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BLACK FRESHMEN: A STUDY OF ACADEMIC SUCCESS AND PERSISTENCE ON PREDOMINANTLY WHITE UNIVERSITY CAMPUSES

The University of Oklahoma PH.D. 1984

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

BLACK FRESHMEN: A STUDY OF ACADEMIC SUCCESS AND PERSISTENCE ON PREDOMINANTLY WHITE UNIVERSITY CAMPUSES

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

ROBBIE JEAN STEWARD

Norman, Oklahoma

1984

BLACK FRESHMEN: A STUDY OF ACADEMIC SUCCESS
AND PERSISTENCE ON PREDOMINANTLY
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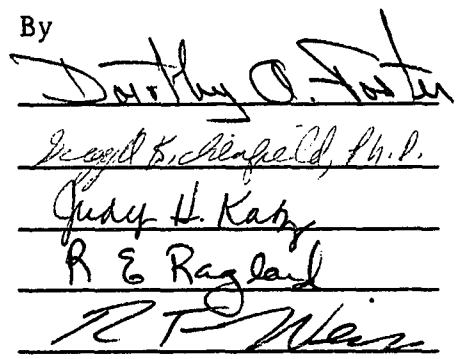

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The time suddenly seems to have passed quickly and smoothly and yet reality is that my last 4 years as a doctoral student were filled with many emotional highs and lows which sometimes seemed to alternately flow in rapid succession. However, I have survived, which satisfies not only my goal to earn a doctorate degree in Counseling Psychology, but also my need to meet and overcome any challenge. I only thank God that not once did I experience neither the highs nor lows alone. No matter what the event, I always found myself surrounded by others who were sharing, supportive, and encouraging.

Each of my committee members positively contributed to my sense of well-being and success during the development of my dissertation research design as well as throughout the program. Dorothy Foster was always more than exemplary in fulfilling her roles as mentor, chairperson, and friend. During periods of self-doubts, Dorothy's encouragement, support, and faith in me never seemed to dwindle. Her dedication to working closely with me during all parts of developing and com-

pleting my dissertation was quite evident and appreciated. For all this, I will forever respect, be grateful to and cherish Dorothy as a person and professional.

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instrumental in the completion of my doctorate degree. Cass Petre was literally a mother away from home. Her unceasing support and honesty, though sometimes difficult to accept, were always helpful in the end. Cass's goodness was a comfort. Her willingness to share herself with me will always be cherished.

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never wavered, nor my love for him. If there is anyone who deserves to share this degree, it is my huaband, a very special person and my dearest friend.

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ABSTRACT

This study examined the differences between academically successful and unsuccessful Black college freshmen enrolled in two predominantly White universities, the University of Oklahoma (OU) and the University of Texas (UT). It focused primarily upon attitudes and values, interpersonal relationship variables, and their interaction with demographic information and standardized test scores. Participants (N=56)) were Black college freshmen who lived on campus and who agreed to complete questionnaire packets that were distributed by resident advisors during second semester. Participants completed a Student Demographic Questionnaire (SDQ), 2 Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B), a Personal Competency Rating Scale (PCI), a University Alienation Scale (UAS), a Just World Scale (JWS), and a Perceived Support Network Inventory (PSNI). In general, the results of multiple regression analyses indicated (a) JWS scores and first year GPA were significantly and negatively correlated for OU students, (b) educational level of mother was significantly and positively correlated with first year

GPA for UT students, (c) a curvilinear relationship existed between size of hometown and first year GPA for UT students, and (d) neither SAT or ACT scores were significantly related to first year GPA. The discussion section explores possible explanations and implications that the results suggest.

BLACK FRESHMEN: A STUDY OF ACADEMIC SUCCESS AND PERSISTENCE ON PREDOMINANTLY WHITE UNIVERSITY CAMPUSES

CHAPTER I

INTRODUCTION

In spite of high attrition rates, enrollment of Black students in predominantly White universities continues to increase (Cortina, 1980; Crossland, 1971; Franklin, 1980; Sedlacek & Webster, 1978). Many arrive with backgrounds that have not prepared them emotionally, financially, or academically for the experience of coping with being Black in the predominantly White university setting (Carney & Barak, 1976; Mullinex, Fadden, Brach, & Gould, 1980; Westbrook, Miyares, & Roberts, 1978). However, research has found that Black students also bring a fierce determination and a belief that nothing will hinder them from attaining a degree (Antonowsky, 1967; Gibbs, 1973). This tenacity and determination may partially explain why Black students continue to enroll in increasing numbers in predominantly White institutions. However, it still remains somewhat unclear why Black

student attrition rates remain significantly higher in spite of the programs developed to aid Black students' adjustment to the majority White campus.

Three basic schools of thought have addressed the question of Black student attrition on predominantly White campuses. The first school is based on the inference of Black inferiority in relation to Whites. The well-known Jensen (1969) study found that Blacks scored lower on IQ tests than Whites. Ausubel & Ausubel (1963), Brazziel (1964), and McClain (1967) found that Black students scored higher than White students on characteristics considered negative by society: deference, shyness, group dependence, suspiciousness, and oversensitivity. Being different from White students was equated with being inadequate or inferior. Black students were identified as the problem.

The second school of thought identifies the racist, ethnocentric White system as the problem. Copeland (1978), Harper (1975), Jones (1980), and Smith (1979) proposed that Black students responded in unique ways in order to cope and adjust because they experienced college life differently, specifically identifying racial discrimination as the culprit. Several different interaction coping styles have been identified within Black student populations (Burbach & Thompson, 1973; Edwards, 1970;

Harper, 1975; Harrell, 1979). Studies have also shown that the validity and predictive value of standardized achievement tests substantially decreased when Black student results were evaluated by the predominantly White norms (Baggaley, 1974; Farver, Sedlacek & Brooks, 1975; Pfeiffer & Sedlacek, 1971 & 1974). This explanation advocates that differences between the two populations should be expected, not labelled as inadequacies or inferiorites.

From this second school of thought, researchers and student personnel have developed a flurry of recommendations concerning the necessary adjustments and changes that predominantly White universities should make to accommodate Black students. The programs most often implemented include: using White graduate students trained in racial empathy and sensitivity to tutor Black students (Gibbs, 1975; Pierce & Norrell, 1970); increasing Black faculty and staff along with including Black counselors in freshmen orientation (Boyd, 1974; Fields, 1970; Harrell, 1979; McClellan, 1970; Proctor, 1970); incorporating Black Studies Programs into basic curriculum (Cleveland, 1969; Hamilton, 1970; Rosser, 1971); and providing compensatory programs for high-risk students (Egerton, 1969; Greising, 1969; Jones, 1980; Williams, 1969). Despite these efforts, Black student attrition has remained dis-

proportionately high and in response the number of special programs and schools employing different admissions criteria for minorities are decreasing, having been labelled ineffective (Cleveland, 1969; Hilton, 1968; Proctor, 1970; Rosser, 1971; Sedlacek, 1977).

