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## ABSTRACT

To investigate differences in academic success due to age (younger or older than age 23), marital status, and nursing experience, a three-way analysis of variance was performed on the grade point averages of 1,435 female nursing students enrolled in 22 Associate Degree Nursing (ADN) programs in Illinois. The sample, representing over 90 percent of the students enrolled in ADN programs, were generally from middle and lower-middle socioeconomic backgrounds, but students from all areas of Illinois and the full range of ethnic groups were included. Students in the older age range achieved GPAs approximately one grade point higher than the younger subjects. Similarly, married women achieved GPAs one grade point higher than their single counterparts. However, the GPAs of those with previous nursing experience as compared to those without experience were almost identical. On the second order interaction, older married women without experience had significantly higher GPAs than older married women with experience. The author associates the results of this study with the need for nursing students to make a definite commitment to their field of study. Data are organized into three tables and charts. (Author/NHM)

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RELATIONSHIP OF AGE, MARITAL STATUS  
AND WORK EXPERIENCE OF COMMUNITY  
COLLEGE NURSING STUDENTS TO GRADES

submitted by

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## ABSTRACT

This study investigated the relationships among grade point averages, age, marital status and previous nursing experience for 1,435 women community college nursing students.

A three-way analysis of variance indicated that older students and married students had significantly higher grade point averages than the younger and single students, respectively. Two significant interactions were also found. Follow-up "t" tests were used to analyze the interactions. Older women without previous nursing experience had higher GPA's than their counterparts with such experiences. In the second-order interaction, older married women without experience had significantly higher GPA's than the older marrieds with experience.

## INTRODUCTION

Until the early 1960's, nursing education was reserved for the 18-25 age range of single women. With the advent of Associate Degree Nursing (ADN) programs in community colleges, the door was opened to women of all ages regardless of marital status. The extent of this change is witnessed by the fact that in 1971 slightly more than one-half of the women enrolled in Illinois ADN programs were married and the same proportion were at least 24 years old (4). This increased enrollment by older women may well be a reflection of the rapidly expanding population of women matriculating in post high school level courses (8).

Evidence indicates that adult students lack self confidence in the school setting (5). Development of femininity has traditionally emphasized success in interpersonal worth and a dependency upon others for feelings of affirmation (1). A mother's success is often measured by the success of her children who in turn are strongly peer group oriented (9). Increased economic and social needs to develop dual careers weigh heavier on many women (6). Also, the increasing divorce rate has added to the identity confusion of many full-time

housewives (6). These ascribed sex roles might lead to a sense of academic inferiority for full-time housewives as a result of their relative isolation world of work.

Added to the sex role expectations of women is their age.

The culturally induced belief in the superiority of youth with its

"Beautiful body" emphasis all add to the mature woman's poor self

image. Adult women entering or continuing their education, will

compete with recent high school graduates. The older students have

been bombarded with the claims that contemporary high schools are

vastly superior to those they attended. Can the adult woman achieve

satisfactorily in the "new" educational environment?

Adult educators generally agree that the fears mature students

have about their ability to learn when compared with the 18-32 age

students are unfounded (1). A University of Texas study indicated

that older women had high school grade point averages (GPA's) sim-

ilar to younger coeds. However, older women had higher collegiate

G.P.A.'s (2). To compare G.P.A.'s of women on the basis of age alone overlooks the plausible relationship that marriage and previous work experience might have.

#### PURPOSE

The purpose of this study was to ascertain the relationship between age, marital status and work experience to academic success as measured by grade point averages among female Illinois community college nursing students. The population, as a whole, were from middle-middle and lower-middle socio-economic backgrounds. However, the population included students from all areas of Illinois and the full range of ethnic groups.

The following null hypothesis was tested:

Grade point averages for older nursing students do not significantly differ from those younger nursing students by previous nursing experience or by marital status.

#### METHOD

Subjects. The sample for this study was 1,435 female nursing students enrolled in 22 Associate Degree Nursing (ADN) programs in Illinois.

This total comprised over 90% of the students enrolled in these programs.

Deleted from the sample were the 58 males. To test the hypothesis, the total sample was divided as to 1) age - younger were less than 23 years old and older were 23 or more years old; 2) previous nursing experience - yes or no; and 3) marital status - single or married.

Grade point averages (GPA). Grade point averages included only the college grades earned in the community college in which they were enrolled for the nursing degree. Both freshman and sophomore students were tested. The grades were all based on a four-point (4=A) system.

