

JORDANIAN PHARMACY STUDENTS' ATTITUDE
TOWARD THEIR CAREER CHOICE

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To the Provost of the Graduate School:

I am submitting herewith a thesis written by Shatha Qatamin entitled "Jordanian Pharmacy Students' Attitude Toward Their Career Choice." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Health Sciences Instruction.

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ABSTRACT

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The primary purpose of this study was to determine the relationship between Jordanian pharmacy students' attitudes toward their career choice and selected demographic variables. A researcher-developed, Likert-type questionnaire was prepared and administered to both first and fifth year students in the College of Pharmacy at the University of Jordan at Amman. Each student completed a demographic data form. The demographic variables were: level in academic program, hometown location (urban/rural), level of family income, and father's occupation. The significant finding of the study was that male and female students have different attitudes toward career choice.

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Statement of Purpose

The purpose of this study is to determine the relationship between Jordanian pharmacy students' attitude toward their career choice and selected demographic variables.

Statement of Purpose

The primary purpose of this study is to determine the relationship between pharmacy students' attitude toward their career choice and selected demographic variables. The demographic variables are hometown location, academic level in academic program, hometown location, family income and father's occupation.

CHAPTER I

INTRODUCTION

There is an increasing interest among pharmacy educators with regard to the pharmacy students' motives for choosing their field of study, and ultimately pharmacy as their future career. It is most likely a result of a set of factors, related to family, geographic area and students' values and beliefs at a certain point in time. In Jordan, literature on career choice determinants lacks an empirical treatment of the relationship between students' attitude toward their career choice and selected demographic variables.

Statement of Problem

What is the relationship between Jordanian pharmacy students' attitude toward their career choice and selected demographic variables?

Statement of Purpose

The primary purpose of this study is to determine the relationship between pharmacy students' attitude toward their career choice and selected demographic variables (gender, level in academic program, hometown location; i.e., urban/rural, family income and father's occupation). It

seeks also to develop an inventory to measure the attitude toward pharmacy as a career choice. Another purpose was to research the literature for factors that influence pharmacy students' attitude toward their career choice.

Hypotheses

The hypotheses investigated in this study were:

1. There is no statistically significant difference between male and female pharmacy students' attitude toward their career choice.
2. There is no statistically significant difference between pharmacy students' attitude toward career choice and family's income.
3. There is no statistically significant difference between pharmacy students' attitude toward their career choice and their father's occupation.
4. There is no statistically significant difference between pharmacy students' attitude toward their career choice and their hometown location (urban/rural).
5. There is no statistically significant difference between the first year pharmacy students' attitude toward their career choice and the fifth year pharmacy students' attitudes toward their career choice.

Definition of Terms

The following definitions were used:

1. Attitude. An individual's favorable or unfavorable feelings toward an object. For the purpose of this study, attitude is reflected as a score on the Pharmacy Students' Attitude Toward Their Career Choice Questionnaire.
2. Career Choice. Refers to an individual's decision regarding a future profession based on his or her personal preferences and orientation.
3. First Year Student. A male or female enrolled in Level One classes.
4. Non-Professional Occupations. Jobs that do not require extensive education preparation or none at all, such as homemaking or agricultural work.
5. Occupation. The job engaged in by each student's father.
6. Pharmacy. The science that deals with the process of making medicine and distributing it to the general population.
7. Pharmacy Student. A member of any of the five classes in a selected college of pharmacy.
8. Professional Occupation. One of the learned professions (jobs) which require extensive educational background (i.e., health practice, teaching, engineering) engaged in for gain or livelihood.

9. Rural Hometown Location. All geographical locations not listed under urban hometown locations will be considered rural.

10. Urban Hometown Location. All the following cities: Ajloun, Amman, Aqaba, Irbid, Jarash, Karak, Ma'an, Madaba, Ramtha, Salt, Tafila and Zarka. The criteria used in defining urban locations is that a city or town is urban, if its total population exceeds 100,000.

Assumptions

The assumptions of this study were as follows:

1. Attitude is a complex phenomenon.
2. The pharmacy students' career choice may be influenced by many variables.
3. Attitude can be measured.
4. Attitude toward the career choice of pharmacy can be measured.
5. Respondents will honestly answer the questionnaire.

Limitations

The limitations of this study were as follows:

1. The sample represents first and fifth year students from one pharmacy school of Jordan and this will influence the generalization of the results.
2. Only content validity was determined.

3. The ex post facto reliability of the attitude inventory was determined.

Significance of the Study

This study is significant because it provides preliminary knowledge concerning influences of pharmacy students' attitude on their career choices. Such a knowledge is important for an educator who otherwise might not be aware of his or her students' attitude toward their career choices. This information may be used as input into the teaching strategies formulation process that an educator should do to enhance his or her ability of teaching. Knowing what defines students' attitude toward their career choices can be used by educators as an input in the process of selecting compatible curricula, that fit students' needs and abilities. It is also significant because it may be useful in that the results of the study may be used by government officials who are in charge of the nation's educational planning.