Having accepted that, given racial discrimination, Black and White students should display differences, the third school of thought attributes the ineffectiveness of existing programs to inaccurate and/or incomplete assessment of Black students' needs. Researchers of this third school have been reexamining earlier research in respect to current Black students while also studying Black students' needs. As in earlier studies, finances and lack of study skills continue to be identified as high sources of stress for all students, but, acutely so, for Black students (Carney & Barak, 1976; Fleming, 1981; Mullinex, Fadden, Brach & Gould, 1980; Westbrook, Miyares, & Roberts, 1978).

Comparing Black students at both predominantly White and predominantly Black universities and White students at a predominantly White university, Westbrook, Miyares, & Roberts (1978) reported that Black students at the predominantly White university showed lower ethnic unity and trust. Both Flemming (1981) and Gibbs (1973) found that Black students at predominantly White universities

reported more interpersonal tension with other studetns, both Black and White, than those enrolled in predominantly Black universities. Overall, Black students at predominantly White institutions were found to report more interpersonal stress than Whites at predominantly White institutions and Blacks at predominantly Black institutions.

This tension, arising from reported interpersonal stress, seems to further effect how Black students experience the university. Smith (1979) and Webster, Sedlacek, & Miyares (1978) indicate that Black students express more difficulty with feeling like victims of racism and racial discrimination than other groups. Research has also found that Black students attributed academic failure primarily to a sense of loneliness and alienation--powerlessness, meaninglessness, and social estrangement (Cortina, 1980; Goodrich, 1980; Smith, 1979; Suen, 1983). Smith (1979) also identified difficulty in adjustment to cultural and/or racial hostility from White faculty and students, lack of counseling help, scarcity of Black faculty models and poor communication with Black faculty. All of the above dilemmas appear to have resulted in Black students more acutely experiencing problems in areas of autonomy, sexual and aggressive feelings, low self-esteem, depression, and

long-range career plans (Baum & Lamb, 1983; Gibbs, 1973).

In response to the research results of the third school of thought, additional suggestions for program development areas have appeared: the improvement of minority selection and admissions procedures (Burlew, 1980; Farver, Sedlacek, & Brooks, 1975; Higher Education of Minorities, 1982; Tracey & Sedlacek, 1984); development of counseling methods to counteract students' mistrust, apathy, or hostility (Haettenschwiller, 1971; Vontress, 1968); and the teaching of skills that should aid in the students' being more effective in functioning in a White setting (Sedlacek & Brooks, 1976). However, very few of these programs have been implemented on a large scale basis and the problems generally remain.

Many questions remain unanswered about Black student success on predominantly White university campuses. Some researchers have found cognitive measures to be better predictors for Black student success (Dispenzierei, Giniger, Reichman, & Levy, 1971), while more current studies support the use of affective measures (Burlew, 1980; Tracey & Sedlacek, 1984). The Commission on the Higher Education of Minorities (1982) found academic performance in secondary school to be the best predictor of college success. Copeland (1978) found that amount of financial aid did not differentiate between those who

stayed in school and those who didn't. That study also found dropouts attended college for non-specific reasons more than stayers and that there were no class or sex differences between stayers and dropouts.

Much of the research has failed to address the diversity existing among Black students. Many times academic classification, belief and value systems, urban versus rural background differences, socio-economic background, sex, interaction styles, and geographic locations are ignored. The result of such research may be inaccurate overgeneralizations in terms of needs assessments and other characteristics. It would seem that a more comprehensive needs assessment technique would be necessary in order to develop more effective programs. Edmunds (1984) states that a needs assessment for Black students must examine personal, interpersonal, academic, career, environmental, and financial issues.

The present research was designed to examine the differences between academically successful and unsuccessful Black college freshmen enrolled in a predominantly White university. It will focus particularly on attitudes and values, interpersonal relationship variables, and their interaction with demographic variables and standardized test scores.

CHAPTER II

METHOD

Participants

The participants of this study were Black freshmen who lived in the dormitories on the University of Oklahoma and the University of Texas at Austin campuses. The population was limited to native born United States citizens whose college experience began the Fall 1983 semester. One-hundred fifty questionnaire packets were distributed.

Data Analysis

The study examined the relationships among the following: 1) Black/Black interaction 2) Black/White interaction 3) Social network variables 4) Perceived personal competencies 5) Degree of feelings of alienation from the university 6) Belief in a just world and 7) First year grade point average (GPA). The usual predictors of college success such as high school GPA and standardized college aptitude scores (ACT or SAT) were included along with demographic and family back-

ground information. Multiple regression analyses were employed to find the best set of variables for predicting first year GPA of Black freshmen on two predominantly White campuses.

Instruments

Each survey packet contained the following: the letter of introduction and explanation (Appendix B), Consent for Research Participation Form (Appendix C), the Student Demographic Questionnaire (SDQ) (Appendix D), the Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B; Schutz, 1967) (Appendix E), the Personal Competency Rating Scale (PCI; Paul, Pulton, Ostrow, Morrill, & Kochenor, 1981) (Appendix F), the University Alienation Scale (UAS; Burbach, 1971) (Appendix G), the Just World Scale (JWS; Rubin & Peplau, 1975) (Appendix H), and the Perceived Support Network Inventory (PSNI; Oritt, 1983) (Appendix I).

Student Demographic Questionnaire (SDQ): The SDQ was designed by the author and consists of 12 items addressing participants' personal and academic backgrounds (Appendix D). A question regarding the student's intent to reenroll the fall semester was also included.

Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B): The FIRO-B (Appendix E) consists of 54 Likert items reflecting three behavioral dimensions: inclusion, control, and affection. Inclusion assesses the degree to which a person associates with others; control measures the extent to which a person assumes responsibility, makes decisions, or dominates people; and affection reflects the degree to which a person becomes emotionally involved with others (Ryan, 1970). For each dimension, two scores, symbolized by "e" and "w", are obtained. The "e" score represents the person's expressed or manifest behavior. It is the overt, observable behavior. The "w" score represents what the individual wants from other people. Eighteen items correspond to each dimension, with scores ranging from 0 to 9. Higher expressed scores indicate higher frequency of behaviors related to inclusion, control, and affection. Higher wanted scores indicate greater needs for inclusion, control, and affection. Evidence for the instrument's validity is based on factor analysis. Estimation of reliability, as measured by a reproducibility score, is .94 for all six scales. The mean coefficient of stability (test-retest) for the FIRO-B over the six scales is .86.

Personal Competency Rating Scale (PCI): The PCI

(Appendix F) consists of 30 5-point Likert-type items designed to assess the extent to which individuals perceive themselves to possess competencies in four general areas: social, personal, problem-solving and functional.

