# Factors influencing female adult students to continue their education 

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# Factors influencing female adult students <br> to continue their education <br> by Cecilia Douthy Willis <br> A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of The Requirements for the Degree of DOCTOR OF PHILOSOPHY <br> Department: Professional Studies Major: Higher Education 

Approved:

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For th Gadduffe College

Iowa State University Ames, Iowa

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## Introduction

What is the value of education to women? Luetkens (1946) summarized her thoughts about education's value in the following quotation:

To gain access to the stores of knowledge accumulated through the ages and to learn methods of handling it has always been one of the first desires of groups who have become aware of their place in society. Knowledge makes free, free to accept or to reject authority. Education is a great emancipator.

America's women appear to be changing. The one common stereotype of women as homemakers, caught up in a world of dishes, diapers, and cookbooks, can no longer be taken for granted.

Erickson (1968) described the stereotypic image of women in the following passage:

A good woman encourages a man.
An intelligent one inspires him,
An attractive woman interests a man,
And a sympathetic one wins him.
The traditional image and role of women and the major goals of their lives have often been predefined. When all of the preconceived expectations and goals have been fulfilled, the question remains, what's next?

What are some of the alternatives available for women; what are some of the problems they face when reviewing their lives and continued education is considered as one of the alternatives? Some women may choose to return to the labor market or, as many women are discovering, they can return to college.

The number of women over 30 who are enrolled in higher education courses has doubled during the past 10 years, thus indicating that
more and more women are not limiting their roles to those of wives and mothers but are seeking to alter these once traditional roles (Oliver, 1975).

A review of the literature in the area of mature women and higher education indicated that the adult female enrollment increase can be attributed to the following: Women are having fewer children and therefore can leave the home earlier; labor saving devices have decreased the amount of time spent doing household chores; increased numbers of sinsle, widowed, and divorced women must support themselves; and the impetus of the women's movement has helped create a feeling for some women that a choice need not be made between their personal lives and their desired careers.

According to Seifer (1973) there is a direct correlation between the level of education of women and their openness to change in their roles. The better informed a woman becomes, the greater the likelihood that she will want a role which may include a career outside the home as well as a satisfying and creative life style.

Researchers who have investigated the area of women and/or female adult learners conclude that the peculiar life cycles, the multiple roles which they must play in modern society, and their needs for selffulfillment intellectually and professionally require a special kind of continued education.

The conceptualization of this study was generated as a result of the literature that has been published about women and the world of
work, the status of women, and the sex roles of women. Few studies have dealt with the question of the education of the mature women even though education may be considered by some to be one of the more obvious avenues for improving the status of women and enriching their lives. This study was designed to add to the research by indicating or clarifying some of the relative concerns of women in the labor market who decide to modify their lives and social worlds by going to college. Objectives of the Study

The primary objective of this study was to increase knowledge about women who are continuing their education. The factors investigated were those associated with the decision of women over 25 years of age to continue their education.

Secondary objectives of this study included:

1. Collecting and reporting data which will indicate which student services are perceived as necessary by female adult students.
2. Collecting and reporting data which indicate which student services are currently being utilized by female adult students.
3. Recommending services which will directly relate to female adult students.
4. Reporting data which will help the directors of student services evaluate the services' effectiveness as it relates to female adult students.

The objectives of this study were met by sampling three Iowa Board of

Regents institutions, the largest private institution in Iowa, and one area community college in the largest population center in Iowa. Organization of the Study

The study was organized in the following manner:

1. The first chapter is an account of the problem, the basic purposes, and the objectives of this study.
2. The second chapter provides a frame of reference by reviewing the literature in several areas: adult education and the adult learner, role of women in education, and female adult students and education.
3. The method of study is presented in the third chapter, giving a general description of each institution, sampling procedure and description of the sample, development and implementation of the instrument used in collecting the data, measurement of the variables, and the statistical procedure used to analyze the collected data.
4. The fourth chapter gives the findings and discussion.
5. In the fifth chapter, summaries of the conclusions drawn from the data are presented. This chapter also contains recommendations for student services which can be utilized by female adult students who are currently enrolled in college as well as female adult students who may wish to engage in further study, and poses questions for further research.

## Limitations

The scope of this investigation was confined to three Board of Regents four-year institutions; the largest private, four-year
institution; and the central campus of the Area XI community college within the state of Iowa for geographic considerations.

A sample of the currently enrolled female adult students was used because of the large population size.

The response rate of the questionnaire may have been restricted due to use of the U.S. Postal Service as opposed to personal administration and collection.

The Rights of Privacy Act of 1973 prevented the researcher from obtaining certain information which may have been of value in the study.

Hypotheses To Be Tested
Based on a review of past research and conceptual frameworks, two general hypotheses were developed for testing:
A. There will be a relationship between educational institutions and personal, social, and situational variables for female adult students.
B. There will be a relationship between age and personal, social, and situational variables for female adult students. The personal, social, and situational variables to be examined in this study are: current academic status, ethnic background, present age, present marital status, total number of children, ages of children currently living at home, degrees completed, factors which influenced the subject's decision to continue her education, roles the subject was currently combining, factors which influenced the subject's choice
of institution, source of financial support, major, educational goals, and student services. (See Appendix B for questionnaire.)

## Review of Literature

Much of the information and research in the area of the female adult student has been gathered in a sporadic and unsystematic manner. Though numerous institutions of higher learning claim to have programs which assist the female adult students who have decided to continue their education, actual research reports few institutions offer such programs. Mattfeld's (1971) study indicated out of 750 colleges and universities surveyed, only 49\% of those institutions had actually made any concessions to meet the needs of female adult students.

This chapter presents a general review of the literature emphasizing the factors that influence the female adult to continue her education. In the first section of the review, the writer discusses adult education, characteristics of the adult learner and the female adult learner and her particular characteristics. In the next section, the writer discusses the role of women in education. This is followed by a discussion of the female adult student and higher education. The final sections of the Review of Literature focus on specific factors which influence the adult female to continue her education, the obstacles she faces in making that decision, and recommendations for services which can assist her with her academic endeavors.

Adult Education and the Adult Learner
Bergevin (1967) emphasizes that adult education is not a pasttime or fad of an affluent society. In its broadest definition, adult education can be considered the wave or direction of the future in higher education.

A review of the literature on adult education and the adult learner cites the following as the general purposes, major goals, and tasks of adult education: (a) to discover and present to the adult the opportunity to advance as a maturing individual, (b) to help one learn how to contribute one's share to the civilizing process, and (c) to assist the adult to develop into the person it is possible for one to be-a free, creative, responsible, productive, and maturing citizen.

Adult education is directed to the acquisition of knowledge through study, teaching, and research; as well as the dissemination of theoretical and practical knowledge through a professional training program.

The following are cited characteristics of adult learners by Knowles (1976): (a) their self-concept moves from one of being a dependent personality toward one of being a self-directing human being, (b) they accumulate a growing reservoir of experience that becomes an increasing resource for learning, (c) their readiness to learn becomes oriented increasingly to the developmental changes from one of postponed application of knowledge tc immediacy of application and their orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness.

Another characteristic of adult learners is their strong drive for self-improvement. Many adult learners have returned to college while still working full- or part-time as well as assuming household responsibilities.

Certain characteristics have been observed with regularity as they relate to the female adult learner. Ruud and Hall (1974) indicate that
these characteristics include the fact that the learner is generally between the ages of 25 and 50, married, and tends to be from middle class or upper middle class socioeconomic backgrounds. The female adult learner has also expressed an interest in community as well as family affairs.

In observing the female adult learners, Helfter (1962) compared the academic performance of women 40 years plus with the performance of women 18-25 in the same classes at two major universities. The mature women achieved better than their younger counterparts in total performance and in each field of study.

Doty (1967) who also conducted research in the area of the female adult learner versus the young learner noted that in the area of academic difficulties mature women had difficulty in concentrating, reading rapidly, and in taking effective class notes. It was also noted that mature women spent twice as much time studying, studied daily at regular hours, reviewed and outlined materials, began assignments promptly, and wrote multiple drafts of papers.

The older learner also expected superior performance of herself because she felt her maturity made her better able to recognize the importance of a college education.

As noted by Letchworth (1970), each year more mature women enroll in colleges and universities across the country. The satisfaction felt by so many women is a function of their ability to understand their motivations for returning to college and their resourcefulness in overcoming initial difficulties.

Lichtenstein and Black (1963) at Hofstra University found that the mature woman receives grades significantly higher than the mature male. Nevertheless, if the goal of our institutions of higher learning is to educate, and further, if grades reflect attainment, the fact remains that these women are getting more out of their educational experience than most students.

Some female adult students have expressed the feeling that while they were occupied with raising children, their husbands often had completed one or more degrees as well as having advanced on their jobs. In order to keep up with their husband's increased intellectual level, many female adults turn their thoughts to continuing their education. To continue their education is generally a next step because many female adults have continued to experiment with various forms of education and the stimulus and encouragement of sharing ideas provides additional support for the endeavor.

Though the need is often unconscious, the female adult has often expressed her need for feelings of worth or achievement as an individual, outside the roles of homemaker, wife, and mother.

## Role of Women in Education

In the complex history of American higher education, one fact stands out conspicuously. It took American educators 200 years after they established institutions of higher education for men to recognize the legitimacy of women's claims to similar education.

Exactly 205 years after Harvard opened its doors to men, three women received the A.B. degree from Oberlin College. By the mid-19th
century, however, attitudes and practices regarding the formal education of women had changed drastically. Holmstrom (1973) cited several factors for this change:

1. Industrial production replaced the home as the unit of production and thus created a demand for women workers.
2. The economic advantages of hiring women teachers was quickly realized by those who voiced opposition to women's participation in the labor market.
3. The Civil War greatly reduced the enrollment of male students, thus increasing the opportunity for more female enrollments.
4. The movement for equal rights and financial donations designed for female students gave impetus to the educational movement for women.

Just as men claim the right to think, to have free and equal access to the wealth of wisdom, women expressed the same desire. Education seemed the natural way to the fulfillment of their new individualism and liberty. Aside from increasing their intellectual capacities, education was an obvious way to personal satisfaction, as well as material and spiritual independence.

The best preliminary preparation for professional and technical study should not be affected by the question of one's sex. Whatever one may think of a woman's right to gain a livelihood in any given occupation, it must be agreed that if a woman is to compete successfully with a man engaged in the same occupation, she must receive the same thorough and prolonged preparation as a man. For the purpose of
successful competition it is desirable to minimize the difference between men and women by giving the same, and not a different, preparation.

Barriers to individual development through education will begin to be eliminated when we as a society decide that educational opportunity depends not on class, stereotypes based on color or shade of one's skin, but upon individual needs, desires, and potential for contribution. Once we recognize that women as well as men can be doctors, lawyers, scientists, businessmen, politicians, and noted writers and artists, we will find the ways to prepare them for their new roles.

If the American women are to be prepared for meeting the growing demands of the new roles they must fill, the status of women in our society, especially in the areas of education and occupations, must be raised to the same level of status as men. The Female Adult Student and Education

The Chronicle of Higher Education, December 23, 1974, described the situation faced by mature women. As they came to the campuses, the mature women found that colleges and universities had few if any arrangements to meet their particular needs. Required courses were held at impossible times. Review classes in special fields were nonexistent and the personal and academic problems that evolved from combining family responsibilities, college, and re-entry into the job market were foreign to counselors who spent their time advising young people.

Insofar as women are entering higher education in ever-increasing numbers, it is the responsibility of educational institutions to
encourage women to continue their education and to use resources arailable to them for their personal growth and development.

It is no longer necessary to champion the cause of women's education. The current task appears to be to understand the life of women, how they adapt to the educational process, what sorts of consequences may result and what information and services are available from every source with which to plan and implement further progress in the field.
"Women need help in understanding their life patterns and how their futures are not predestined but how they can be shaped and personally determined" (Koontz, 1970). Scott (1971) indicates that the specific life pattern a woman develops depends on three strategic variables: the shaping of her personality, the immediate circumstances of her adult life, and the way in which she responds to these circumstances.

Before the turn of the century, alternative patterns of life were determined to a great extent by a more or less rigid environment. A woman who had completed higher education could generally pursue a career only at the cost of foregoing marriage and a family. Her alternatives were a career or marriage.

Because of the revolutionary changes which have taken place in the environment, a woman is now able to work while she is studying; before her marriage; after she is married; while her children are very young, enter school, or have grown.

Continuing education programs for women are becoming more of a reality and integral part of higher education.

The basic theme behind programs of continuing education for women is one of understanding the special time pattern of educational and personal growth of women. This pattern generally involves some education, marriage, a family, and then a resumption of education.

Alexandra (1976) notes that continuing education programs for women should provide matual supports and encouragement for women, development of a strong sense of self-esteem in women, and help in improving family relations. It also helps provide the academic preparation and skills needed for women to make decisions about educational and personal goals as well as carner decisions.

Much courage is required for a woman to take the initial steps in returning to college. Encouragement, counseling, and careful planning can help her establish realistic and attainable goals. Large numbers of female adults are taking these steps and accomplishing their goals, whether for job preparation, insurance for the future, or personal sąisfaction.

The female adult student is sometimes characterized by having sent her youngest child off to school; average age about 35; and can look forward to some 30 years of productive work with reduced home responsibilities (Furness \& Graham, 1974).

Demographic factors, as noted by Osborn (1963) found the adult female student to be in the upper $10 \%$ of her graduating class, had participated in three or four extracurricular activities, had been married at least once, and rated her marriage as happy. The fathers of
the female adult students were in professional or managerial occupations, and their mothers were primarily homemakers. The average education of the parents was a little over 11 years.

Women are finding themselves in a different social environment; one in which opportunities for women have greatly expanded. With these opportunities more available, women are finding themselves with more and more time on their hands, and are often anxious to seek new modes of personal development and social contribution.

The female adult student has been a population which has noticeably increased in the classrooms of institutions of higher learning. Though it has been noted that this population is steadily increasing, what reasons can be attributed to this increase?