Thus, educators and government may have stakes in the results of this study. Educators of pharmacy students may be interested in knowing their students' career choice determinants, in order to make a maximum attainable fit between teaching and training strategies on one hand and students' needs and capabilities on the other hand. Government, as a national planner, may attain higher levels

of efficiency in the education planning process as a result of knowing what factors are likely to influence students' choice of their field of study and consequently their future careers. Governmental knowledge of these career choice determinants may help in screening applicants for pharmacy programs in its state universities. This screening might be needed to help in planning the right placement of graduates in different sectors of the national economy in the future.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter focuses on literature concerning attitudes as well as students' attitude toward career choice. Selected factors influencing students' career choices are also discussed.

Definition of Attitude

During this century, there have been various attempts to define the concept of attitude. An attitude as related to human individuals was defined by Allport (1935) as a

. . . mental or neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual response to all objects and situations with which it is related. (p. 810)

Katz (1960) defined attitude as: "The predisposition of an individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner" (p. 168).

Opinions are the verbal expressions of attitudes. While Allport emphasized the role of experience in influencing an individual's attitude, Katz based his definition on an individual's choice to evaluate symbols and objects in his or her environment.

Thurstone (1967) expanded Katz's definition of an attitude and put it in a more detailed perspective. An attitude is the "sum total of man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic." (p. 77)

Shaw (1967) offered a definition of an attitude as a . . . relatively enduring systems of evaluative, affective reactions based upon and reflecting the evaluative concepts and beliefs which have been learned about the characteristics of a social object or class of social objects. (p. 3)

He also elaborated on the evaluative element of an attitude as a perception of phenomenon in terms of ability to facilitate or hinder the attainment of the individual's goals. From this idea, an individual develops a positive or negative attitude toward phenomenon that enhance or inhibit goals achievement.

Oskamp (1977) identified the common elements of all definitions of attitude in the literature and concluded that an attitude is a physiological response and that it can be learned. He emphasized the evaluative character of an attitude. He also divided attitude into three components: cognitive, which refers to an individual's beliefs and values that govern his or her state of readiness; affective, which relates to emotional reaction to objects; and

behavioral, which is defined as the patterns of action tendencies.

Attitude Measurement

Several measurements were proposed for measuring attitude. Thurstone (1967) has proposed a scale to measure attitude. This measure consists of a series of statements of opinion expressing all ranges of opinion toward some attitudinal object. There are usually a hundred statements in the list, and several hundred judges (Thurstone, 1967), or thirty judges (Gronlund, 1971). Participants are asked to arrange the statements and place them on slips of paper, then people acting as judges sort statements into eleven piles. Judges are instructed to place the statements expressing the most favorable attitudes in pile 11, the neutral attitude in pile 6, and the least favorable attitude in pile 1. Then the number of times a statement is placed in each pile provides the data for determining the ambiguity or scale value of the item. The final step in constructing this attitude scale is to select statements which are more relevant, least ambiguous, and which cover the entire range of scale values (Gronlund, 1971). The statements are then arranged randomly, and the subject is told to check those statements with which he or she agrees. Then an individual score is calculated by obtaining the median values of all statements he or she has checked. The problem with

Thurstone's method is that it is very time consuming, because it requires that statements be sorted by judges (Gronlund, 1971).

The most widely used and extensively tested scale is that developed by Likert (1967). Questionnaires may be the most successful instrument to assess attitudes through obtaining answers to very specific questions divided into two categories: favorable and unfavorable. The Likert scale for measuring attitude is based on summing of ratings to measure attitude. This method is devised to capture the respondent's degree of agreement or disagreement with a specific attitude expression (Oskamp, 1977).

Likert scale construction uses well-defined, straight to the point statements. Groups of respondents are asked to respond by identifying their personal belief that is classified into at least five categories: strongly agree, agree, undecided, disagree, or strongly disagree.

The nature of questions or statements should be designed such that the individual stance toward a statement is an increasing function of his or her attitude toward the object. That is, the more favorable his or her attitude toward the object, the higher his or her expected score for that specific item (Shaw, 1967). There are several criteria that should not be taken into consideration in constructing

the instrument with the intent of using the Likert scale (Likert, 1967). These criteria are:

1. Statements should be written in terms of desired behavior and should not address facts.
2. The language by which statement is written should be concise, clear and straightforward.
3. Statements should reflect the overall specifications of the model used, so that respondents' reactions are dispersed over the entire attitude inventory.
4. The different response categories should allow respondents to choose one single response.
5. Representation of favorable and unfavorable responses should be approximately equal; i.e., half of the statements should represent favorable attitude and the other half should represent unfavorable attitude.

Shaw (1967) indicated that the Likert scale has proven to be both reliable and valid. The range of answers made available to respondents is part of the scale reliability. Oppenheim (1969) described Likert scale reliability as good, some criticisms, however, were directed at Likert scales.

One of these criticisms concerned the assumption inherited in Likert scale information; that is, a Likert scale does not take into account the possible differences

among respondents in terms of their level of education and knowledge (Oppenheim, 1969). The Likert scale also ignores the fact that the same score may be obtained by different ways (Oppenheim, 1969). In summary, a Likert scale is a useful tool for measuring attitude. It has been described as reliable and valid.

