To the Graduate Council:

I am submitting herewith a dissertation written by William G. Crump entitled "Career Patterns of Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee, College of Medicine." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Supervision.

Dewey H. Stollar, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
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CAREER PATTERNS OF REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE, COLLEGE OF MEDICINE

A Dissertation

Presented for the

Doctor of Education

Degree

The University of Tennessee, Knoxville

William G. Crump

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DEDICATION

To my father who, although having entered the gates of larger life, continues to serve as my guide and mentor in a life of service to my fellow man.

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ABSTRACT

Many well qualified applicants to medical schools are being rejected each year due to a lack of seats in entering classes. What should a rejected applicant be advised to do as an alternative to becoming a physician? Questions such as this prompted the author to undertake this study. The problem associated with this study was to identify the careers of The University of Tennessee, Knoxville, pre-medical students who did not gain admission to a college of medicine during 1959-1963.

The purpose of this study was to determine the careers, job satisfactions, and source of career counseling of unsuccessful medical school applicants. The information gathered in this study could be used as a basis for more effective counseling by pre-medical advisors and admission officers.

Seventy-seven unsuccessful medical school applicants were identified and asked to respond to a questionnaire concerning occupational status and satifaction. Thrity individuals responded and subsequently one-third of them were interviewed in order to prepare case studies.

Forty percent of the sample had persisted and had become physicians. Sixteen percent of the respondents were in health-related occupations. Members of the latter group were more satisfied with their careers than either the physicians or the non-health related non-physicians.

Many pre-medical advisors have been advising rejected applicants to seek alternative careers in the health field; however, there has been no research evidence to indicate that this was "good" advice. The results of this study indicate that this is, indeed, "good" advice.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	Background of the Problem	1
	Statement of the Problem	8
	Purpose of the Study	8
	Importance of the Study	8
	Assumptions	9
	Limitations and Delimitations	9
	Procedures	10
	Definitions of Terms	14
	Organization of the Study	15
II.	REVIEW OF RELATED LITERATURE AND RESEARCH	16
	Introduction	16
	Relevant Research	18
	Related Research Projects	20
III.	PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA	21
IV.	CASE STUDIES	40
	Case Study "A"	40
	Case Study "B"	42
	Case Study "C"	43
	Case Study "D"	44
	Case Study "E"	45
	Case Study "F"	46

CHAPTER PAGE

Case Study "G" 48

Case Study "H" 49

Case Study "I" 51

Case Study "J" 52

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 53

Introduction 53

Summary of the Findings 53

Conclusions 57

Recommendations 58

Recommendations for Further Study 59

BIBLIOGRAPHY 61

APPENDICES 64

VITA 72

LIST OF TABLES

TABLE		PAGE
I.	Population and Questionnaire Data	12
II.	Occupation in 1973 of Rejected University of Tennessee, Knoxville, Medical School Applicants to the University of Tennessee College of Medicine, 1959-63	22
III.	Degree of Job Satisfaction of Rejected University of Tennessee, Knoxville, Medical School Applicants to the University of Tennessee College of Medicine 1959-63	24
IV.	Comparison of Degree of Career Success Between Rejected University of Tennessee, Knoxville, Medical School Applicants to the University of Tennessee College of Medicine, 1959-63, and Their College Classmates	25
V.	Expectation to Change Occupations in the Next Three Years (1973-76) of Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63	27
VI.	Number of Jobs Held Since Receiving Baccalaureate Degree by Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63	28

TABLE PAGE

VII. Highest Degree Held by Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63 29

VIII. Expectation to Earn Another Degree by Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63 30

IX. Occupations of the Parents of Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63 32

X. Single Most Helpful Source of Aid in Obtaining Employment as Perceived by University of Tennessee, Knoxville, Rejected Medical School Applicants to The University of Tennessee College of Medicine, 1959-63. 34

XI. A Summary of the Perceived Importance of Certain Selected Job Characteristics by Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63 36

CHAPTER I

INTRODUCTION

1. BACKGROUND OF THE PROBLEM

The population of the United States increasingly expects more efficient health care. There is a tacit assumption that, given enough time, money, knowledge, and manpower, all of the most serious health problems can be overcome.

This study is concerned with the manpower aspect of the above assumption. Health manpower has one common thread running throughout: extensive, specialized training. This training almost exclusively requires post-secondary education that extends from six months for some occupations to over ten years for others. In addition to the length of the training period, there is also a considerable degree of specialization that culminates in specific occupations. Consequently, an individual selects an occupational goal in the health fields knowing that he or she must spend a required amount of time in training that will lead to licensure and an increasing degree of specialization. Since this specialization begins quite early in the training period, "switching" to another "track" leading to a different goal is usually difficult. The necessity for such "switching" normally is a result of a declining interest in the goal, financial/personal reasons, academic failure, or any combination of these.

> Settling for second best (or even third or fourth) is something few of us are prepared for in any public way. There are no school or college courses in how to fail or how to substitute one set of goals for another when attainment of the first becomes impossible. (Gagnon, 1969, p. 283)

Large numbers of students are attracted to careers in the health occupations for a variety of reasons. Unfortunately, the number and distribution of training positions available do not coincide with the number and distribution of aspirants. Coupled with this, there is a gross imbalance between manpower needs and available trained workers.

Probably the most widely known example of this situation is medical training. Concurrently, there exists a large number of well qualified pre-medical students and a shortage of physicians; however, there are a limited number of training positions available.

> Although the number of medical school seats has increased by more than one-third since 1968, a sudden rise in the quality and quantity of applicants has rendered this otherwise startling growth inadequate. (Goldhaber, 1972, p. 332)

Presently, large numbers of highly motivated and well qualified pre-medical students are experiencing failure by not gaining entrance to a medical school and, therefore, are having to settle for a lesser choice. This requires a rigorous assessment of the individual's situation, including values and preparation. In most educational institutions, designated personnel are available to assist the individual in making such an assessment. However,

> . . .the student who goes to college in pursuit of a career requiring academic excellence (in terms of

> grades) and who suddenly finds himself at the bottom of the grading heap may have difficulty adjusting to a required change in career choice. But for such a student, the adjustment is both unavoidable and rapid; failure leaves little alternative. (Gagnon, 1969, p. 284)

Pre-medical advisors and medical school admissions personnel are concerned about affording greater assistance to the frustrated pre-medical student who perhaps for the first time in his educational program is experiencing failure.

> The actual process of failing--or selecting--down to fields of less prestige--is an important source of development for lower-status fields, both within and outside the high-performance domain. (Gagnon, 1969, p. 286)

Many individuals have suggested that the less prestigious health care fields could certainly benefit from these individuals being redirected into one of them. They appear to be generally well qualified and presumably motivated toward a "people oriented profession."

Society has a vital interest in this individual in as much as he is partially trained for entering the health manpower pool, and it is an economic waste for him to select an occupation outside of the health occupations. The educational insitutions that he is attending and to which he is applying also have an obvious interest in and obligation to him.

Admissions officers and pre-medical advisors are aware of particular cases involving unsuccessful pre-medical students and of their successes or failures in alternative careers, but much of this awareness is not based on any research data.

> Pre-medical advisors have the task, not only of helping serious students to construct successful strategies of application, but they also have to discourage the non-competitive student and try to make it possible for the unmotivated applicant to be explicit about his ambivalent intentions. (Green, 1970, p. 450)

> When the educational system acts as a screening device to identify and give special training to those who are perceived to have talent, it also screens out the others. They are the failures, the drop-outs, those who do not make high grades. The same teachers who select and stimulate the talented discourage the less talented. (Slocum, 1966, p. 190)

During the years of advising these students, the advisor could prepare them to seek alternative careers. However, this is not an easy task, because the student's perception of himself as a future physician has been formed over a long period of time and is not easily extinguished. "Time heals all wounds" and a considerable expenditure of time is often necessitated.