Brandon (1973) listed several statements by adult females as to why they decided to return to college:

I refuse to stagnate to prove to myself and the world I was not stupid intellectually...I find a housewife's duties non-creative and a bore...My family is nearly grown so the decision to plan my future made it mandatory that I further my education... My divorce this year...I need more education for the job market...I would like to set an example for my children...This is my third return, the other times family obligations made it difficult to continue... This return is for my personal satisfaction, as I have felt I left something "unfinished" all these years...I was a secretary for 13 years and found it hopelessly boring and completely unchallenging.

The following statements were made by female adult students enrolled in a Women's Re-Entry Program at San Jose City College between 1973 and 1976:

I figure I have 20 years left of my life and I want to make the most of it. I feel ashamed that I do not have a degree. In fact,

I lie sometimes and say I went to college two years. So now, I would like to try and make that lie a truth.

It has been 26 years since I have studied and I will be checked by 10 little ones to be sure I practice what I preach. Since I am at an age when jobs are not easy to find, the more $I$ have to offer the better chance I will have to get a worthwhile and profitable one.

I am now mother and father to my two children. My husband died in an automobile accident. I went back to high school, but now I find in order to really help my children in their health and education in this new world, I need to learn and educate myself, so as to keep up and understand them. For myself, I need to go on in this world; I cannot build my world solely around my sons.

At the age of 28 , I've discovered my brain is stagnating.
The most frequent reasons for female adults returning to college according to Letchworth (1970) is to gain relief from boredom. These are women whose families are grown and feel their life is dull compared to their husbands.

The female adult student in a study conducted by Doty (1966) cited the following as reasons for returning to college:

To fulfill a desire for knowledge; dissatisfaction with club, community, and social activities; financial preparation for retirement; lack of interests in jobs that did not require a college education. Almost one-third of the women said they always intended to return to college when they were financially able and their children were of school age.

The following reasons were cited by Osborn (1963) for why female adult students in her survey returned to college: personal growth and self-improvement, enjoyment of learning, and desire for professional growth. Although the aforementioned reasons were the primary ones given by Osborn's participants, other factors such as preparation for teaching, financial assistance for children, advance in work, enrichment of
everyday living, and preparation for employment other than teaching were included. When asked who provided encouragement for them to return to school, 75\% of Osborn's participants said their husbands; 66\% were encouraged by their parents, children, and professors; and $80 \%$ were encouraged by employers.

Maki (1974) noted personal satisfaction, to meet a challenge, to complete a degree, to learn new and different things, as well as a way to meet new people as reasons for the female adults returning to Mesabi Community College.

Several other factors were cited as reasons for the female adult student's presence on college campus: (a) a desire to grow intellectually and personally, (b) to provide enrichment of leisure time,
(c) insurance in case the need arises in the future for support of self, (d) to develop special skills needed for volunteer work, (e) the rising standard of living, (f) the general population shift toward more education, and (g) the demands of a rapidly changing society for female adults returning to college.

Other women return to college to escape from responsibilities that have little meaning or to escape from divorce and marriage troubles. For these women, college is not only a retreat from personal problems, but also requires the establishment of a new pattern of life. College helps these women meet new people, develop useful skills, and develop new ideas.

Finally, some women want to return to college to finish college work they had started many years earlier.

The academic interests of women returning to college included education, sociology, nursing, law, literature, and women's studies.

In the reviewing of 1iterature, Osborn (1963) found that many of the older women students' difficulties in returning to college were transitory. Among the transitory problems were: inadequate study techniques, deficient orientation to college, and lack of self-confidence. Occasional problems were the ubiquitous scheduling difficulty, tensions of exams causing increased tensions at home, and sharp curtailment of social activity.

Clements (1974) noted several difficulties female adults encountered when returning to school. These difficulties often served as barriers to the students. Some of the difficulties included:

Refusal to accept transfer credits; arbitrary age limits; overt discrimination of faculties, deans, and college officials; admission requirements; lack of services which make education compatible with women's other activities; residence requirements; insistence on full-time study; lack of childcare facilities; and the discrimination often encountered when applying for fellowships, travel grants, and married student housing.

Through her research Andrews (1973) cited another set of difficulties often expressed by the female who desires to continue her education: (a) the potential student's family is often critical and concerned that continued education will interfere with household duties, (b) general family criticism about mother or wife continuing her education, (c) the financial strain of higher education, (d) the adjustment of being graded again, and (e) any other personal problems she might encounter with her family, friends, or employers.

The following questions were posed of femaie adults who have decided to continue their education: (Rurd \& Hall, 1974)

1. Is she still capable of learning, especially in competition with young people?
2. Will she be able to manage time to study without neglecting husband, children, and home responsibilities?
3. Is there money within the budget for continued education?
4. Will she have adequate time to complete her study as her husband is completing course work or before he is transferred by his company to another part of the country?

Roby (1975) pointed out that the structural barriers to women in higher education are strengthened by the social attitudes and norms taught to both men and women concerning "feminine behavior." The seeds of sex-role conflict are sown in very early socialization that takes place concerning sex-roles and remain as a problem and influence the lives of women.

The responses from directors of continuing education programs for women express a healthy acceptance of the view that education is not a mechanical transfer of facts from teacher to student, but rather a process in which the expectations, hopes, and fears of the student bear heavily on her capacity to learn.

When surveyed on the services needed to assist the female adult student in her adjustment to her new environment, directors stressed the importance of guidance and counseling, as well as the importance of the psychological support of peers.

What is the importance of counseling programs? The most frequent request of female adult students is for individual counseling by qualified persons. They seek highly competent advice with respect to educational and employment plans. It was also noted that college counselors who necessarily spend much of their time working with young people often do not realize the special problems associated with continued family responsibilities and re-entry into the labor force at a mature age. Also noted by some female adult students was the fact that counselors are often not sufficiently aware of existing services and facilities that can help solve students' problems. We cannot stress too strongly how great is this sense of need for career guidance to new realities at this critical turning point in the life of a woman.

The institution's counseling service is vital as well as essential, for where else can women of 30,40 , and 50 go for diagnosis of their intellectual potential, evaluation of their prior education and review of their work experience, with subsequent counseling as to the next steps in both education and career.

## Conclusion

It has been suggested by some educators that an experimental situation would help to determine the mature women's motivations to learn, effective means of instruction, pertinent instructional materials, and the effect of previous nonacademic experience on self-concept and approach to learning. It should incorporate features such as resource centers on available opportunities for women, child care facilities,
coursework credit for relevant non-academic experiences, flexible curricula to meet specific needs of ethnic women, and procedures which will help to alleviate or eliminate administrative encounters with institutions.

It has therefore been concluded by some researchers that the peculiar life cycles of women, the multiple roles which they must play in modern society, and their needs for self-fulfillment--intellectually and professionally--require a special kind of education.

## Methodology

This chapter presents the method employed in this study including a general description of each institution sampled, sampling procedures and a description of the sample, the development of the instrument, the ways in which the selected variables were measured, the hypotheses to be tested, and the statistical procedure used to analyze the data. Institutions

The institutions sampled in this study included the three Board of Regents institutions in the state of Iowa; the largest private, four-year institution in Iowa; and one area community college in the largest population center in Iowa.

Iowa State University is a four-year, state-supported institution located in Ames. The student population as of September 1976 numbered over 22,000 with a faculty of approximately 2,000 . Instruction is offered throughout the year, divided into four quarters of approximately 11 weeks each. Tuition, as of September 1976, for resident undergraduate students is $\$ 735$, and $\$ 858$ for resident graduate students for the academic year.

Drake University is a private and independent major university located on a campus in an urban setting, Des Moines. Approximately 5,000 students are enrolled in each of the two semesters. Two fiveweek terms and a three-week interim term are offered in the summer session. Drake's College of Continuing Education offers late afternoon, evening, and Saturday classes on campus and extension classes at
locations throughout the state of Iowa. The College for Continuing Education also conducts conferences, workshops, institutes, and professional seminars for business, industry, associations, and government groups with special programs for women. Tuition costs as of September 1976 are $\$ 1465$ for undergraduate students per academic year. The University of Northern Iowa is Inaated in Cedar Falls, north and east of the geographic center of Iowa, on the Cedar River. Cedar Falls has a population of approximately 32,000 with the Cedar FallsWaterloo greater metropolitan area having a population of more than 106,000. The student body population is approximately 10,000 with a faculty numbering about 575. The University of Northern Iowa is a state-supported institution. Tuition cost is $\$ 694$ for an in-state undergraduate student and $\$ 726$ for an in-state graduate student for the academic year.

The University of Iowa's enrollment is more than 22,500 students with a full-time faculty of 1,200 and 1,400 part-time instructors. Its 900 -acre main campus spans the Iowa River Valley and merges with the business center of Iowa City, a community of 50,000 persons near Cedar Rapids, Iowa's second largest city. Approximately $82.5 \%$ of the University's undergraduate students are enrolled in the College of Liberal Arts. Less than $25 \%$ of its total enrollment are in the Graduate College. The University of Iowa is also a state-supported institution, governed by the same Board of Regents as Iowa State and

University of Northern Iowa. Tuition costs are $\$ 750$ for resident undergraduate students and $\$ 858$ for resident graduate students. Des Moines Area Comminity College is a publicly-supported, twoyear institution serving the Des Moines metropolitan area and surrounding counties. The college's central campus and administrative offices are located at Ankeny. Other ongoing attendance centers are the Boone Campus, the Urban Campus in Des Moines, and the Carroll Center. In addition, classes are held in more than 50 locations within the district. Tuition costs are $\$ 405$ per year.

Sampling Procedures-Sample Description
The subiects in this study were women over 25 years of age who were currently enrolled in one of the following institutions; Iowa State University, Drake University, the University of Northern Iowa, the University of Iowa, and the Des Moines Area Community College-Ankeny Campus; during the winter quarter or semester of 1977.

Because of the policy of allowing only officials of the institution to have access to the records, the Vice Presidents for Student Affairs obtained the names of all women fitting the criteria outlined by the researcher (that they were 25 years of age and were currently enrolled in one of the selected institutions during winter quarter or semester 1977). The subjects were selected from the lists submitted by each institution by use of a table of random numbers. One hundred questionnaires were distributed to female adult students at each of the following institutions: Iowa State University,

Drake University, University of Northern Iowa, and University of Iowa. Des Moines Area Community College--Ankeny Campus received 190 questionnaires to distribute to female adult students. The number sent to the community college was designed to increase the two-year institution representation.

Materials distributed to each subject included an explanatory cover letter; a questionnaire; and an addressed, postage-paid envelope. The cover letter (See Appendix A.) emphasized the purpose of the study, the importance of each individual's response, and assured respondents that their answers would be kept confidential. Although responses were to be confidential, each questionnaire had a number on the back in the lower right-hand corner so follow-up materials could be sent to non-respondents.

Five weeks after the initial set of materials were mailed, a fol-low-up letter (See Appendix A.) was sent to the individuals who had not responded. Included with the follow-up materials was another explanatory cover letter; a questionnaire; and an addressed, postagepaid envelope.

The total number of questionnaires distributed was 626, including the pilot study. Of the sample mailed, five were returned because selected subjects had moved and left no forwarding address. Questionnaires were completed by 351 women: This figure includes the 32 women in the pilot study.

Response rates by institution were: Iowa State University, 98
women responding $=27.9 \%$ of total sample; Drake University, 52 women
responding $=14.8 \%$ of total sample; University of Northern Iowa, 63 women responding $=17.9 \%$ of total sample; University of Iowa, 50 women responding $=14.2 \%$ of total sample; Des Moines Area Community College, 88 women responding $=25.1 \%$ of total sample. The Iowa State University response rate was larger for two reasons: (a) this institution included the pilot study, and (b) the institution was the researcher's home base.

The Questionnaire
The research instrument used in this study consisted of a semistructured, open-ended questionnaire composed of questions seeking factual information, questions seeking problem information, questions seeking information about goals and student services.

As a preliminary step, a pilot study was conducted to determine the effectiveness of the questionnaire in eliciting the information desired and to estimate the time required for completion of the questionnaire.

One purpose of the pilot study had been to determine whether or not any of the questions needed to be reworded or rearranged for greater clarity. Since the information sought was elicited to the satisfaction of the researcher, the questions remained unchanged. For this pilot study 36 women were selected and 32 responded. Measurement of Variables

Measurement of the variables current academic status, ethnic background, age, present marital status, total number of children,
ages of children currently living at home, degrees completed, combination of roles, and sources of financial support are described in the tables included in the Findings and Discussion chapter of this study.

In measuring the variable "what factors influenced the subject's decision to continue her education," it was determined by having the subject check all the responses which applied as factors influencing her decision and then rank ordering the responses, using 1 as most important.
"Factors which influenced the respondent's choices of institutions" was measured by having the subject check all the factors which applied and then rank ordering the responses, using 1 to indicate most important.
"Sources of financial support" was measured by having the respondent check all the sources of financial support for her continued education.
"Education goals" was measured by the subjects checking all the responses which indicated their educational goals and then rank ordering them using 1 to indicate most important.
"Contact with institution's counseling center and programs designed for female adult students" was measured by the subjects' responses to two questions, each indicating a choice of answers on a continuum ranging from "visit often" to "did not know where the counseling center was" or "did not know programs existed on the campus." Subjects were to check one answer per question.
"Student services" was measured by two questions, one concerning which student services the female adult student perceived as necessary and the second having to do with which student services the subject wanted to know more about. Subjects were to check all student services which they perceived as necessary and wanted to know more about and then rank order the responses, using 1 to indicate most important. Hypotheses

As indicated in the first chapter, the two major hypotheses to be tested are:
A. There will be a relationship between educational institutions and personal, social, and situational variables for female adult students.
B. There will be a relationship between age and personal, social, and situational variables for female adult students.

These hypotheses are listed with the null hypothesis first, followed by the alternative hypothesis. The specific hypotheses to be tested for general hypothesis A are:

## Hypotheses 1

$H_{0}$ : There will be no significant difference between current academic status and educational institutions sampled.
$H_{A}$ : There will be a significant difference between current academic status and educational institutions sampled.

## Eypotheses 2

$\mathrm{H}_{0}$ : There will be no significant difference between the category ethnic background and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category ethnic background and educational institutions sampled.

