reported most frequently by all three age categories (Table 24).

With the exception of books, Table 25 shows that well over two-thirds of the older spokespersons indicated use of each mass medium as a resource for home-based learning. Table 25 also shows that well over 50 percent of the

TABLE 23.--Rank frequency of television programs viewed by age category of life cycle.

Young		Middle		Older	
News	13	News	10	News	21
Current events	11	Current events	7	Current events	13
Family-variety	9	Family variety	4	Sports	7
Kid's shows	8	Kid's shows	1	Family variety	5
Sports	2	Sports	1	Kid's shows	2
Gardening	1	Gardening	1	(Other	17)
(Other	12)	(Other	7)		

TABLE 24.--Rank frequency of radio programs by age category of life cycle.

Young		Middle		Older	
News	9	News	10	News	16
Music	4	Music	3	Music	5
Current events	2	Current events	3	Current events	4
Sports	1	Sports	2	Sports	2
				Gardening	2

TABLE 25.--Use of mass media by age category of life cycle and total sample.

Mass media	Young (N=36) %	Middle (N=36) %	Older (N=36) %	Total (N=108) %
Television	77.8	47.2	83.3	69.4
Radio	41.7	47.2	72.2	53.7
Newspapers	63.9	69.4	77.8	70.4
Magazines	80.6	66.7	80.6	75.9
Books	61.1	66.7	55.6	61.1

spokespersons in each age group and in the total sample used print media, although significant differences among age groups were not indicated in chi-square analyses. It may be that use of print media is common to all age groups and frequently used, a factor that has important implications for developing nonformal education programs for home delivery to cross-age audiences (Figure 1).

Age and use of interpersonal resources

Age and relatives. A significant difference was indicated between the age of spokesperson and use of relatives for assistance with home-based learning activities. Young spokespersons more often reported using relatives as resources than did those in the other two age categories (Table 16). Although young spokespersons reported using brothers, sisters, and extended family

members, parents were the relatives most frequently cited as interpersonal resources (Table 26). It may be that young adults have a continued dependence on parents while making

TABLE 26.--Rank frequency of relatives contacted according to age category of life cycle.

Young		Middle		Older	
Parents	18	Brothers, sisters	4	Children	9
Extended family	6	Extended family	3	Extended family	4
Brothers, sisters	5	Parents	2	Brothers, sisters	2
		Children	1	Parents	1
		(Others	2)		

the transition from the nuclear family unit to an independent household. The dependence may last longer for some depending on such factors as strength of family ties or geographic distance. Lack of household skills and inexperience with household management, especially independent decisionmaking, may be other factors involved in this finding. The developmental tasks of young adulthood (Havighurst, 1972) demand a level of skill and maturity that are not often developed prior to assumption of adult family and occupational roles.

With the exception of relatives by young respondents, Table 27 shows that interpersonal resources were infrequently used by respondents in this study, with each of the other interpersonal resource groups mentioned by fewer than 50 percent of the spokespersons in all age categories. In terms of the total sample, relatives were

TABLE 27.--Use of interpersonal resources by age category of life cycle and total sample.

Interpersonal resource group	Young (N=36) %	Middle (N=36) %	Older (N=36) %	Total (N=108) %
School	22.2	16.7	13.9	17.6
Library	44.4	44.4	27.8	38.9
Extension	0.0	11.1	13.9	8.3
Relatives	72.2*	27.8	36.1	45.4
Neighbors	25.0	11.1	30.6	22.2
Friends	41.7	38.9	36.1	38.9

*X^2 = 16.213 (2 d.f.), p = .0003, Cramer's V = .3874

reported most frequently (45%) and cooperative extension reported least frequently (8%) as interpersonal resources for assistance with home-based learning activities. Table 28 shows, by age and frequency of mention, the reasons cited by spokespersons for contacting others for assistance. The most frequently cited reason given by all age categories

TABLE 28.--Rank frequency of reasons given for making interpersonal contact by age category of life cycle.

Young		Middle		Older	
Trusted expert	24	Trusted expert	20	Trusted expert	20
Convenient	20	Knew about	16	Knew about	16
Knew about	17	Convenient	13	Convenient	11
Friend	14	Friend	12	Friend	11
Close to home	13	Close to home	9	Close to home	9
Free	11	Free	6	Free	8
Person had information	5	Person had information	4	Person had information	2

was that the person was a trusted expert. It is of interest to educators that the reason mentioned least frequently by all age groups was that the person contacted had the needed information. These findings seem consistent with research which has indicated that information from a person's reference group is considered trustworthy as it is consistent with previous beliefs (Reeder, LeRay, Jr., and MacKenzie, 1974).