Factors Influencing Career Choice

In theory, career decisions are a life-span phenomenon, and not a short-term event. On the other hand, this life-span phenomenon does not imply that a career decision once it has been taken is not reversible. On the contrary, it is reversible, but at some cost. Ginzberg (1972) asserted that

Careers may be redirected in major ways, though there are costs involved, and these costs operate in some ways to make the process irreversible for some people at some times. (p. 91)

An individual, through his or her decision making mechanism is on a continuous search for an optimal career. Ginzberg (1972) also stated: "There is a continuing search on the part of an individual for the best fit between the career avenues he or she prefers and the opportunities open to him or her." (p. 91)

Rosenberg (1972) reported that the relationship between parental class and student career choice was significant. In particular, father's income seemed to be highly related to the kinds of choices students made. He also

reported that families with high level of income produced more than their share of physicians and lawyers. It has also been found that the future earnings expected by students correlates very highly with father's income level.

In a comprehensive study, Blau and Duncan (1976) researched the effect of sociological factors in determining career choice behavior. The fundamental question raised by them is what determines an individual's occupation. The answer was an individual's social level, since the lower he or she is at the beginning, the more likely that he or she is to move up the social-occupational ladder.

Blau and Duncan's conclusions were similar to those drawn by Libsett (1962) and Sewell and Shah (1968), that variables such as race, father's occupation, sex, marital status, family income, place of residence, and family status (e.g., broken versus complete), interact with significant variables and affect opportunities as well as training.

Student Attitudes Toward Career Choice

Pharmacy Students

Career choice as applied to pharmacy students is perceived as a function of several interactive demographic and non-demographic factors. Pharmacy has been described as a marginal profession (Smith, 1970). He indicated that this state of the profession may be related to the fact that

pharmacists and students of pharmacy often perceive pharmacy as both a profession and a business.

Research has indicated that many pharmacists were surveyed and were satisfied with their profession, but over half of them were not sure that they would choose pharmacy again as a career if they had the choice to make over again (Kirk, 1976). Kirk and Wolfgang (1984) found that 54.1% of surveyed pharmacists would prefer an occupation other than pharmacy.

Johnson, Hammel and Heinen (1988) studied the hospital pharmacists' overall satisfaction with their profession and concluded that they were less satisfied than other workers surveyed. However, another study indicated that pharmacists seemed to be less committed to their jobs and more likely to change jobs in comparison to other professional workers and managers (Johnson, Hammel and Heinen, 1985).

McAhan, Drangalis and Boofman (1985) surveyed pharmacy students in their final year of study at two colleges of pharmacy as to what factors influenced their career choice. With an overall response rate of 76%, they found that parents' level of education was a leading factor in predicting commitment to the pharmacy profession. Age, desire to work with patients, and happiness about choosing pharmacy as a profession were identified as leading factors in career choice.

Hanson and Kirk (1987) found that first semester Mexican-American students of pharmacy at the University of Texas at Austin differ from Caucasian students as to their career choice motives. Some of the career choice differences were found to be due to dissimilarities in cultural background, particularly with regard to the choices of male and female students. Mexican-American students also indicated that they favored hospital pharmacy and pharmacy ownership to a greater extent than Caucasian students.

Shepherd, Henderson and Ohvall (1985) have identified another set of pharmacy students' career choice aspirations; that is, to proceed further in graduate education with the desire to be a faculty member. A career in academia was selected by a relatively high proportion of all respondents in this study. Most of these students expressed interest in a pharmacy faculty position. Fink and Smith (1983) conducted a study to determine the primary factors affecting students' career choice consideration as related to their decisions to pursue graduate study. These researchers reported that the primary career goal was community pharmacy for a plurality of Bachelor of Science degree students with an ultimate goal of ownership. Another career choice factor identified by the researchers was the desire to obtain more education and experience (8%). The principal

career goal for 41% of the surveyed students was clinical pharmacy.

Lubawg, Cook and Parker (1981) conducted a study to assess the interest of the pharmacists in obtaining the doctoral degree. They indicated that an interest in earning a doctoral degree does exist among a substantial number of pharmacists and students. They reported that 23% of respondents indicated that they are interested in obtaining the degree if it required the equivalent of 1,500 hours of instructional time over a period of several years.

Beamer and Nelson (1983) reported that approximately 16% of pharmacists in South Carolina indicated some interest in pursuing an advanced degree. Iowa respondents (8%) expressed interests in pursuing off-campus advanced studies leading to a degree and an additional 6% were interested in educational opportunities but not necessarily a degree. A substantially higher level of interest (47%) was reported in Kentucky.

Fink and Smith (1983) identified the following factors that affect students' career choice; three related factors were reported by 14% of the respondents: cost (7%), family reasons (3%), inadequate grades (2%), and difficulty of the pharmacy curriculum (1%).

Medical Students

A number of factors have been found to influence medical students' career choices (Wilson and Hallett, 1985). These researchers reported the following six types of factors that are found to influence medical students' career choices; including (a) demographic factors: sex, parental occupation, and social background; (b) personality factors: past experience, beliefs, and predispositions; (c) structural factors relating to the educational system such as commitment of the medical school to family practice, curriculum, the size of the program; (d) career factors: pay, prestige, and promotional opportunities; and (e) perceived working conditions. The sample of this study was drawn from the third year medical students at the University of South Alabama.

