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STUDENT CHARACTERISTICS ASSOCIATED WITH INTEREST
IN STUDYING UNDERGRADUATE PSYCHOLOGY

A Thesis
Presented to
the Faculty of the Department of Psychology
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Jerry T. Lawler
December, 1990

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ABSTRACT

STUDENT CHARACTERISTICS ASSOCIATED WITH INTEREST IN STUDYING UNDERGRADUATE PSYCHOLOGY

by Jerry T. Lawler

This study analyzed an extant body of data consisting of a survey of 437 psychology majors at San Jose State University. The literature on student motivation of undergraduate psychology majors suggests that: (a) females choose psychology more for vocational reasons than men; (b) females, more than males, intend to use psychology in a helping profession; and (c) scholastically superior psychology majors tend to be more interested in the scientific dimensions of the discipline than its applications. These hypotheses were tested by chi-square analyses but in each case the factors were found to be independent of each other. In addition, the relationship of seven student characteristics to two motives for entering psychology (vocational interest vs. interest in psychology as a liberal art) was studied using two-group discriminant analysis. Only one variable, ethnicity, was shown to differentiate between the two motives, Hispanics being more likely than Caucasians or Asians to be interested in psychology as a liberal art.

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Student Characteristics Associated With
Interest In Studying Undergraduate Psychology

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Running Head: Psychology Curriculum

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Student Characteristics Associated With

Interest in Studying Undergraduate Psychology

Finding the best way to structure an undergraduate psychology curriculum is a question that has concerned educators for over four decades. This controversy has continued during a period of growth and flux in the field. Many commentators have noted psychology's rapid expansion as a discipline and its increasing complexity. McGovern and Hawks (1986) describe the social and historical forces which have influenced the discipline and the internal struggles which shaped its current identity. Harper (1982) noted the increase in American Psychological Association divisions from 15 in 1947 to 37 in 1981. During roughly the same period the number of courses offered to undergraduates increased 519% (Lux & Daniel, 1978).

A debate about the content of the psychology curriculum has emerged from this increased complexity. Should students in psychology be trained as scientists or for specific applied postbaccalaureate professions? As early as 1945 the University Commission to Advise on the Future of Psychology at Harvard debated the issue of whether psychologist/practitioners should be trained in a liberal arts setting (Gersoni, 1970). Since then, three well known comprehensive

studies (Buxton, Cofer, Gustad, MacLeod, McKeachie, & Wolfe, 1952; Kulic, 1973; McKeachie & Milholland, 1961) have addressed the growing tendency of psychology to offer more specialized tracks designed for specific applied postbaccalaureate vocational settings. All reaffirmed the concept of psychology as a liberal arts discipline equipping the student with generic scientific skills for a lifetime of inquiry. Kulik (1973), for example, describes psychology's role as that of educating the "free man" who "...thinks without prejudice, creates without destruction, cares without obsession, conceptualizes without distortion, and knows and understands" (p. 201).

The present research examines the students at San Jose State University who have chosen psychology as a major. What can be said about their characteristics when compared to their apparent interests in the discipline?

There have been several studies which related student interest in psychology to student characteristics. Gender appears to be associated with the selection of psychology for vocational vs. non-vocational purposes. Quereshi, Brennan, Kuchan, and Sackett (1974) found high interest in applied areas of psychology and little interest in statistics among 167 undergraduates. There were significant

differences between males and females. Women more than men selected psychology for occupational goals, although the specific occupational objectives were not reported. More recently, McGovern and Hawks (1986), using Mann's (1982) conceptual model, surveyed 260 undergraduate students. Women, more than men, were found to prefer elements of their training that would prepare them for helping professions, including learning about the psychology of women, receiving the best preparation for graduate school, and getting practical experience in an applied setting. More than men, they preferred work in a community mental health setting and preferred working with the elderly or with children.