## Hypotheses 3

$H_{0}$ : There will be no significant difference between the category age and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category age and educational institutions sampled.

## Hypotheses 4

$H_{0}$ : There will be no significant difference between the category of present marital status and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category of present marital status and educational institutions sampled.

## Hypotheses 5

$\mathrm{H}_{0}$ : There will be no significant difference between the category total number of children and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category total number of children and educational institutions sampled.

## Hypotheses 6

$H_{0}$ : There will be no significant difference between the category of degrees completed and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category of degrees completed and educational institutions sampled.

## Hypotheses 7

$H_{0}$ : There will be no significant difference between rank order of importance of factors which influence a subject to continue her education and educational institutions sampled.
$H_{A}$ : There will be a significant difference between rank order of importance of factors which influence a subject to continue her education and educational institutions sampled.

## Hypotheses 8

$H_{0}$ : There will be no significant difference between the category of educational goals and the educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category of educational goals and the educational institutions sampled.

## Hypotheses 9

$H_{O}$ : There will be no significant difference between the category of student services perceived as necessary by female adult students and educational institutions sampled.
$H_{A}$ : There will be a significant difference between the category of student services perceived as necessary by female adult students and educational institutions sampled.

The specific hypotheses to be tested for general hypothesis $B$ are the same as the hypotheses stated in testing general hypothesis A, with age inserted for institution.

## Statistical Procedures

Analysis of these data was completed by an IBM 360 computer using the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, \& Brent, 1975).

The statistical significance of the tabled data was tested by computing chi-squares. The chi-square test is a simple and direct test of significance. It is appropriate for most cases in which observations can be classified into discrete categories and treated as frequencies (McCollough, 1963).

## Findings and Discussion

The data collected through the questionnaire are presented according to personal, social, and situational variables (See Appendix B.). The demographic characteristics, influential factors, educational goals, and the role of student services as they relate to female adult students over 25 years of age are described and discussed in this chapter.

## Demographic Characteristics

To obtain a more complete profile of the sample included in the study, the following demographic characteristics were researched: current academic status, ethnic background, age, present marital status, total number of children, ages of children currently living at home, degrees completed, and combination of roles.

Current academic status, as shown in Table 1, indicated the sample included undergraduate, graduate, and special students. The largest number of women indicated they were graduate students (37\%), with $\mathbf{2 9 \%}$ considering themselves as part-time graduate students. Almost $50 \%$ of the total sample indicated that they were part-time students regardless of their current academic classification.

Ethnic background, as reported in Table 2, indicated $88 \%$ of the total sample were Caucasian, whereas Blacks and Foreign/Non-US Citizens comprised $9 \%$ of the sample. The remaining $3 \%$ of the respondents were represented by the ethnic background categories of American Indian, Asian American, and Spanish American.

All of the women included in the study were between 25 and 60 years of age, with the average age category being 25-30. This age

Table 1
Frequency Distribution By Total Sample
And Current Academic Status

| Status | \# of <br> subjects | Adj. freq. $\%^{\text {a }}$ |
| :--- | :---: | :---: |
| Full-time undergraduate | 69 | 19.8 |
| Part-time undergraduate | 68 | 19.5 |
| Full-time graduate | 63 | 18.1 |
| Part-time graduate | 102 | 29.3 |
| Other | 46 | 13.2 |
| No response | 3 | -2 |
| Total | 351 | 100.0 |
| a Adjusted Frequency Percent | (Adj. freq. \%) includes |  |
| non-responses or missing data. |  |  |

Table 2
Frequency Distribution By Sample and
Ethnic Background

| Ethnic background | \#F of <br> subjects | Adj. freq. $\%^{\mathrm{a}}$ |
| :--- | :---: | :---: |
| American Indian | 5 | 1.4 |
| Black | 22 | 6.3 |
| Mexican American | 1 | 0.3 |
| Asian American | 2 | 0.6 |
| Caucasian | 307 | 88.0 |
| Puerto Rican | 0 | 0.0 |
| Foreign/Non-US citizen | 12 | 3.4 |
| No response | 2 | - |
| Total | 351 | 100.0 |

${ }^{a_{\text {Adjusted }} \text { Frequency Percent (Adj. freq. \%) includes }}$ non-responses or missing data.
category accounted for $51 \%$ of the total sample. The age category groupings were utilized by the researcher because it was anticipated that the subjects were more likely to respond to an age grouping rather than specifying their actual age. Table 3 lists the number of women in each age category.

Many of the women sampled indicated a combination of the roles of student and spouse. As indicated in Table 4, 212 women were married; 74 women were either widowed, divorced, or separated; and 65 women were single. Data do not indicate whether the subjects responding single had ever been married or were single as a result of being widowed, divorced, or separated. The study does not specify whether subjects who responded married had been married more than once. However, for the research purposes of this study, the current marital status was used to identify the sample groups.

Of the women sampled, $36 \%$ indicated having no children, whereas 25\% of the 344 women indicated having at least two children. Only 4\% of the women sampled had five or more children. The writer did not assume that no response by the subject was equivalent to not having any children. Table 5 indicates the frequency distribution of the total sample by the total number of children.

In response to the question "number of children currently living at home," 95 women indicated that they had children under 6 years of age, whereas 24 women had children 18 years or older living at home. Table 6 provides frequency distribution data for the number of women who indicated ages of children living at home.

Table 3
Frequency Distribution of Total
Sample By Age


Table 4
Frequency Distribution of Total Sample
By Present Marital Status

| Marital status | \# of <br> subjects | Adj. freq. $\%^{\text {a }}$ |
| :--- | :---: | :---: |
| Single | 65 | 18.5 |
| Married | 212 | 60.4 |
| Widowed | 7 | 2.0 |
| Divorced | 57 | 16.2 |
| Separated | $\frac{10}{351}$ | $\frac{2.8}{100.0}$ |

${ }^{\text {a }}$ Adjusted Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

## Table 5

Frequency Distribution of Total Sample
By Total Number of Children

| Children | \# of <br> subjects | Adj. freq. $\%^{\text {a }}$ |
| :---: | :---: | :---: |
| 0 | 127 | 36.9 |
| 1 | 58 | 16.9 |
| 2 | 86 | 25.0 |
| 3 | 36 | 10.5 |
| 4 | 22 | 6.4 |
| 5 | 7 | 2.0 |
| 6 | 1 | 1.5 |
| 7 | 2 | 0.3 |
| 8 | 7 | 0.6 |
| No response | 351 | $-\infty$ |
| Total |  | 100.0 |

[^0]| Table 6 |
| :--- |
| Frequency Distribution of Total |
| Sample By Ages of Children |
| Currently Living At Home |
| Ages |
| Birth-6 years |
| $7-12$ years |
| $13-17$ years |
| 18 years or older |
| No response |
| No children |
| Total |

More than $55 \%$ of the women sampled had completed at least a bachelors degree, whereas $26 \%$ of the women sampled had completed requirements for a masters degree. Eleven percent of the women listed that they had completed other degrees. These were not specified in the question but were required for completion of at least one of the recognized degrees in order to be certified in a particular area. The certification process in society and the flexibility of programs may provide some understanding of the diversity of degrees offered. Table 7 provides the frequency distribution of the total sample by the degrees completed.

As stated previously, 212 of the women sampled were combining the roles of spouse and student. More than $35 \%$ of the respondents were combining the roles of a professional and a student, and $43 \%$ of the respondents combined the roles of spouse, professional, and student (Table 8).

Factors Influencing Female Adult Students to Continue Their Education
Factors which influenced female adult students to continue their education are reported in this section.

Respondents were asked to check all factors which influenced their decisions to return to education and to rank order responses, with the 1 being most important.

In reviewing the responses when asked the question "what influenced your decision to continue your education," $67 \%$ of the female adult students sampled indicated increased job potential as their

Table 7
Frequency Distribution of Total
Sample By Degrees Completed

| Degree | \# of <br> subjects | Adj. freq. $\%^{a}$ |
| :--- | :---: | :---: |
| Associate of Arts | 18 | 7.3 |
| Bachelors | 135 | 55.1 |
| Masters | 64 | 26.1 |
| Doctorate | 0 | 0.0 |
| Other | 28 | 11.4 |
| No response | 106 | -2 |
| Total | 351 | 100.0 |

[^1]Table 8

## Frequency Distribution of Total Sample

By Combination of Roles

| Role | \# of <br> subjects | Adj. freq. $\%^{a}$ |
| :--- | :---: | :---: |
| Marriage \& school | 94 | 32.3 |
| Career \& school | 73 | 25.1 |
| Marriage, career, \& school | 124 | 42.6 |
| No response | $\underline{30}$ | $-\mathbf{1 0 0 . 0}$ |
| Total | 351 |  |
| adjusted Frequency Percent (Adj. freq. \%) includes <br> non-responses or missing data. |  |  |

primary reason for continuing. Their secondary reason for continuing their education was a feeling of achievement (Table 9).

However, when asked to rank order factors that influenced their decisions to continue their education, over $28 \%$ of the sample revealed increased job potential as the primary factor and $19 \%$ reported an increase in income as the secondary factor for continued education. It should be noted that $0 \%$ of the women sampled were continuing their education because of social pressure.

## Factors Influencing Choice of Educational Institution

Factors influencing the female adult student to select a particular educational institution are reported in this section.

Respondents were asked to check all factors influencing their choice of educational institution and then to rank order their responses, with 1 being the most important. Over $57 \%$ indicated traveling distance as a reason for choice of an educational institution and $\mathbf{5 3 \%}$ indicated availability of courses desired as reason for choosing an educational institution.

When asked to rank order the factors that influenced selection of a particular educational institution, over $20 \%$ indicated traveling distance as the first. An additional $48 \%$ listed traveling distance as the second factor affecting their choice. Availability of course offerings at an institution was ranked third (19\%). Though not ranked in the top three choices, location of spouse's job was a reason cited for selection of an educational institution. Table 10 indicates the rank order of factors utilized by students in the selection of an institution.

# Ranked Order Frequency Distribution of Factors Influencing <br> Sample To Continue Their Education 

| Factors | Ranked 1 |  |
| :---: | :---: | :---: |
|  | \# of subjects | Adj. freq. $\%^{\text {a }}$ |
| Fellowship or scholarship | 7 | 2.3 |
| Prestige of a degree | 3 | 1.0 |
| Potential for increase in income | 35 | 11.6 |
| Financial self-sufficiency | 35 | 11.6 |
| Obtaining a feeling of achievement | 49 | 16.2 |
| Prevent boredom | 7 | 2.3 |
| Children more capable and thus provided the opportunity | 1 | 0.3 |
| Family encouragement | 11 | 3.6 |
| Increased job potential | 86 | 28.4 |
| Update of education | 23 | 7.6 |
| Interest in specific course offerings | 26 | 8.6 |
| Encouragement of others | 3 | 1.0 |
| Social pressure | 0 | 0.0 |
| Other | 17 | 5.6 |
| No response | 48 | -- |
| Total | 351 | 100.1 |
| ${ }^{\text {a }}$ Adjusted Frequency Percent (Adj. fr responses or missing data. | \%) inclu | non- |


| Ranked 2 |  | Ranked 3 |  |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { \# of } \\ & \text { subjects } \end{aligned}$ | Adj. freq. $\%^{\text {a }}$ | $\begin{gathered} \text { \# of } \\ \text { subjects } \end{gathered}$ | Adj. freq. $\%^{\text {a }}$ |
| 5 | 1.7 | 5 | 1.8 |
| 8 | 2.8 | 10 | 3.6 |
| 56 | 19.4 | 37 | 13.4 |
| 20 | 6.9 | 28 | 10.1 |
| 47 | 16.3 | 37 | 13.4 |
| 7 | 2.4 | 11 | 4.0 |
| 3 | 1.0 | 12 | 4.3 |
| 16 | 5.5 | 31 | 11.2 |
| 52 | 18.0 | 44 | 15.9 |
| 33 | 11.4 | 18 | 6.5 |
| 23 | 8.0 | 21 | 7.6 |
| 11 | 3.8 | 16 | 5.8 |
| 1 | 0.3 | 6 | 2.2 |
| 7 | 2.4 | 0 | 0.0 |
| 62 | -- | 75 | -- |
| 351 | 100.0 | 351 | 100.0 |

Table 10
Ranked Order Frequency Distribution of Factors Influencing
Sample's Choice of Institution

| Factors | Ranked 1 |  |
| :---: | :---: | :---: |
|  | $\begin{gathered} \text { 非 of } \\ \text { subjects } \end{gathered}$ | Adj. freq. \% ${ }^{\text {a }}$ |
| Finances | 64 | 20.6 |
| Traveling distance | 71 | 22.9 |
| Household responsibilities | 2 | 0.6 |
| Child care | 3 | 1.0 |
| Spouse's attitude | 2 | 0.6 |
| Special counseling programs for women | 5 | 1.6 |
| College advising office | 0 | 0.0 |
| Recruitment by college representative | 4 | 1.1 |
| Employment (full-time) | 21 | 6.8 |
| Employment (part-time) | 6 | 1.7 |
| Availability of courses desired | 62 | 20.0 |
| Location of spouse's job | 49 | 15.8 |
| Other | 21 | 6.8 |
| No response | 41 | -- |
| Total | 351 | 100.0 |

[^2]| Ranked 2 |  | Ranked 3 |  |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 非 of } \\ \text { subjects } \end{gathered}$ | Adj. freq. $\%^{\text {a }}$ | $\begin{gathered} \# \text { of } \\ \text { subjects } \end{gathered}$ | Adj. freq. $\%^{\text {a }}$ |
| 41 | 17.4 | 25 | 16.1 |
| 72 | 30.6 | 22 | 14.2 |
| 6 | 2.6 | 19 | 12.3 |
| 7 | 3.0 | 7 | 4.5 |
| 2 | 0.9 | 6 | 3.9 |
| 0 | 0.0 | 5 | 3.2 |
| 0 | 0.0 | 2 | 1.2 |
| 4 | 1.7 | 1 | 0.6 |
| 10 | 4.3 | 9 | 5.8 |
| 10 | 4.3 | 10 | 6.5 |
| 51 | 21.7 | 30 | 19.4 |
| 16 | 6.8 | 10 | 6.5 |
| 16 | 6.9 | 9 | 5.7 |
| 116 | -- | 196 | -- |
| 351 | 100.0 | 351 | 100.0 |

## Financial Support

When asked to indicate source(s) of financial support for their continued education, $31 \%$ of the women sampled indicated they were selfsupporting. Of the $42 \%$ who indicated a combination of financial sources, spouse and self was the most frequently cited combination. Table 11 indicates the frequency distribution of the total sample by financial support.