Another study was done at the University of New Mexico School of Medicine (Moor-West, West, Obenshain and Atencio, 1984). A questionnaire designed by the researchers to assess undergraduate minority students' attitude toward careers in medicine and what factors influenced their decisions to pursue medicine was administered to 5,000 minority students. Comparisons were made among Hispanic, native American (Indian), and Black students to examine their interests in medicine and the factors influencing their career choices. Although a substantial number of the

students indicated an initial interest in medicine, only a small percentage (6% Hispanic, 9% native Americans, 9% Black) expressed a serious interest in medicine as a career. Forty-four percent of the Hispanic, 46% of the native Americans, and 65% of the Blacks indicated that they had enough encouragement to pursue medicine as a career. Hispanic students and native Americans ranked family and friends as the most encouraging factors, while Blacks ranked self-confidence most frequently. Hispanic students and native Americans ranked too much schooling and difficult course work as the most discouraging factors, while Blacks listed grades and course work.

In a study conducted by Bergquist, Duchac, et. al. (1985), all male and female first year medical students at the Medical College of Wisconsin were asked to complete a questionnaire designed to examine factors associated with their career choices. The survey obtained information concerning gender, age, race, state of residence, and undergraduate college.

The objective of this study was to see whether there was a difference or similarity of attitudes and perceptions between male and female students toward their career choices. When the respondents were asked to identify their medical specialty choice, significantly more women than men selected specialties in the primary care category

and significantly more men selected specialties in the surgical category. The researchers found that 70.4% of the women chose primary care specialists compared to 44.4% men, while 30.8% of the men chose surgical specialties compared to 11.1% of the women.

The results of the above study (Bergquist, Duchac, et. al., 1985) suggested that there was no similarity of attitudes among male and female medical students concerning the influences on their career choice decisions. These studies seem to suggest that women are driven in their career decisions by the quality of family life. They rated family life higher than men. Women in their first year of medical school have put more emphasis in the importance of family, which was apparently clear in choosing primary care specialties. The male students' preference for the higher income specialties is consistent with their expectation of higher earnings as one primary factor affecting their attitudes toward career choice.

Summary

Presented in this chapter were definition of attitude and different attitude measurements. A historical development of attitude measurements and theory was described. A description of Likert attitude scale was also presented. Literature on factors influencing career

choices was surveyed and reported in this chapter. Most of this literature was done during the 1960s and 1970s. Students' attitude toward career choice was covered with a special emphasis on pharmacy and medical students. Male and female attitude differences were also covered.

Students at the College of Pharmacy at the University of Arizona expressed their career choice attitudes in a questionnaire of nature.

Population and Sample

The population of this study included all students enrolled in the College of Pharmacy at the University of Arizona at the time. The sample of this study included students enrolled in the first and fifth years of the program. Students were voluntarily participating in the study. The distribution of the sample was 25 students from the first year and 25 students from the fifth year.

Protection of Human Subjects

Permission to conduct this study was obtained from the Dean of the College of Pharmacy at the University of Arizona (see Appendix A). No names were mentioned in the questionnaire and all information was reported as group data. Thus, confidentiality of respondents was maintained.

CHAPTER III

METHODOLOGY

This study was conducted to investigate the attitude of students at the College of Pharmacy at the University of Jordan at Amman toward their career choice. This study was descriptive in nature.

Population and Sample

The population of this study included all students enrolled in the College of Pharmacy at the University of Jordan at Amman. The sample of this study included students enrolled in the first and fifth years of the pharmacy program who were voluntarily participating in the study. The distribution of the sample was 70 students from the first year and 48 students from the fifth year.

Protection of Human Subjects

Permission to conduct this study was obtained from the Dean of the College of Pharmacy at the University of Jordan at Amman (see Appendix A). No names were requested on the questionnaire and all information was reported as group data. Thus, confidentiality of respondents was protected.

Instrument

The instrument used in this investigation was a two-part researcher-developed questionnaire (see Appendix B). The first part contained questions related to demographic variables (gender, level in academic program, hometown location [urban/rural], family income, and father's occupation). The second part was an 18-item Likert-type attitude scale related to pharmacy students' career choice. It utilized a four category format. They were: (1) strongly agree (SA); (2) agree (A); (3) disagree (D); and (4) strongly disagree (SD). The subjects responded to each statement by circling the statement.

Scoring

Numerical values were assigned to each category in scoring favorable statements in the following way: Strongly agree (SA) 4 points; agree (A) 3 points; disagree (D) 2 points; and strongly disagree (SD) 1 point. The reverse scores were assigned to unfavorable statements in the following way: Strongly agree (SA) 1 point; agree (A) 2 points; disagree (D) 3 points; and strongly disagree (SD) 4 points. The scores ranged from 72 to 18.

Validity and Reliability

Content validity was determined by asking a panel of health professionals to evaluate the instrument in terms of

clarity and appropriateness. An evaluation form (see Appendix C) and a pre-addressed, stamped envelope were mailed to the panel of health professionals. All evaluation forms were returned. Based on health professional recommendations, two items on the attitude inventory section of the instrument were changed.