A further area of difference involved scholastic achievement. McGovern and Hawks (1986) found that students with grade-point averages (GPAs) of 3.5 and above held the same preference for clinical/practitioner vocations but mirrored more closely the faculty valuation of the importance of understanding the scientific principles of behavior, learning statistical methods, writing well, and being able to read research critically.

Thus, two characteristics of students, gender and scholastic achievement, can form the basis for hypotheses that can be tested with our data: (a) female undergraduates

majoring in psychology select the discipline more for vocational reasons than men, (b) female undergraduates majoring in psychology are more interested in applying their training to helping professions than are males, and (c) students with a GPA of 3.5 and above are more associated with interest in the scientific aspect of the discipline than other students.

These hypotheses address a specific student characteristic which may distinguish two categories of psychology students (liberal arts versus professional preparation), as discussed by McGovern and Hawks (1988). Since additional data were collected in the San Jose State Psychology Department survey that might further describe the type of student drawn to these two interest dimensions, I expanded the analysis beyond gender and GPA to include class, ethnicity, educational background, work status, and age. Does a linear combination of any of these, along with GPA and gender variables, signal membership in either of the two groupings? For purposes of this analysis, liberal arts students were defined as those pursuing breadth instead of specialization and general research skills which transcended any particular applied setting. In the context of psychology, this definition describes students interested in

the discipline as a science.

Method

Subjects

The sample consisted of 437 psychology majors who were enrolled in at least one psychology class in the fall of 1988. The sample was 73.2% female. The two largest minority groups were Chicano/Mexican/Mexican-American (7.4%) and Asian (5.6%). The sample mirrored the university population, with the largest group (42.8%) being in the 21-25 age group, but with a substantial number (21.6%) age 31 or above. Half (49.0%) attended junior colleges prior to coming to the university, and most of the remainder (30.0%) came directly from high school. Scholastically, the majority had GPAs between 2.5 and 2.9 (32.4%) or 3.0 and 3.6 (42.4%).

Design and Procedure

The survey document consisted of 22 multiple-choice questions and 5 open-ended write-in questions (see Appendix A). The multiple-choice questions focused on student demographic characteristics, status, career aspirations, and preferences for various class times and calendar days. The open-ended questions elicited opinions on the need for additional courses and concentrations not currently offered

and general attitudes about the performance of the Psychology Department in meeting educational needs.

In all, 49 of the 62 psychology classes and all of the 11 statistics sections responded. This response represented courses in which 2,213 students were enrolled; a total of 1,827 (82.6%) responses were received (the difference represents either students who dropped the class following the eight-week cutoff when total enrollment was calculated or students who were absent when the survey was administered). Because of the variety of reasons a student may be absent on a particular day, there was no reason to suspect that the respondents represented a biased sample. Of the 1,827 replies, 293 (16.0%) were duplicates, leaving a total of 1,534 unique responses for analysis.

Students entered the answers to the multiple-choice questions on an optical-scanning answer sheet. Following a review of the form to assure data were properly marked, forms were scanned and sorted by student Social Security number and purged of duplicate responses. In purging the duplicates, the first duplicate was dropped unless another duplicate contained additional data not entered on the first, such as sex, class level, or course number. The analysis focused on the 437 students who listed psychology

as their major.

Results

The data set consisted of 10 variables. Students were asked to declare their concentration among five choices: (a) general, (b) biological/cognitive, (c) developmental/social/personality, (d) clinical/counseling, and (e) industrial/organizational. Students also listed five career goals which included: (a) clinical/counseling, (b) academic, (c) other applied business, (d) research, and (e) other. Students were also asked for their educational goals among four choices, which included: (a) a BA in psychology, (b) an MA in psychology, (c) a PhD in psychology and, (d) an advanced degree in another discipline. Each student's GPA range and gender were identified, as well as five age ranges, four educational backgrounds, nine ethnic categories, five ranges of outside work hours, and four class levels.