## Educational Goals

In an attempt to better understand the reasons why women decide to continue their education, the researcher asked the women what their educational goals were. The female adult students sampled were asked to check all of the educational goals which were appropriate and rank order their goals, with 1 being the most important.

Increased job potential was listed by $74 \%$ of the women sampled as their primary reason for returning to school; $71 \%$ indicated self-satisfaction as their secondary educational goal; $65 \%$ reported obtaining a degree as their third goal (Table 12). The following educational goals were stated in order of importance by the female adult: obtaining a degree, increased job potential, and self-satisfaction.

Further research should be conducted to determine whether the subjects' educational goals were the same upon graduation from high school as they were at the time of this survey, as well as whether the subjects attained their educational goals.

## Student Services

Resuming one's education is a significant decision on the part of mature women, as it may involve the assumption of additional roles

Table 11
Frequency Distribution of Total Sample
By Financial Support

| Source | $\begin{gathered} \text { \# of } \\ \text { subjects } \end{gathered}$ | Adj. freq. \% ${ }^{\text {a }}$ |
| :---: | :---: | :---: |
| Self | 108 | 31.0 |
| Spouse | 53 | 15.2 |
| Parents | 9 | 2.6 |
| Fellowships | 13 | 3.7 |
| Government funds | 18 | 5.2 |
| Comb. of sources | 147 | 42.3 |
| No response | 3 | - |
| Total | 351 | 100.0 |
| ${ }^{a_{\text {Adjusted }}}$ Frequ includes non-resp | Percent <br> or miss | $\begin{aligned} & \text { j. freq. \%) } \\ & \text { data. } \end{aligned}$ |

Table 12
Ranked Order Frequency Distribution of Total
Sample By Educational Goals

| Goals | Ranked 1 |  |
| :---: | :---: | :---: |
|  | $\begin{gathered} \text { \# of } \\ \text { subjects } \end{gathered}$ | Adj. freq. \% ${ }^{\text {a }}$ |
| Obtain a degree | 79 | 25.3 |
| Increase job potential | 71 | 22.8 |
| Obtain self-sufficiency | 24 | 7.7 |
| Self-satisfaction | 54 | 17.3 |
| Opportunity for occupational advancement | 46 | 14.7 |
| Desire for educational advancement | 28 | 9.0 |
| Other | 10 | 3.2 |
| No response | 39 | -- |
| Total | 351 | 100.0 |

[^3]| Ranked 2 |  | Ranked 3 |  |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { \# of } \\ \text { subjects } \end{gathered}$ | Adj. freq. $\%^{\text {a }}$ | $\begin{aligned} & \text { \# of } \\ & \text { subjects } \end{aligned}$ | . Adj. freq. \% ${ }^{\text {a }}$ |
| 46 | 16.4 | 37 | 14.9 |
| 81 | 28.8 | 45 | 18.1 |
| 33 | 11.7 | 45 | 18.1 |
| 59 | 21.0 | 66 | 26.6 |
| 35 | 12.5 | 23 | 9.3 |
| 25 | 8.9 | 31 | 12.5 |
| 2 | 0.7 | 1 | 0.4 |
| 70 | - | 103 | - |
| 351 | 100.0 | 351 | 100.0 |

which may or may not be compatible with previously established or expected role patterns. . In some instances this change in roles and environmental setting may cause discomfort and/or fear.

Each of the institutions sampled had an established counseling service. At least three of the institutions had programs designed specifically for female adult students who had decided to seek additional education. However, student responses indicated that $61 \%$ had never visited the counseling center or did not know where the counseling center was located, whereas only $7 \%$ visited the center often and $32 \%$ reported that they seldom visited the center (Table 13).

Almost the same information was obtained when the women were asked about their contact with programs designed to meet specific needs. Of the $28 \%$ who were aware of the programs only $9 \%$ visited often and $18 \%$ visited program offices on a sporadic basis. Seventy-two precent of the women sampled never visited or were unaware of specific programs for female adult students existing on campus (Table 14).

The researcher was interested in ascertaining what student services the women perceived as being most important to them in their roles as female adult students. The respondents were asked to check all of the student services that they perceived as necessary and rank order the services in order of importance, with 1 being the most important.

The placement office was perceived by $45 \%$ of the women in the sample as being of major importance, whereas $41 \%$ listed the financial aid office as being important (Table 15).

## Table 13

Frequency Distribution of Total Sample By
Contact With Counseling Center

| Contact | 非 of <br> subjects | Adj. freq. $\%^{a}$ |
| :--- | :---: | :---: |
| Visit often | 25 | 7.2 |
| Visit seldom | 111 | 32.1 |
| Never visit | 129 | 37.3 |
| Do not know where it is | 81 | 23.4 |
| No response | $\underline{351}$ | $-\frac{100.0}{}$ |
| Total |  |  |

[^4]\left.| Table 14 |  |  |
| :--- | :---: | :---: |
| Frequency Distribution of Total Sample By |  |  |
| Contact With Adult Student Programs |  |  |$\right]$.


| Ranked Order Frequency Distribution of Total |  |  |
| :---: | :---: | :---: |
|  | Ranked 1 |  |
| Student services | $\begin{aligned} & \text { 非 of } \\ & \text { subjects } \end{aligned}$ | Adj. freq. \% ${ }^{\text {a }}$ |
| Financial aid office | 88 | 32.9 |
| Counseling service | 46 | 17.2 |
| Minority programs | -- | -- |
| Office of student act. | 2 | 0.7 |
| Dean of students | 14 | 5.2 |
| Adult program office | 24 | 9.0 |
| Women's center | 9 | 3.4 |
| Placement office | 61 | 22.8 |
| Other | 24 | 9.0 |
| No response | 83 | -- |
| Total | 351 | 100.0 |
| ${ }^{a_{\text {Adjusted }}}$ Frequency Percent (Adj. freq. \%) includes non-responses or missing data. |  |  |


| Ranked 2 |  | Ranked 3 |  |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 非 of } \\ & \text { subjects } \end{aligned}$ | Adj. freq. \% ${ }^{\text {a }}$ | $\begin{gathered} \text { \# of } \\ \text { subjects } \end{gathered}$ | Adj. freq. $\%^{\text {a }}$ |
| 25 | 14.9 | 12 | 11.6 |
| 39 | 23.2 | 23 | 22.1 |
| 9 | 5.4 | 3 | 2.9 |
| 7 | 4.2 | 2 | 1.9 |
| 5 | 3.0 | 8 | 7.7 |
| 24 | 14.3 | 8 | 7.7 |
| 19 | 1.3 | 20 | 19.2 |
| 38 | 22.6 | 23 | 22.1 |
| 2 | 1.2 | 5 | 4.8 |
| 183 | - | 247 | -- |
| 351 | 100.0 | 351 | 100.0 |

## Differences Among Institutions

Table 16 indicates the significant and non-significant variables cross-tabulated with educational institution or age.

Current academic status. A significant relationship was found between educational institution sampled and the variable current academic status.

The total sample included undergraduate, graduate, and speciai students. Of this sample, $47 \%$ were classified as full- or part-time graduate students, which compared to $39 \%$ of the females sampled who were full- or part-time undergraduates.

Iowa State University (ISU), the State University of Iowa (SUI), and Drake University had the majority of their female adult students classified as graduate students. Of all of the educational institutions sampled, Drake had the most female graduate students. They were also classified as part-time. The majority of the female graduate students at SUI were full-time graduate students, carrying nine hours or more. There was almost an equal number of female adult graduate students classified as full- or part-time at ISU.

The major difference between educational institutions is the graduate/undergraduate classification of students at the four-year institutions and Des Moines Area Community College (DMACC), a two-year institution. Ninety-five percent of the female undergraduate population were enrolled at DMACC. However, $6 \%$ of the graduates sampled were enrolled at DMACC. This can be attributed to women who have returned to school to update credentials or take courses offered only at DMACC.

Table 16
Significant and Non-Significant Variables Cross-Tabulated With
Educational Institution or Age

| Variables | Significant ${ }^{\text {a }}$ for institution |  | $\begin{aligned} & \text { Significant } \\ & \text { for age } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Yes | No | Yes | No |
| Current academic status | x |  |  | X |
| Ethnic background | X |  |  | X |
| Age |  | X |  | X |
| Marital status | x |  | x |  |
| Degrees completed | x |  |  | x |
| Combination of roles | X |  | x |  |
| Financial support | X |  |  | x |
| Utilization of counseling service | X |  |  | x |
| Contact with special programs | X |  | X |  |

${ }^{\text {a }}$ Significant difference calculated at or beyond the .05 level.

The philosophy of the commuity college with regard to flexible class scheduling and an open door admission policy could account for the $51 \%$ of the female adult students from DMACC being classified as part-time undergraduates.

The part-time student status encourages women to contime their education. The flexibility of the part-time status allows women to return to school without completely revising their life styles. The part-time enrollment may also be an accurate determination of the female's real desire to continue education.

Thirteen percent of the total sample were classified as "other," which can be explained by female adult students enrolled for courses in non-degree programs, taking special courses, or participating in workshops which require official enrollment in school. Tables 17 and 18 report the numerical and percentage distributions of the sample by institution and current academic status.

Ethnic background. A significant relationship was found between educational institution and ethnic background. The greatest number of female adult students were Caucasian (88\%), which is consistent with the population in the state of Iowa. Less than $1 \%$ of the total population is minority.

Sixty-seven percent of the women who are Foreign/Non-US Citizens are enrolled at Iowa State. The large enrollment of international female adult students could be attributed to the enrollment in school of the females' spouses. Iowa State is an attractive educational institution because of its agricultural, science, and technology emphasis.

Table 17
Numerical Distribution of Sample By Institution And Current Academic Status

| Current academic status | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Full-time undergraduate | 8 | 5 | 18 | 8 | 30 | 69 |
| Part-time undergraduate | 12 | 8 | 10 | 13 | 35 | 68 |
| Full-time graduate | 31 | 9 | 4 | 19 | 0 | 63 |
| Part-time graduate | 34 | 25 | 23 | 14 | 6 | 102 |
| Other | 13 | 5 | 8 | 6 | 14 | 46 |
| Total | 98 | 52 | 63 | 50 | 85 | 348 |
| Missing observations $=3$. |  |  |  |  |  |  |
| Chi-square $=116.16565$ with 16 degrees of freedom. |  |  |  |  |  |  |

Table 18
Percentage Distribution of Sample By Institution
And Current Academic Status

| Current academic status | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Full-time undergraduate | 8.2 | 9.6 | 28.6 | 16.0 | 25.3 | 19.8 |
| Part-time undergraduate | 12.2 | 15.4 | 15.9 | 6.0 | 41.2 | 19.5 |
| Full-time graduate | 31.6 | 17.3 | 6.3 | 38.0 | 0.0 | 18.1 |
| Part-time graduate | 34.7 | 48.1 | 36.5 | 28.0 | 7.1 | 29.3 |
| Other | 13.3 | 9.6 | 12.7 | 12.0 | 16.5 | 13.2 |
| Total $^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=3$.
Chi-square $=116.16565$ with 16 degrees of freedom.
${ }^{\text {a }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Ninety-one percent of the females who were Black were enrolled at either Iowa State or DMACC. The number of Blacks in the Iowa State sample is due to the pilot study being included in the sample and that the women in the randomly selected sample were combining the roles of professional and school. Black female adult students were_enrolled at DMACC because of its geographic proximity to Des Moines and the specialization of courses available at the community college. Tables 19 and 20 report the numerical and percentage distributions of the sample by institution and ethnic background.

Age. There was no significant relationship between educational institution sampled and the variable age. Fifty-one percent of the sample were $25-30$ years of age. The age of the sample was the same at all of the institutions. Less than $1 \%$ of the total sample were over 55 years of age.

Marital status. There was a significant relationship between educational institution and present marital status. Over 60\% of the total sample were married, as compared to $40 \%$ of the total sample who were single (Tables 21 and 22). The $21 \%$ of the total sample who were divorced, widowed, or separated indicated returning to school to become more self-sufficient.

Degrees completed. There was a significant relationship between educational institution and degrees completed.

Seven percent of the women sampled indicated they had completed at least an Associate of Arts (A.A.) degree. The majority of women (44\%)

Table 19
Numerical Distribution of Sample By Institution and Ethnic Background


Table 20
Percentage Distribution of Sample By
Institution and Ethnic Background

| Ethnic background | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| American Indian | 0.0 | 3.8 | 1.6 | 0.0 | 2.3 | 1.4 |
| Black American | 13.4 | 1.9 | 0.0 | 2.0 | 8.0 | 6.3 |
| Mexican American | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 0.3 |
| Caucasian | 76.3 | 92.3 | 96.8 | 94.0 | 88.6 | 88.0 |
| Puerto Rican ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Foreign/Non-US citizen | 8.2 | 1.9 | 0.0 | 4.0 | 1.1 | 3.4 |
| Asian American | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| Total $^{\text {b }}$ | $\underline{100.0}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=2$.
Chi-square $=42.36551$ with 20 degrees of freedom.
${ }^{\text {a }}$ Category not included in the calculation of chi-square.
${ }^{b}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Table 21
Numerical Distribution of Sample By Institution and Marital Status

| Marital status | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Single | 19 | 8 | 7 | 19 | 12 | 65 |
| Married | 62 | 32 | 45 | 15 | 58 | 212 |
| Widowed | 2 | 0 | 1 | 2 | 2 | 7 |
| Divorced | 13 | 11 | 7 | 13 | 13 | 57 |
| Separated | 2 | 1 | $\frac{3}{7}$ | $\frac{1}{5}$ | $\frac{3}{88}$ | $\frac{10}{35 i}$ |
| Total | 98 | 52 | $\frac{63}{50}$ |  |  |  |

Chi-square $=31.99220$ with 16 degrees of freedom.