The social subscale addresses interpersonal relationship abilities, including communication, assertiveness, interpersonal problem-solving, and intimacy. The personal subscale contains items reflecting an individual's abilities to adapt, plan, exercise self-control, cope with failures, manage anxiety, differentiate feelings, and enhance physical attractiveness. The problem-solving subscale examines problem-solving abilities including aspects of problem definition, alternative exploration, and resource organization. The functional subscale measures the functional competencies involving computational, reasoning, reading, writing and time-use. Each of the subscales has been found to add to the overall measure. The instrument has content validity, and reliability has been found to be .85.

University Alienation Scale (UAS): The UAS (Appendix G) consists of 25 5-point Likert-type items that are designed to measure components of alienation in college students with reference to the university setting. The construct validity is based on item-to-total analysis and factor analysis by correlating the UAS with

the Dean Alienation Scale (Dean, 1961) which measures feelings of alienation relative to society. The coefficients are .79, .89, and .72 for powerlessness, meaninglessness, and social estrangement, respectively. The corrected reliability for the total scale if .92. All scale items have been found to contribute to the measurement of the scale's general properties.

Just World Scale (JWS): The JWS (Appendix H) consists of 20 6-point Likert-type items that assess the extent to which an individual believes in a just world. Eleven of the randomly assigned items, have been designed to represent agreement with a "just world bias" (scored positively) and the other items to represent an "unjust world" bias (scored negatively). Respondents indicate the degree of agreement or disagreement with each statement. Kuder-Richardson internal consistency reliability scores are reported at .80 and .81 respectively for samples of college students from the Boston and Oklahoma areas. Predictive and construct validity are documented by Rubin & Peplau (1975).

Perceived Support Network Inventory (PSNI): The PSNI (Appendix I) is a modified version of the Arizona Social Support Interview Schedule (Barrera, 1980) and the Personal Competency Rating Scale (Ostrow, Paul, Oritt, & Dark, 1981). It is a two-part instrument designed to assess social support networks. In Part One,

Support Network, respondents record first name and last initial of all people that they would go to if they needed support during a stressful period. In Part Two, Support Network Information, respondents provide six categories of information about each individual listed in Part One. Categories represent perceived social support variables which are operationalized as follows: initiation of support-seeking behavior, the contacting of a support network member for the purpose of obtaining support or help during times of stress; perceived availability of support, the presence of the support network member during times of stress and the provision of support by that person; satisfaction with support, the satisfaction felt by the subject with the support received from the support network member during times of stress; perceived multidimensionality, the provision of more than one type of support by the support network member during times of stress. The five types of support are listed below this question and subjects indicate expected types of support; perceived reciprocity, the extent to which subjects provide support network members with support during their times of stress; perceived network conflict, the extent to which subjects have serious disagreements or uncomfortable emotional confrontations with support network members--the higher the score the less conflict is assumed be-

tween the subject and network member. Respondents rate the extent to which a particular variable exists for each network member on 9 7-point Likert type scales. The instruments' similarity to a previous instrument (Barrera, 1980; Ostrow, Paul, Oritt, & Dark, 1981), the reliability of which was .80, justifies the inclusion in the present study.

Procedure

The researcher made the necessary contacts to obtain names of potential participants. Two weeks prior to Spring Break (second semester) each participant received a packet containing: a letter of consent form, a copy of each of the measures and a demographic sheet with instructions. The packet included two FIRO-B instruments in which the participants were asked to respond to the first as if in a totally Black situation on campus, while in the other as if they were the only Black in a White situation on campus. Each instrument was a pencil and paper test and was self-administered.

Information gained regarding individual subjects was held in strict confidence. Code numbers were assigned to each participant and only this number was used to identify participants on the psychological instruments and demographic information sheet. The code was kept in a secure location under the control of the experimenter.

CHAPTER III

RESULTS

Fifty-six freshmen returned the survey packets. The sample was comprised of 37.5% (21) males and 62.5% (35) females having a mean age of 18 years. Seventy-two percent (40) were enrolled at the University of Oklahoma (OU) and 38% (16) at the University of Texas (UT) at Austin. Appendix J presents the background data collected on the students: parental levels of education, population of hometown, age, ACT and SAT scores, high school grade point average (HSGPA), and college major. The data indicated that the sample consisted of a broad representation of Black freshmen from all educational background levels and geographic locations.

Appendix K presents the means and standard deviations for all variables by university. UT students were found to have significantly higher ($p<.05$) means on expressed control with Blacks and Whites, wanted affection from Whites and education of mother.

The original research design used the students'

statement of their plans to return or not to the university as one criterion measure. However, that analysis was abandoned since only two students said that they were not returning to the present university, giving health problems and a move to a better university as reasons.

Since the standardized admission test data that was available was different for the two universities (ACT for OU and SAT for UT), the multiple regressions were separated by university. Table 1 presents the results of the multiple regression using both social/psychological and demographic variables to predict cumulative grade point average (GPA) at the end of 2 semesters.

TABLE 1

Results of multiple regression using both social/psychological variables and demographic data as predictors of first year GPA

University of Texas

significant predictor	B value	Std. Error	R^2	F	Prob>F
Hometown Population	-.00000072	.00000023	.6367	8.76	.006
Education of mother	.4147	.1431			
Intercept	1.28848				

Variables that were not significant: personal competency (total score), expressed affection with Blacks, high school GPA, education of father, SAT score, and sex.

TABLE 1
(cont.)

Results of multiple regression using both social/psychological variables and demographic data as predictors of first year GPA

University of Oklahoma

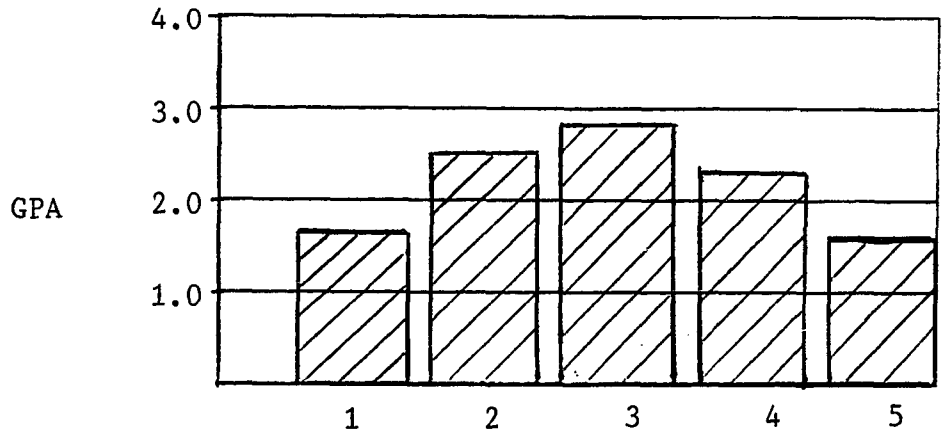
significant predictor	B value	Std. Error	R^2	F	Prob>F
Belief in Just World	-0.7531	0.3049	.2095	6.10	.0214
Intercept	5.3903				

Variables that were not significant: high school GPA, hometown population, education of mother, ACT score, education of father, and sex.