> Even when pre-medical students are informed of alternate health careers, they often insist on becoming physicians because of the greater prestige, income, and intellectual stimulation. (Goldhaber, 1972, p. 332)

While the student may be reluctant to seek another career, there is also a reluctance on the part of other prestigious health professions to accept the "cast-offs" from medicine. Admissions committees must be convinced of the sincerity of the redirected pre-medical student. They feel that he is a detriment to himself and his new goal if he continues to see that goal as a second choice.

The situation in a public medical school in which residents are given priority in selection ultimately means

that if an individual is not admitted to a public school, the chances are slim that he will be admitted to any other school in the United States. Presently, almost all public medical schools are giving priority to residents and are accepting few if any non-residents. Competition for places in private prestigious medical schools is considerably greater than it is in public schools. This means that an applicant from the State of Tennessee being denied admission to The University of Tennessee College of Medicine must, if he intends to pursue medicine as a career, turn to either osteopathic medical schools or foreign medical schools to seek admission. The chances for admission in such a situation are also limited.

> One of the functions of the educational system for occupational choice is that it provides a continuing reality check for the choices which have been made. This appears to be an unintended result of the institutional structure of education. (Miller, 1961, p. 119)

The author first became interested in the subject of this study while serving as Assistant Director of Admissions at The University of Tennessee Center for the Health Sciences. After having talked and counseled with hundreds of frustrated pre-medical students, the author concluded that neither admissions officers nor pre-medical advisors had much information to relay to unsuccessful pre-medical students regarding alternative careers. The author personally advised many to pursue a career in dentistry, and this was apparently good advice since many are now successful dentists.

During the past ten years in the State of Tennessee,

there has been an increasing number of Tennesseans who have applied to The University of Tennessee College of Medicine who have not been accepted. This apparent waste of training constitutes a serious problem in relation to health manpower in the State of Tennessee. One would assume that these applicants are motivated to pursue careers in the health sciences; however, they are denied their first choice, i.e., the study of medicine. These motivated students (who will presumably earn baccalaureate degrees) could be redirected to pursue careers in other health professions. The question that comes to mind immediately is, "What do unsuccessful pre-medical students pursue as lifetime careers?" This study attempts to answer that question. Researchers at Johns Hopkins Medical School and the University of California Medical School at San Francisco have conducted studies attempting to ascertain what activities pre-medical students engage in one or two years subsequent to their denial by medical schools; however, this study investigates "stable" careers that exist 10 to 15 years following graduation from an undergraduate institution.

During the early Sixties, The University of Tennessee College of Medicine was able to accommodate all "qualified" applicants from the State of Tennessee. If a pre-medical student was not admitted to medical school, it was solely for the reason that the admissions committee did not consider him to be qualified. The number of Tennesseans admitted did not

fill a class; therefore, a large number of non-resident applicants were admitted. Approximately 10 years ago, the number of qualified resident applicants exceeded the number of places available. At the present time, there are pre-medical students from the State of Tennessee not being admitted who are indeed qualified for admission.

The aforementioned situation is largely due to the number of individuals in the 20 to 25 year-old age group. Presumably, the increase of social awareness on the part of college students has led many students interested in the sciences to pursue careers in the health sciences rather than careers in research.

In the early Sixties, the Tennessee Hospital Association formed the Tennessee Hospital Education and Research Foundation. One of the responsibilities of this foundation was to establish what has become known as the Tennessee Health Careers Program. Such programs were designed to motivate students to enter the health care profession and hopefully to increase the size of the health manpower pool. The typical pre-medical student pursues a major in the biological sciences and a minor in the physical sciences. When he graduates from college with his baccalaureate degree, he is a product that is not marketable. There are very few, if any, careers for which the student with a baccalaureate degree in biology is prepared to step into at the time of his graduation. He might enter any number of occupations, but

they all require training of a post-baccalaureate, specialized nature. In other words, the typical pre-medical student, upon being denied admission to medical school, is not specifically prepared for any particular profession and/or career.

2. STATEMENT OF THE PROBLEM

The problem associated with this study was to identify the careers of The University of Tennessee, Knoxville, pre-medical students who did not gain admission to a college of medicine during 1959-1963.

3. PURPOSE OF THE STUDY

The purpose of this study was to determine the careers, job satisfactions, and sources of career counseling of unsuccessful medical school applicants.

4. IMPORTANCE OF THE STUDY

Pre-medical advisors in colleges and universities throughout the nation are constantly faced with the problem of what advice to give a pre-medical student following his/her denial by a medical school. The information gathered in this study could be used as a basis for more effective counseling by pre-medical advisors and admission officers.

> We do little "advising" in the usual sense of the word. It is very seldom that a non-admitted student will ask us, "What do you think I ought to do now?" Nor do we tell him what he should do even if he does ask. We provide him with as much information as possible regarding alternate plans, but the choice of action is entirely his own. (Bakes, 1969, p. 87)

Information regarding what students have done in the past in similar situations should be of great benefit to pre-medical advisors. For reasons such as these, this study was initiated. Presumably, information regarding the type of occupation that rejected applicants have selected and the degree to which they are satisfied would be of benefit to pre-medical advisors as they counsel with students who have not been admitted to a medical school. In addition to rejected applicants, the pre-medical advisor advises a large group of students that he knows in the beginning, or soon after the beginning of their pre-medical program, most likely will not be admitted to medical school. These students could also be advised of the chances of success and satisfaction in alternative careers and might therefore be redirected into other areas of academic preparation.

5. ASSUMPTIONS

Two major assumptions were made in this study. One was that an individual's career is determined by factors embedded in the individual's past and is not determined solely by chance. The other assumption was that stable career patterns have been formed after a period of 10 years following application to medical school.

6. LIMITATIONS AND DELIMITATIONS

Only one undergraduate school and one medical school

were involved in this study; therefore, portions of the data are not directly applicable to private school situations due to the differences in selection processes at the medical school entry level.

The academic profiles and abilities of rejected applicants were considerably lower in the late Fifties than at present. Many applicants were advised to raise their grades and to reapply at a later date. This advice is not applicable now due to the high academic averages of the applicants and the very small number of places that are available in medical schools.

7. PROCEDURES

The American Association of Medical Colleges in Washington furnished the author with a list of all of the students from The University of Tennessee, Knoxville, that took the Medical College Admissions Test and applied to medical schools during the years 1959-1963. Seventy-seven individuals who applied but were not accepted during that time period were identified. These individuals comprised the population that was investigated.

Addresses for the 77 individuals were sought by searching through the alumni files of The University of Tennessee. Addresses for 10 individuals could not be located, and 12 questionnaires were returned by the post office due to incorrect addresses. In April, 1973, questionnaires

were mailed to 55 of 77 individuals identified through the American Association of Medical Colleges list. Thirty questionnaires were completed and returned. Twenty-five questionnaires were not returned on the original mailing. Follow-up letters and questionnaires were sent, but these evoked no additional responses. Subsequent to the follow-up letter, the rejected applicants that lived in Tennessee were contacted by telephone. Therefore, the sample (N=30) upon which this study was based represented 39 percent of the population and was based on a 54.5 percent return. (See Table I.)

The questionnaire (Appendix A) was constructed using original items, items from the Calvert Questionnaire (Calvert, 1969), and items from the Hopkins Questionnaire (Becker et al, 1972). Calvert's Questionnaire appears in the appendix of his study entitled, Career Patterns of Liberal Arts Graduates. Between June, 1970, and January, 1972, a pilot study entitled "Evaluation of Unsuccessful Applicants to Medical School as a Health Manpower Resource" was conducted at the Johns Hopkins School of Medicine by Becker, Katatsky, Seidel, and Sims. Both studies were federally funded and are part of the public domain. In addition, Calvert and Becker were contacted personally.