Data Analysis. A three-way analysis of variance was performed on the grade point averages to investigate any difference by marital status, age, or nursing experience. Means and standard deviations were computed on the GPA's for the total population as well as for the independent variables of marital status, age, and previous nursing experience. The level of significance was set at the .05 alpha level.

## FINDINGS

The mean scores and standard deviations for the total population are reported on Table 1. An observation of this table indicates that students in the older age range achieved GPA's approximately one grade point higher than the younger subjects. Similarly, the marrieds obtained GPA's one grade point higher than their single counterparts. However, the mean GPA's for those with previous nursing experience as compared to those without such experience was almost identical.

Table 2 contains the results of the three-way analysis of variance. Significant main effects were found for age ( $p < .01$ ) and for marital status ( $p < .01$ ). Nonsignificant main effects were found for nursing experience. On the basis of these findings, the null hypothesis was rejected. However, significant interaction ( $p < .05$ ) was found between age and nursing experience as well as between age, nursing experience, and marital status ( $p < .05$ ).



To further analyze the findings, follow-up "t" tests were conducted for each of the two interactions. The test results indicated that in the first-order interaction, older students without nursing experience had significantly higher ( $p < .01$ ) GPA's than their counterparts with experience. Amongst the younger students, the experience factor made no significant difference.

On the second-order interaction, only the older married group differed significantly on the nursing experience factor. Those without nursing experience had significantly higher, ( $p < .01$ ) GPA's. The difference between older married students (with and without experience) appears to account for both the first and second-order interactions. Figure 1 provides a graphic illustration of both levels of interactions.

#### DISCUSSION

The results of this study indicated that older and married women students achieved higher grade point averages than the younger and single groups. This may be associated with the need for nursing

students to make a definite commitment to their field of study.

The Associate Degree Nursing Program is a two-year course of study which requires a sequence of specific courses and clinical experiences. The adult female has had more time to plan this program within the framework of her responsibilities. When she enrolled, she had to make major changes in her life style. Furthermore, for the married woman, one goal has already been attained which is highly valued in middle class society; namely, marriage and a family. In the population of this study, 85% of the married students had one or more children in their homes. The married student's identity had already been established as a wife and mother.

However, for the young 18-19 year old single student, the formulation of her identity may be less well established (7). Furthermore, it requires a considerable commitment by the adult and married students to enter a full-time program. This may be the reason that older students manifest a greater interest studying for a specific vocational goal than younger students (10).

Another interesting factor in this study was the findings comparing students who had nursing experience with those who had no such experience.

Four groups of students were categorized as having or not having nursing experience: 1) older married, 2) older single, 3) younger married, and 4) younger single. The older marrieds with no previous nursing experience maintained a significantly higher GPA than their counterparts with previous experience.

Conversely, for the remaining three groups, those with nursing experience attained higher GPA's than those lacking the work experience. Why the difference in GPA's for the older married group?

The older married women without previous experience may as a group have higher socio-economic status. The socio-economic status factor could be related to more adequate academic background and higher aspiration levels. They could delay their entrance into nursing until full-time could be devoted to preparing themselves professionally. The older married woman with experience may well have started to work in order to help support her family.

The findings in this project do lead to further questions for educators concerned with adult education. Would the same results apply to women who have less clearly defined vocational goals? Do grade point averages differ among different categories of men and women?

The study of adult academic achievement needs a great deal more attention. In nursing, the adults are becoming an important factor in the ADN programs. On just the factor of age alone, it could be assumed that the adults have more widely divergent characteristics, attitudes, and interests than "typical" age adolescent college students. If an educational program is truly to recognize the strengths and weaknesses of both young and adult students, educators must become increasingly aware of the abilities and needs of the students they are teaching.

TABLE 1

NUMBER OF SUBJECTS, MEANS AND STANDARD  
DEVIATIONS FOR GPA BY AGE, NURSING  
EXPERIENCE, AND MARITAL STATUS

	Age Category		Nursing Experience		Marital Status		Total
	Younger	Older	Yes	No	Single	Married	
Mean	2.75	3.71	3.24	3.23	2.73	3.70	3.23
SD	1.26	1.24	1.30	1.38	1.24	1.25	1.34
N	712	723	690	745	691	744	1435