Three potentially relevant variables, which described additional courses or concentrations desired by the students and the student's minor, were dropped. Response frequencies for new courses and concentration questions were too small (35.0% and 30.4%) and the number of categories for each response too large (29, 43, and 49) to provide sufficient

data for analysis. Furthermore, only a few responses in these variables could be unambiguously related to the student characteristics of interest.

A copy of the survey document (which describes the levels or categories of each variable) appears in Appendix A. The set of 10 variables consisted of one dichotomous variable (sex), five categorical variables (ethnicity, prior educational setting [origin], career goal [career]), educational goal, and concentration), and four ordinal variables (age, GPA, class, and outside work hours).

Of the categorical nondichotomous variables, origin was dichotomized into two groups: those with no prior college experience and those with some college. This merged two responses: students who came from two-year colleges and students from four-year schools. It was felt the division between two-year and four-year college groups, where years attended, course load, and prior major are unknown, was not meaningful. The "other" category in this question was dropped, since there was no information to explicate the meaning of this response. The transformed categories provided a more meaningful discrimination between students with and without postsecondary educational experience.

The ethnic variable was constructed to conform to the

university-wide standard for classification of ethnicity. There were frequencies of less than 10 in all categories except "white" (286), "Chicano/Mexican/Mexican-American" (29), and "Asian" (22). The "other Hispanic" category (containing 9 students) was added to the Chicano/Mexican/Mexican-American category to create a relatively homogeneous grouping. The remaining groups, "black nonHispanic" (9), "Pacific Islander" (3), "Filipino" (9), and "other" (5), could not be grouped in any meaningful category, so were dropped from the analysis.

Following these adjustments, kurtosis and skewness were checked for each of the noncategorical and dichotomous variables and were found to be minor. The most highly skewed variable was the transformed variable of origin (-.716), reflecting the 67.7% of our students having some college prior to coming to San Jose State.

Although all variables contain some missing data, the percentage of missing data was less than 2% for all variables except ethnicity (18.1%), class (9.8%), and sex (5.0%). Missing responses for class and sex were probably the result of the survey procedure. These questions were not asked on the survey document, but were standard questions incorporated into the answer sheet and therefore

were sometimes overlooked by respondents. There is no reason to believe that this oversight was not random. The missing data for ethnicity consisted of one out-of-range code, 11 students who responded "decline to answer," and 79 missing responses. Of the 79, 34 were coded missing by the researcher as impossible to interpret. This occurred because the ethnicity question, since it contained 10 possible choices, had to span two five-answer questions. These 34 students apparently misunderstood the instructions and answered both questions thus indicating two ethnicities. The remainder represented students who did not answer the question (11) or students in the infrequent categories dropped by the researcher (34). Only the ethnic variable may have caused a systematic distortion of the data set since it was possible more minorities than nonminorities chose not to disclose their race. Since the ethnic variable is a vital one, I chose to include it and qualify the results of the analysis with the possibility of the ethnic variable not being truly representative of the population.

Hypothesis One: Gender and Vocationalism

For the first hypothesis (females select psychology as a major more for vocational reasons than men), I classified students by gender on one dimension and by a combination of

concentration and educational goal on the second. The latter consisted of two categories: (a) students who listed "general" as a concentration and sought only a BA degree and (b) all other students.

I did a chi-square analysis comparing expected versus observed frequencies across these two dimensions. The survey did not elicit direct responses to the students' intent to use psychology for a specific vocational goal. However, student statements regarding educational goal and concentration can be interpreted to indicate an absence of a specific vocational intent. There were eighty-four students who listed "general" as a concentration. Of these, 27 sought only a BA degree in spite of the need for an advanced degree for their declared career goals such as clinical/counseling (6) or teaching or research (5). It was possible that these students had specific vocational goals and were simply uninformed about the educational credentials needed. Their ignorance was indicative, however, of an absence of career planning that signaled an absence of care in career selection. There were seven who listed "other applied business" as a career goal with a BA indicating lack of vocational specificity. The remainder listed "other" as a career goal. As a group, these students expressed an

uncertainty about career plans which, when compared to their fellow students who expressed specific occupational goals and graduate school plans, could be meaningfully compared. Excluding missing responses to either the gender or vocational question, the sample consisted of 406 individuals.