Statement number 6: "The pharmacy career requires a high risk taking attitude" has been changed to read "The pharmacy career requires a high degree of precision." Statement number 8: "Individuals in pharmacy career must pay special attention to working with details" has been changed to read "The pharmacy career requires that individuals pay special attention to details." This instrument was found to have content validity.

Data Collection

A packet containing a cover letter and the instrument was sent to one selected individual in Jordan. This individual administered the instrument in accordance with the Dean's permission. This instrument was distributed to two classes (first and fifth years). All first year students were present in one classroom and all fifth year students were in another classroom. Each group was administered the questionnaire on the same day.

Treatment of Data

Data collected from the questionnaire was reported. However, an ex post facto grouping by hometown (urban/rural) and by occupation categories was done by the researcher. The demographic profile was reported using descriptive statistics. Computer analysis of the data was performed at Texas Woman's University's Computer Center on a DEC 20 using the SPSSX Program.

Frequency scores and percentages were used to describe the demographic data gathered from Part I. The t-test was used to test hypotheses 1, 3, 4, and 5. Frequency, percentage, mean, standard deviation, and probability are reported for each of these hypothesis. One-way analysis of variance (ANOVA) was used to test hypothesis 2. The 0.05 level of significance was used for the t-test and ANOVA.

In addition, an ex post facto analysis of the Jordanian pharmacy students' attitude toward their Career Choice Questionnaire was done to determine the reliability of the instrument. The coefficient alpha statistical procedure was used to determine the reliability of this questionnaire.

CHAPTER IV

FINDINGS

The problem of this study was to determine whether there is a significant difference between Jordanian pharmacy students' attitude toward career choice and a set of demographic variables (gender, family's income, father's occupation, hometown location [urban/rural], and level in educational program). Presented in this chapter are descriptions of the sample, profile of the respondents and the findings of this investigation according to each research hypothesis. The reliability of the instrument is also discussed.

Description of the Sample

Questionnaires were mailed to the Dean of the School of Pharmacy at the University of Jordan at Amman. He administered the questionnaire to first year and fifth year students. A total number of 70 first year students and 48 fifth year students responded to the investigator. A total of 118 students answered all questionnaire items and a response rate of 100% was obtained.

Profile of Respondents

Seventy-seven respondents (65.3%) were female and forty-one (34.7%) were male. Seventy respondents (59.3%) were in the first year and forty-eight (40.7%) in the fifth year. Ninety-two (77.9%) of the respondents live in metropolitan areas (urban) and twenty-six (22.1%) in rural areas. Thirty-eight (32.2%) of the respondents identified their father's occupation as professional and eighty (67.8%) of the respondents indicated that their father's occupation was non-professional.

Respondents were distributed in the six income categories. These six income categories were as follows: Group 1 was comprised of six students (5.1%) with income category less than 100 Jordanian dinars. Group 2 had 34 students (28.8%) with income category between 100-199 Jordanian dinars. Group 3 was comprised of 19 students (16.1%) with income category between 200-299. Group 4 had 17 students (14.48%) with income category between 300-399 Jordanian dinars. Group 5 was comprised of 10 students in income category between 400-499. The last group was comprised of 32 students (27.2%) with income category of 500 or more Jordanian dinars.

Findings by Research Hypothesis

Findings are shown on the following pages. Statistical tables are provided to show the data pertaining to each research hypothesis.

Research Hypothesis 1

It was hypothesized by the investigator that "there is no significant difference between male and female pharmacy students' attitude toward their career choice." The result of this statistical test was that there is a significant difference between male and female students' attitude toward their career choice. Therefore, the null hypothesis of no difference was rejected. Table 1 shows the results of this test.

TABLE 1

FREQUENCY, MEAN, STANDARD DEVIATION,
t-TEST, AND PROBABILITY BY GENDER

Variable Gender	Frequency	Mean	Standard Deviation	t Value	Prob- ability
Male	41	55.07%	2.54	-2.89	0.005
Female	77	56.82	3.99		

Research Hypothesis 2

It was hypothesized that "there is no statistically significant difference between pharmacy students' attitude toward their career choice and the family's income." This hypothesis was tested using ANOVA. The null hypothesis of no difference was accepted; therefore, there is no significant difference between the family's income and pharmacy students' attitude toward career choice. Results of this test are reported in Table 2.

TABLE 2

ANALYSIS OF VARIANCE BY
ATTITUDE AND FAMILY INCOME

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	Probability
Between Groups	5	66.54	13.31	1.0022	0.4199
Within Groups	112	1487.17	13.28		
Total	117	1553.70			

Research Hypothesis 3

It was hypothesized that "there is no statistically significant difference between pharmacy students' attitude toward career choice and their father's occupation." The null hypothesis of no difference was accepted; therefore, there is no significant difference between pharmacy students' attitude toward their career choice and their father's occupation. The results of this test are reported in Table 3.