The sample of the cover letter (Appendix B) indicates that no attempt was made to identify the individual as an unsuccessful medical school applicant. The persons receiving

TABLE I

POPULATION AND QUESTIONNAIRE DATA

Population and Responses	Number
Rejected University of Tennessee, Knoxville, Medical School Applicants to The University of Tennessee College of Medicine, 1959-63	77
Addresses Unavailable in UT Alumni Office	10
Questionnaires Returned by Post Office for Lack of Proper Address	12
Questionnaires Mailed But Not Returned by Individuals or Post Office	25
Questionnaires Completed and Returned	30
Sample = 39% of Population	30

Note: This was a self-selected sample in that the individuals who responded were considered the sample of the population.

the questionnaire assumed that they were part of a survey of liberal arts graduates being asked questions relative to career education. No incentive was included.

The cover letter was on the College of Liberal Arts letterhead. Cooperation was possibly partly due to the fact that the author was serving as a pre-professional advisor in the College of Liberal Arts Advising Center.

Six major areas were investigated:

1. What is the unsuccessful applicant's current occupation?

2. To what extent is the unsuccessful applicant's job related to the health professions?

3. What is the unsuccessful applicant's degree of job satisfaction?

4. What are the occupational conditions and characteristics that are perceived to be important by the unsuccessful applicant?

5. What effect did the unsuccessful applicant's family background have on his career choice?

6. What individual, agency, or group did the unsuccessful applicant see as most helpful in getting a job?

Following the receipt of the completed questionnaire and the compilation of the data contained therein, 10 individuals were selected for a case study approach to their career development. Two of the individuals selected were physicians, while eight were non-physicians. The individuals were interviewed in person and/or by telephone.

8. DEFINITIONS OF TERMS

Applicant pool. The entire population of individuals who make application for admission to any particular entering medical school class.

Career. A person's course of progress through life, especially as it relates to his occupation(s).

Health-Related Occupations. Those jobs directly related to one of the health professions (e.g., medicine, dentistry, nursing, pharmacy, physical therapy).

Medical School Applicant. An individual who has submitted a complete application to a medical school.

Non-Health Related Occupations. Those jobs not directly related to one of the health professions.

Occupation. The kind of work an adult does on a regular basis. (Slocum, 1966)

Pre-Medical Advisor/Counselor (PMAC). An individual on the faculty or staff of an institution of higher learning who advises and counsels pre-medical students during their academic preparation prior to application to a medical school. This individual also submits a formal statement of recommendation to the medical school upon the request of the applicant.

Rejected Medical School Applicant. A student who took the Medical College Admissions Test during 1959-1963 and made at least one application to a medical school.

9. ORGANIZATION OF THE STUDY

The study was organized into five chapters, in addition to a bibliography.

Chapter I provides an introduction, background of the problem, a statement of the problem, purpose of the study, assumptions, limitations and delimitations, procedures, definitions of terms, and organization of the study.

Chapter II presents a review of related research and pertinent literature dealing with career patterns of rejected medical school applicants.

Chapter III contains a presentation, analysis, and interpretation of the data obtained from the questionnaire.

Chapter IV contains case studies of 10 of the individuals in the sample.

Chapter V contains a summary of the findings in the form of a brief reconsideration of the six research questions, conclusions, and recommendations.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

1. INTRODUCTION

Super's basic idea was that a person tended to choose occupations with characteristics that were compatible with his conception of himself as developed through personal experience. Therefore, when an individual had a blocked career choice, he would then select an alternative that would be very similar to the blocked choice, inasmuch as he was trying to establish the same compatability (Super, 1953). For this reason, it has been assumed that a blocked choice of medicine would result in an individual selecting some other health profession.

This assumption was supported further by Slocum:

> A person will tend to choose the occupation which offers the greatest return for his resources (skills, abilities, personal qualities, etc.). (Slocum, 1966, p. 269)

Rosenberg argued that when a person makes a substantial "investment" of time and energy in preparing for a career such as medicine or engineering, he is motivated not to change his plans because the change would be too costly. That is, the investment of time and energy would be, in a sense, wasted. Apparently, this gives further support to the assumption that, once a pre-medical student has completed his college preparation, he is very unlikely to change to a radically different career field (Rosenberg, 1957).

This study has involved two aspects of Super's Developmental Self-Concept Theory of Vocational Behavior. The first aspect is "reality testing," while the other is "vocational development tasks." (Super, 1953)

Super believed reality testing must occur in any life phase prior to decision-making as it relates to career development. The reality factors must of necessity either confirm or negate tentative educational and vocational decisions and cause them to be modified accordingly.

Such a reality-test is the failure to gain admission to a medical school following the completion of a pre-medical program in a college or university. Obviously, such activity could lead to modification of career plans. This study attempted to identify the outcome of those modifications.

In 1963, Super identified the following vocational development tasks and the approximate ages at which they occur (Super, 1963):

1. Crystallization, age 14 - 18
2. Specification, age 18 - 21
3. Implementation, age 21 - 24
4. Stabilization, age 25 - 35
5. Consolidation, age over 35

This study dealt with individuals that have been unsuccessful in implementation and must regress and redevelop the specification tasks.

Furthermore, it has been assumed that the majority of

the individuals investigated in this study were in the stabilization phase of Super's tasks.

2. RELEVANT RESEARCH

A search of the literature produced only three research studies directly relevant to this particular problem.

> Successful applicants are a much-studied group, but comparatively little is known about unsuccessful applicants. Admission officers, whose tasks unually include a significant amount of counseling of rejected applicants, need more data on this group, including information on patterns of applicant success and failure. (Green, 1970, p. 449)

Stephenson attempted to determine the occupational status four to eight years later of persons who, having completed their pre-medical work in the College of Science, Literature, and the Arts of the University of Minnesota, were not admitted to the School of Medicine upon first application. His purpose in doing so was to ascertain if the self-concept of "physician" had become specific before application to professional school and had crystallized to the extent that the individual persisted in implementation throughout his early adult occupational history. His findings were interpreted as evidence that the self-concept of the pre-medical student had crystallized prior to making application to a school of medicine (Stephenson, 1961).

Becker et al. examined 200 unaccepted medical school applicants from 1971 and found that approximately two-thirds of the sample entered either health career areas or related

scientific areas. This study was a pilot study for a larger study conducted in 1974-75 (Becker et al., 1972).

Hutchins and Morris investigated 761 applicants in 1958-59 who were rejected by colleges of medicine. They attempted to determine whether the applicants planned or pursued careers in medicine and, if not, what they were doing. They identified a "talented" sample that consisted of rejected applicants that had scored above 600 on each of the Verbal and Quantitative subsections of the Medical College Admission Test. They found that one-fourth of this "talented" sample was no longer enrolled in any academic or professional pursuit. They then proceeded to investigate the reasons for rejection as perceived by the students and the schools involved (Hutchins, 1963). The author of the present study has not attempted to examine motivation or to distinguish among applicants on the basis of MCAT scores.

The present study differed from those cited in that stable career patterns were investigated of individuals who were rejected 10 to 15 years earlier. A much more comprehensive study and one of a more general nature was conducted by Calvert and his associates in 1963. The title of that study was "Career Patterns of Liberal Arts Graduates" and dealt with graduates during the period of 1948-1958.

3. RELATED RESEARCH PROJECTS

The studies at Johns Hopkins and the University of California, San Francisco, that were discussed in Chapter I did not focus on the activity of the unsuccessful pre-medical student over a long period of time. They only examined the short range activity (i.e., one or two years after rejection). Discussion with Becker showed that the two studies could be complementary. The studies at the aforementioned institutions were being conducted concurrently with this study.