Table 22
Percentage Distribution of Sample By
Institution and Marital Status

| Marital status | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Single | 19.4 | 15.4 | 11.1 | 38.0 | 13.6 | 18.5 |
| Married | 63.3 | 61.5 | 71.4 | 30.0 | 65.9 | 60.4 |
| Widowed | 2.0 | 0.0 | 1.6 | 4.0 | 2.3 | 2.0 |
| Divorced | 13.3 | 21.2 | 11.1 | 26.0 | 14.8 | 16.2 |
| Separated | 2.0 | 1.9 | 4.8 | 2.0 | 3.4 | 2.8 |
| Total $^{\beth}$ | 100.0 | 100.0 | $\frac{100.0}{100.0}$ | $\frac{100.0}{100.0}$ |  |  |

Chi-square $=31.99220$ with 16 degrees of freedom.
${ }^{a}$ Colum totals may not equal $100 \%$ due to rounding error in the computation process.
who indicated A.A. degrees were enrolled at DMACC or University of Northern Iowa (UNI) (33\%). DMACC offers only an A.A. degree and the female adult students at UNI who indicated completion of an A.A. had transferred from a comminity college in the area.

Fifty-five percent of the total population had completed at least a bachelors degree. Over $38 \%$ of the female adult students had completet bachelors degrees, whereas only $6 \%$ of the women at DMACC had completed the same degree. Though the comparison is not totally valid, it does indicate that a portion of the women at DMACC had attended a fouryear institution. There was an equal number who had completed masters degrees; 25 of the female adult students at each of the four-year institutions had completed masters degrees. Tables 23 and 24 give the numerical and percentage distributions on these data.

Decision to continue education. A relationship was found between educational institution and ranked order of importance of factors which influenced the women sampled to continue their education. Twenty-nine percent of the women sampled indicated "increased job potential" as the primary reason for their return to school; "fellowship or scholarship," "prestige of a degree," "financial self-sufficiency," and "children more capable and thus provided the opportunity" were not significant factors in their decisions to return to school (Tables 25 and 26). Combination of roles. A significant relationship was found between educational institution and combination of roles. Sixty-eight percent of the total population were combining the roles of student and professional (Tables 27 and 28). The greatest number of female adult

Table 23

Numerical Distribution of Sample By
Institution and Degrees Completed

| Degree | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Associate of Arts | 2 | 1 | 6 | 1 | 8 | 18 |
| Bachelors | 51 | 25 | 21 | 30 | 8 | 135 |
| Masters | 29 | 13 | 9 | 13 | 0 | 64 |
| Doctorate |  |  |  |  |  |  |
| Other |  |  |  |  |  |  |
| Total | 0 | 0 | 0 | 0 | 0 | 0 |

Missing observations $=106$.
Chi-square $=70.45554$ with 16 degrees of freedom.
acategory not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented }}$ one additional choice.

## Table 24

## Percentage Distribution of Sample By

> Institution and Degrees Completed

| Degrees | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Associate of Arts | 2.3 | 2.4 | 15.0 | 2.1 | 29.6 | 7.3 |
| Bachelors | 58.0 | 59.5 | 52.5 | 62.5 | 29.6 | 55.1 |
| Masters | 33.0 | 31.0 | 22.5 | 27.1 | 0.0 | 26.1 |
| Doctorate ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other ${ }^{\text {b }}$ | 6.8 | 7.1 | 10.0 | 8.3 | 40.7 | 11.4 |
| Total ${ }^{\text {c }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=106$.
Chi-square $=70.45554$ with 16 degrees of freedom.
${ }^{\text {a }}$ category not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented one additional category. }}$
${ }^{c}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Table 25

Ranked First in Order of Importance for Numerical

Distribution of Sample By Institution and Factors Influencing Subject's Decision to

Continue Her Education

| Factors | ISU | Drake |
| :---: | :---: | :---: |
| Fellowship or scholarship | 1 | 0 |
| Prestige of a degree | 1 | 1 |
| Potential for increase in income | 9 | 5 |
| Financial self-sufficiency | 9 | 6 |
| Obtaining a feeling of achievement | 17 | 4 |
| Prevent "boredom" | 1 | 3 |
| Children more capable and thus provided the opportunity | 0 | 0 |
| Family encouragement | 4 | 2 |
| Increased job potential | 27 | 12 |
| Update of education | 8 | 1 |
| Interest in specific course offerings | 5 | 6 |
| Encouragement of others | 0 | 0 |
| Social pressure ${ }^{\text {a }}$ | 0 | 0 |
| Other ${ }^{\text {b }}$ | 5 | 5 |
| Total | 87 | 45 |
| Missing observations $=48$. |  |  |
| Chi-square $=72.50311$ with 52 degrees of freedom. |  |  |
| ${ }^{\text {a }}$ Category not included in the calculat $b_{\text {Represented }}$ two additional categories | i-sq | re. |


| UNI | U of I | DMACC | Total |
| ---: | ---: | ---: | ---: |
| 1 | 4 | 0 | 6 |
| 0 | 1 | 0 | 3 |
| 9 | 0 | 12 | 35 |
| 4 | 2 | 14 | 35 |
| 10 | 4 | 14 | 49 |
| 1 | 1 | 1 | 7 |
| 0 | 0 | 1 | 1 |
| 2 | 1 | 2 | 11 |
| 15 | 11 | 22 | 87 |
| 4 | 5 | 5 | 23 |
| 5 | 6 | 4 | 26 |
| 0 | 2 | 1 | 3 |
| 0 | 0 | 0 | 0 |
| 1 | 5 | 1 | 17 |
| 52 | 42 | 77 | 303 |

Table 26
Ranked First in Order of Importance of Percentage Distribution of
Sample By Institution and Factors Influencing Subject's Decision To Continue Her Education

| Factors | ISU | Drake | UNI |
| :--- | ---: | ---: | ---: |
| Fellowship or scholarship | 1.1 | 0.0 | 1.9 |
| Prestige of a degree | 1.1 | 2.2 | 0.0 |
| Potential for increase in income | 10.3 | 11.1 | 17.3 |
| Financial self-sufficiency | 10.3 | 13.3 | 7.7 |
| Obtaining a feeling of achievement | 19.5 | 8.9 | 19.2 |
| Prevent "boredom" | 1.1 | 6.7 | 1.9 |
| Children more capable and thus provided the |  |  |  |
| opportunity | 0.0 | 0.0 | 0.0 |
| Family encouragement | 4.6 | 4.4 | 3.8 |
| Increased job potential | 31.0 | 26.7 | 28.8 |
| Update of education | 9.2 | 2.2 | 7.7 |
| Interest in specific course offerings | 5.7 | 13.3 | 9.6 |
| Encouragement of others | 0.0 | 0.0 | 0.0 |
| Social pressure |  |  |  |
| Other | 0.0 | 0.0 | 0.0 |
| Total |  |  |  |

Missing observations $=48$.
Chi-square $=72.50311$ with 52 degrees of freedom.

[^5]| U of I | DMACC | Total |
| ---: | ---: | ---: |
| 9.5 | 0.0 | 2.0 |
| 2.4 | 0.0 | 1.0 |
| 0.0 | 15.6 | 11.6 |
| 4.8 | 18.2 | 11.6 |
| 9.5 | 18.2 | 16.2 |
| 2.4 | 1.3 | 2.3 |
| 0.0 | 0.0 | 0.3 |
| 2.4 | 2.6 | 3.6 |
| 26.2 | 28.6 | 28.7 |
| 11.9 | 6.5 | 7.6 |
| 14.3 | 4.2 | 8.6 |
| 4.8 | 1.3 | 1.0 |
| 0.0 | 0.0 | 0.0 |
| 11.9 | 1.3 | 5.6 |
| 100.0 | 100.0 | 100.0 |

Table 27
Numerical Distribution of Sample By
Institution and Combination of Roles

| Role | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Marriage with school | 29 | 10 | 20 | 11 | 23 | 93 |
| Career with school | 19 | 13 | 7 | 16 | 19 | 74 |
| Marriage \& career with school | 34 | 24 | 27 | 5 | 34 | 124 |
| Total | 82 | 47 | 54 | 32 | 76 | 291 |
| Missing observations $=60$. |  |  |  |  |  |  |
| Chi-square $=25.99013$ with 12 degrees of freedom. |  |  |  |  |  |  |

Table 28
Percentage Distribution of Sample By
Institution and Combination of Roles

| Role | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Marriage with school | 35.4 | 21.3 | 37.0 | 34.4 | 30.3 | 32.0 |
| Career with school | - 23.2 | 27.6 | 13.0 | 50.0 | 25.0 | 25.4 |
| Marriage \& career with school | 41.5 | 51.1 | 50.0 | 15.6 | 44.7 | 42.6 |
| $\text { Total }{ }^{\mathbf{a}}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Missing observations $=60$. |  |  |  |  |  |  |
| Chi-square $=25.99013$ with 12 degrees of freedom. |  |  |  |  |  |  |
| ${ }^{a}$ Column totals may putation process. | t equa | $100 \%$ | to | ding | in | com- |

students who were combining the roles of spouse and student were enrolled at ISU. ISU and DMACC accounted for $50 \%$ of the female adult students who were combining the roles of a professional and student.

The same proportion (27\%) of female adult students at both institutions were combining the roles of spouse, professional, and student. This figure can be attributed to the part-time student status of both samples.

Choice of institution. A relationship was found between educational institution and ranked order of importance for factors which influenced the subject's choice of institution. Twenty-three percent of the women sampled indicated traveling distance as the primary factor in choice of institution (Tables 29, 30, 31, 32, 33, and 34). Women sampled at ISU indicated their primary reason for choice of institution was location of spouse's job. Women sampled at SUI indicated availability of courses, whereas $47 \%$ of the women sampled at DMACC indicated finances as their primary reason for choice of institution.

Financial support. A significant relationship was found between educational institution and financial support. Of the total number of women sampled, $31 \%$ indicated they were self-supporting; $37 \%$ were receiving financial support from a combination of sources, self, spouse, parents, and fellowship or scholarship. Sixty-four percent of the female adult students whose major source of financial support was fellowship or scholarship were enrolled at ISU. This was consistent with the graduate status of the female adult students at ISU. At DMACC $61 \%$ of

Table 29
Ranked First in Order of Importance for Numerical Distribution of
Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finances | 12 | 4 | 4 | 8 | 36 | 64 |
| Traveling distance | 9 | 22 | 27 | 3 | 10 | 71 |
| Household responsibilities | 1 | 0 | 0 | 0 | 1 | 2 |
| Child care | 0 | 1 | 0 | 0 | 2 | 3 |
| Spouse's attitude | 1 | 0 | 0 | 1 | 0 | 2 |
| Special counseling program for women | 3 | 0 | 0 | 0 | 2 | 5 |
| College advising office ${ }^{\text {a }}$ | 0 | 0 | 0 | 0 | 0 | 0 |
| Recruitment by college representative | 3 | 0 | 0 | 0 | 1 | 4 |
| Employment (full-time) | 8 | 4 | 2 | 3 | 4 | 21 |
| Employment (part-time) | 4 | 0 | 0 | 2 | 0 | 6 |
| Availability of courses desired | 9 | 10 | 10 | 14 | 19 | 62 |
| Location of spouse's job | 26 | 5 | 9 | 8 | 0 | 48 |
| Other ${ }^{\text {b }}$ | 12 | 1 | 3 | 5 | 1 | 22 |
| Total | 88 | 47 | 55 | 44 | 76 | 310 |

Missing observations $=41$.
Chi-square $=167.95982$ with 52 degrees of freedom.
${ }^{\text {a }}$ Category not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented }}$ two additional categories.

Table 30
Ranked First in Order of Importance for Percentage Distribution of Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finances | 13.6 | 8.5 | 7.3 | 18.2 | 47.4 | 20.6 |
| Traveling distance | 10.2 | 46.8 | 49.1 | 6.8 | 13.2 | 22.9 |
| Household responsibilities | 1.1 | 0.0 | 0.0 | 0.0 | 1.3 | 0.6 |
| Child care | 0.0 | 2.1 | 0.0 | 0.0 | 2.6 | 1.0 |
| Spouse's attitude | 1.1 | 0.0 | 0.0 | 2.3 | 0.0 | 0.6 |
| Special counseling programs for women | 3.4 | 0.0 | 0.0 | 0.0 | 2.6 | 1.6 |
| College advising office | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| $\begin{aligned} & \text { Recruitment by } \\ & \text { college } \\ & \text { representative } \end{aligned}$ | 3.4 | 0.0 | 0.0 | 0.0 | 1.3 | 1.3 |
| Employment (full-time) | 9.1 | 8.5 | 3.6 | 6.8 | 5.3 | 6.8 |
| Employment (part-time) | 4.5 | 0.0 | 0.0 | 4.5 | 0.0 | 1.9 |
| Availability of courses desired | 10.2 | 21.3 | 18.2 | 31.8 | 25.0 | 20.0 |
| Location of spouse's job | 29.5 | 10:6 | 16.4 | 18.2 | 0.0 | 15.5 |
| Other ${ }^{\text {b }}$ | 13.6 | 2.1 | 5.5 | 11.4 | 1.3 | 7.1 |
| Total ${ }^{\text {c }}$ | $\overline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ |

Missing observations $=41$.
Chi-square $=167.95982$ with 52 degrees of freedom.