Mass media use and demographic factors

Television and income. The relationship indicated in this study between television use and family income level is similar to other research in which frequent television

use was found among persons with low incomes (Greenberg and Dervin, 1970; Sargent and Stempel, 1968). In the present study television use was indicated most frequently by those with incomes below $6,000 and least frequently by those with incomes above $18,000 (Table 17). In other research, over 70 percent of an urban sample, with an average income of $2,382, reported regular television viewing and identified this medium as one of two most useful sources for assistance with product choice (Block, 1970). Persons with severely limited incomes may be less mobile and thus more likely than those with higher incomes to rely on television as a convenient medium for assistance with role related concerns. They may also be less aware of helping sources and/or reluctant to seek out individuals or group activities that could provide assistance. Rees and Paisley (1968) found that blue-collar workers viewed group settings, such as evening classes and lectures, as strongholds of white-collar middle class.

Persons with greater financial means, who often have more education, may also be more committed to outside activities such as organizational meetings and educational, community and recreational activities than those with less income. According to Samuelson, Carter and Ruggels (1963), roles which often accompany increased education may obscure the effects one might expect from Lewin's "Life-Space" concept. This concept suggests that increased education enlarges a person's life space and increases the likelihood

of diverse concerns or interests. This tends to orient the person toward the medium through which the interests are channelled. Thus, the relationship of income to television use, with use less frequent among those with higher incomes, may be partially a function of higher educational levels which place greater demands on one's time. Although in the present study persons who reported low incomes also reported low levels of completed education (Table 8), the above factors must be considered with caution since those at the upper end of the educational variable were underrepresented. It may be that those with severely limited incomes, who often cannot afford sources of entertainment outside the home, may view television as a form of entertainment through which learning is an indirect outcome rather than the result of a deliberate learning effort. Perhaps hobbies, which often require financial resources, are more likely to be substituted for television viewing by persons whose incomes are high enough to permit spending beyond the satisfaction of basic needs.

Radio and income. The frequent use of radio by older persons (Table 15) probably contributed to the relationship indicated between family income level and radio use (Table 18). Incomes between $6,000 and $17,999, the level of most frequent radio use, were reported by 65 percent of the older spokespersons (Table 7). In contrast, while nearly two-thirds of both the young and the middle-aged

spokespersons also reported incomes between $6,000 and $17,999 (Table 7), they reported considerably less use of radio than older spokespersons (Table 15). Frequent use of television by low income respondents and the likelihood of greater time commitments by those with incomes of $18,000 or above may account for the lesser use of radio indicated by these two groups.

Newspaper use according to sex of spokesperson. Although the relationship indicated between sex of spokesperson and use of newspaper (Table 19) was accepted as significant for this exploratory study, the chi-square value was quite low and the relationship indicated is not supported by other research reviewed. In the present study, a higher percentage of women than men indicated use of newspapers for home-based learning. Although they did not specify a direct relationship between sex and newspaper reading, Schramm and White (1949) did find that reading of news content peaked earlier for men than for women, that economic status made a greater difference in reading by men than by women, and that education made a greater difference in reading by women than by men. Schramm and White (1949) also reported a positive relationship between age and news reading, a relationship not indicated in the present study. Rees and Paisley (1968) found that sex was a life cycle predictor of adult educational involvement but it was not a predictor of newspaper, newsmagazine, or

magazine readership. They found that use of written mass media was better predicted by lifestyle attributes of education and income and that differences in newspaper reading were greatest across income levels.

Interpersonal resource use and demographic factors

Friends and income level. A relationship was found between family income level and use of friends for home-based learning assistance (Table 20). This use was mentioned most frequently by spokespersons with incomes below $6,000. Although contacts with friends were not directly investigated in the low income sample studied by Nelson and Coppedge (1974), they found that respondents made fewer contacts with public service organizations, cooperative extension, and community colleges than persons who were not defined as low income. This may suggest that respondents in that study either were not seeking assistance from others or were seeking it from nonformal sources. The absence of knowledge about services and the inappropriateness or inaccessibility of services were reasons suggested by Nelson and Coppedge for low utilization of the more formal sources of assistance. These reasons are consistent with those given by spokespersons in the present research for seeking assistance from others (Table 28). However, in a low income urban sample, Block (1970) found that mass media were favored over other persons, including friends, for assistance with consumer roles. Respondents in that study

ranked friends third as sources of product information and ranked social workers least desirable as sources.