CHAPTER III

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

Two-thirds of the individuals who responded were either physicians or were in health-related occupations. Indeed, two out of five in this group were physicians. They had apparently persisted and/or improved their records and gained admission to medical schools. At The University of Tennessee College of Medicine, certain rejected students were routinely told to take designated courses and improve their grade point averages in order to gain admission at a later date. Therefore, the 40 percent figure was not unexpected. (See Table II.)

Consistent with Super's theory, a large number of these individuals should have selected an alternative career that was closely related to medicine. If a rejected student was counseled to return to school and improve his record, he most likely did this in a graduate program in the life sciences; therefore, it follows that this preparation might be used for a health-related career.

During the late Fifties and early Sixties, there were large numbers of non-resident students admitted to The University of Tennessee College of Medicine; therefore, there was a place for the rejected resident applicant who could "prove" himself to the admissions committee. Priority was

TABLE II

OCCUPATION IN 1973 OF REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Occupation	Number	Percent
Non-Physician		
Non-Health Related Occupations		44.4
Professional	1	
Managerial	4	
Technical	4	
Other	1	
Health Related Occupations		15.6
Dentist	4	
Pharmacist	1	
Other	3	
Physician	12	40.0

N = 30

given to residents in the admissions process, therefore many resident applicants that persisted did eventually gain admission.

When asked how satisfied they were with their present occupations, there was no appreciable difference between physicans and non-physicians. Fifty-two percent of the non-physicians were very satisfied, while 55 percent of the physicians were very satisfied. Only approximately 10 percent of the entire population was dissatisfied with their current position. Less than 2 percent were very dissatisfied.

Separating non-physicians into the two categories of non-health related and health-related occupations produced the following results. Sixty-five percent of the individuals in health-related occupations indicated that they were very satisfied with their occupations, while only 40 percent of the non-health related respondents made a similar reply. (See Table III.)

When asked to contrast their career success with that of other members of their graduating class, the health-related non-physicians felt that they were definitely more successful. Twenty percent of the non-health related respondents thought that they were probably not as successful as their college classmates. There was very little difference between non-health related respondents and physicians in all four categories (i.e., definitely more successful, probably more successful, probably not as successful, definitely not as successful). (See Table IV.)

TABLE III

DEGREE OF JOB SATISFACTION OF REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Occupation	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied
Non-Physician	51.9%	36.5%	10.1%	.6%
Non-Health Related	40.6%	46.5%	11.6%	1.2%
Health Related	65.7%	24.3%	10.0%	.0%
Physician	55.1%	32.0%	11.5%	1.3%

N = 30

TABLE IV

COMPARISON OF DEGREE OF CAREER SUCCESS BETWEEN REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63, AND THEIR COLLEGE CLASSMATES

Occupation	More Successful		Not as Successful	
	Probably	Definitely	Probably	Definitely
Non-Physician	38.8%	44.4%	16.6%	0.0%
Non-Health Related	30.0%	50.0%	20.0	0.0%
Health Related	50.0%	37.5%	12.5%	0.0%
Physician	33.3%	58.3%	8.3%	0.0%

N = 30

One-third of the non-health related non-physicians felt that they would probably change occupations during the next three years, while only 13 percent of the individuals who were non-physicians in health-related occupations expected to change occupations. None of the physicians expected to change occupations in the next three years; indeed, no one in the entire group surveyed definitely planned to change occupations in that time period. (See Table V.)

Respondents were queried as to the number of jobs they had held since receiving their baccalaureate degrees. Three out of four of the physicians had held only one job. Nine of the 18 (50 percent) non-physicians had held three or more jobs during the time since their graduation. (See Table VI.)

Nineteen of the 30 respondents to the questionnaire earned a professional degree while four of the 30 respondents earned a graduate degree. A group of seven individuals had not earned any degree beyond the bachelor's degree. Among the professional degree holders were four dentists, one pharmacist, one lawyer, 12 physicians, and one individual with a degree in public health. (See Table VII.)

When asked if they expected to earn another degree, eight of the 18 non-physicians indicated that they probably would seek such a goal. Only two of the 12 physicians had plans for an additional degree. (See Table VIII.)

The respondents were asked to indicate the occupation(s) of both parents. The author was seeking to determine if a

TABLE V

EXPECTATION TO CHANGE OCCUPATIONS IN THE NEXT THREE YEARS (1973-76) OF REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Occupation	Yes		No	
	Probably	Definitely	Probably	Definitely
Non-Physician	23.5%	0.0%	41.2%	35.3%
Non-Health Related	33.3%	0.0%	55.6%	11.1%
Health Related	12.5%	0.0%	25.0%	62.5%
Physician	0.0%	0.0%	8.3%	91.7%

N = 30

TABLE VI

NUMBER OF JOBS HELD SINCE RECEIVING BACCALAUREATE DEGREE BY REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Occupation	Number of Jobs Held	Number of Individuals
Non-Physician		
Professional	1	2
	2	1
	3	1
	4	1
	5	1
Non-Professional	1	2
	2	1
	3	5
	4	3
	5	1
Physician	1	9
	2	0
	3	3
	4	0
	5	0

N = 30

TABLE VII

HIGHEST DEGREE HELD BY REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Undergraduate or graduate Degree	Number	Professional Degree	Number
B. S.	7	D. D. S.	4
M. S.	3	B. S. Ph.	1
Ph. D.	1	J. D.	1
		M. D.	12
		Other	1

N = 30

TABLE VIII

EXPECTATION TO EARN ANOTHER DEGREE BY REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Occupation	Yes	No	Maybe
Non-Physicians	5	10	3
Physicians	1	10	1

N = 30

direct relationship existed between the occupation of a parent and the occupation selected by a rejected medical school applicant. Specifically, did the individuals who selected health-related occupations have parents in such occupations? Less than 25 percent of the respondents in health-related occupations had parents in such occupations. (See Table IX.)

One item on the questionnaire asked the following question: "What was the single most helpful source responsible for you obtaining each of the jobs which you have held?" Calvert's questionnaire in 1969 contained the same question; therefore, a direct comparison was possible. He found that 37 percent of the liberal arts graduates whom he questioned believed "direct personal application" to be the single most important source of aid. This study found that 30 percent of the non-physicians and 42 percent of the physicians also felt that "direct personal application" was the single most important source.

None of the physicians felt that college placement offices, faculty advisors, or employment agencies were important. One-fourth of the physicians felt that family contacts had been important, and 17 percent stated that their new employers had contacted them. Non-physicians felt that personal friends had been of considerable help, while their faculty advisors or professors had been of little or no assistance.

TABLE IX

OCCUPATIONS OF THE PARENTS OF REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Rejected Applicant's Occupation	Father's Occupation		Mother's Occupation	
	Health Related	Non-Health Related	Health Related	Non-Health Related
Non-Physicians - Non-Health Related	2	6	0	8
Non-Physicians - Health Related	2	8	0	10
Physicians	3	9	1	11

N = 30

Examination of Table VIII (page 30) indicates general agreement between the non-physicians surveyed and Calvert's group of liberal arts graduates surveyed in 1969. One explanation for this agreement is the fact that most of the rejected applicants were enrolled in The University of Tennessee, Knoxville, College of Liberal Arts. (See Table X.)

The respondents were asked to indicate the relative importance of specific job characteristics. More than 89 percent of the population indicated that the opportunity to be helpful to other people was important. Although two-thirds of the group felt that financial security was important, less than one-half felt that a high income was important.

The non-physicians felt that a chance to be creative was important, while the physicians felt that it was unimportant. Less than one-half of the entire group felt that a relaxed atmosphere with few pressures was important. The majority of the respondents valued time to devote to raising their families and being attentive to their spouses' needs. The chance to achieve prestige was seen to be important by less than half of the group. The opportunity of seeing concrete results for which they got credit and freedom from direct supervision were considered important by more than half of the respondents.