TABLE 3

FREQUENCY, MEAN, STANDARD DEVIATION,
t-TEST, AND PROBABILITY BY FATHER'S OCCUPATION

Variable Occupation	Frequency	Mean	Standard Deviation	t Value	Prob- ability
Professional	38	57.00	3.30	1.71	0.092
Non- Professional	80	55.84	3.76		

Research Hypothesis 4

It was hypothesized that "there is no statistically significant difference between pharmacy students' attitudes toward their career choice and their hometown location (urban/rural)." The null hypothesis of no difference was accepted; therefore, there is no significant difference between pharmacy students' attitude toward their career choice and hometown location (urban or rural). Results of this statistical t-test are shown in Table 5.

TABLE 4

FREQUENCY, MEAN, STANDARD DEVIATION,
t-TEST, AND PROBABILITY BY HOMETOWN
 LOCATION (URBAN/RURAL)

Variable Location	Frequency	Mean	Standard Deviation	t Value	Prob- ability
Urban	92	56.40	3.63	1.06	0.295
Rural	26	55.54	3.67		

Research Hypothesis 5

It was hypothesized that "there is no statistically significant difference between the first year pharmacy students' attitude toward their career choice and the fifth year pharmacy students' attitude toward their career choice." The null hypothesis of no difference was accepted, which implies that there was no significant difference between the first year students and the fifth year students' attitude toward their career choice. Results of this test are shown in Table 4.

TABLE 5

FREQUENCY, MEAN, STANDARD DEVIATION,
t-TEST, AND PROBABILITY BY ACADEMIC LEVEL

Variable Year Level	Student Frequency	Mean	Deviation	t Value	Prob- ability
1	70	56.33	3.24	0.40	0.691
5	48	56.04	4.19		

Reliability of the Instrument

The coefficient alpha was calculated on items in the attitude inventory in order to analyze the reliability of the instrument. The coefficient alpha for items number 1, 10, and 16 exceeded 0.50 and ranged between 0.42 and 0.48 for the rest of the items. The overall reliability coefficient alpha was 0.4849. It should be mentioned that there were three items (1, 10 and 16) having negative correlations indicating that the scoring from favorable to unfavorable was reversed.

Summary of Findings

In this chapter, the findings of the questionnaire regarding Jordanian pharmacy students' attitudes toward their career choices and selected demographic variables (gender, family's income, father's occupation, hometown location [urban/rural], and level in educational program) were presented. Among the five null hypotheses used to investigate the Jordanian pharmacy students' attitudes toward their career choice and selected demographic variables, only the null hypothesis which dealt with the difference between pharmacy students' attitude toward their career choice and gender was found significant. The other four hypotheses which dealt with the difference between family's income, father's occupation, year level in academic program, hometown location (urban/rural), and students'

attitude toward their career choice were found not significant. Table 6 reviews the disposition of the hypotheses.

SUMMARY, CONCLUSIONS,

AND RECOMMENDATIONS

TABLE 6
DISPOSITION OF RESEARCH HYPOTHESES

Hypotheses	Disposition
1 There is no statistically significant difference between male and female pharmacy students' attitude toward their career choice.	Rejected
2 There is no statistically significant difference between pharmacy students' attitude toward career choice and family's income.	Accepted
3 There is no statistically significant difference between pharmacy students' attitude toward career choice and their father's occupation.	Accepted
4 There is no statistically significant difference between pharmacy students' attitude toward career choice and their hometown location.	Accepted
5 There is no statistically significant difference between the first year pharmacy students' attitude toward their career choice and the fifth year students' attitude toward their career choice.	Accepted

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Presented in this chapter is a summary of the study and a discussion of the findings related to the study of Jordanian pharmacy students' attitude toward career choice. Conclusions based on the findings and recommendations for further study comprise the last part of this chapter.

Summary

The problem of this study was to determine if there was a difference between pharmacy students' attitudes toward their career choice and identified demographic variables. Jordanian pharmacy students' attitudes toward their career choice were investigated in this study. Hypotheses focused on five areas of demographic nature: (a) gender, (b) family's income, (c) father's occupation, (d) hometown location (urban/rural), and (e) level in academic program. The existence of differences between identified demographic variables and attitude scores were assessed.

The five null hypotheses presented in this study were focused on the no difference between pharmacy students' attitude toward career choice and the indicated demographic

variables. A Likert-type questionnaire was utilized for the collection of data. The first part contained questions related to selected demographic variables, and the second part was an attitude scale related to pharmacy students' career choices. The demographic data collected from the questionnaires were reported through descriptive statistics. Inferential statistics were used to test the hypotheses.

Conclusions

The following conclusions were derived from the findings of this study:

1. Male and female pharmacy students have different attitudes toward career choice.
2. Level in academic programs, hometown location, level of income or father's occupation does not affect students' attitude toward their career choices.

Discussion of Findings

Given the sample size and the demographics of the respondents only the hypothesis related to difference between male and female students' attitude toward their career choice was significant. The difference between the two sexes was significant at the 0.005 level. One possible explanation of the results is that the career of pharmacy may be perceived as a "gentle and caring career" which might have more appeal to female than male individuals. Another

possible explanation is that pharmacy as a career requires no heavy duty hand work, which may make it easier for females to handle than males.