[^6]Table 31
Ranked Second in Order of Importance for Numerical Distribution of Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Finances | 5 | 1 | 10 | 5 | 20 | 41 |
| Traveling distance | 19 | 10 | 9 | 8 | 26 | 72 |
| Household responsibilities | 1 | 2 | 1 | 1 | 1 | 6 |
| Child care | 1 | 3 | 1 | 0 | 2 | 7 |
| Spouse's attitude |  |  |  |  |  |  |
| Special counseling program <br> for women | 0 | 0 | 0 | 0 | 0 | 0 |
| College advising office | 0 | 0 | 0 | 0 | 0 | 0 |
| Recruitment by college <br> representative | 2 | 0 | 0 | 1 | 0 | 4 |
| Employment (full-time) | 1 | 5 | 1 | 1 | 2 | 10 |
| Employment (part-time) | 5 | 0 | 2 | 2 | 1 | 10 |
| Availability of courses |  |  |  |  |  |  |
| desired | 13 | 6 | 9 | 12 | 11 | 51 |
| Location of spouse's job | 8 | 1 | 5 | 1 | 1 | 16 |
| Other |  |  |  |  |  |  |
| Total | 9 | 3 | 0 | 4 | 0 | 16 |

Missing observations $=44$.
Chi-square $=90.12358$ with 44 degrees of freedom.
${ }^{\text {a }}$ Categories not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented }}$ two additional categories.

Table 32
Ranked Second in Order of Importance for Percentage Distribution of
Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finances | 7.8 | 3.1 | 25.6 | 14.3 | 30.8 | 17.4 |
| Traveling distance | 29.7 | 31.3 | 23.1 | 22.9 | 40.0 | 30.6 |
| Household responsibilities | 1.6 | 6.3 | 2.6 | 2.9 | 3.5 | 2.6 |
| Child care | 1.6 | 9.4 | 2.6 | c.: | 3.1 | 3.0 |
| Spouse's attitude ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.9 |
| Special counseling programs for women ${ }^{a}$ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| $\begin{aligned} & \text { College advising } \\ & \text { office } \end{aligned}$ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ```Recruitment by college representative``` | 3.1 | 0.0 | 2.6 | 2.9 | 0.0 | 1.7 |
| Employment (full-time) | 1.6 | 15.6 | 2.6 | 2.9 | 3.1 | 4.3 |
| Employment (part-time) | 7.8 | 0.0 | 5.1 | 5.7 | 1.5 | 4.3 |
| Availability of courses desired | 20.3 | 18.8 | 23.1 | 34.3 | 16.9 | 21.7 |
| Location of spouse's job | 12.5 | 3.1 | 12.8 | 2.9 | 1.5 | 6.8 |
| Other ${ }^{\text {b }}$ | 14.1 | . 94 | 0.0 | 11.4 | 0.0 | 6.9 |
| Total ${ }^{\text {c }}$ | $\overline{100.0}$ | 100.0 | $\underline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ | $\overline{100.0}$ |
| Missing observations $=44$. |  |  |  |  |  |  |
| Chi-square $=90.12358$ with 44 degrees of freedom. |  |  |  |  |  |  |
| ${ }^{\text {a }}$ Categories not included in the calculation of chi-square. <br> $\mathrm{b}_{\text {Represented one additional category. }}$ <br> ${ }^{c}$ Column totals may not equal $100 \%$ due to rounding error in the computation process. |  |  |  |  |  |  |

Table 33
Ranked Third in Order of Importance for Numerical Distribution of Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finances | 7 | 0 | 6 | 7 | 5 | 25 |
| Traveling distance | 5 | 0 | 4 | 4 | 9 | 22 |
| Household responsibilities | 7 | 4 | 2 | 0 | 6 | 19 |
| Child care | 3 | 1 | 1 | 0 | 2 | 7 |
| Spouse's attitude | 2 | 2 | 0 | 0 | 2 | 6 |
| Special counseling program for women | 1 | 0 | 1 | 2 | 1 | 5 |
| College advising office | 1 | 1 | 0 | 0 | 0 | 2 |
| Recruitment by college representative | 0 | 1 | 0 | 0 | 0 | 1 |
| Employment (full-time) | 1 | 3 | 3 | 0 | 2 | 9 |
| Employment (part-time) | 1 | 0 | 3 | 2 | 4 | 10 |
| Availability of courses desired | 2 | 5 | 4 | 2 | 17 | 30 |
| Location of spouse's job | 4 | 2 | 1 | 2 | 1 | 10 |
| Other ${ }^{\text {a }}$ | 5 | 3 | 0 | 0 | 1 | 9 |
| Total | 39 | 22 | 25 | 19 | 50 | 155 |
| Missing observations $=196$. |  |  |  |  |  |  |
| Chi-square $=91.97108$ with 60 degrees of freedom. |  |  |  |  |  |  |
| ${ }^{\text {Represented }}$ one addition | 1 cat | egory. |  |  |  |  |

Table 34
Ranked Third in Order of Importance for Percentage Distribution of
Sample By Institution and Factors Influencing Choice of Institution

| Factors | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Finances | 17.9 | 0.0 | 24.0 | 36.8 | 10.0 | 16.1 |
| Traveling distance | 12.8 | 0.0 | 16.0 | 21.1 | 18.0 | 14.2 |
| Household responsibilities | 17.9 | 18.2 | 8.0 | 0.0 | 12.0 | 12.3 |
| Child care | 7.7 | 4.5 | 4.0 | 0.0 | 4.0 | 4.5 |
| Spouse's attitude | 5.1 | 9.1 | 0.0 | 0.0 | 4.0 | 3.9 |
| Special counseling programs for women | 2.6 | 0.0 | 4.0 | 10.5 | 2.0 | 3.2 |
| College advising office | 2.6 | 4.5 | 0.0 | 0.0 | 0.0 | 1.3 |
| Recruitment by college representative | 0.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.6 |
| Employment (full-time) | 2.6 | 13.6 | 12.0 | 0.0 | 4.0 | 5.8 |
| Employment (part-time) | 2.6 | 0.0 | 12.0 | 10.5 | 8.0 | 6.5 |
| Availability of courses desired | 5.1 | 22.7 | 16.0 | 10.5 | 34.0 | 19.4 |
| Location of spouse's job | 10.3 | 9.1 | 4.0 | 10.5 | 2.0 | 6.5 |
| Other | 12.8 | 13.6 | 0.0 | 0.0 | 2.0 | 5.8 |
| Total ${ }^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=196$.
Chi-square $=91.97108$ with 60 degrees of freedom.

[^7]the female adult students were supported through government funds, whereas only $6 \%$ of the women at Drake and SUI were receiving financial aid from government funds (Tables 35 and 36).

Counseling service. A significant relationship was found between educational institution and utilization of counseling services. Thirtyseven percent of the total sample indicated they never used the institution's counseling service (Tables 37. and 38). Only 7\% of the sample visited often; $32 \%$ of the female adult students at ISU and $44 \%$ of the women at DMACC visited their counseling center often. Iowa State offered services specifically to female adult students and the average age of all students at DMACC is over 25 and the counseling center was viewed as a positive service on campus because of the staff. Almost equal numbers of women at ISU, Drake, UNI, and SUI responded they seldom visited, never visited, and did not know where the counseling center was located. Only 9\% of the women sampled at DMACC indicated they did not know where the counseling center was.

Programs. A significant relationship was found between educational institution and utilization of programs specifically designed for female adult students. Over $72 \%$ of the total sample indicated they never used or were unaware of programs designed for female adult students on their campuses. (See Tables 39 and 40.)

Female adult students at ISU (37\%) and DMACC (27\%) had the most contact with special programs for mature women. Women at Drake and UNI (14\%) indicated they seldom had contact with special programs.

Table 35
Numerical Distribution of Sample By
Institution and Financial Support

| Financial support | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Self | 28 | 16 | 16 | 16 | 31 | 107 |
| Spouse | 15 | 7 | 11 | 6 | 14 | 53 |
| Parents | 2 | 2 | 1 | 3 | 1 | 9 |
| Fellowship or scholarship | 9 | 3 | 2 | 0 | 0 | 14 |
| Government funds | 3 | 1 | 2 | 1 | 11 | 18 |
| Combination of support | 37 | 20 | 28 | 22 | 23 | 130 |
| Other | 4 | 2 | 2 | 2 | 7 | 17 |
| Total | 98 | 51 | 62 | 50 | 87 | 348 |

Missing observations $=3$.
Chi-square $=37.78572$ with 24 degrees of freedom.

Table 36
Percentage Distribution of Sample By
Institution and Financial Support

| Financial support | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Self | 28.6 | 31.4 | 25.8 | 32.0 | 35.6 | 30.7 |
| Spouse | 15.3 | 13.7 | 17.7 | 12.0 | 16.1 | 15.2 |
| Parents |  |  |  |  |  |  |
| Fellowship or <br> scholarship |  |  |  |  |  |  |
| Government funds |  |  |  |  |  |  |
| Combination of support | 3.0 | 3.9 | 1.6 | 6.0 | 1.1 | 2.6 |
| Other | 3.2 | 5.9 | 3.2 | 0.0 | 0.0 | 4.0 |
| Total ${ }^{\text {a }}$ |  |  |  |  |  |  |

Table 37
Numerical Distribution of Sample By Institution and Utilization of Counseling Service

| Contact | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visit often | 8 | 3 | 0 | 3 | 11 | 25 |
| Visit seldom | 25 | 11 | 22 | 10 | 43 | 111 |
| Never visit | 38 | 26 | 22 | 18 | 25 | 129 |
| Do not know where it is | 25 | 12 | 18 | 19 | 7 | 81 |
| Total | 96 | 52 | 62 | 50 | 86 | 346 |
| Missing observations $=5$. |  |  |  |  |  |  |
| Chi-square $=40.97879$ with 12 degrees of freedom. |  |  |  |  |  |  |

Table 38
Percentage Distribution of Sample By Institution and
Utilization of Counseling Service

| Contact | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visit often | 8.3 | 5.8 | 0.0 | 6.0 | 12.8 | 7.2 |
| Visit seldom | 26.0 | 21.2 | 35.5 | 20.0 | 50.0 | 32.1 |
| Never visit | 39.6 | 50.0 | 35.5 | 36.0 | 29.1 | 37.3 |
| Do not know where it is | 26.0 | 23.1 | 29.0 | 38.0 | 8.1 | 23.4 |
| Total ${ }^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=5$.
Chi-square $=40.97879$ with 12 degrees of freedom.
${ }^{\text {a }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Table 39
Numerical Distribution of Sample By Institution and
Programs Designed for Female Adult Students

| Programs | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Visit often | 11 | 6 | 4 | 4 | 8 | 33 |
| Visit seldom | 22 | 9 | 9 | 6 | 18 | 64 |
| Never visit <br> Did not know programs <br> existed at my <br> institution | 51 | 27 | 25 | 21 | 23 | 147 |
| Total | $\frac{13}{97}$ | $\frac{10}{52}$ | $\frac{24}{62}$ | $\frac{18}{49}$ | $\frac{38}{87}$ | $\frac{103}{347}$ |

Missing observations $=4$.
Chi-square $=40.24437$ with 16 degrees of freedom.

Table 40
Percentage Distribution of Sample By Institution and
Programs Designed for Female Adult Students

| Programs | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visit often | 11.3 | 11.5 | 6.5 | 8.1 | 9.2 | 9.5 |
| Visit seldom | 22.7 | 17.3 | 14.5 | 12.2 | 20.7 | 18.4 |
| Never visit | 52.6 | 51.9 | 40.3 | 42.9 | 26.4 | 42.4 |
| Did not know programs existed at my institution | 13.4 | 19.2 | 38.7 | 36.7 | 43.7 | 29.7 |
| Total ${ }^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=4$.
Chi-square $=40.24437$ with 16 degrees of freedom.
${ }^{a}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Dissatisfaction with staff and program content wereindicated as reasons for not participating in programs or activities designed to meet the needs of female adult students.

Student services. A significant relationship was found between educational institution and ranked order of importance of student services indicated as necessary by female adult students sampled. The financial aid office was listed as the most important student service by $33 \%$ of the total sample (Tables 41, 42, 43, and 44). Women sampled at ISU (33\%) indicated the placement office as the most important service, whereas women at the other institutions were consistent with the total sample's report. DMACC's female adult students reported counseling services as the most important.

Educational goals. No significant relationship was found between educational institution and ranked order of importance of educational goals. Twenty-five percent of the women sampled indicated their primary educational goal as "obtaining a degree." Other educational goals included "increased job potential," "obtain self-sufficiency," "selfsatisfaction," "opportunity for occupational advancement," and "desire for educational advancement."

Differences Among Age Categories
Current academic status. No significant relationship was found between age and current academic status. Of the females sampled between the ages of 25 and $30,61 \%$ were classified as full-time undergraduates. In the age group 41-45, 7\% were classified as full-time

Table 41
Ranked First in Order of Importance for Numerical Distribution Of Sample By Institution and Student Services


Tabl: 42
Ranked First in Order of Importance for Percentage Distribution of Sample By Institution and Student Services

| Student service | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Financial aid | 25.4 | 39.0 | 26.8 | 40.0 | 37.3 | 32.9 |
| Counseling service | 8.9 | 17.1 | 12.0 | 5.0 | 37.3 | 17.2 |
| Minority programs ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Office of student activities | 1.3 | 0.0 | 0.0 | 0.0 | 1.5 | 0.7 |
| Dean of students | 3.8 | 12.2 | 2.4 | 10.0 | 1.5 | 5.2 |
| Adult programs office | 12.7 | 7.3 | 4.9 | 10.0 | 7.5 | 9.0 |
| Women's center | 5.1 | 2.4 | 4.9 | 0.0 | 3.0 | 3.4 |
| Placement office | 32.9 | 17.1 | 24.4 | 30.0 | 9.0 | 22.8 |
| $\text { Other }{ }^{b}$ | 10.1 | 4.9 | 24.4 | 5.0 | 3.0 | 9.0 |
| Total ${ }^{\text {c }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=83$.
Chi-square $=69.90530$ with 32 degrees of freedom.
${ }^{\text {a }}$ Category not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented one }}$ additional category.
${ }^{\text {c }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Table 43
Ranked Second in Order of Importance for Numerical Distribution Of Sample By Institution and Student Services

| Student services | ISU | Drake | UNI | U of I | DMACC | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Financial aid | 5 | 5 | 5 | 3 | 7 | 25 |
| Counseling service | 8 | 6 | 5 | 7 | 13 | 39 |
| Minority programs | 7 | 0 | 0 | 1 | 1 | 9 |
| Office of student activities | 2 | 0 | 1 | 4 | 0 | 7 |
| Dean of students | 3 | 0 | 1 | 0 | 1 | 5 |
| Adult programs office | 9 | 3 | 0 | 0 | 12 | 24 |
| Women's center | 4 | 5 | 1 | 5 | 4 | 19 |
| Placement office | 13 | 6 | 7 | 3 | 9 | 38 |
| Other ${ }^{\text {a }}$ | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 22 | 25 | 20 | 23 | 47 | 168 |

Missing observations $=183$.
Chi-square $=53.87881$ with 36 degrees of freedom.