The opportunity to help solve social problems was found to be unimportant to the group. Physicians and

TABLE X

SINGLE MOST HELPFUL SOURCE OF AID IN OBTAINING EMPLOYMENT AS PERCEIVED BY UNIVERSITY OF TENNESSEE, KNOXVILLE, REJECTED MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Source of Aid	Percentage		
	Non-Physicians	Physicians	Calvert 1969
College Placement Office	8.0	0.0	12.5
Faculty Advisor or Professor	0.0	0.0	8.4
Direct Personal Application	30.0	41.7	36.9
Private Employment Agencies	8.0	0.0	4.2
State Employment Services	2.0	0.0	1.4
Family Contacts	8.0	25.0	9.0
Personal Friends	16.0	8.3	8.4
Want Ads	0.0	0.0	2.4
Professional Societies or Contacts	8.0	8.3	4.3
New Employer Contacted Me	8.0	16.6	6.3
Other	12.0	0.0	6.2

N = 30

individuals in health-related occupations felt that working on health-related problems and working with people rather than things were important. Non-physicians felt that a chance to work in an unstructured setting with flexible hours was important. More than three-fourths of the group felt that the stimulation of intellectual challenge was important. (See Table XI.)

In 1957, Rosenberg identified three configurations of occupational values that were true of all occupations. They were: (1) orientation toward helping people; (2) orientation toward extrinsic rewards; and (3) orientation toward self-expression. The findings outlined above related to specific job characteristics appear to agree closely with the first and second findings of Rosenberg.

Perhaps the most startling aspect of the results of this study was the large number of physicians in the group. However,

> ...the individual who has prepared himself for medical school through an undergraduate pre-medical course of study is unlikely to "waste" this preparation because of little desire to help people. (Underhill, 1966, p. 171)

This contention of Underhill's certainly seems to be borne out by the present study. Two-thirds of the group studied either persisted in becoming physicians or were in a health-related occupation and apparently well satisfied with their choice of a career.

This finding correlates strongly with that of

TABLE XI

A SUMMARY OF THE PERCEIVED IMPORTANCE OF CERTAIN SELECTED JOB CHARACTERISTICS BY REJECTED UNIVERSITY OF TENNESSEE, KNOXVILLE, MEDICAL SCHOOL APPLICANTS TO THE UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 1959-63

Job Characteristic	Respondent's Occupation	Essential or Very Important	Somewhat Important of Unimportant
Opportunity to be helpful to other people	NPNH[1]	88.9	11.1
	NPH[2]	100.0	0.0
	P[3]	100.0	0.0
A high income	NPNH	33.3	66.7
	NPH	50.0	50.0
	P	50.0	50.0
Chance to be creative	NPNH	80.0	20.0
	NPH	75.0	25.0
	P	25.0	75.0
Relaxed atmosphere with few pressures	NPNH	40.0	60.0
	NPH	50.0	50.0
	P	8.3	91.6
Time to devote to raising my family and being attentive to spouse's needs	NPNH	80.0	20.0
	NPH	62.5	37.5
	P	66.6	33.3
Chance to achieve prestige	NPNH	50.0	50.0
	NPH	37.5	62.5
	P	33.3	66.7

TABLE XI (Cont.)

Job Characteristic	Respondent's Occupation	Essential or Very Important	Somewhat Important of Unimportant
Freedom from direct supervision in my work	NPNH	70.0	30.0
	NPH	62.5	37.5
	P	58.3	41.7
Chance to work in an unstructured setting with flexible hours	NPNH	77.8	22.2
	NPH	75.0	25.0
	P	16.7	83.4
Working with people rather than things	NPNH	44.4	55.5
	NPH	75.0	25.0
	P	91.6	8.3
Working on health related problems	NPNH	20.0	80.0
	NPH	87.5	12.5
	P	91.6	8.3
Opportunity to help solve social problems	NPNH	0.0	100.00
	NPH	25.0	75.0
	P	9.1	90.8
Financial Security	NPNH	72.7	27.3
	NPH	75.0	25.0
	P	66.6	33.3
Stimulation of intellectual challenge	NPNH	100.0	0.0
	NPH	75.0	25.0
	P	100.0	0.0
Seeing concrete results of my work, for which I get credit	NPNH	70.0	30.0
	NPH	87.5	12.5
	P	58.3	41.6

[1]Non-Physician Non-Health Related [2]Non-Physician Health Related [3]Physician

Hutchins and Morris (1963). They found that nearly two-thirds of their total sample were evidently making progress in the fields of medicine, health, or science (Hutchins and Morris, 1963). In addition, Stephenson (1961) found that two-thirds of the total applicant group he studied were eventually admitted to a medical school and that 80 percent of all persons studied were found in medical or related occupations. In addition, this study agrees with the findings of Stephenson regarding the ratio of physicians to dentists in the samples. He found that "the ratio of M.D. degree holders to D.D.S. degree holders was 78:30." (Stephenson, 1961, p. 214) The ratio in this study was 3:1. Apparently the attraction into dentistry is not as great as might be assumed, although all of the dentists surveyed indicated satisfaction with their occupation.

When the results of Calvert's study were compared with the data in Table VIII (page 30), the profile for his group and the two groups from the sample being considered were approximately the same. The greatest differences in this comparison were between the physician sub-group and Calvert's group.

The college counseling and placement services were perceived as being of little or no assistance in securing a job. Miller recognized this and stated:

> ...it would seem that the facilities for formal guidance are not reaching their potential customers effectively, or that the customers are

> unwilling to acknowledge or fail to recognize the influence of these personnel. (Miller, 1961, p. 121)

The last quarter of the questionnaire contained a section with the following instructions: "Answer the following questions only if you applied but were not accepted by a professional or graduate school." Seven respondents completed that part of the questionnaire. These individuals were all non-physicians and five of them had earned a graduate or professional degree. Of the seven respondents, two indicated that they had definite plans for an alternative career of course of study, while two indicated that they only had tentative plans and three indicated that they had no other plans when they were rejected by a professional or graduate school. When asked what individuals or groups they consulted when they were rejected, half of the responses indicated that professors, teachers, physicians, and medical students were sought out for advice. When asked whose advice was followed, 80 percent of the responses indicated that this same group's advice was followed (i.e., professors, teachers, physicians, and medical students). The advice that was given by these individuals did not show any trends or patterns.

CHAPTER IV

CASE STUDIES

Ten respondents were interviewed either in person or by telephone. In order to maintain anonymity, the respondents' names are identifed as colors in the case studies. Each individual was asked the following questions:

1. What were your educational and career objectives as an undergraduate?

2. In relation to your current profession and/or occupation, how did you get to where you are now?

3. Given an opportunity to change your career with no adverse effects, would you? And if so, to what?

4. What advice would you give to someone who found himself in the same situation that you found yourself as a senior in college?

1. CASE STUDY "A"

Mr. Brown's parents were both white-collar workers. He described his background as being lower middle-class. A 1960 graduate of Midville High School, he was a leader in his senior class. His goal was to earn a degree in four years and to go on to medical school. His mother was "pushing" him to become a physician. After experiencing difficulty with the sciences, he changed his major to

history. While an undergraduate, he worked 30 to 40 hours per week in a retail store. He described his college experience as "task oriented." Mr. Brown was on campus for classes only. He was not involved in any other aspect of college life.

Mr. Brown married a nurse while he was in college. Her disillusionment with physicians "rubbed off" on him and he decided that medicine was not for him. He told the author that he applied to a medical school but did not take the Medical College Admission Test. The AAMC records indicate that he did both take the test and apply in 1962.

Upon graduation from the University, Mr. Brown took a job with the United States Public Health Service (USPHS) as a venereal disease investigator. He was able to "establish effective educational programs" in public schools. He also visited with physicians in order to discuss various patients. The job with the USPHS was obtained through on-campus interviews.

He became bored with the public health job and went to work for an out-of-state electronics firm. His position was with the public relations division. Subsequent to this position, he was employed in the training programs division of a retail store and later moved into a position in systems and data processing.