Friends as resources by sex of spokesperson. The relationship indicated in this study between sex of spokesperson and use of friends for assistance with home-based learning may be partially a function of time allocation, since females indicated use of friends more frequently than did males. Married adult females, if they are unemployed, likely spend more time than employed males in the family and community environment where there is greater access to informal sources of assistance. Those who are neither employed nor active in community affairs may not be aware of information sources other than friends whom they know share household and family related concerns. The role related concerns of the married male adult are most likely focused on an occupation outside the home through which assistance with that role will be sought when needed. If household and family matters are not perceived by the male adult as his primary responsibility, he may not seek assistance from others regarding concerns with those roles. Males who are skillful with home maintenance tasks are not likely to seek assistance from others, whereas those lacking skills may be as likely to call an expert, such as a plumber or contractor, as to call a friend. An association between sex and use of friends for assistance was not found in research by Rieger and Anderson (1968). They identified

sources used by adults for information on government affairs, consumer and financial matters, and educational planning and did not find significant relationships between sex and the use of friends as information sources for any subject area. In all subjects, friends were infrequently cited as sources (<20%) by both males and females who ranged in age from 21 to over 65.

Relatives as resource by number of children. The relationship indicated in this study between number of children and use of relatives for assistance shows that among families who had children at home, use was indicated most frequently by those with one child and least frequently by those with three or more children. Some explanation for this pattern is found in previously reported findings of the present research. Two-thirds of the young spokespersons, the age group which most frequently identified relatives as resources (Table 16), reported one to two children living in the household (Table 9). Middle-aged spokespersons reported three or more children living in the household more frequently than the other age groups and were the age group which least frequently identified relatives as resources (Table 16). It may be that middle-aged adults who have more years of experience in family role functions may either draw from those experiences or be more aware of interpersonal resources outside the family that can provide assistance. They may also be less dependent on relatives as a result

of geographical mobility and/or attitude and value transformations. In the middle years changing values and attitudes based on acquired experience may reach a point where they are perceived more relevant to a given situation than assistance that might be rendered by older relatives whose attitudes and values may not have changed to the same extent. The less frequent use of relatives by spokespersons without children than by those with one child can be partially attributed to the fact that two-thirds of those without children were in the older age category. They, like the middle-aged spokespersons, may rely on personal role experience and greater exposure to resources outside the family environment. It is further recognized that many older adults have fewer relatives from whom to seek assistance and they may feel that younger relatives are unable to identify with the situations they now face. Geographical distance between older persons and their adult children may also be a factor. Adults who have not had children may not have faced situations which might otherwise motivate them to seek assistance from relatives.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The primary purpose of this exploratory study was to examine the mass media and interpersonal resources used by young, middle-aged and older adults for assistance with home-based learning to determine whether differences in use existed among age categories. A secondary purpose was to investigate possible relationships between use of those resources and selected demographic characteristics. Data collected in "The Home as a Learning Center" (HLC) feasibility study by researchers from the College of Human Ecology, Michigan State University (Bobbitt and Paolucci, 1975)[1] were used to test null hypotheses based on research objectives. In that study, 36 adult males and 72 adult females from blue-collar families in Vevay Township, Michigan, were interviewed to determine how they and other family members utilized the home environment for learning activities. Reported demographic characteristics and the responses spokespersons gave regarding their personal utilization of

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[1]The "Home as a Learning Center"(HLC) study reported by Bobbitt and Paolucci (1975) was performed pursuant to Contract Number 300748735, The Department of Health, Education and Welfare, Office of Education, Occupational and Adult Education Branch.

learning resources were used for analyses in the present study.

Frequency counts were established for use of television, radio, newspaper, magazines and books, and for use of neighbors, friends, relatives, and school, library and cooperative extension personnel as sources of assistance. After counts were cross-tabulated with the three adult age categories and with demographic variables of education, income, sex and number of children in household, they were subjected to chi-square procedures. Cramer's V and phi coefficients were computed to determine the strength of the relationships indicated. Objectives one and two were concerned with differences among the three age categories in the use of each mass medium and interpersonal resource group. The following chi-square results were considered significant for exploratory purposes:

1. A difference was indicated among age groups in use of television that was significant at the .0016 level of probability, with both young and older spokespersons indicating use more frequently than those who were middle-aged.

2. A difference in use of radio was shown that was significant at the .0216 level of probability with older spokespersons reporting considerably more use than the two younger age groups.