Population of hometown and educational level of mother were found to be significant ($p<.006$) predictors of first year GPA for UT students. Figures 1 and 2 present UT data showing the relationships between hometown population and education level of mother with GPA respectively. Hometown population was found to have a curvilinear relationship with GPA while educational of mother has a positive, linear relationship with GPA. For OU students belief in a just world was found to be the only significant ($p<.02$) predictor with a negative correlation with first year GPA, indicating the higher the expressed belief in a just world the lower the GPA.

Figure 1

Relationship between hometown population size and first year GPA for University of Texas students



* 1= 0 - 50,00
2= 50,001 - 100,000
3= 100,000 - 500,000
4= 500,001 - 1,000,000
5= 1,000,000+

Figure 2

Relationship between educational level of mother and first year GPA for University of Texas students

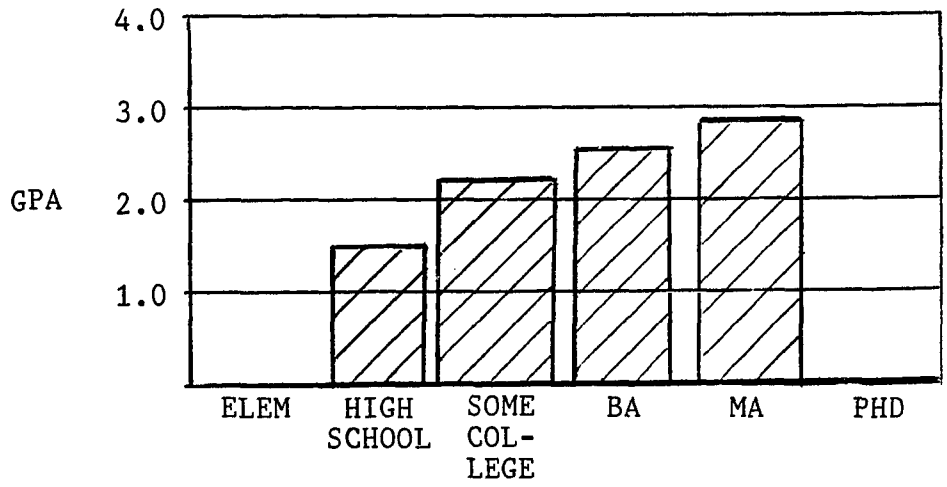


Table 2 presents the analysis using only the social/psychological variables to predict first year GPA.

TABLE 2

Results of multiple regression using only social/psychological variables as predictors of first year GPA

University of Texas

significant predictor	B value	Std. Error	R^2	F	Prob>F
Personal Competency (Total score)	-0.8879	0.3767	.3445	2.89	.098
Expressed Affection w/Blacks	0.1878	.1099			
Intercept	4.9556				

Variables that were not significant: all other social/psychological variables examined in the study.

University of Oklahoma

significant predictor	B value	Std. Error	R^2	F	Prob>F
Belief in Just World	-0.8870	0.3086	.1825	8.26	.007
Intercept					

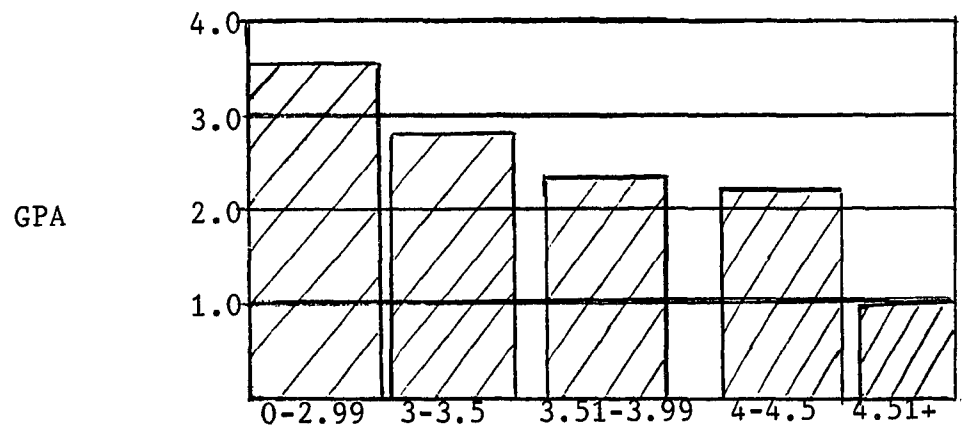
Variables that were not significant: all other social/psychological variables examined in the study.

For UT students personal competency total scores and expressed affection for Blacks were found to be the

best predictors of first year GPA, however, the .05 level of significance was not attained. Belief in a just world was again found to be the only significant predictor of first year GPA for OU students. Figure 3 presents OU data showing the negative relationship between Just World Scale scores and GPA.

Figure 3

Relationship between Just World Scale scores and first year GPA for University of Oklahoma students



Neither standardized test scores nor HSGPAs contributed significantly to predicting first year GPA for either sample, not even at the .15 level of significance. Pearson product correlation coefficients of .16 ($p<.31$) and .46 ($p<.07$) were found between GPA and ACT

and SAT scores respectively. For UT students a correlation coefficient of .23 ($p<.40$) was found between HSGPA and first year GPA in college, while for OU students the correlation was .28 ($p<.08$).

Appendices L and M present intercorrelations among all measures for OU and UT respectively.

CHAPTER IV

DISCUSSION

As some earlier researchers have suggested (Boyd, 1974; Edwards, 1970; Harper, 1975), this study found the Black student freshmen group to be quite complex and not very amenable to blanket generalizations. Results indicated that differences such as those found between the University of Texas (UT) and the University of Oklahoma (OU) students effect what instruments best predict first year GPA as well as how the student might experience the predominantly White university setting. OU students were found to have parents with lower levels of education, to be more passive in interaction with both Blacks and Whites, and wanted less intimacy with Whites than their UT counterparts. However, in spite of these differences, it is important to note that at both universities neither standardized tests nor high school grade point average were found to be significant predictors of academic success. These findings contradict results of Burlew (1980), the Commission on the Higher Education of Minorities

(1982), Dispenzierei, Giniger, Reichman & Levey (1971), and Harris & Reitzel (1967). However, they support findings by Burlew (1980) and Tracey & Sedlacek (1984) that affective measures, aspirations, expectations, and others' perceptions are more effective predictors for minority students. This is of particular importance since standardized tests and HSGPA are the accepted admission requirements in higher education.