The results of the chi-square test of independence is shown in Table 1 along with the results for hypotheses two and three discussed below (for all three analyses, all cells had expected frequencies of at least five cases and all chi-square statistics are after Yates' correction). As can be seen, the chi-square statistic was nonsignificant. Residuals were nonsignificant, and the value of the lambda indicating proportional reduction of error was zero, indicating neither of the variables was of any value in predicting the value of the other.

To test the concurrent validity of the measures, cross-tabulations were done on the two component elements of the vocational group to see how they were distributed over the responses to other questions (which might signal interest in vocational vs. nonvocational objectives). Those 56 students seeking a BA only were disproportionately represented in the "other" (10) and in the "other applied

Table 1

Results of Chi-Square Analyses for Hypotheses One, Two and Three

Hypothesis	n(%)	Expected/ (%)	Chi-Square	Sig.
Gender/Vocationalism			.057	.8111
Male/vocational	106(25.9)	105.0(25.7)		
Female/vocational	280(68.6)	281.0(68.9)		
Male/nonvocational	5(1.2)	6.0(1.5)		
Female/nonvocational	17(4.1)	16.0(3.9)		
Gender/Healing			1.333	.2483
Male/healer	47(11.6)	52.7(12.4)		
Female/healer	144(35.5)	158.3(37.2)		
Male/nonhealer	65(16.0)	59.3(13.9)		
Female/nonhealer	150(36.9)	155.7(36.5)		
GPA/Scientist			.00	1.000
High GPA/Scientist	5(1.3)	5.0(1.3)		
Lower GPA/Scientist	38(10.1)	38.0(10.1)		
High GPA/Professional	39(10.4)	39.0(10.4)		
Lower GPA/Professional	293(78.1)	293.0(78.1)		

business" (19) categories of the career interest question. These same students were disproportionately represented in the "general" category of concentration (24). While the question about career goals did not provide an "unknown" response option, the "other" response option probably captured most of the students who were uncertain, since the alternate responses pointed to specific vocations. This high frequency along with the high frequency of BAs in a general concentration would point to reasonably good concurrent validity for this measure.

Of the 80 students declaring a "general" concentration, more (24) sought a BA than any other type of degree. Only 10 students were expected to fall into this cell. These students were also disproportionately represented in the "other" category of the career goal question (22 where only 9 were expected). Since both measures alone signaled vocational uncertainty, their combination was probably a fairly good measure of this characteristic.

Hypothesis Two: Gender and Healing Orientation

I tested the second hypothesis (female psychology majors are more interested in applying their training to helping professions than males) with a chi-square analysis. The interest domain of helping professions was simulated by

grouping students together who both displayed a current interest in working with people and anticipated a career in a helping profession. The 187 students seeking advanced degrees and listing "clinical/counseling" both as a career goal and a concentration formed this group, and all other students were placed in the other group. Students currently interested in clinical work and planning careers in this field were viewed as intent on entering a helping profession in an applied setting and could be meaningfully compared with all other students. The limitation of this group to advanced-degree students further refined it by excluding students who had career and educational goals which were discordant. The frequency of occurrence of males and females in this group in relation to the expected frequency based on the population (73.2% female versus 26.8% male) tested the McGovern and Hawks (1986) contention that this group should be disproportionately female. Excluding missing responses to the gender, advanced degree, or concentration questions, the sample equaled 406 individuals.

As can be seen from Table 1, there was very little difference between observed and expected frequencies resulting in a chi-square of 1.33, $p = .2483$. As with hypothesis one, residuals were nonsignificant and the value

of lambda was zero.