3. A difference was indicated among age groups in use of relatives as learning resources that was significant at

the .0003 level of probability. Nearly three-fourths of the young spokespersons indicated use of relatives compared to less than 37 percent of each of the other groups.

Objectives three and four were concerned with relationships between use of each mass medium and each demographic variable and between use of each interpersonal resource group and each demographic variable. Chi-square results considered significant for exploratory purposes were as follows:

1. A relationship was indicated between family income level and use of television and was significant at the .0671 level. Television use was reported by nearly 86 percent of those earning under $6,000. The number of users steadily declined among those with higher incomes and sharply dropped to 48 percent among those reporting earnings of $18,000 or above.

2. The relationship indicated between family income level and use of radio was significant at the .0682 level. Use was indicated least frequently by those earning under $6,000 and $18,000 or above.

3. A relationship was shown between sex of spokesperson and use of newspaper that was significant at the .0540 level. Use was indicated more frequently among females than among males.

4. A relationship indicated between family income level and use of friends for assistance was significant at the .0314 level. Use was reported by nearly two-thirds of

those earning less than $6,000 and by less than half of those in each of the other income categories.

5. A relationship was shown between sex of spokesperson and use of friends for assistance and was significant at the .0396 level. While use was reported by less than half of each sex category, it was reported more frequently among females than among males.

6. A relationship was indicated between number of children in household and use of relatives that was significant at the .0458 level. Less than half of the spokespersons without children indicated use; whereas, among those with children use was reported most frequently by those with only one child.

Conclusions

The following conclusions have been drawn from the results of this exploratory study and indicate promising directions for further research. However, since results are derived from secondary analyses of the existing HLC data base they should be interpreted within the context of the limitations stated in Chapter I.

1. Although the relationships reported in Chapter IV were accepted as statistically significant for the exploratory purposes of this study, Cramer's V and phi coefficient values indicated the relationships were weak. Therefore, they should not be considered operationally significant for planning educational programs.

2. The ecological model presented in Chapter I (Figure 1) conceptualized interfacing between and among age groups in use of home based learning resources. In this research sample, mass media use was frequently reported by adults in all age categories of the life cycle. All age groups were similar in use of print media, but exhibited differences in use of broadcast media. The frequently reported use of television for learning assistance, by young and older adults suggests this may be an important resource for those age groups, whereas radio may be an important learning resource only for the older adults. With the exception of books, the majority of older persons reported considerable use of all mass media. These findings reinforce the importance of determining the mass media used by adults in different age categories of the life cycle prior to designing educational programs for delivery to the home environment (Figure 1). They also support the research findings of Davis, et al. (1976), Chaffee and Wilson (1975), and Sears (1975) with regard to older persons, and of Bower (1973), Coolican (1973), and Shultz and Riggs (1972) with regard to use of television among young adults.

3. Young adults, far more than those in the middle and later years, turned to relatives--particularly parents--for learning assistance. Otherwise, results indicated that the use of interpersonal resources for assistance was similar among all age groups and was relatively infrequent. Formal sources, through which factual information and educational

programs are channelled, were infrequently used by adults in all age groups. Extension, the least used source, was not indicated at all by young spokespersons. Knowledge of these information-seeking patterns, combined with further research efforts is needed to establish more effective communication networks between educators and audiences.

4. Use of mass media and interpersonal resources were influenced by demographic factors of income and sex. The relationship indicated between income and television use, though weak in this study, is consistent with other research (Block, 1970; Greenberg and Dervin, 1970; Sargent and Stempel, 1968). These variables should be further examined in terms of using television to reach adult audiences whose access to sources outside the home may be hindered by meager finances as well as by factors associated with low levels of education. Although radio seemed to have the greatest impact among older persons in the sample, that impact may have been greater among the older persons with incomes above subsistence levels. Although the frequently reported use of friends by persons with incomes under $6,000 is similar to results found in other studies (Nelson and Coppedge, 1974; Block, 1970), the chi-square value and Cramer's V coefficient in the present study are not strong evidence for the selection of friends as resources by persons with low incomes.

5. The association indicated between (a) sex of spokesperson and use of friends and (b) sex of spokesperson

and use of newspapers were accepted as significant for this study. However, the chi-square values for H_o5c and H_o9f were low, a factor which increases the likelihood that the relationships indicated were caused by sampling error. While several explanations were proposed in Chapter IV for the relationship indicated between sex and use of friends for learning assistance, other research has indicated a lack of such relationship (Rieger and Anderson, 1968). Schramm and White (1949) indicated that education, economic status, and age were factors that contributed to differences in newspaper use between males and females.