A friend in Metro City recommended him for a job in the development office of a large university. He is

presently employed in this capacity and is quite satisfied with his work. Looking back, however, Mr. Brown stated that he probably would have gone to law school. He feels that his work must be "people-oriented" and must have enough financial remuneration to be comfortable. He declared that prestige was not very important.

Mr. Brown feels much better about university life now than he did as an undergraduate. He thinks that in some ways he is "reliving his college experience in a 'new way'." As an undergraduate he did not perceive any interest in him on the part of the faculty, with the exception of a Russian instructor. Mr. Brown accepts the blame for this situation inasmuch as he was not really giving the university a chance to help him.

2. CASE STUDY "B"

Mr. Black's first job after graduation was as a high school science teacher. He later became an associate biologist, an associate health physicist, and finally an industrial hygienist. All of these last three jobs have been with the same company.

During this time he earned a Master of Science degree from the University of Megathon and a Master of Public Health degree from the University of Subduran. Not until the late 1960's did he decide that he had achieved a stable career and therefore identified himself as an industrial hygienist.

He entered the University of Biltar in 1954 as a pre-medical student. He was not successful and blames his lack of success on his poor high school preparation. He felt that he had "stumbled" into his present career and that his undergraduate preparation had been adequate for his subsequent endeavors.

When asked if he would change professions if given the chance, he declared that he would like to be a physician. There was an element of uncertainty in his answer.

3. CASE STUDY "C"

Mr. Blue began his tenure at the University of Biltar by enrolling in the College of Engineering. Due to a change in career goals, he transferred to the College of Business Administration. He stated that he "briefly considered the medical profession, but saw where it was going in relation to the federal government" and decided against that alternative career choice. According to the AAMC records, he took the Medical College Admission Test in 1960 and made one unsuccessful application.

He has worked in the motor carrier industry for the past 18 years. The early part of his working life was spent as a traffic clerk, a field traffic agent, and a traffic manager. He is currently a market research manager. He is concerned about the prestige value of his job. He stated that "his worth was the same as engineering but that the

prestige was not there." All his in-service education has been accomplished through independent study.

When asked if he would change his occupation, he said probably not, but if he did it would be a change to some field of agriculture. His advice to students that are currently in the position that he was in 18 years ago is to obtain a Master's degree in economics with an emphasis on mathematics.

4. CASE STUDY "D"

Mr. Pink was a very unresponsive person during the interview from which this study is written. He enrolled in the University of Biltar in the fall of 1958. His major at that time was zoology. Graduate study was his educational objective and biological research was his career objective. He took the Medical College Admission Test in 1961 but was not accepted by a medical school even though he had submitted an application. (The latter was not mentioned in the interview.) Since graduation in 1962 he has earned a Master of Science degree in biomedical sciences and is currently working as a research biologist at Caltron National Laboratory.

Mr. Pink stated that "he got a lot of help and attention from the faculty." However, he went on to say that "the University did practically nothing to help in career decision making. They don't have the obligation, but should do it intuitively."

He would like to advise graduating students concerning "what soft money is and how to go about getting funded." He went on to say that "teaching is crowded but he would not discourage them."

Mr. Pink is generally dissatisfied with most aspects of his job, but would not change his career.

5. CASE STUDY "E"

Mr. Gold had been a pre-medical student for two years when he decided to change his major to English due to poor grades in his pre-medical curriculum. He had taken several English courses as electives and had made good grades in these courses. At the time he changed his major, he did not have any other career objective in mind. Mr. Gold stated that he applied to a medical school but did not take the Medical College Admission Test. He felt that in his present position as executive vice-president of a large bank his communication background was extremely helpful.

Upon graduation from the University of Biltar, Mr. Gold entered the armed forces and in 1963 entered a training program at the bank where he is now employed. After holding several different positions with the bank, he became "committed" to banking in 1970. He said that his success could be attributed to being at the "right place at the right time."

Both as an undergraduate and during his service in the

armed forces, he did not receive any meaningful counseling or advice. He now thinks that this would have been very worthwhile. He was the son of a physician and had explored medicine prior to entering college. He suggested that the University should "attempt to develop a dialogue with its student body, followed by an interest inventory and a program of career explanation."

Mr. Gold is very pleased with his banking career. He thinks that this "fit" occurred by accident, but he would not change into another occupation.

6. CASE STUDY "F"

A graduate of a prestigious prep school in Middle Biltar, Dr. Red was awarded a scholarship to Miltron University where he earned a baccalaureate degree in biology. His career goal at this time was to become a physician. His father-in-law, a physician himself, advised him against becoming a physician because of a lack of time to devote to his family.

Following his graduation from Miltron, he went to the University of Biltar at the suggestion of the dean of the University of Biltar College of Medicine. While in Midville, he took quantitative analysis, qualitative analysis, organic chemistry, Latin etymology, and Greek etymology. He was attempting to raise his overall grade point average and improve his chance of gaining admission to medical school. Upon completing this course work, he returned to Miltron to

work on an advanced degree in pharmacology. It was during this time (1964) that he applied to the University of Biltar College of Dentistry.

Dr. Red was accepted into the Master's degree program in orthodontics. He had graduated first in his class in dental school. He has practiced orthodontics for the past six years. He is "extremely happy" with orthodontics and feels that he would not like general dentistry because he does not like "dirty mouths."

He could not remember a single person that was a member of his undergraduate faculty and stated that he did not receive any counseling. The courses he thought were most helpful in preparing for professional school were histology, physiology, and organic chemistry. He felt that there is too much emphasis on academic ability in selecting students for professional school. Dr. Red would look for good "B" students that cared for people and had the ability to work with their hands.

He stated that if he had entered marketing and sales, "he would have already retired." If he could change his profession at the present, he would go into forestry or some other outdoor career. He would not advise anyone to enter medicine or dentistry today, due to the heavy initial debt incurred in establishing a practice. In addition, he felt that the "market was being flooded" with physicians and dentists.

Dr. Red concluded the interview by saying that he had never revealed these feelings to anyone except his wife and father-in-law.

7. CASE STUDY "G"

Due to the influence of his teachers at Volta High School in Midville, Dr. White decided to become a teacher. He enrolled in liberal arts at the University of Biltar in 1957. His declared major was in the romance languages. While an undergraduate, he began working at Dalmid Hospital. His work led him to consider a career in pharmacy; however, his future father-in-law advised strongly against pharmacy as a career. Family friends suggested a career in dentistry and this is what he eventually did.

He told the interviewer that he had not considered a career in medicine. The American Association of Medical College records indicate that he completed the Medical College Admission Test and filed one application in 1960. When asked if he had considered his father's profession as a minister, he replied that he had not. Given the opportunity to change his profession, he would stay in dentistry. He enjoys his autonomy and other working conditions.

During his stay at the University, his contacts with the faculty were very impersonal. His experience in high school was much more meaningful than his experience in college. Concerning course requirements and preparation, he felt that

Greek etymology, Latin etymology, and chemistry really prepared him for his experience in the college of dentistry. In general, he felt that he had received very little help or encouragement from the undergraduate faculty.

He would not advise his son to go into dentistry because of growing federal government intervention. He declared that there is a "glut" of dentists at the present time. He would rather see his son enter a field of business such as real estate.

Better preparation for running a business is needed in the field of general dentistry. He felt that business courses should be added to the curriculum in colleges of dentistry. He has practiced dentistry for 15 years and is very satisfied with his career.

8. CASE STUDY "H"

Dr. Green has been a practicing dentist for 10 years. He began his undergraduate experience as a music major in 1954. He described the intervening years between 1954 and 1968 as "helter-skelter." He described his career pathway as a mixture of "being at the right place at the right time" and "lots of luck." His educational objective while an undergraduate was to gain entrance to medical school. His career objective was consistent with this educational objective. Due to a weakness in his preparation in certain science courses he did not gain admission into a medical school.