[^8]Table 44
Ranked Second in Order of Importance for Percentage Distribution of

Sample By Institution and Student Services

| Student service | ISU | Drake | UNI | U of I | DMACC | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Financial aid | 9.4 | 20.0 | 25.0 | 13.0 | 14.9 | 14.9 |
| Counseling service | 15.1 | 24.0 | 25.0 | 30.4 | 27.7 | 23.2 |
| Minority programs | 13.2 | 0.0 | 0.0 | 4.3 | 2.1 | 5.4 |
| Office of ssudent activitive | 3.8 | 0.0 | 5.0 | 17.4 | 0.0 | 4.2 |
| Dean of students | 5.7 | 0.0 | 5.0 | 0.0 | 2.1 | 3.0 |
| Adult programs office | 17.0 | 12.0 | 0.0 | 0.0 | 25.2 | 14.3 |
| Women's center | 7.5 | 20.0 | 5.0 | 21.7 | 8.5 | 11.3 |
| Placement office | 24.5 | 24.0 | 35.0 | 13.0 | 19.1 | 22.6 |
| $\text { Other }{ }^{\text {a }}$ | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| $\text { Total }{ }^{\text {b }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Missing observations $=183$. |  |  |  |  |  |  |
| Chi-square $=53.87881$ with 36 degrees of freedom. |  |  |  |  |  |  |
| $a_{\text {Represented one addi }}$ <br> ${ }^{b}$ Column totals may not putation process. | equal | tegory | to ro | ding er | in | - |

undergraduates. The greatest number of women sampled were between the ages of 25 and 30. Therefore, this age group represented the largest number of women in each academic classification.

Ethnic background. No significant relationship was found between age and ethnic background. As reported previously, the greatest number of women (88\%) sampled were Caucasian. The greatest number of these women were 25-30 years of age. The women sampled who indicated other ethnic categories generally were over 30 years of age.

Marital status. A significant relationship was found between age and present marital status. Of the women sampled between the ages of 25 and $30,82 \%$ were single. The greatest number of women who are widowed and divorced are over 30 years of age (Tables 45 and 46).

Degrees completed. No significant relationship was reported between age and degrees completed. At least a bachelors degree had been completed by $39 \%$ of the women sampled between 31 and 35 years of age.

Combination of roles. A significant relationship was found between age and combination of roles. Over $50 \%$ of the women sampled between the ages of 25 and 30 indicated the combination of roles spouse and student. Over 58\% of the women in the age group 25-30 were combining the roles of a professional and student, whereas only $1 \%$ of the women 41-45 years of age were. One percent of the women $56-60$ years of age were combining the roles of a professional, spouse, and student. The low number of women in this category corresponds with the percentage of women who were also widowed or divorced. Tables 47 and 48 report numerical and percentage distributions for these data.

## Table 45

Numerical Distribution of Sample
By Age and Marital Status

| Marital <br> status | $25-30$ | $31-35$ | $36-40$ | $41-45$ | $46-50$ | $51-55$ | $56-60$ | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Single | 53 | 7 | 2 | 1 | 0 | 2 | 0 | 65 |
| Married | 96 | 38 | 41 | 20 | 9 | 7 | 1 | 212 |
| Widowed | 1 | 1 | 1 | 4 | 0 | 0 | 0 | 7 |
| Divorced | 24 | 18 | 11 | 2 | 2 | 0 | 0 | 57 |
| Separated | 5 | 2 | 1 | 0 | 1 | 0 | 0 | 9 |
| Total | 179 | 66 | 56 | 27 | 12 | 9 | 1 | 350 |
| Missing observations = 1. |  |  |  |  |  |  |  |  |
| Chi-square $=67.80399$ with 24 degrees of freedom. |  |  |  |  |  |  |  |  |

Table 46
Percentage Distribution of Sample
By Age and Marital Status

| Marital <br> status | $25-30$ | $31-35$ | $36-40$ | $41-45$ | $46-50$ | $51-55$ | $56-60$ | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Single | 29.6 | 10.6 | 3.6 | 3.7 | 0.0 | 22.2 | 0.0 | 18.6 |
| Married | 53.6 | 57.6 | 73.2 | 74.1 | 75.0 | 77.8 | 100.0 | 60.6 |
| Widowed | 0.6 | 1.5 | 1.8 | 14.8 | 0.0 | 0.0 | 0.0 | 2.0 |
| Divorced | 13.4 | 27.3 | 19.6 | 74.4 | 16.7 | 0.0 | 0.0 | 16.3 |
| Separated | 2.8 | 3.0 | 1.8 | $\frac{0.0}{100}$ | $\frac{8.3}{100}$ | $\frac{0.0}{100.0}$ | $\frac{0.0}{100.0}$ | $\frac{100.0}{100.0}$ |
| Total $^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100 |  |  |  |

Missing observations $=1$.
Chi-square $=67.80399$ with 24 degrees of freedom.
${ }^{\text {a }}$ Colum totals may not equal $100 \%$ due to rounding error in the computation process.

Table 47
Numerical Distribution of Sample By Age and Combination of Roles

| Role | 25-30 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 | 56-60 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Marriage with school | 47 | 20 | 16 | 8 | 3 | 0 | 0 | 94 |
| Career with school | 42 | 16 | 10 | 1 | 2 | 2 | 0 | 73 |
| Marriage and career with school | 54 | 20 | 24 | 12 | 7 | 6 | 1 | 124 |
| Total | 143 | 56 | 50 | 21 | 12 | 8 | 1 | 291 |
| Missing observations $=60$. |  |  |  |  |  |  |  |  |
| Chi-square $=39.65097$ with 18 degrees of freedom. |  |  |  |  |  |  |  |  |

Table 48
Percentage Distribution of Sample By Age and Combination of Roles

| Role | 25-30 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 | 56-60 | Tatal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Miarriage with school | 32.9 | 35.7 | 32.0 | 38.1 | 25.0 | 0.0 | 0.0 | 32.3 |
| Caxeer with school | 29.4 | 28.6 | 20.0 | 4.8 | 16.7 | 25.0 | 0.0 | 25.1 |
| Marriage and career with school | 37.8 | 35.7 | 48.0 | 57.1 | 58.3 | 75.0 | 100.0 | 42.6 |
| Total ${ }^{\text {a }}$ | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Missing observations $=60$.
Chi-square $=39.65097$ with 18 degrees of freedom.
${ }^{\text {a }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

Financial support. No significant relationship was found between age and sources of financial support. Of the women sampled between the ages of 25 and $30,89 \%$ reported their primary sources of financiai support as parents and fellowships or scholarships. Data are not consistent with the number of female adult students sampled who reported being married.

Counseling service. No significant relationship was reported between age and utilization of counseling services.

Programs. A significant relationship was reported between age and contact with programs designed for female adult students. Frequent contacts with the programs designed for female adult students were reported by $6 \%$ of the women sampled between the ages 25 and 30 , whereas $81 \%$ of the women sampled in this age group indicated they never visited or were unaware of programs on their campus.

Decision to continue education. No significant relationship was found between age and ranked order of importance of factors which influenced the women sampled to continue their education.

Choice of institution. A significant relationship was found between age and ranked order of importance for factors which influenced the subject's choice of institution. Of the women 25-30 years of age, 24\% indicated finances as the primary factor in their choice of educational institution. Of the women 31-35, $22 \%$ indicated availability of courses desired, whereas women 46-50 indicated location of spouse's job as their primary reason for choosing an educational institution.

Ranked second in order of importance for choice of institution was traveling distance. This was consistent with all age categories. (See Tables 49, 50, 51, and 52.)

Student services. No significant relationship was found between age and ranked order of importance of student services.

Educational goals. No significant relationship was found between age and ranked order of importance of educational goals.

Table 49
Ranked First in Order of Importance for Numerical Distribution of Sample By Age and Factors Influencing Choice of Institution

| Factors | $25-30$ | $31-35$ | $36-40$ | $41-45$ |
| :--- | ---: | ---: | ---: | ---: |
| Finances | 38 | 12 | 10 | 1 |
| Traveling distance | 27 | 10 | 19 | 10 |
| Household responsibilities | 0 | 1 | 0 | 1 |
| Child care | 2 | 1 | 0 | 0 |
| Spouse's attitude | 2 | 0 | 0 | 0 |
| Special counseling program for women | 3 | 1 | 1 | 0 |
| College advising office | 0 | 0 | 0 | 0 |
| Recruitment by college representative | 3 | 0 | 0 | 1 |
| Employment (full-time) | 10 | 3 | 5 | 0 |
| Employment (part-time) | 4 | 2 | 0 | 0 |
| Availability of courses desired | 40 | 13 | 1 | 6 |
| Location of spouse's job | 19 | 11 | 9 | 3 |
| Other | 9 | 6 | 4 | 1 |
| Total | 157 | 60 | 49 | 23 |

Missing observations $=42$.
Chi-square $=103.24278$ with 78 degrees of freedom.
${ }^{\text {a }}$ Category not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented }}$ two additional categories.

| $46-50$ | $51-55$ | $56-60$ | Total |
| :---: | :---: | :---: | ---: |
| 1 | 2 | 0 | 64 |
| 1 | 3 | 1 | 71 |
| 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 5 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 4 |
| 1 | 2 | 0 | 21 |
| 0 | 0 | 0 | 6 |
| 1 | 1 | 0 | 62 |
| 6 | 0 | 0 | 48 |
| 1 | 0 | 0 | 21 |
| 11 | 8 | 1 | 309 |

Table 50

Ranked First in Order of Importance for Percentage Distribution Of Sample By Age and Factors Influencing Choice of Institution

| Factors | 25-30 | 31-35 | 36-40 | 41-45 |
| :---: | :---: | :---: | :---: | :---: |
| Finances | 34.2 | 20.0 | 20.4 | 4.3 |
| Traveling distance | 17.2 | 16.7 | 38.8 | 43.5 |
| Household responsibilities | 0.0 | 1.7 | 0.0 | 4.3 |
| Child care | 1.3 | 1.7 | 0.0 | 0.0 |
| Spouse's attitude | 1.3 | 0.0 | 0.0 | 0.0 |
| Special counseling program for women | 1.9 | 1.7 | 2.0 | 0.0 |
| College advising office ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 |
| Recruitment by college representative | 1.9 | 0.0 | 0.0 | 4.3 |
| Employment (full-time) | 6.4 | 5.0 | 10.2 | 0.0 |
| Employment (part-time) | 2.5 | 3.3 | 0,0 | 0.0 |
| Availability of courses desired | 25.5 | 21.7 | 2.0 | 26.1 |
| Location of spouse's job | 12.1 | 18.3 | 18.4 | 13.0 |
| $\text { Other }{ }^{b}$ | 5.7 | 10.0 | 8.2 | 4.3 |
| Total ${ }^{\text {c }}$ | 100.0 | 100.0 | 100.0 | 100.0 |
| Missing observations $=42$. |  |  |  |  |
| Chi-square $=103.24278$ with 78 degrees of freedom. |  |  |  |  |
| ${ }^{\text {a }}$ Category not included in the calculation of chi-square. |  |  |  | ${ }^{\mathrm{b}}$ Represented one additional category. |
| ${ }^{c}$ Column totals may not equal $100 \%$ du putation process. | to roun | ing er: | in | com- |


| $46-50$ | $51-55$ | $56-60$ | Total |
| ---: | ---: | ---: | ---: |
| 9.1 | 25.0 | 0.0 | 20.7 |
| 9.1 | 37.5 | 100.0 | 23.0 |
| 0.0 | 0.0 | 0.0 | 0.6 |
| 0.0 | 0.0 | 0.0 | 1.0 |
| 0.0 | 0.0 | 0.0 | 0.6 |
| 0.0 | 0.0 | 0.0 | 1.6 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 1.3 |
| 9.1 | 25.0 | 0.0 | 6.8 |
| 0.0 | 0.0 | 0.0 | 1.9 |
| 9.1 | 12.5 | 0.0 | 20.1 |
| 54.5 | 0.0 | 0.0 | 15.5 |
| 9.1 | 0.0 | 0.0 | 6.8 |
| 100.0 | 100.0 | 100.0 | 100.0 |

Table 51
Ranked Second in Order of Importance for Numerical
Distribution of Sample By Age and Factors
Influencing Choice of Institution

| Factors | $25-30$ | $31-35$ | $36-40$ | $41-45$ |
| :--- | ---: | ---: | ---: | ---: |
| Finances | 26 | 7 | 5 | 3 |
| Traveling distance | 32 | 13 | 16 | 5 |
| Household responsibilities | 1 | 3 | 1 | 0 |
| Child care | 2 | 4 | 0 | 0 |
| Spouse's attitude | 0 | 1 | 0 | 0 |
| Special counseling program for women | 0 | 0 | 0 | 0 |
| College advising office | 0 | 0 | 0 | 0 |
| Recruitment by college representative | 4 | 0 | 0 | 0 |
| Employment (full-time) | 4 | 2 | 2 | 1 |
| Employment (part-time) | 9 | 1 | 0 | 0 |
| Availability of courses desired | 28 | 11 | 6 | 4 |
| Location of spouse's job | 0 | 3 | 3 | 2 |
| Other | 8 | 6 | 0 | 1 |
| Total | 8 | 51 | 33 | 16 |

Missing observations $=116$.
Chi-square $=110.51929$ with 66 degrees of freedom.
${ }^{\text {a }}$ Categories not included in the calculation of chi-square.
$\mathrm{b}_{\text {Represented }}$ two additional categories.