6. While results did not indicate a direct association between education and the use of any learning resource examined, other data in this study indicate that education may have been an important contributor to the relationships indicated between income and use of learning resources.

7. In studies involving people and behavioral patterns, factors influencing a given behavior are often multiple. This situation seemed evident in the relationships indicated in the present study. Several factors from these data and from other research findings were suggested as possible intervening variables in the use of home-based learning resources. These should be further explored by those concerned with the development of educational programs for delivery to the home environment.

Recommendations for Future Research and Nonformal Education

Several possibilities for future research emerged from this exploratory study and are suggested in this section. Also included are implications for nonformal education which should be considered within the context of the previously stated limitations (Chapter I).

Recommendations for research

1. Formulate hypotheses from the findings of this research and conduct a replicate study using a larger blue-collar sample and utilizing the mass media, interpersonal resources, and demographic portions of the HLC survey instrument. Since chi-square distribution tables are based on large sample sizes, a larger sample would increase the likelihood that the results found would accurately represent the population studied.

2. Formulate hypotheses from the findings of this research and design a new instrument to generate data for multivariate analysis. Questionnaire items should be designed for interval scale measurement to facilitate analyses by parametric procedures. For instance, multiple or partial correlation could provide a measure of association among selected learning resources and demographic variables which were used in the present study. Data on the involvement in educational activities outside the home, the number and kinds of community or organizational affiliations, the employment status of married female respondents, and the

time allotted to such activities and to household and family roles would also be useful. These factors could be correlated with quantified time or frequency measures of mass media and interpersonal resource use to provide useful information for educators concerned with home delivery systems for nonformal education. For instance, if researchers find that middle-aged adults view less television for home learning than other adult age groups, should this fact be attributed to time conflicts with household roles or to activities such as employment and educational or social affiliations that demand time away from home for long periods? For adults in any age group who indicate use of a given mass medium, which of the above factors related to activities or time allocation might be associated with a given amount of use? Does education directly influence adult activities away from the household or do other factors intervene? Further investigations need to consider the above questions and identify associations both between and among the variables selected in order to provide a solid base for planning nonformal programs for home delivery. Consideration might be given to the development of life cycle constructs, an approach which utilizes both correlational and cluster analysis procedures to answer questions about people in terms of their interests, activities, and opinions and combines those responses with demographic information (Plummer, 1972).

3. It would also be helpful to identify factors which motivate use of a given resource and to determine whether or not the information received was actually used to further develop role performance or to satisfy a learning need. If not used, was this because the information was irrelevant to the perceived need or too difficult to understand? To what extent is mass media a substitute for decreased social and occupational activity among adults in the later years? If learning is not the primary motivator for use, is it a by-product which the user recognizes as relevant to a personal need?

4. A comparison study could be done using a sample composed of both blue-collar and white-collar and/or professional workers to determine whether differences existed in their use of home-based learning resources. The variables suggested in item two above could be included in the instrument design. Inclusion of the white-collar or professional sample would likely increase representation of college graduates and thus facilitate valid comparisons between educational level and use of home centered learning resources.

5. A study could be done using objectives similar to those in the present study but preceded by assessment of specific role related mass media programs (broadcast and print) offered to a given population. From this assessment, a survey instrument could be designed to determine (a) if the specified programs or print materials are being used,

(b) the extent of use, (c) the benefit or satisfaction received, (d) specific educational programs or informative material respondent desires and would use, and (e) preferred television formats for educational programs. Questions regarding the learning process should also be considered. Did use of the material received from the resource lead to changed behavior such as increased role competency or further searching? Was change a direct result of resource use, or was there interaction with others to facilitate learning? Do adults reporting use of home centered learning resources perceive this behavior as an investment in themselves through which they can contribute to the role development of family members and/or persons in the community with special learning needs?

6. Further investigation might be made to find out how mass media, perhaps through Public Service Announcements, could play a coordinating role by serving as an information and referral source for both educational and community service agencies. This service could help link people who may be outside the educational system with the factual information they need to make critical daily decisions.