Concurrent validity of the healing measure was assessed by examining the distribution of the components (concentration and career aspirations of clinical-counseling) of the category against other possible responses to the two questions. Of the 217 students who declared a clinical/counseling concentration, the overwhelming majority (202) also aspired to a clinical career. Only eight anticipated an academic career, four a career in other applied business, and three in the other category. No student declaring a clinical/counseling concentration anticipated a career in research. These clinical/counseling concentration students comprised the vast majority of the 260 students seeking clinical/counseling careers. Only the small numbers in a developmental/social/personality (28) or a general (26) concentration might have been motivated by different goals.

Hypothesis Three: High Scholarship and Liberal Scientist Orientation

The third hypothesis (majors with a GPA of 3.5 and above are more interested in the scientific aspect of psychology than all other students) was tested by doing a chi-square analysis which classified students by GPA (3.5

and above against all others) on one dimension and career objective on the other. The latter dimension combined students listing "academic" or "research" as a career objective in one group, and students listing "clinical/counseling" or "other applied business" in the other. The declaration that one desires a research or academic career may not directly indicate interest in learning the scientific principles of behavior, but the literature generally supports this separation (e.g., Cupchik, Klajner, & Riley, 1984; Quereshi, Brennan, Kuchan, & Sackett, 1974). A comparison of the frequencies of high and lower GPAs of the applied group with the research/academic group provided a test of the hypothesis. The group which responded "other" to this question was dropped, as their career intentions were unknown. The sample size for this group, excluding missing responses to the GPA question, was 375.

For this analysis, observed and expected values exactly coincided, resulting in a chi-square value of .000, $p = 1.00$. In fact, a Pearson's product moment r between all levels of GPA and the two orientations was .0043. There were no other data in the survey to cross check the validity of hypothesis three. However, McGovern and Hawks (1986)

used the criterion of a GPA of 3.5 and above in their investigation. Since the San Jose State survey asked for responses in a slightly different range (3.7 and above), an additional chi-square analysis was done grouping the two highest GPA categories (3.0 to 4.0) and comparing observed versus expected frequencies against the two career groups. Again, the observed values almost exactly duplicated the expected ones, producing a chi-square of .000 with a significance of $p = 1.0$. Apparently, scholastic achievement as measured by GPA and interest in psychology as defined by the two groups are independent of each other in our sample.

Hypothesis Four: Multiple Student Characteristics and Membership in Liberal Arts/Professional Preparation Groups

The more general hypothesis (does a linear combination of a student's gender, GPA, educational background, work status, ethnicity, class, and age describe membership in either the liberal arts or professional preparation groups?) was tested with a two-group discriminant analysis. The independent variables included were those which, either conceptually or as a result of prior research, might signal membership in either group. Of the three potential grouping factors (career choice, concentration, and educational goal), career choice was selected as the best criterion for

grouping students. Although a student's educational goal may parallel interest or indifference to learning scientific principles of behavior, this cannot be assumed. Halgin (1986), for example, pointed out how misinformed many undergraduates were about the degree of research emphasis in the PhD programs they were planning to enter. Furthermore, the proportions of our majors aspiring to an advanced degree requiring research (67.7%) is at odds with literature showing the relative unpopularity of research as an undergraduate topic (e.g., McGovern & Hawks, 1986). There is no assurance that our students aspiring to PhD or MA programs are attracted by the prospect of research.

The student's concentration did not provide categories that could be related unambiguously to the liberal arts/professional-preparation split. Students declaring clinical/counseling or industrial/organizational concentrations may be drawn to either orientation. The declaration of a general, biological/cognitive, or social/developmental/personality concentration, though not suggesting a vocational track, does not necessarily imply interest in science per se. Many of these students may be pursuing the self-knowledge motivation proposed by Mann (1982).