TABLE 2

ANALYSIS OF VARIANCE OF GPA BY AGE, NURSING  
EXPERIENCE, AND MARITAL STATUS

Source of Variation	Degrees of Freedom	Mean Squares	F
Age (A)	1	53.89	35.93**
Nursing Experience (N)	1	0.00	0.00
Marital Status (M)	1	70.83	47.22**
A x N	1	7.80	5.20*
N x M	1	1.40	0.93
A x M	1	0.07	0.05
A x N x M	1	6.44	4.29*
Error	<u>1427</u>	1.50	
Total	1434		

\* Significant at .05

\*\* Significant at .01

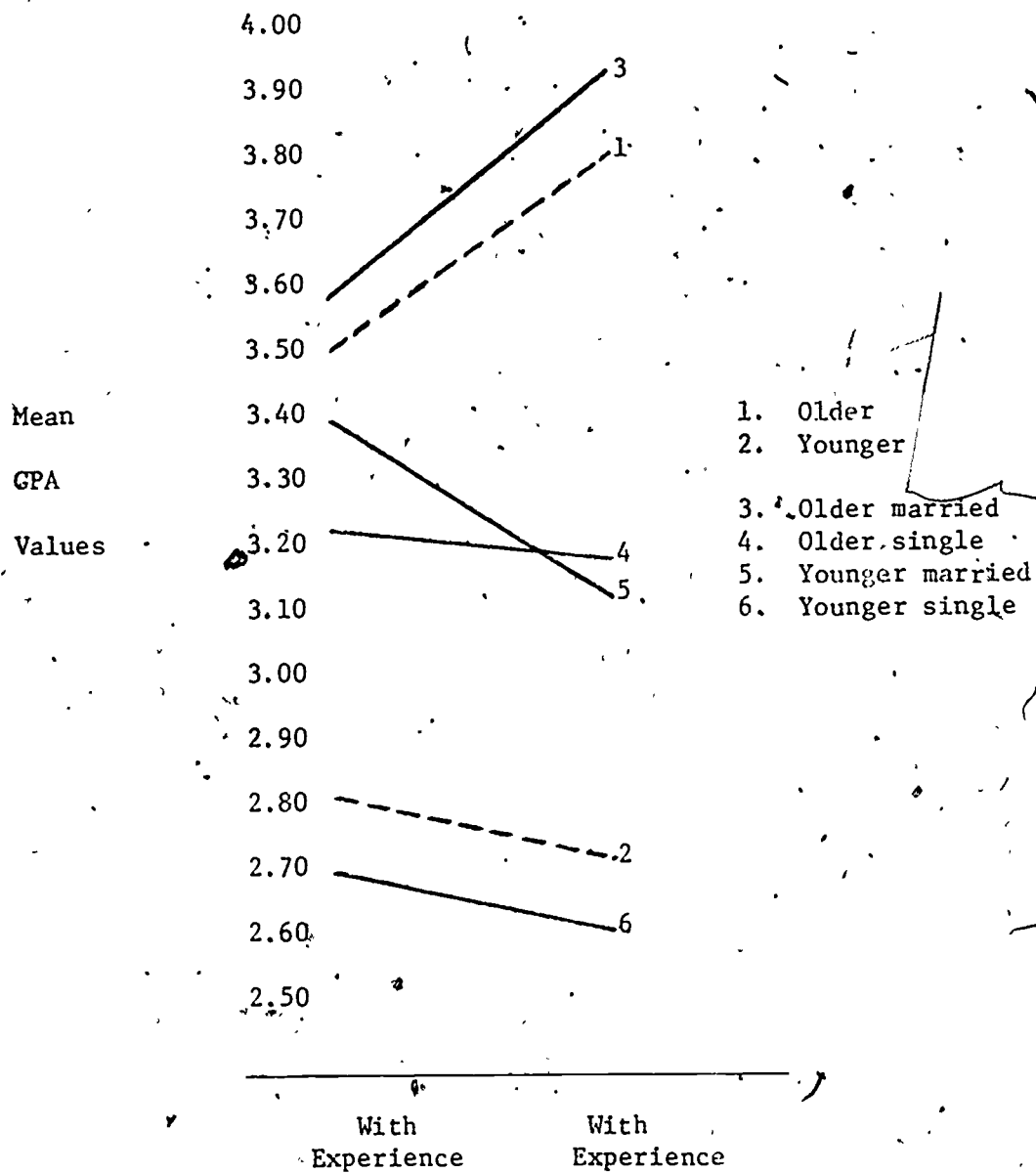


Figure 1. Grade point average mean values by age and marital status over nursing experience

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