7. Review of the research in mass media use suggests that greater collaboration is needed between educators concerned with home delivery of role related education and researchers in other fields who are collecting data on mass media use and information-seeking behaviors. Educators concerned with nonformal education need to provide input into

the design of national surveys that will specifically define the term "educational" in regard to media offerings. The researcher's meaning of this term must be conveyed to respondents, in writing or verbally, and respondents need to define their own perceptions of the term to the researcher when expressing preference for "educational" programs. A mutually understood definition could facilitate cross-study comparison and provide needed information for nonformal program planning. For instance, researchers have asked respondents with both high and low levels of completed education whether television was providing a sufficient or insufficient number of "educational" programs. Although results have shown distinct differences between educational levels, do we know whether all respondents were defining education in terms of similar content? Is one group concerned with cultural or intellectual stimulation and the other with practical role concerns? Are those who may have the greatest need for practical education, but who specify "sufficient" educational programs, unaware of the programs that are or could be made available through mass media to facilitate role related learning?

7. Research should further explore the extent to which adults are aware of and seek assistance from educators or other interpersonal sources in the community who can assist them with learning in the home environment. Results of the present study indicated low response across all age categories to interpersonal resources outside the home

environment. Was this a function of unawareness, of previous dissatisfaction, or of inaccessibility? Low response to the resources of cooperative extension was especially apparent. This may suggest a need for evaluating the effectiveness of present channels for publicizing extension's total adult programming in role related concerns. Perhaps the expertise of extension personnel is most visible to those within the mainstream of the university system. Could visibility to others be increased through 4-H channels, a widely recognized program of cooperative extension?

Implications for nonformal education

1. If future research determines that adults at different life cycle stages are relatively similar in their use of mass media for learning assistance as conceptualized in Figure 1, educators should examine the developmental tasks and commonly expressed needs of these adults to determine appropriate situations for a common audience approach. Such an approach would facilitate cross-age interaction, a factor strongly emphasized in the literature as important to one's total learning experience regardless of age. Educators planning television programs for home delivery might consider using actors that represent all stages of the life cycle. Scripts could emphasize the contributions each age group can make to the other in facilitating problem clarification and developing competencies for effective role performance.

2. Educators concerned with effective functioning of the family unit have a responsibility to make personnel in the radio and television industries aware of (a) research findings which indicate the extent to which people find these media convenient and desirable for practical information and assistance and (b) the important contribution that family oriented professionals can make in helping individuals deal with the social and economic issues that receive continual mass media coverage.

3. The results of this study and other studies cited suggest that there may be a need to channel role related information through a network of nonformal sources. Educators might identify present clientele who would initiate the formation of small groups of friends, neighbors, and/or relatives who prefer learning in the home environment. Participants could use home delivered educational materials, as a group or as individuals, and then gather informally to discuss information, share ideas, and provide feedback to the educational system. Educators might also identify key individuals within a neighborhood who would serve as intermediary resources. Visibility could be provided by word-of-mouth or by written notices posted in community facilities such as health and service organizations, public libraries or commercial establishments. Libraries should be given greater recognition as an intermediary source between persons who desire to learn at home and educators concerned with dissemmination of knowledge and information from formal

institutions. The NICHE program described in Chapter II is an example of this outreach.

4. Extension personnel and others providing nonformal education could increase visibility through community facilities which provide a place to offer free literature regarding health care, social security benefits, swaps of goods and services, and other citizen interests. Publicity could be either in the form of literature or notices about local resource persons or programs. Public Service Announcements on radio and television are other avenues for increasing visibility.

5. Research studies have provided indications that persons with low levels of education may not often view "educational" programs on television, but they are more likely than the higher educated to view television because they "might learn something." The less educated audience may be receptive to entertainment formats that "educate" such as the Gap-Stop program described in Chapter II. The utility of entertainment formats on television should be given increased attention as a medium for delivering educational messages that will be viewed and likely shared with peers.

6. Educators concerned with family and occupational role competencies need to be aware of surveys being done at local levels and to make their professional expertise visible as an essential input to survey design. "Need" surveys are often sponsored by community colleges or independent

organizations which have been funded to serve special audiences such as the aged. Volunteer interviewers, and their sponsors, may not be aware of the family oriented educational resources available to address both the needs they are identifying and other needs they may not have considered in survey design.