Dr. Green's reason for majoring in music was a sincere interest in the subject rather than as a preparation for a musical career. Dr. Green's father was a dentist, but had died many years before Dr. Green entered the University of Biltar. He said that this was not an important factor in the selection of his career.

Following graduation from the college of dentistry, Dr. Green applied for post-graduate training in oral surgery but was denied admission. He feels that in retrospect this denial was to his advantage as he would not now want to be an oral surgeon. When asked if he would change his profession, he replied that he would like to be a medical specialist because he could make more money with less effort. (Dr. Green was blunt and to the point!) He felt dentistry was physically demanding and that it was hard to earn a living without taking advantage of his clients.

Dr. Green said that pre-professional advisors should advise students to consider all options, to proceed as quickly as possible toward their goals, and to drop out and get a job if they are unsure of their educational or career objectives. He advised that pre-dental students should examine dentistry indepth before going to dental school. Like Dr. White, Dr. Green felt that business courses should be added to the curriculum in dental schools.

9. CASE STUDY "I"

Dr. Gray, a physician's son, graduated from the college of education at the University of Biltar in 1958. His career objective and educational objective vacillated between becoming either a college instructor or a physician. While he was an undergraduate, he received no meaningful advice or counseling. His assigned faculty advisor was constantly changed and this created numerous problems. One advisor would track him in one direction and some subsequent advisor would point him in a different direction.

In 1958, Dr. Gray went to Miltron University where he earned a Master's degree in molecular biology. Although he applied to medical school, his goal at this time was to become a college instructor. His major professor left the university and dissuaded him from continuing graduate studies. He urged him to go to medical school.

Dr. Gray enrolled in the College of Medicine in 1961 and completed the program in 1964. He then completed an internship and residency at Slidell Hospital. Even during his residency, he considered a teaching career. Presently he is a practicing medical specialist; however, he does deliver a few lectures each year at the College of Medicine.

Asked if he would change his profession, Dr. Gray stated that he would like to teach in a medical school. He did not feel that he could offer any meaningful advice to today's pre-medical students.

10. CASE STUDY "J"

Dr. Scarlet, the son of a physician, entered the University of Biltar in 1954 as a pre-medical student but he later declared himself to be a mathematics major. He was asked to leave the University for academic reasons and enrolled in the University of Leesville where he earned a Bachelor of Arts degree in mathematics. He then enlisted in the Navy. Following his discharge, he talked with the Dean of the College of Medicine and was advised to enroll in the Graduate School at the University of Biltar. He did so and took courses in chemistry and zoology. Although Dr. Scarlet had been denied admission by the College of Medicine in 1959, he was accepted in 1965 and graduated in 1968. He is presently an associate professor in a college of medicine.

Given a chance to change his profession, he would not do so in any way. Asked what he would tell pre-medical students that found themselves in the situation that he was once in, he said, "I would see why they had such low grades and then advise them accordingly!"

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

1. INTRODUCTION

Seventy-seven unsuccessful medical school applicants were identified and asked to respond to a questionnaire concerning occupational status and satisfaction. Thirty individuals responded. They represented 39 percent of the population. Information was sought relative to their careers 10 years subsequent to rejection by a medical school. The purpose of such an inquiry was to obtain information that would be helpful in advising the large number of well qualified medical school applicants that are currently being rejected.

2. SUMMARY OF THE FINDINGS

Questionnaire

Six particular questions were asked by the author. These questions and their answers are summarized below.

What is the unsuccessful applicant's current occupation? Forty percent of the group surveyed are currently physicians. Members of this group persisted in their attempts to gain entrance to medical school and were ultimately successful. Sixteen percent were not successful in gaining entrance and pursued careers in health-related occupations. Of this group, half were dentists. Forty-four percent of the group surveyed

entered non-health related occupations such as law, insurance, banking, management, and administration. (See Appendix C.)

To what extent is the unsuccessful applicant's job related to the health professions? Fifty-six percent of the sample were currently working in health-related professions. This group included 12 physicians, four dentists, a research biologist, a pharmacist, a pathologist, and an industrial hygienist.

What is the unsuccessful applicant's degree of job satisfaction? The unsuccessful applicants that entered into health-related occupations were more satisfied with their jobs than were the physicians or the non-health related workers. The least satisfied was the latter group.

What are the occupational conditions and characteristics that are perceived to be important by the unsuccessful applicant? Almost all respondents felt that the opportunity to be helpful to other people was very important. In addition, they felt that the opportunity to be creative and to work in an unstructured setting with flexible hours was important.

What effect did the unsuccessful applicant's family background have on his career choice? The occupation of either parent did not appear to have any effect on the occupation of the unsuccessful applicant. This is in agreement with Calvert's conclusion that occupational fields for fathers and sons are not directly comparable (Calvert, 1969).

What individual, agency, or group did the unsuccessful

applicant see as most helpful in getting a job? Direct personal application was the most helpful source in getting a job for both physicians and non-physicians. However, both groups indicated that personal friends, family contacts, and contact by the new employer were important. Faculty advisors, professors, and college placement agencies were not perceived to be important.

Case Studies

Four particular questions were asked by the author of 10 respondents. These questions and a summary of the responses of the individuals interviewed are given below.

What were your educational and career objectives as an undergraduate? Approximately one-half of the individuals interviewed had definite educational and/or career goals as undergraduates and these goals had been attained as a working adult.

The remaining individuals (i.e., those that are not engaged in a career that was their goal as an undergraduate) followed checkered pathways towards their careers. As one respondent stated, he was "at the right place at the right time."

In relation to your current profession and/or occupation, how did you get to where you are now? The individuals in non-health related professions moved from one job to another in order to find satisfying jobs with optimum benefits.

The individuals in the health-related occupations entered their current occupations through continuing professional education. The physicians in the group interviewed continued in graduate school following undergraduate school and were ultimately successful in gaining admission to medical school.

Given an opportunity to change your career with no adverse effects, would you? And if so, to what? Two-thirds of the individuals interviewed would not change their careers. Only two of the eight non-physicians interviewed still wanted to be physicians. One dentist would like to have had an outdoor career.

What advice would you give to someone who found himself in the same situation that you found yourself as a senior in college? Five of the individuals interviewed had advice of a specific nature. One urged students to consider an in-depth look at their career goals prior to making definite commitments. Two individuals urged students not to consider a career in medicine or dentistry, one individual in a non-health related career urged students to seek advanced degrees, and the last individual suggested that the University should "attempt to develop a dialogue with its student body, followed by an interest inventory and a program of career exploration."

3. CONCLUSIONS

Of the 77 unsuccessful applicants surveyed, 40 percent persisted and ultimately became physicians. A similar situation is highly unlikely today. This statement is made on the basis of personal experience. The large number of well qualified applicants each year mitigates against the possibility of ever increasing one's chances, once one has been rejected.

The high degree of job satisfaction evidenced by the individuals in health-related careers supports Super's theory that individuals choose occupations that are compatible with their self-concept. This undoubtedly is the reason for the persistence to gain entrance into a health profession and for the high degree of job satisfaction in a stable career.

The occupational conditions and characteristics that were perceived to be important by the respondents are certainly compatible with the health professions. For this reason, unsuccessful applicants should expect a high degree of job satisfaction in one of the health professions.

The fact that college graduates did not feel that their alma maters were of any help in securing jobs is indeed discouraging. It may be, however, that advice and counseling were not perceived as a direct aid in securing a job. In other words, if a job contract is not waiting at the end of the graduation line, then the graduate may not acknowledge any benefit from the institution.