The career choice of either "academic" (35) or "research" (11) provided the best measure of student interests in liberal arts as opposed to vocationalism. Their relative infrequency is more in agreement with the relative popularity of the two dimensions in the literature. While some may be naive about the research responsibilities of teaching, it was assumed that exposure to faculty in multiple courses and experience in faculty or graduate research projects had acquainted many with this aspect of the profession. I merged the two vocationally-oriented careers (clinical/counseling and other applied business) as the second group and dropped the nebulous category of "other." The two-group discriminant analysis explored the association of the seven variables with these two groups.

The three-category ethnic variable was transformed into two dummy variables: (a) Asian and all other was coded 1 and 0, and (b) Hispanic and all other was similarly coded. The three categories were thus quantified so their contribution to a discriminant function could be assessed both collectively and individually.

The objective of the analysis was to derive a descriptive model for the assignment of students to one of the two groups and test the adequacy of the model. Stepwise

entry of variables was used, as there was no a priori knowledge of which variables would prove important and which extraneous. The Wilks method of entry was used, as Wilks' lambda was used in evaluating statistical significance.

The size and distribution of the data set appeared to be adequate. Skewness and kurtosis of the predictor variables was slight and robustness of multivariate normality was expected since there were at least 20 cases in the smallest group with only a few predictors, even with unequal n , and there were more cases than predictor variables in every cell (Tabachnick & Fidell, 1989, pp. 377-378).

Scatterplots of each predictor variable against all others revealed no serious curvilinearity. Only one variable, GPA, contained univariate outliers (which were defined as cases having a standardized score outside the bounds of ± 2.58). Twelve cases had standardized scores of -2.69 , representing those students reporting a GPA of from 0 to 1.9. These cases were extreme due to the preponderance of students reporting GPAs in the three highest categories. Since these scores represented a valid segment of the population under study, and, since none of the cases showed a pattern of extreme scores across variables, it was decided

to leave all 12 cases in the study.

The 10 cases showing the most deviant Mahalanobis' distance within the professional preparation group ranged from a low of 5.39 to a high of 9.91. Inspection of the values of the predictor variables for these cases revealed that 9 of the 10 cases also had a value of "1" on the GPA variable. There was no pattern of extreme values for the other variables. The 10th case, having the lowest deviancy of 5.39, was a Caucasian senior male working 40 or more hours per week, age 31-50, with a GPA of between 2.0 and 2.4, and transferring in from another college. The relatively rare combination of age and work made this case unique but, because of the relatively modest deviancy, the case was retained. Since the same factor that made the other cases univariate outliers made them deviant here, they were retained as well.

The Mahalanobis' distances for the liberal arts group were more modest with only one case exceeding 3.0. Case number 16 (5.03) was a junior Hispanic male, over 51 years of age, working 26 to 39 hours per week, maintaining a GPA of between 2.0 and 2.4, and transferring from another college. The extreme values on ethnicity and age made this case unusual. However, its modest value did not suggest

undue influence on the analysis. With df of six at $p = .001$, only chi-square values of 22.5 or greater would indicate undue influence (Tabachnick & Fidell, p. 97), so the case was retained in the analysis. Box's M test was nonsignificant at $p = .16$, indicating robustness to homogeneity of covariance matrices, even with the uneven sample size of the two cells.

The two-group stepwise discriminant analysis was run using 435 total cases. A total of forty-seven cases were excluded for missing or out-of-range values for the grouping variables, and 56 cases had at least one missing discriminating variable. Six cases were missing both. The final sample was 326 cases, 40 in the liberal arts group and 286 in the professional-preparation group.

In step one, Hispanic entered the equation with an F to enter of 9.60 ($p = .002$) and a univariate lambda of .971. No further variables entered the equation. None of the remaining variables in combination with Hispanic would improve on the Wilks' lambda for the model. Examination of the means of the predictor variables confirmed that all but the two ethnic categories were nearly equal. A chi-square analysis comparing the observed vs. expected frequencies of the two ethnic categories revealed the Hispanic variable to

be significant ($p = .043$) but the Asian variable non-significant. Seven of the 28 Hispanic students were in the liberal arts group, a higher number than would be expected.