APPENDICES

APPENDICES A

DEMOGRAPHIC DATA AS REPORTED BY SPOKESPERSONS

KEY TO CODES USED IN TABLES 29, 30, AND 31
DEMOGRAPHIC DATA AS REPORTED BY SPOKESPERSONS

Location

R = rural
U = urban

Dwelling type

S = single
A = apartment
M = mobile
O = other

Family income level in thousands

01 = under 1.9
02 = $ 2.0 - 3.9
03 = $ 4.0 - 5.9
04 = $ 6.0 - 7.9
05 = $ 8.0 - 9.9
06 = $10.0 - 11.9
07 = $12.0 - 13.9
08 = $14.0 - 15.9
09 = $16.0 - 17.9
10 = $18.0 - 19.9
11 = $20.0 - 21.9
12 = $22.0 or above

Highest level of completed education

1 = under 7 years
2 = grades 7 - 9
3 = grades 10 - 11
4 = high school graduation
5 = vocational/technical training
6 = some college
7 = college graduation
8 = graduate/professional training

Past experience in 4-H work and home economics classes

X = yes

Number of children

Indicates total number under 19 years of age living in household at time of interview.

Age

Shown in years.

Table 29.--Demographic data as reported by young adult spokespersons.

Family No.	Location	Dwell. type	No. of Children	Income level	Education	4-H	Home Ec.	Age
			(Females)					
287	U	A	1	06	4		X	20
231	U	S	1	12	6	X	X	28
533	R	S	1	08	4		X	28
588	R	S	2	08	4		X	31
557	R	S	1	03	3	X	X	22
16	U	S	1	07	4		X	21
164	U	S	2	12	4	X	X	31
58	R	S	2	06	4		X	30
259	U	S	1	10	6	X		22
383	U	S	3	07	4	X	X	24
18	U	S	2	09		X	X	31
234	U	S	3	09	6		X	27
147	U	A	1	02	6	X	X	24
110	U	S	2	03	3		X	22
333	U	S	1	08	4		X	24
233	U	S	2	08	4	X	X	29
276	U	S		09	4		X	24
235	U	S	2	09	4	X		26
26	U	S	2	06	4		X	23
518	R	S	2	12	4		X	28
127	U	S	3	11	3	X	X	25
108	U	S	1	07	6		X	27
185	U	S	4	04	6		X	33
133	U	S	1	10	5			31
			(Males)					
537	R	S	2	12	7	X		27
316	U	S		07	4			24
555	R	S	3	08	7		X	34
300	U	S	1	07	6			29
145	U	A		05	6	X		23
172	U	A		10	7		X	25
382	U	S	3	07	2			33
504	R	S		06	6	X	X	28
184	U	O	2	12	6	X		27
608	R	S	4	08			X	34
303	U	S	2	12	4		X	30
587	R	S	2	08	6			32

TABLE 30.--Demographic data reported by middle-aged adult spokespersons.

Family No.	Location	Dwell. type	No. of children	Income level	Education	4-H	Home Ec.	Age
				(Females)				
232	U	S	1	04	4		X	41
332	U	S	2	06	4	X	X	49
523	R	M		02	4	X	X	51
301	U	S	3	03	4		X	33
591	R	S	3	01	4	X		32
105	U	S	3	11	3		X	33
572	R	S		06	3		X	38
589	R	S		06	4		X	53
351	U	S	3	04	5		X	39
275	U	S	2	12	4		X	46
130	U	S	2	09	4			42
241	U	S	1	05	3		X	29
582	R	S		08	5	X	X	48
173	U	O		08	4	X	X	47
114	U	S	4	06	6	X	X	35
239	U	S	1	06	4		X	39
607	R	S		11	4	X		53
244	U	S		08	4			52
138	U	S	4	03	4		X	37
124	U	S	3	06	5	X	X	36
328	U	S	3	07	4		X	51
600	R	S	6	10	7	X	X	45
364	U	S	2	10	5	X	X	24
604	R	S	1	08	4	X	X	41
				(Males)				
302	U	S		08	5	X		45
511	U	S	3	12	4		X	42
201	U	S	4	08	6			44
208	U	M		02	1			42
336	U	S		07	6	X		41
128	U	S	1	06	6			42
554	R	S	2	12	5		X	49
614	R	M		11	3			41
198	U	S	1	10	5			40
549	R	S	1	12	5			47
584	R	S		07	3			47
379	U	S	4	09	4			36

TABLE 31.--Demographic data as reported by older adult spokespersons.