4. RECOMMENDATIONS

The major recommendation to be made on the basis of this study is that pre-medical advisors and others who counsel rejected medical school applicants should continue to urge them to select alternative careers in the health professions. This study has demonstrated that the individuals who followed this plan have been more satisfied with their work than either their classmates who became physicians or the ones who entered non-health related occupations.

Sherlock and Cohen in 1966 stated that occupational choice involves compromise between reward preferences and opportunities for access to specific occupations. The specific occupation to which they made reference in this statement was dentistry. The individuals in this study who had their access to medicine blocked and who compromised and selected a health-related occupation have been shown to be well satisfied. Pre-medical advisors can feel assured that such advice to a rejected pre-medical student will be sound and will lead to a high degree of job satisfaction.

While many advisors have been sharing such advice and counsel for several years, no one has had any evidence that it was particularly good advice. The author has been encouraged that in some small way this study has demonstrated the worth of such advice.

In talking with the individuals who were interviewed, the author became aware of the need for students to be

identified as pre-medical students while undergraduates. Pre-medical students are not normally perceived by faculty members as majoring in any particular discipline; therefore, little if any interest is shown in them as individuals. Perhaps if a physician were advising the pre-medical students, this problem might be remedied.

Faculty advisors, professors, and college placement agencies apparently were not of any significant benefit to the rejected applicants. The role of these people and agencies should be re-examined as it relates to this study group. Perhaps the rejected applicant (1) is viewed as a failure and therefore is avoided, (2) is in most cases a recent graduate to which the institution does not feel an obligation, and (3) does not seek assistance. Whatever the reason may be, for the sake of alumni relations, institutions should make an effort to assist these individuals through advice, counseling, and placement.

5. RECOMMENDATIONS FOR FURTHER STUDY

A study of similar nature to this one should be undertaken in order to test (1) a larger population, (2) a more diverse population (i.e., from other institutions), and (3) a population that had been out of school for a longer period of time.

No attempt was made in this study to probe into the motivation or rationale for any of the decisions that were

made by the rejected applicants. Such a study would certainly provide very helpful information for pre-medical advisors.

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APPENDICES

APPENDIX A

APPENDIX A

QUESTIONNAIRE

List below the names, locations, dates, and degrees (if any) of all undergraduate, graduate, and professional schools that you have ever attended. List the schools in the order in which you attended them. (Exclude schools in which you attended only a summer session.)

Name	Location	Dates	Degrees

Aside from the degrees which you now hold, do you anticipate receiving any graduate or professional degree in the next few years? (Check one)

NO. . . . . _____
MAYBE . . . . . _____
**YES . . . . . _____

** If "YES," what degree? _____
In what field? _____

List below all the occupations at which you have been employed on a full time basis since you received your bachelor's degree. (Exclude periods of full time study, short-term military service, or times when you were unemployed or between jobs.)

1st job _____ 5th job _____

2nd job _____ 6th job _____

3rd job _____ 7th job _____

4th Job _____

Which was the single most helpful source responsible for you obtaining each of the jobs which you have held?

	1st	2nd	3rd	4th	5th	6th	7th
College placement office							
Faculty advisor or professor							
Direct personal application							
Private employment agencies							
State employment services							
Family-contacts							
Personal friends							
Want ads							
Professional societies of contacts							
New employer contacted me directly							
Other (Please specify:_____							
_____							

ADDRESS _____

NAME _____

If you are currently employed at a full-time job, how satisfied are you with each of the following aspects of your job?

	Very Satisfied	Satisfied	Dis-Satisfied	Very Dis-Satisfied
1) Salary and fringe benefits	____	____	____	____
2) Hours (length and flexivility)	____	____	____	____
3) Your boss or supervisor	____	____	____	____
4) Amount of paper work	____	____	____	____
5) Your freedom to make decisions and to initiate actions	____	____	____	____
6) Amount of time dealing with patients or clients directly	____	____	____	____
7) Opportunity for tasks that genuinely interest me	____	____	____	____
8) Amount of job security	____	____	____	____
9) Prestige value of my job	____	____	____	____

Contrasted with your college classmates would you say that your career had been more successful?

Definitely Yes	Probably Yes	Probably No	Definitely No
____	____	____	____

In the next three years do you think you will change to another occupation:

Definitely Yes	Probably Yes	Probably No	Definitely No
____	____	____	____

Below are some characteristics of different occupations. Please indicate the importance each is-was for you in considering prospective careers.

	Essential	Very Important	Somewhat Important	Not at all Important
1) Opportunity to be helpful to other people	____	____	____	____
2) A high income	____	____	____	____
3) Chance to be creative	____	____	____	____
4) Relaxed atmosphere with few pressures	____	____	____	____
5) Time to devote to raising my family and being attentive to spouse's needs	____	____	____	____
6) Chance to achieve prestige	____	____	____	____
7) Freedom from direct supervision in my work	____	____	____	____
8) Chance to contribute to an area of scholarship	____	____	____	____
9) Chance to work in an unstructured setting, with flexible hours	____	____	____	____
10) Opportunity to help solve social problems	____	____	____	____
11) Working with people rather than things	____	____	____	____
12) Working on health-related problems	____	____	____	____
13) Financial security	____	____	____	____
14) Stimulation of intellectual challenge	____	____	____	____
15) Seeing concrete results of my work, for which I get credit	____	____	____	____

Which of the above was most important to you? Give no. of item ____

What was your father's (or step-father's or guardian's) occupation when you graduated from high school? _____
Mother's (or step-mother's)? _____

APPENDIX B

APPENDIX B

THE UNIVERSITY OF TENNESSEE
COLLEGE OF LIBERAL ARTS

KNOXVILLE 37916

FFICE OF THE DEAN

May 25, 1973

You may be aware of the current emphasis by the federal government on career education, made more critical by the current state of the job market. Although the College of Liberal Arts is less "career oriented" than the other colleges of The University of Tennessee, we naturally want to do all we can to assist students in moving educationally toward their vocational goals. With this in mind we are surveying a number of graduates of the College relative to the relationship between their educational preparation as undergraduates and their current career pattern.

We would be very pleased if you would assist us by completing the enclosed questionnaire, which has been prepared by a member of the staff of the Liberal Arts Advising Center, and returning it as soon as possible. Thank you in advance for your help.

Sincerely yours,

Boyd L. Daniels
Assistant Dean for
Student Academic Affairs

BLD:dcm

Enclosure

APPENDIX C

APPENDIX C

SPECIFIC OCCUPATIONS OF RESPONDENTS

Occupation	Number
Physician	12
Dentist	4
Research Biologist	1
Pharmacist	1
Clinical Professor - Pathology	1
Industrial Hygienist	1
Research Assistant in Social Sciences	1
Manager, Market Research	1
Banker	1
Computer Programmer	2
Insurance Sales	1
Manager, Public Relations	1
Computer Specialist	1
University Administrator	1
Attorney	1

VITA

William Griffin Crump, son of William Benton and Mary Elizabeth Crump, was born on March 30, 1938, in Nashville, Tennessee. He attended Issac Litton High School in Nashville. In the fall of 1956, he entered The University of Tennessee, Knoxville, and tranferred to George Peabody College for Teachers in Nashville where he received his Bachelor's degree in 1962 with a major in biology.

Following his graduation from George Peabody College, he began a teaching career with Shelby County Schools. He served in this capacity for five years. While teaching in Shelby County, he earned a Master's degree in Education from Memphis State University. This degree was awarded in August, 1970.

In January, 1967, he assumed a position with The University of Tennessee Medical Units in Memphis as the Assistant Director of Admissions. In the fall of 1971, he took a leave of absence from his position with the Medical Units in order to pursue a Doctor of Education degree at The University of Tennessee, Knoxville. During this time he served as a Professional Assistant in the University of Tennessee Evening School.

Following two years of study in Knoxville, he returned to the Shelby County School System as a science teacher.

In December, 1978, he received his Doctor of Education degree with a major in Educational Administration and Supervision.