A standard discriminant analysis was also run. Canonical correlation was a low .1926 and the chi-square of Wilks' lambda was nonsignificant ($p = .1470$). It appears that the null hypothesis that there is no linear combination of the identified variables which signals membership in one of the two defined career interest groups in our sample cannot be rejected. At most, a single variable, Hispanic, may be more prevalent in one group than in the other.

Discussion

As none of the null hypotheses could be rejected, it appears that, in our sample, gender of a psychology major is not associated with selection of a career for either occupational or healing interest, nor does high scholastic achievement of psychology majors appear associated with interest in liberal arts as opposed to professional preparation. There also appears to be no linear combination of the variables included which point to membership in the liberal arts or professional-preparation groups.

Quereshi (1988) suggested that females more than males select psychology because of specific occupational plans.

However, the proportion of males and females in the occupational and nonoccupational group in the present study appeared independent. Quereshi's study was an alumni survey based on graduate psychology majors' responses across the period 1973 to 1983. Thus, it does not parallel the present study. The passage of time may influence reported attitudes toward what were the alumni opinions of the utility of psychology in their occupations. Or, the completion of a psychology major may have differentially reinforced occupational motivation of females more than males. Additionally, the present study may not have isolated the students who had little occupational interest in psychology. For example, the students who chose social/developmental/personality concentrations were placed in the occupationally-oriented group. In addition, the declaration that a student desired a graduate degree placed him in the occupational group even though the high percentage of students in our study aspiring to graduate degrees appears unrealistic. There was no way to isolate those students whose aspirations to an advanced degree may have been whimsical. To study the occupational intent of students in choosing psychology would require a survey geared to this specific question. An alumni survey could gauge how

realistic this motivation turned out to be in terms of the students' postgraduate experience.

It was surprising that hypothesis two did not show a disproportionate number of females interested in using their psychology training in a healing profession. Although our sample mirrored previous research indicating that the overwhelming number of psychology students were interested in using their training for applied areas, there was no difference by gender in our sample. It has been suggested that the disproportionate number of women interested in psychology as a healing profession reflects the ethic of care seen in other professions dominated by women (e.g., Gilligan, 1982). What the present survey may indicate is that, at San Jose State, the ethic of care may continue to predominate in psychology, but it is no longer a woman's exclusive domain. It is also possible that the measures of interest in healing in the present study were not valid, that is, that the selection of a clinical concentration and career does not signal an interest in healing or does so only for a subgroup of the sample. McGovern and Hawks (1986) research was based on expressions of interest by psychology majors in 19 subject areas in psychology and work in 19 specific postgraduate settings. Our sample may have included

students who were interested in administration in a clinical setting, applied research, or simply in the large incomes often earned by clinical psychologists and master's level clinicians.

A similar question can be raised about the motivations of the students in the liberal arts group. In the McGovern and Hawks (1986) research, students grouped in this category had listed as important such specific subjects as learning statistical methods, knowing how to write a scientific paper, and learning how to evaluate scientific research in psychology. In the present study, it was necessary to infer that the student held these values from the selection of a career choice. Many other motivations for career selection may have confounded this measure, including the perceived lifestyle of teachers and researchers, personality factors, and family influences.

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Appendix A:

PSYCHOLOGY DEPARTMENT STUDENT QUESTIONNAIRE

The Psychology Department is interested in finding out just who our students are and how well we are meeting their needs. This questionnaire will be given to all students in all psychology classes annually. It will allow us to more sensibly schedule classes, determine how many sections are necessary, and to plan for new courses and study concentrations.

DIRECTIONS:

IDENTIFICATION INFORMATION ON LEFT SIDE OF ANSWER FORM:

NAME, CLASS, SEX, & SS#: Enter as usual

COURSE ID: Enter the catalogue number of this course in the first three columns (e.g., Introductory Psychology would be 001, Introduction To Statistics would be 095, and Abnormal would be 110). Enter the section number of the class in the remaining two columns (i.e., 01).