Family No.	Location	Dwell. type	No. of Children	Income level	Education	4-H	Home Ec.	Age
				(Females)				
321	U	S		05	8		X	71
609	R	M		03	3			70
134	U	S		04	4			80
131	U	S	1	07	4		X	39
206	U	S		03	4		X	62
579	R	S						60
603	R	S		08	4	X		68
501	R	S			2			76
506	R	S		12	4	X	X	60
216	U	S	3	06	3		X	52
326	U	A		02	2			67
353	U	A		05	6	X	X	66
236	U	S		07	4			58
224	U	S		04	7			70
605	R	S		08	5			58
703	R	S		07	5		X	52
355	U	A		03	5		X	68
324	U	S		02	2		X	69
246	U	S		08	2		X	63
367	R	S		07	2		X	57
578	R	S	1	13	4		X	55
213	U	S		04	3		X	70
330	U	S			4	X	X	64
339	U	S		05	2			54
				(Males)				
567	R	S		05	6			69
327	U	S	2		4			57
532	R	S		11	4			61
565	R	S		04	5	X		79
548	R	S		07	3			72
186	U	S		12	4			55
524	R	S		11	2	X		57
167	U	M		04	4			55
564	R	S		04	4			66
516	R	S		03	2			72
228	U	A		07	3			60
526	R	S		12	6			60

APPENDICES B

SUMMARY OF STATISTICAL VALUES

TABLE 32.--Summary of chi-square results, coefficient values, and exact probability levels by null hypothesis (H_o) tested.

Nature of H_o	H_o No.	X^2	p*	C-V**	Phi	H_o***
Age with						
television use	1a	12.829	.0016	.3447		x
radio use	1b	7.671	.0216	.2665		x
newspaper use	1c	1.687	.4301	.1250		
magazine use	1d	2.533	.2818	.1531		
book use	1e	.935	.6265	.0930		
school contacts	2a	.894	.6395	.0910		
library contacts	2b	2.805	.2460	.1612		
extension contacts	2c	5.010	.0784	.2171		
relative contacts	2d	16.213	.0003	.3874		x
neighbor contacts	2e	4.179	.1238	.1967		
friend contacts	2f	.234	.8897	.0465		
Education with						
television use	3a	5.264	.3845	.2239		
radio use	3b	5.371	.3723	.2262		
newspaper use	3c	7.833	.1657	.2731		
magazine use	3d	4.757	.4462	.2129		
book use	3e	2.194	.8217	.1445		
Income with						
television use	4a	7.155	.0671	.2636		x
radio use	4b	7.120	.0682	.2629		x
newspaper use	4c	.783	.8536	.0872		
magazine use	4d	4.533	.2093	.2098		
book use	4e	5.318	.1499	.2272		
Sex with						
television use	5a	1.227	.2679		.1279	
radio use	5b	.116	.7330		.0525	
newspaper use	5c	3.752	.0540		.1864	x
magazine use	5d	.766	.3814		.1072	
book use	5e	.394	.5300		.0806	

Table 32 (con'd.)

Nature of H_o	H_o No.	X^2	P*	C-V**	Phi	H_o***
Number of children with						
television use	6a	2.418	.6594	.1496		
radio use	6b	2.160	.7063	.1414		
newspaper use	6c	2.033	.7296	.1372		
magazine use	6d	1.565	.8151	.1204		
book use	6e	1.838	.7655	.1305		
Education with						
school contacts	7a	6.445	.2649	.2478		
library contacts	7b	6.250	.2846	.2440		
extension contacts	7c	2.437	.7860	.1523		
relative contacts	7d	4.166	.5258	.1992		
neighbor contacts	7e	5.166	.3960	.2218		
friend contacts	7f	7.397	.1928	.2654		
Income with						
school contacts†	8a	10.866	.0125	.3248		
library contacts	8b	2.017	.5688	.1399		
extension contacts	8c	3.700	.2958	.1895		
relative contacts	8d	.763	.8584	.0860		
neighbor contacts	8e	1.373	.7118	.1155		
friend contacts	8f	8.848	.0314	.2931		x
Sex with						
school contacts	9a	.008	.9288		.0172	
library contacts	9b	.394	.5300		.0806	
extension contacts	9c	1.227	.2679		.1421	
relative contacts	9d	1.350	.2454		.1315	
neighbor contacts	9e	.060	.8061		.0472	
friend contacts	9f	4.383	.0396		.2015	x

Table 32 (con'd.)

Nature of H_o	H_o No.	X^2	P*	C-V**	Phi	H_o***
Number of children with						
school contacts†	10a	14.636	.0055	.3681		
library contacts	10b	4.269	.3708	.1988		
extension contacts	10c	6.037	.1964	.2364		
relative contacts	10d	9.702	.0458	.2997		
neighbor contacts	10e	.882	.9272	.0935		
friend contacts	10f	1.046	.9028	.0984		

*exact probability level

**Cramer's V coefficient

***rejected null hypothesis

†Test results invalid due to low expected frequencies.

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