These findings suggest that: 1) many Black students may be erroneously guided away from college because of having received low standardized test scores; 2) universities that rely solely upon standardized test scores and high school GPA to predict academic success may be overlooking a large number of Black students who may have potential for academic success in higher education; and 3) the focus on standardized test scores and high school GPA may predispose universities to ignore other important factors that may hinder the academic success of minority students. This would clearly support the need for new minority selection and admissions procedures (Burlew, 1980; Farver, Sedlacek & Brooks, 1975; Higher Education of Minorities, 1982; Tracey & Sedlacek, 1984). However, until a more consistently accurate predictor of academic success for Black students is found, these findings also give cre-

dence to the 5% admissions regulations used at some major universities for minority students.

For OU students the best predictor of two semester cumulative GPA was found to be Just World Scale (JWS) scores with which GPA was negatively correlated. This indicates that students who strongly believe that people generally receive what they deserve and that hard work is automatically equated with success will obtain lower first year GPAs. A possible explanation of this result could be that the students who believe in a just world are being exposed to situations that blatantly contradict these beliefs and therefore they experience considerable cognitive dissonance. This explanation is supported by Steiner & Johnson (1963) who found a positive correlation between JWS scores and an intolerance for cognitive dissonance. It is likely that such a conflict between belief and experience would result in some strong negative feelings that might render the students less functional. One of these strong negative emotions is likely to be depression (Beck, Rush, Shaw, & Emery, 1978) which often renders individuals incapable of effectively engaging in the kind of cognitive tasks required to function academically. Therefore, the resulting depression would have a direct effect upon GPA. While therapeutic intervention at this point would be ideal, it does not often occur because most Black stu-

dents have learned through experience not to appear vulnerable or "needy" with Whites in order to avoid judgment and rejection (Willie & McCord, 1972). This hesitance to ask for help may have long term serious consequences if the only person who can assist in resolving a problem happens to be White, which often is the case on predominantly White campuses.

Another possible explanation for the negative relationship between JWS scores and GPA involves the sense of isolation that results from not valuing association with other Blacks, who may be viewed as underprivileged or lesser than Whites. Centers (1963), Christie (1954), and Noonan, Barry, & Davis (1970) have found JWS scores to be positively correlated with feelings of hostility toward those whom society considers to be handicapped or underprivileged. The belief that Blacks are inferior to Whites would therefore not only effect how Black students perceive themselves, but also would limit the number of contacts available to develop an adequate support network. Either could lead to depression and its effects as discussed previously.

From these results it appears that the OU students who cognitively did not believe in a just world, but who behaved as if they did, would most likely have higher GPAs. Students who had a sense that the world is not fair and yet a willingness to continue to set goals and

move toward them, would perform better academically than those who did not. Acknowledging that the world is sometimes just and sometimes not, these students could maintain the hope necessary to keep them engaged in behaviors which would allow them to attain their educational goals. When faced with setbacks they would be more likely to take comfort in the belief that in time things would turn around, while the students who had a strong belief in a just world would have a tendency to deem themselves inherently unworthy of good fortune and give up all hope when things went wrong. High academic achievers would therefore seem to have a different belief system and coping style than those who are not as successful academically.

In contrast to OU students, size of hometown and educational level of mother were found to be the best predictors of first year GPA for UT students. Results indicated that students from cities with populations in the 100,000-500,000 range and whose mothers had higher levels of education would have the highest first year GPAs. This relationship with GPA probably has less to do with actual numbers within a city and the number of college hours Black students' mothers may have, and more to do with the psychological effects resulting from a combination of the two. First, having a highly educated mother may provide the student with a "suc-

cessful" Black person with whom to identify and be identified. This positive identity development would therefore provide the student with the necessary sense of self-worth that would allow them to overcome feelings of alienation, avoid related resulting depression, and therefore function better. This relationship between how competent one perceives oneself and academic success has been supported by findings of Burlew (1980), Sedlacek & Brooks (1976), and Tracey & Sedlacek (1984). As a self-fulfilling prophecy, perceiving oneself to be competent and having others reinforce this belief through identification with a successful parent, could be an impetus that would reinforce the student to most likely and most often behave in ways that would maintain this self-image. This "identification" with a successful person would therefore not only provide the student with a higher sense of self-worth, but also the behaviors to increase the competency levels that already exist.

Second, the more highly educated Black mother would serve as a very powerful role model, having successfully overcome two obstacles, being both Black and female. The existence of successful role models could at the least provide the student with an alternative that students without role models would not have. At the most, the mother as a model, would serve as a guide to academic success by exhibiting behaviors and sharing words of

wisdom about how to set and attain academic goals. This would set up the student to be a participant observer with the mother as the model. The process has been found to be much more powerful than any other type of modeling (Bandura, Adams, & Bayer, 1977; Lewis, 1974). These hypotheses are supported by findings reported by the National Academy of Sciences (1982). Maternal employment and educational level were found to be significantly and positively correlated with higher school achievement of children in Black families, whereas, the opposite was found to be true for White families. Black girls were found to hold their mothers in higher esteem, and whose mothers worked, aspired to combine a career and a family when they grow up. Overall the children of Black working mothers were less sexist than those whose mothers did not work.

Size of hometown was also found to have a significant curvilinear relationship with GPA peaking at the 100,000-500,000 population range. A possible explanation could be that the size of hometown may also reflect the concentration of higher educated, middle-class, Blacks within a given city. Cities with populations greater and lesser than the 100,000-500,000 range may have members of this group scattered and isolated amid White middle-class communities, decreasing the numbers, the impact of and the support and guidance from other suc-

cessful Black role models. Louis Wirth (1951) pointed out in "Urbanism as a Way of Life" that identity development and quality of relationships were directly effected by the number of inhabitants belonging to that particular group and class. In addition, Willie & McCord (1972) found that small populations of Blacks within a White setting tended to be tension filled, highly competitive, and less cohesive. Therefore, students whose hometowns have lower concentrations of middle-class, higher educated Blacks, may receive less emotional support and encouragement from community and peers. This possibly explains the lowest GPAs of students whose hometowns are in the population ranges of 0-50,000 and 1,000,000+.

The fathers' educational level was not a significant predictor of Black student first first year GPA. These findings may reflect the dual role of the professional mother in not only maintaining a career, but of remaining the primary parent and therefore having more influence upon their children than professional fathers.

Why different predictors of first year GPA were found for OU and UT students remains somewhat unclear. The most obvious explanation could be the significant mean differences found on educational levels of mothers, expressed control with both Blacks and Whites and wanted intimacy with Whites. However, further research

is necessary since so many variables were included within this study. Examining 32 variables and comparing UT and OU means, significant differences were only found on five variables. So few significant differences could be accounted for by chance alone.