Another possible explanation might have been a result of the fact that attitude is a complex and hard-to-measure phenomena. It also might have been a result of the fact that, in the higher socio-economic levels, generally females are expected to have more emphasis on professional careers.

Other demographic variables (level in academic program, hometown location [urban/rural], level of income and father's occupation) were not significant. These results are not consistent with the results of similar studies conducted in the U.S. (Libsett 1962; Sewell and Shah, 1968; Wilson and Hallett, 1985). Researchers found that demographic variables can be considered as determinants of career choices.

Several possible reasons can be suggested here. First, it might have been a result of the low reliability coefficient ($\alpha = 0.4849$) of the study. Second, it might have been a result of the differences that exist between this study sample and other U.S. based study samples. Cultural differences are believed to be so large that comparisons cannot be reliably made. Third, the profile of respondents in this study is different from profiles of respondents reviewed in the literature. In a

Third World country such as Jordan, socioeconomic structure of the population is in upheaval and generally characterizes societies in a developing stage of their society's life cycle.

It is the researcher's opinion that these results should not be surprising. It is believed to be a reflection of the socioeconomic background which is different from the socioeconomic backgrounds underlying samples taken from highly developed societies, such as the American society.

Recommendations for Further Study

From this study, the following recommendations for further study were made:

1. To replicate this study among populations from other Jordanian or Mideastern pharmacy schools.
2. To conduct a comparative study between Jordanian pharmacy students' attitude toward their career choices and other parts of the world.
3. To conduct study on all five academic levels of the pharmacy student program.
4. To reevaluate the instrument and improve its reliability.

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APPENDICES

APPENDICES

AGENCY APPROVAL

APPENDIX A

AGENCY APPROVAL

TEXAS WOMAN'S UNIVERSITY
HEALTH SCIENCES INSTRUCTION PROGRAM
AGENCY PERMISSION FOR CONDUCTING SURVEY

The University of Jordan at Amman

GRANTS TO

Shatha A. Qatamin

a student enrolled in the master's degree program in Health Sciences Instruction at Texas Woman's University, the privilege of its facilities/data in order to study the following problem:

JORDANIAN PHARMACY STUDENTS' ATTITUDE TOWARD THEIR CAREER CHOICE

The conditions mutually agreed upon are as follows:

1. The agency (may) (~~may not~~) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (~~may not~~) be identified in the final report.
3. The agency (wants) (~~does not want~~) a conference with the student when the report is completed.
4. Other Please Consult Dr. R. Awad for organizing and running the study

DATE:

May 6, 1988

Wahid A. Al-Fakh
Signature of Agency

Shatha Qatamin
Signature of Student

Barbara J. James
Thesis Committee Chairman

JORDANIAN PHARMACY STUDENTS' ATTITUDE
TOWARD THEIR CAREER CHOICE QUESTIONNAIRE

Demographic Data

Check (✓) only one item for each question where response where indicated.

1. Your gender:
male
female

2. What is your academic level in the pharmacy program?
first year
fifth year

3. Monthly family income:
less than 100

APPENDIX B
JORDANIAN PHARMACY STUDENTS' ATTITUDE
TOWARD THEIR CAREER CHOICE QUESTIONNAIRE

4. Monthly family income:
100 - 200
200 - 400
more than 400

5. What is the name of your hometown?

6. What is your father's occupation?

JORDANIAN PHARMACY STUDENTS' ATTITUDE
TOWARD THEIR CAREER CHOICE QUESTIONNAIRE

PART I. Demographic Data

Please check (✓) only one item for each statement or write
in your response where indicated.

1. Your gender.
☐ male
☐ female
2. What is your academic level in the pharmacy program?
☐ first year
☐ fifth year
3. The monthly family income in Jordanian dinars?
☐ less than 100
☐ 100 - 199
☐ 200 - 299
☐ 300 - 399
☐ 400 - 499
☐ more than 500
4. Indicate the name of your hometown.

5. Indicate your father's occupation.

PART II. Attitude Inventory

To the right of each item are four response categories: strongly agree (SA), agree (A), disagree (D), strongly disagree (DA). Circle the letter that corresponds to your opinion toward each item. There is no right or wrong answer. Please answer each item.

- | | | | | |
|--|----|---|---|----|
| 1. Pharmacy is a high paying career. | SA | A | D | SD |
| 2. Pharmacy is not an interesting career. | SA | A | D | SD |
| 3. Pharmacy is an unchallenging career. | SA | A | D | SD |
| 4. Pharmacy is a prestigious career. | SA | A | D | SD |
| 5. Pharmacy is not an intellectually stimulating career. | SA | A | D | SD |
| 6. The pharmacy career requires a high degree of precision. | SA | A | D | SD |
| 7. The pharmacy career allows potential promotional opportunities. | SA | A | D | SD |
| 8. The pharmacy career requires that individuals pay special attention to details. | SA | A | D | SD |
| 9. The pharmacy career provides an opportunity for a wide range of professional interaction. | SA | A | D | SD |
| 10. The pharmacy career requires personal sacrifices. | SA | A | D | SD |
| 11. The pharmacy career requires a high degree of professional commitment. | SA | A | D | SD |
| 12. The pharmacy career provides a professional with a stable work environment. | SA | A | D | SD |
| 13. The pharmacy career requires continuing education. | SA | A | D | SD |
| 14. The pharmacy career is mentally unchallenging. | SA | A | D | SD |