| $46-50$ | $51-55$ | $56-60$ | Total |
| :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | 41 |
| 4 | 2 | 0 | 72 |
| 1 | 0 | 0 | 6 |
| 1 | 0 | 0 | 7 |
| 0 | 1 | 0 | 2 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 4 |
| 0 | 0 | 1 | 10 |
| 0 | 0 | 0 | 10 |
| 0 | 2 | 0 | 51 |
| 0 | 0 | 0 | 16 |
| 1 | 0 | 0 | 16 |
| 7 | 5 | 1 | 235 |

Table 52

Ranked Second in Order of Importance for Percentage Distribution Of Sample By Age and Factors Influencing Choice of Institution

| Factors | 25-30 | 31-35 | 36-40 | 41-45 |
| :---: | :---: | :---: | :---: | :---: |
| Finances | 21.3 | 13.7 | 15.2 | 18.8 |
| Traveling distance | 26.2 | 25.5 | 48.5 | 31.3 |
| Household responsibilities | 0.8 | 5.9 | 3.0 | 0.0 |
| Child care | 1.6 | 7.8 | 0.0 | 0.0 |
| Spouse ${ }^{\text {2 }}$ s attitude | 0.0 | 2.0 | 0.0 | 0.0 |
| Special counseling program for women ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 |
| College advising office ${ }^{\text {a }}$ | 0.0 | 0.0 | 0.0 | 0.0 |
| Recruitment by college representative | 3.3 | 0.0 | 0.0 | 0.0 |
| Employment (full-time) | 3.3 | 3.9 | 6.1 | 6.3 |
| Employment (part-time) | 7.4 | 2.0 | 0.0 | 0.0 |
| Availability of courses desired | 23.0 | 21.6 | 18.2 | 25.0 |
| Location of spouse's job | 6.6 | 5.9 | 9.1 | 12.5 |
| $\text { Other }{ }^{\mathrm{b}}$ | 6.5 | 11.8 | 0.0 | 6.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Missing observations $=116$. |  |  |  |  |
| Chi-square $=110.51929$ with 66 degrees of freedom. |  |  |  |  |
| ${ }^{\text {a }}$ Categories not included in the calc $\mathrm{b}_{\text {Represented two }}$ additional categori | ${ }^{\text {a }}$ Categories not included in the calculation of chi-square. |  |  |  |


| $46-50$ | $51-55$ | $56-60$ | Total |
| ---: | ---: | ---: | ---: |
| 0.0 | 0.0 | 0.0 | 17.4 |
| 57.1 | 40.0 | 0.0 | 30.6 |
| 14.3 | 0.0 | 0.0 | 2.6 |
| 14.3 | 0.0 | 0.0 | 3.0 |
| 0.0 | 20.0 | 0.0 | 0.9 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 1.7 |
| 0.0 | 0.0 | 100.0 | 4.3 |
| 0.0 | 0.0 | 0.0 | 4.3 |
| 0.0 | 40.0 | 0.0 | 21.7 |
| 0.0 | 0.0 | 0.0 | 6.8 |
| 14.3 | 0.0 | 0.0 | 6.9 |
| 100.0 | 100.0 | 100.0 | 100.0 |

## Summary, Conclusion and Recommendations

The purpose of this study was to research factors which influence female adult students to continue their education and to study the ciamographic characteristics of women over 25 years of age who were enrolled at five Iowa post-secondary institutions. The study focused on the choice of educational institution, educational goals, and institutional student services that female adult students perceived as necessary for a successful experience.

The sample was selected from a population of over 3,000 women who were enrolled at either Iowa State University, Drake University, the University of Northern Iowa, the State University of Iowa, or Des Moines Area Community College, during winter term, 1977. The sample population consisted of 351 women between the ages of 25 and 60 .

The research instrument used for the study consisted of a semistructured, open-ended questionnaire which was pretested in a pilot study. The instrument was not changed because the results from the pilot were satisfactory.

The female adult students sampled had the following characteristics: 212 women were married, 7 women were widows, 57 women were divorced, 10 women were separated from their spouses, and 65 women were married. Of the 351 women who completed the questionnaire, 307 women were White, 22 were Black, 5 were American Indians, 2 were Asian Americans, 12 were Foreign/Non-US Citizens, and 1 woman indicated Spanish American as her ethnic background.

The results indicated 179 of the women were $25-30$ years of age, 66 were $31-35$ years of age, 56 were $36-40$, and 49 women were between the ages of 41 and 60

Women with children living at home were as follows: 95 indicated having children under 6 years of age, 108 women had children 7-12 years of age, and the remaining 83 had children between 13 and 18 years of age.

Factors that can be attributed to a female adult student's decision to continue her education are: increased job potential and potential for increased income. Education may be seen as a vehicle by which upward mobility can be achieved.

The female adult student's choice of educational institution was based on the following factors: traveling distance, finances, and availability of courses offered at the institution.

Student services which female adult students perceived as necessary for a successful experience were ranked in the following order: (a) the financial aid office, (b) the counseling center, and (c) the placement offices on campus. A concern about the availability of financial resources was expressed by the majority of the female adult students sampled. The most important educational goals reported by the women sampled were: to obtain a degree, to increase job potential, and self-satisfaction.

The following conclusions were drawn from the data:

1. The largest age category among the female adult students sampled was 25-30.
2. Over $50 \%$ of the sample had completed a bachelors degree. Most of the women resumed their studies 3-5 years after their initial college graduation.
3. The female adult students sampled indicated their primary source of financial assistance was self or a combination of self and spouse.
4. There was no significant relationship reported between educational institutions and each of the variables age and educational goals.
5. There was a significant relationship reported between educational institutions and each of the variables current academic status, ethnic background, present marital status, degrees completed, combination of roles, sources of financial support, counseling services, and programs.
6. There was no significant relationship reported between age and each of the variables current academic status, ethnic background, age, degrees completed, and financial support.
7. There was a significant relationship reported between age and each of the variables of present marital status and combination of roles. This was also true between age and programs.

The institutions sampled indicated that there were only two student services offices that offered assistance designed specifically for female adult students. All of the counseling centers indicated they had services which were designed to help female adult students assume their new role with minimal difficulty. Three of the five institutions had women's centers, but none of the centers were administered by the student affairs area.

The financial aid office at only one of the institutions sampled offered assistance to female adult students who did not qualify under the same guidelines used for awarding financial aid packages for the majority population.

The following recommendations are based on the data collected through the female adult students' study: Caution should be exercised in interpreting the data because other samples might have produced other recommendations.

1. Establish new quidelines and policies which would make funds more available for female adult students.
2. Revise application procedures to better evaluate the needs of female adult students.
3. Offer more programs, groups, and seminars to assist female adult students to adjust to their new roles.
4. Establish more flexible office hours, which will be more congruent with the students' flexible schedules.
5. Reorient or redirect the faculty/staff understandings of the needs of female adult students.
6. Develop new instruments to evaluate the interest of these female adult students.
7. Cooperation and collaboration among collegiate, community, and alternate educational agencies should be encouraged so that new and more diverse educational possibilities in program and structure may come into being.

Female adult students are increasing in number in institutions of higher education. The following are considerations for further research in evaluating and meeting the needs of mature women returning to school:

1. The actual population of women combining professional roles and educational roles. How many female adult students at the institution are also on staff.
2. The educational goals of female adult students in high school as compared to college and whether these goals were met.
3. The effectiveness of standardized evaluation devices to assess interests.
4. Prediction of academic success of female adult students compared to women under 25 years of age.
5. Prediction of academic success of female adult students compared to adult male students.

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## Appendix A. Corresfondence

## Initial Contact Letter

January 17, 1977

## Dear Adult Student:

The adult student population is increasing at many institutions of higher learning. I feel it is important to study the adult student population, and more specifically, the female student, and determine which student services can best assist her with her academic endeavors, as well as her personal adjustment.

Enclosed please find a questionnaire designed to explore the characteristics of the female adult student who has decided to continue her education and the factors which influenced that decision.

Questions have been arranged so that a check mark or a number will provide a sufficient response. Please select the response(s) that most closely reflects your current status or opinion. Please select the number(s) which most closely reflect your opinion or status. Please comment as openly as possible. ALL OF YOUR RESPONSES WILL BE HELD IN STRICTEST CONFIDENCE.

Reaiizing that many of you may be pressed for time, this questionnaire will take approximately 20 minutes to complete. It is not necessary to complete the entire questionnaire in one sitting.

Your effort in completing and returning this questionnaire is greatly appreciated. Please return the questionnaire in the enclosed envelope by February 15, 1977, or within ten (10) days of receiving it.

Thank you for your cooperation.

Sincerely,

Cecilia A. Willis, Coordinator
Academic Support Services
njh
Enclosure

Follow-Up Letter
February 21, 1977

Dear Adult Student:
A few weeks ago you should have received a questionnaire inquiring about the factors which influenced you to continue your education. In order to assess what student services are being used and what student services need to become more aware of the needs of the female adult student, I need your input.

I know as an adult student many demands are placed on your time. However, the information gathered from the enclosed questionnaire will hopefully benefit not only you and services at your particular institution, but other female adult students who have also decided to continue their education.

Therefore, again I am asking for your cooperation by completing this questionnaire.

Please return the questionnaire within ten (10) days after receiving it, or no later than March 7, 1977.

Thank you again for your cooperation.

> Sincerely,

Cecilia A. Willis, Coordinator Academic Support Services
njh
Enclosure
P.S. If you have already filled out the questionnaire and returned it, please disregard this letter; and thank you.

## Appendix B. Research Instrument

factors influencing adult female college
STUDENTS TO CONTINUE THEIR EDUCATION
Please respond to all the questions which apply to you.

## Part I

1. Current enrollment status: $\qquad$ full-time undergraduate (12 or more credit hours)
part-time undergraduate (11 or less credit hours)
full-time graduate ( 9 or more credit hours)
part-time graduate (6 or less credit hours)
other (please specify)
2. Ethnic background:
American Indian/Native American
_Black/Afro-American
_Mexican American/Chicano
Oriental/Asian American
White/Caucasian
Puerto Rican
_ Foreign/Non-US Citizen
3. Your present age:
$25-30$
$-\quad 31-35$
$-\quad 36-40$
$41-45$
$-\quad 46-50$
$-\quad 51-55$
$56-60$
$-\quad 61-65$
$-\quad 65$ or older
4. Present marital status: $\qquad$
5. Total number of children:
6. Present ages of children currently living at home (please specify number of children in each space):
__7irth-6 years

$$
\begin{aligned}
& 13-17 \text { years } \\
& \ldots \\
& 18 \text { years or older }
\end{aligned}
$$

7. Highest education level attained by you:
high school junior or community college college (0-3 years) college ( 4 or more years) college (currently enrolled)
8. Present college classification:
freshman
__sophomore
__junior
__senior graduate special other (please specify
9. Degrees completed: _ Associate of Arts Masters Doctorate Other (please specify)
10. What influenced your decision to continue your education: (check all that apply and rank order your responses; \#l = most important, etc.)
fellowship or scholarship
prestige of a degree
potential for increase in income
financial self-sufficiency
obtaining a feeling of achievement
prevent "boredom"
children more capable and thus provided the opportunity
family encouragement
increased job potential
update of education
interest in specific course offerings
encouragement of others (friends, employers, etc.)
__social pressure
__other (please specify)
11. Are you presently combining:
marriage with school career with school marriage and career with school
12. Which of the fcllowing factors influenced your choice of institution: (check all that apply and rank order your responses; \#1 = most important, etc.)
finances
traveling distance
household responsibilities
child care
other (please specify)
spouse's attitude
special counseling program for women
college advising office recruitment by college representative
```
        employment (full-time)
        employment (part-time)
        availability of courses desired
        location of spouse's job
```

13. Source of financial support for education:
self
spouse parents fellowships or scholarships government funds (GI bill, Vocational Rehabilitation, etc.)
other(s) (please specify) $\qquad$

## Part II

14. What is your present major:
15. Do you anticipate changing your major: __Yes ___ No
16. If yes, what will be your new major and why:
17. What are your present educational goals: (check all that apply and rank order your responses; $\# 1=$ most important, etc.)
obtain a degree
increase job potential
obtain self-sufficiency
self-satisfaction
opportunity for occupational advancement
desire for educational advancement
other (please specify)
18. In what ways are your educational goals related to your occupational goals?
$\qquad$
$\qquad$
19. What has been your contact with your present institution's counseling center:
visit often
never visit
visit seldom
20. What has been your contact with programs at your institution which are designed to assist the adult female student who has returned to continue her education:
been in contact with programs have had little contact with programs have had no contact with programs did not know programs existed at my institution
21. What student services do you feel will be necessary to be used while attending your institution: (check all that apply and rank order your responses; 非 = most important, etc.)

22. Which student services would you like to know more about: (check all that apply and rank order your responses; $\# 1=$ most important, etc.)
financial aid office counseling service
minority programs office
office of student activities
——Dean of Students
adult programs office women's center placement offices other )please specify)
23. How can the counseling service at your institution best meet the needs of the adult female student continuing her education:
more female counselors
groups designed to meet the specific needs of women special counseling program for adult female women continuing their education offering services other than psychological counseling other (please specify)

[^0]:    ${ }^{a}$ Adjusted Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

[^1]:    ${ }^{\mathrm{a}}$ Adjusted Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

[^2]:    ${ }^{a_{\text {Adjusted }}}$ Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

[^3]:    ${ }^{a_{\text {Adjusted }}}$ Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

[^4]:    ${ }^{\text {a }}$ Adjusted Frequency Percent (Adj. freq. \%) includes non-responses or missing data.

[^5]:    ${ }^{\text {a }}$ Category not included in the calculation of chi-square.
    $\mathrm{b}_{\text {Represented }}$ one additional category.
    ${ }^{\text {c }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

[^6]:    ${ }^{\text {a }}$ Category not included in the calculation of chi-square.
    $\mathrm{b}_{\text {Represented }}$ one additional category.
    ${ }^{\text {c }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

[^7]:    ${ }^{\text {a }}$ Column totals may not equal $100 \%$ due to rounding error in the computation process.

[^8]:    ${ }^{\text {Represented }}$ two additional categories.