Another possible explanation is that the UT student sample was more homogeneous in that all students were from Texas, while 24% of the OU students were from other states (California, Nevada, Nebraska, Illinois, Kentucky, Virginia, and New York). This within group diversity may explain why JWS scores were significant predictors of GPA for OU students and not for UT students who were all from the same geographical regional and therefore perhaps more likely hold more similar beliefs. JWS scores for the OU sample ranged from 3.0 to 5.25 (±2.25) depicting greater diversity than the UT sample range, 3.1 to 4.3 (±1.2). This information may also give some clue to the differences found among research studies on Black students on predominantly White campuses across geographical regions.

These results provide valuable information for orientation and retention programs at predominantly White institutions. The need for new minority selection and admissions procedures is clearly supported (Burlew, 1980; Farver, Sedlacek & Brooks, 1975; Higher Education

of Minorities, 1982; Tracey & Sedlacek, 1984). Further support to increase minority and/or minority-sensitive faculty and staff Harrell, 1979), to increase efforts in recruitment of minority students, as well as the inclusion of minority survival skill training and support groups within retention and/or orientation programs for Black students was also found (Brazziel, 1964; Coelho, Hamburg, & Murphey, 1963; Sedlacek & Brooks, 1976). Such systemic changes could have a major effect in making Black students' adjustment to the predominantly White university setting much easier. They could also aid the university in early identification of students who may experience difficulty in adjusting to the new setting which could allow time for intervention prior to negative academic and personal consequences.

Before concluding, it is important to mention that the other criterion variable, intent to reenroll, was excluded from data analysis because of the almost universal positive response from all students regardless of GPA or other difficulties stated. In fact, only two students gave negative responses which were explained by a move to a better university and a physical illness. Although these results truncated the research design, they are consistent with earlier findings of Antonowsky (1967) and Gibbs (1973) that no matter what is occurring, Black students expect nothing to hinder them from attaining

a degree. However, it is also important to acknowledge this determination as a strength which when combined with a more appropriate coping style in the face of cognitive dissonance, and successful role models and guidance could lead to an increased number of academically successful Black students.

Finally, it is important to consider the limitations of the present study in interpreting the results. Given small sample size and underrepresentation of UT students, these findings cannot provide the complete picture toward understanding the total Black student population on predominantly White campuses. Replication would appear to be necessary, especially with the inclusion of a follow-up on participating students in order to provide information on retention. Additional research might limit the number of variables to be correlated with GPA. Developing a packet which would take a shorter period of time to complete might increase the willingness of students to participate and therefore increase sample size.

In spite of the study's shortcomings many results were consistent with previous findings. This study, however, did raise enough questions that suggest a complexity within the Black student population (even within a small sample size), that many studies have not

addressed. This within group variability requires closer examination if a better understanding of the population and a more accurate needs assessment for purposes of the development of more efficient admissions, orientation, and retention programs are to occur.

REFERENCES

Antonowsky, A. (1967). Aspirations, class, and racial-ethnic membership. Journal of Negro Education, 36, 385-393.

Ausubel, D.P. & Ausubel, P. (1963). Ego development among segregated Negro children. In A. H. Pascow (Eds.), Education in Depressed Areas. New York: Teachers College, Columbia University.

Baggaley, A.R. (1974). Academic prediction of an ivy league college, moderated by demographic variables. Measurement and Evaluation in Guidance, 6, 232-235.

Bandura, A., Adams, N.E., & Bayer, J. (1977). Cognitive processes mediating behavioral change. Journal of Personality and Social Psychology, 35, 125-139.

Barrera, M. (1980). The Development and Application of Two Approaches to Assessing Social Support. Paper presented at the Annual Convention of the Western Psychological Association, Honolulu.

Baum, M.S. & Lamb, D. (1983). A comparison of the concerns presented by Black and White students to a university counseling center. Journal of College Student Personnel, 24, 127-131.

Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1978). Cognitive Therapy of Depression: A treatment manual. Unpublished manuscript, University of Pennsylvania.

Boyd, W. (1974). Desegregating America's Colleges?: A Nationwide Survey of Black Students, 1972-1973. New York: Praeger.

Brazziel, W. (1964). Correlates of southern Negro personality. Journal of Social Issues, 20, 106-116.

Burbach, H.J. (1971). Alienation among college freshmen: a comparison of Puerto Rican, Black, and White students. Journal of College Student Personnel, 12, 248-252.

Burbach, H.J. & Thompson, M.A. (1973). Note on alienation, race, and college attrition. Psychological Reports, 33,

Burlew, K.H. (1980). Black youth and higher education: a longitudinal study. Research Report, 143, RIE.

Carney, C. & Barak, A. (1976). A survey of student needs and student personnel services. Journal of College Student Personnel, 17, 280-284.

Centers, R. (1963). Authoritarianism and misogny. Journal of Social Psychology, 61, 81-85.

Christie, R. (1954). Authoritarianism re-examined. In R. Christie & M. Jahota (Eds.), Studies in the Scope and Methods of the Authoritarian Personality. Glencoe, Illinois: Free Press.

Cleveland, B. (1969). Black studies in higher education. Phi Delta Kappan, 51, 44-46.

Coelho, G.V., Hamburg, D.A., & Murphey, E.B. (1963). Coping strategies in a new learning environment. Archives of General Psychiatry, 9, 433-443.

The Commission on the Higher Education of Minorities. (1982). Final Report. Higher Education Research Institute: Ford Foundation, RIE.

Copeland, L.L. (1978). An Exploration of the Causes of Black Attrition of Predominantly White Institutions of Higher Education. 1976 Ph.D. Dissertation, University of Michigan, RIE.

Cortina, R.J. (1980). From Educational Access to Academic Success: A Design for Improving Opportunities for Minority Persons in Wisconsin Higher Education in the 1980s. Madison: University of Wisconsin System Committee.

Crossland, F. (1971). Minority Access to College. New York: Schocken Books.

Dean, D.G. (1961). Alienation: its meaning and measurement. American Sociological Review, 26, 753-758.

Dispenzierei, A., Giniger, S., Reichman, W., & Levey, M. (1971). College performance of disadvantaged students as a function of ability and personality. Journal of Counseling Psychology, 18, 298-305.

Edmunds, G.J. (1984). Needs assessment strategy for Black students: an examination of stressors and program implications. Journal of Non-White Concerns in Personnel and Guidance, 12(2), 48-56.

Edwards, H. (1970). Black Students. New York: Free Press.

Egerton, J. (1969). State Universities and Black Americans. Atlanta, GA: Southern Education Foundation.

Farver, A.G., Sedlacek, W.E., & Brooks, G.C., Jr. (1975). Longitudinal predictors of university grades for Blacks and Whites. Measurement and Evaluation in Guidance, 7, 243-250.

Fields, C. (1970). Black students in a White university. In Financing Equal Opportunity in Higher Education, A College Scholarship Service Colloquium. New York: College Entrance Examination Board.