- | | | | | |
|--|----|---|---|----|
| 15. The pharmacy career requires a high degree of managerial skills. | SA | A | D | SD |
| 16. The pharmacy career is physically unchallenging. | SA | A | D | SD |
| 17. The pharmacy career is one of the "caring" professions. | SA | A | D | SD |
| 18. The pharmacy career does not allow public interaction. | SA | A | D | SD |

APPENDIX C
EVALUATION FORM

JORDANIAN PHARMACY STUDENTS' ATTITUDE
TOWARD THEIR CAREER CHOICE QUESTIONNAIRE

EVALUATION FORM

Instructions: Please read each statement below and evaluate it for appropriateness and clarity. Place a check mark (✓) in front of the response that best corresponds to your decision of the statement. If any modifications are necessary, please write them in the space provided.

NOTE: Respondents to the questionnaire will be requested to indicate their degree of agreement or disagreement with the statement. They will have four possible responses: strongly agree, agree, disagree, and strongly disagree.

1. Pharmacy is a high paying career.

- A. _____ Leave as is
B. _____ Delete
C. _____ Change/Modify _____

2. Pharmacy is not an interesting career.

- A. _____ Leave as is
B. _____ Delete
C. _____ Change/Modify _____

3. Pharmacy is an unchallenging career.

- A. _____ Leave as is
B. _____ Delete
C. _____ Change/Modify _____

4. Pharmacy is a prestigious career.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-
5. Pharmacy is not an intellectually stimulating career.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-
6. The pharmacy career requires a high risk taking attitude.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-
7. The pharmacy career allows potential promotional opportunities.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-
8. Individuals in the career of pharmacy must pay special attention to working with details.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-
9. The pharmacy career provides an opportunity of a wide range of professional interaction.
- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____
-

10. The pharmacy career requires personal sacrifices.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

11. The pharmacy career requires a high degree of professional commitment.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

12. The pharmacy career provides a professional with a stable work environment.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

13. The pharmacy career requires continuing education.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

14. The pharmacy career is a mentally unchallenging profession.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

15. The pharmacy career requires a high level of managerial skills.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

16. The pharmacy career is a physically unchallenging profession.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

17. The pharmacy career is one of the "caring" professions.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

18. The pharmacy career does not allow public interaction.

- A. ☐ Leave as is
B. ☐ Delete
C. ☐ Change/Modify _____

19. Other

APPENDIX D
COVER LETTERS

June 10, 1988

Dean of College of Pharmacy
University of Jordan, Amman

Dear Dean:

I am conducting a research study concerning the relationship of selected demographic and attitude variables related to the pharmacy students' career choice.

This research study may be useful in understanding variables (personal, family's, economic, and attitude) that tend to influence pharmacy students of our nation in their career choice decisions. It may also provide information for cross-cultural comparisons with other pharmacy students from other nations.

Students' responses will be kept confidential. Only grouped data will be analyzed. Only first and fifth year pharmacy students will be surveyed. Approximately 10 to 15 minutes of a student's time will be required.

A copy of the research instrument is attached. If you wish to modify this instrument, please feel free to do so. It is a graduate school policy that the attached form be completed and returned to me, if your permission is granted to survey the first and fifth year students in the College of Pharmacy.

May I suggest the following two ways to administer this survey. First, my sister Sahar, a 1988 graduate from your program, would be happy to meet with the professors of the two classes (first year and fifth year) to be surveyed. Second, you may wish to give the instrument to any other party to administer it and then return the instrument to Sahar so that she may forward the material to me. It is desirable to have the survey administered the same day if possible. If not, the survey should be administered to both classes in the same week.

A copy of this research study will be sent to you after completion. When I return to Jordan I would be happy to discuss my study with you or any faculty member(s).

This research is being conducted as a partial fulfillment for the Master of Science in Health Sciences Instructions from Texas Woman's University. Thank you for your cooperation.

Sincerely,

Shatha Qatamin

Shatha A. Qatamin
Master's Student
Texas Woman's University

Attachment

April 19, 1988

Dear Evaluator:

I am conducting a study concerning attitude toward pharmacy career choice, among the students of the first and fifth years in the College of Pharmacy in the University of Jordan at Amman.

Hopefully, this study will provide information for the cross-cultural comparative evaluation of students' attitude toward their pharmacy career choice, between Jordan and the United States of America in the future.

The enclosed instrument will be used to gather information from pharmacy students in the University of Jordan at Amman. I submit this Likert-type questionnaire to you requesting your judgment on each item and the entire questionnaire as a whole for clarity. Criticism and comments are welcomed and needed to produce a quality instrument.

Enclosed is an instrument evaluation form and a pre-addressed, postage paid envelope. When completing your evaluation, please use the envelope provided to mail them back to me. If you have any questions, please don't hesitate to call me. My phone number is (214) 690-1618.

Thank you for your assistance.

Sincerely,

Shatha Qatamin

Shatha A. Qatamin
Master's Student
Texas Woman's University

Enclosures