TEST FORM: Enter the two digits which represent your major. See page 5 and 6 for the list.

TEST NO: Using the same system, enter your minor (or second major). If you have not declared a major or minor as yet enter 00 on both columns.

NOW PLEASE TURN THE PAGE AND MOVE TO NUMBERED ITEMS

1. Your age:
 - a. 17-20
 - b. 21-25
 - c. 26-30
 - d. 31-50
 - e. 51+

- 2 & 3. Your ethnic identity:
 - 2a. American Indian or Alaska Native
 - 2b. Black non-Hispanic
 - 2c. Chicano, Mexican, Mexican-American
 - 2d. Other Hispanic
 - 2e. Asian
 - 3a. Pacific Islander
 - 3b. White, non-Hispanic
 - 3c. Filipino
 - 3d. Other
 - 3e. Decline to state

4. From where did you enter San Jose State?
 - a. entered as a freshman-directly from high school or transfer in with fewer than 10 semester units
 - b. transferred from a community college with 10 or more units.
 - c. transferred from a 4-year college with 10 or more units.
 - d. other

5. The average number of units you take each semester:
 - a. 1-5
 - b. 6-9
 - c. 10-12
 - d. 13-15
 - e. 15+

6. How many hours per week do you put in at your place of employment?
 - a. 0
 - b. less than 10
 - c. 10-25
 - d. 26-39
 - e. 40 or more

7. How many units of college work have you completed (not including work this semester)?
- 0-29
 - 30-59
 - 60-89
 - 90-120
 - 120+
8. What is your current overall GPA?
- 0-1.9
 - 2.0-2.4
 - 2.5-2.9
 - 3.0-3.6
 - 3.7-4.0
9. What time did this class begin?
- before 10am
 - 10am - before noon
 - 12 - before 3pm
 - 3pm - before 5pm
 - after 5pm
10. When does this class meet?
- MWF
 - T-TH
 - One day per week
 - other

Rate each of the following questions using this scale:

A	B	C	D	E
Strongly Prefer	Prefer	No Preference	Dislike	Strongly Dislike

- 7:30 am classes
- Later morning classes
- Early afternoon classes
- Late afternoon classes (starting at 3:00 to 4:30 p.m.)
- Early evening classes (starting between 5:00 and 6:00 pm)
- Evening classes (starting after 6:00)

17. Which do you prefer (check one)?
- a. 3 1-hour classes on one day
 - b. 1 half-hour class on two days
 - c. 1 1-hour class on three days
18. Which do you prefer (check one)?
- a. Tues-Thurs classes
 - b. Mon-Wed-Fri classes

If you are not a psychology major, please skip items 19-22 and go on to items 23-26.

19. What are your ultimate educational plans?
- a. B.A. in psychology
 - b. M.A. in psychology
 - c. Ph.D. in psychology
 - d. advanced degree in another discipline
20. What are your career goals?
- a. clinical/counseling setting
 - b. academic setting
 - c. other applied/business setting
 - d. research only
 - e. other
21. What is your chosen psychology major concentration
- a. general
 - b. biological/cognitive
 - c. developmental/social/personality
 - d. clinical/counseling
 - e. industrial/organizational
22. Is program of study (skills and knowledge to be acquired) associated with each of these concentrations understandable to you?
- a. yes
 - b. no

ALL STUDENTS PLEASE COMPLETE THE FOLLOWING QUESTIONS ON THE BACK OF THE ANSWER FORM (please number your answers).

23. Please list any concentrations which the Psychology Department is not offering which you would like it to offer.

24. Please list any psychology courses you have been unable to get into because all sections were full.
25. Please list any courses you were unable to take because of when they were scheduled.
course preferred time
26. Please list any courses the Psychology Department is not offering which you would like it to offer.
27. Any additional comments? (answer on back of answer form.)