Fleming, J. (1981). Stress and satisfaction in college years of Black students. Journal of Negro Education, 50, 307-318.

Franklin, P. (1980). Beyond Student Financial Aid. New York: College Entrance Examination Board.

Gibbs, J.T. (1973). Black students/White university: different expectations. Personnel and Guidance Journal, 51, 463-469.

Gibbs, J.T. (1975). Use of mental health services by Black students at a predominantly White university: a three year study. American Journal of Orthro-Psychiatry, 45, 430-445.

Goodrich, A. (1980). A Data-Driven Retention Model for Improving Minority Student Persistence in Higher Education Institutions. Paper presented at the Spring Conference of the Wisconsin Association of Educational Opportunity Program Personnel, Lake Geneva, Wisconsin.

Greising, R. (1969). The high-risk student. North Central Association Quarterly, 43, 328-334.

Haettenschwiller, D. (1971). Counseling Black college students in special programs. Personnel and Guidance Journal, 50, 29-34.

Hamilton, D. (1970). The challengs of Black studies. Social Policy, 1, 14-16.

Harper, F.D. (1975). Black Students/White Campus. Washington D.C.: APGA Press.

Harrell, J.P. (1979). Analyzing Black coping styles: a supplimental diagnostic system. Journal of Black Psychology, 5, 99-108.

Harris, S. & Reitzel, J. (1967). Negro performance in a predominantly non-Negro university. Journal of College Student Personnel, 8, 366-368.

Hilton, W. (1968). What the 'disadvantaged' student does not need. Journal of the Association of College Admissions Counselors, 13, 20-22.

Jensen, A. (1969). How much can we boost IQ and scholastic achievement? Harvard Educational Review, 39, 1-123.

Jones, L.G. (1980). Black students enrolled in White colleges and universities: their attitudes and perceptions. Research Report RIE.

Lewis, S.A. (1974). A comparison of behavior therapy technique in the reduction of fearful avoidance behavior. Behavior Therapy, 5, 648-655.

McClain, E. (1967). Personality characteristics of Negro college students in the south--a recent appraisal. Journal of Negro Education, 36, 320-325.

McClellan, F. (1970). A Black student's reaction to the present system of financial aid. In Financing Equal Opportunity in Higher Education: A College Scholarship Service Colloquium. New York: College Entrance Board.

Mullinex, S., Fadden, T., Brach, M., & Gould, G. (1980). A brief survey technique for environmental assessment. Journal of College Student Personnel, 21, 468-469.

The National Academy of Sciences (1982). Families that Work: Children in a Changing World. Washington, D.C.: U.S. Government Printing Office.

Noonan, J.R., Barry, J.R., & Davis, H.C. (1970). Personality determinants in attitudes toward visible disability. Journal of Personality, 38, 1-15.

Oritt, E.J. (1983). Perceived Support Network Inventory. Unpublished manuscript. Salt Lake City, Utah: University of Utah Counseling Center.

Ostrow, E., Paul, S.C., Oritt, E., & Dark, V. (1981). Utah Social Network Rating Scale. Unpublished manuscript. Salt Lake City, Utah: University of Utah Counseling Center.

Paul, S.C., Paulton, J.S., Ostrow, E., Morrill, W.H., & Kechenour, E. (1981). Personal Competency Rating Scale. Unpublished instrument. Salt Lake City, Utah: University of Utah.

Pfeiffer, C.M., Jr., & Sedlacek, W.E. (1974). Predicting Black student grades with nonintellectual measures. Journal of Negro Education, 43, 67-76.

Pfeiffer, C.M., Jr., & Sedlacek, W.E. (1971). The validity of academic predictors for Black and White students at predominantly White universities. Journal of Educational Measurement, 8, 253-261.

Pierce, R. & Norrell, G. (1970). White tutors for Black students. Journal of College Student Personnel, 11, 169-172.

Proctor, S. (1970). Racial pressures on urban institutions. In D. Nichols and O. Mills (Eds.), The Campus and the Racial Crisis. Washington, D.C.: American Council on Education.

Rosser, J. (1971). Student Opinions and Black Studies. Paper presented at the American Educational Research Association Conference, New York.

Rubin, Z. & Peplau, L.A. (1975). Who believes in a just world. Journal of Social Issues, 31(3), 65-89.

Ryan, L.R. (1970). Clinical Interpretation of the FIRO-B. Palo Alto, California: Consulting Psychologists, Inc.

Schutz, W.C. (1967). The FIRO Scales. Palo Alto, California: Consulting Psychologist Press, Inc.

Sedlacek, W.E. (1977). Test bias and the elimination of racism. Journal of College Student Personnel, 18, 16-20.

Sedlacek, W.E. & Brooks, G.C., Jr. (1976). Racism in American Education: A Model for Change. Chicago: Nelson Hall.

Sedlacek, W.E. & Webster, D.W. (1978). Admission and retention of minority students in large universities. Journal of College Student Personnel, 19(3), 242-248.

Smith, D.H. (1979). Admissions and Retention Problems of Black Students at Seven Predominantly White Universities. Washington D.C.: National Advisory Committee on Black Higher Education and Black Colleges and Universities (DHEW).

Steiner, I.D. & Johnson, H.H. (1963). Authoritarianism and tolerance of trait inconsistency. Journal of Abnormal and Social Psychology, 67, 388-391.

Suen, H.K. (1983). Alienation and attrition of Black college students on a predominantly White campus. Journal of College Student Personnel, 24(2), 117-120.

Tracey, T.J. & Sedlacek, W.E. (1984). Noncognitive variables in predicting academic success by race. Measurement and Evaluation in Guidance, 16, 171-178.

Vontress, C.E. (1968). Counseling Negro students for college. Journal of Negro Education, 37, 37-44.

Webster, D.W., Sedlacek, W.E. & Miyares, J. (1979). A comparison of problems perceived by minority and White university students. Journal of College Student Personnel, 20, 165-173.

Westbrook, F., Miyares, Y., & Roberts, J. (1978). Perceived problem areas by Black and White students and hints about comparative counseling needs. Journal of Counseling Psychology, 25, 119-125.

Williams, R. (1969). What are we learning from current programs for disadvantaged students? Journal of Higher Education, 40, 17-25.

Willie, C. & McCord, H. (1972). Black Students at White Colleges. New York: Praeger.

Wirth, L. (1951). Urbanism as a way of life. American Journal of Sociology, 44. Reprinted in P. Hart and A. Reiss, Jr. (Eds.), Reader in Urban Sociology, 39. New York: The Free Press.

A P P E N D I X

A

The Prospectus

PROSPECTUS

BLACK FRESHMEN: A STUDY OF ACADEMIC SUCCESS AND PERSISTENCE ON PREDOMINANTLY WHITE UNIVERSITY CAMPUSES

INTRODUCTION

In 1975 the U.S. Census Bureau reported a 65% attrition rate for Black college students. An important contributor to this appears to be the high attrition rate of Black students enrolled in predominantly White colleges and universities (Crossland, 1971). In a 9-semester study at the University of Oklahoma (1981), a 62% loss of Black students was reported compared to a 50% loss of White students. Cortina (1980) found that Black students at a Wisconsin campus dropped out at a rate of 73.4% as compared to an overall student population attrition rate of 47.7%. On campuses where the overall attrition rates were lower, significant differences were still reported between Black and White students. Astin (1977) reported that Black students dropped out at a rate of 49.5% as compared with 36.1% for White students at a San

Francisco campus. Franklin (1980) reported similar significant differences between Black and White students. Goodrich (1978) and Sedlacek & Webster (1978) also found attrition rates of Black students to be particularly high in predominantly White institutions, and increasing as well.

In spite of this trend, Black students continue to enroll in predominantly White institutions (Astin, 1969; Bayer & Baruch, 1969; Sedlacek & Webster, 1978). The majority, however, arrive with backgrounds that have not prepared them for the experience of being Black in the White college setting. Bayer and Baruch (1969), Centra (1970), and Watley (1971) found that more Black students came from: poorer families with less formal education, poorer high school performance, and lower scores on standardized tests (Astin, 1969). However, 72% of these students expected nothing to hinder them from attaining a degree (Antonowsky, 1967; Gibbs, 1973), although the reality is that 50% or more of them will drop out before doing so.

There have been studies which have resulted in programs developed to aid the Black student adjustment to the White institution. White graduate students trained in racial empathy and sensitivity have been used in tutoring programs for Black students (Pierce & Norrell,

1970; Gibbs, 1975). Black counselors have been included in freshmen orientation, along with an overall increase in Black faculty and staff (Boyd, 1974; Hart, 1969; Harrell, 1979). Financial aid has been made more accessible (McClellan, 1970; Proctor, 1970; Fields, 1970). Black Studies Programs have been incorporated into basic curriculum (Hamilton, 1970; Cleveland, 1969; Rosser, 1971). Compensatory Programs for high-risk students have been developed and implemented (Greising, 1969; Egerton, 1969; Williams, 1969). Alternatives to traditional selection and admission procedures have been explored and implemented (Ott, 1978). Nevertheless, the significantly higher attrition for the Black student population on the majority White campus remains a given.

The continuation of this phenomenon has been explained by three basic schools of thought. The first is based on the position of Black inferiority in relation to Whites. Jensen (1969) found in comparing scores on IQ tests that Blacks scored lower than Whites. He concluded that Blacks were intellectually inferior. McClain (1967), Ausubel and Ausubel (1963), and Brazziel (1964) found that Blacks were not capable of competing in the dominant culture because of marked tendencies to be deferent, shy, and dependent.

A second explanation is that Blacks are not the pro-

blem, but rather the difficulty arises in the racist and ethnocentric White system. The major focus here is to advocate that in order for Blacks to fare well at White institutions the attitudes, behaviors, curriculum and teaching methodology of the White faculty must be addressed. Smith (1979) recommends that substantial changes in admission, recruitment, financial aid, academic assistance, orientation, counseling, and student life policies and practices should be made in order to encourage and support the Black student community. Jones (1980) states that for positive changes to occur in Black academic success and persistance the White institutions must move in a direction of committment to developing programs to meet the special needs of the minority students. In spite of an earlier flurry of special programs for Black students in the White institution, Sedlacek (1978) found that the number of special programs for minorities had decreased, the average number of admissions criteria had increased, and the number of schools employing different admissions criteria for minorities had dropped in 1975 and 1976. All of these results show trends moving backward toward the situation found in 1969.

The third school of thought is based on the position of inaccurate assessment of the needs of the Black student. Hilton (1968), Cleveland (1969), Rosser (1971),

and Proctor (1970) found that the existing programs were ineffective for a large percentage of the Black student population. They concluded that neither Black nor White researchers were asking the right questions.

In view of the attitudes and existing literature addressing this problem, it is the objective of the present research to explore specific characteristics of a Black student population without using the traditional technique of making comparisons to the White student population. The purpose of this study is to research the differences between academically successful and unsuccessful Black college freshmen enrolled in a majority White university setting. This will be done by examining the relationships among the following: 1) Black/Black interaction 2) Black/White interaction 3) Social networks 4) Personal competencies 5) Degree of feelings of alienation 6) Degree of belief in a just world 7) Grade point average (GPA) and 8) Intended continuation. The usual predictors of college success such as high school GPA and standardized college aptitude scores (ACT, SAT) will also be included.

LITERATURE REVIEW

Demographic Information

Much of the research in the area of Black students on majority White campuses has used the following demographic categories to better understand the characteristics and needs of specific segments of the Black student population.

Sex. In a study of 40 colleges and universities, Boyd (1974) found several significant differences between the sexes involving family and educational backgrounds, academic behavior, and opinions. The Black women students came from more highly educated and wealthier families than Black men students. Black women reported more interaction with White peers, staff, and faculty; however, they also reported more incidents of racism. These sex differences would generally lead to the assumption that Black women would be more academically successful than Black men. However, current research shows this conclusion to be untrue.

Black women have been found to have significantly higher attrition rates than Black men. The University of

Oklahoma (1981) found the attrition rate for Black women was 72% as compared to 50% for Black men. Of the nation's total representation of Black college graduates, 62% were male and 38% female. Others have reported similar differences (Astin, 1977; Cortina, 1980; U.S. Census Bureau, 1975; Franklin, 1980).

Socioeconomic Status. In comparison to White students, the Black students' socioeconomic status was found to be significantly lower (McClellan, 1970; Fields, 1970; Proctor, 1970). Forty-three percent of the fathers of Black students, compared to 15% of the fathers of White students, were unskilled, semi-skilled, or service workers (McClellan, 1970). Centra (1970) found that 27% of the Black students received no parental support, compared to 13% of the White students. Sixty-six percent of the Black students relied on loans and scholarships as primary support in comparison to only 4% of the White students.

Several characteristics of Black students were found to be related to family income. Boyd (1974), Centra (1970), Clark & Plotkins (1963), and Hedegard & Brown (1969) found that students from families with lower incomes were more likely to have: parents who had not attended college, fair or poor academic preparation, special admissions status, and financial aid as a primary

source of funds. Boyd (1974) found that 69% of the Black students surveyed were the first in their families to attend college. Fifty-six percent of these felt that their academic backgrounds were insufficient, in comparison to 49% of those with prior college experience in their families.

The poorest and the richest Black students reported more dissatisfaction with their college experience and were more apt to feel that faculty members discriminated (Boyd, 1974). However, adjustment to the college setting was found to be more difficult for the poorer Black students. This was explained by their having had less experience with campus and boarding schools, few experiences outside their communities and fewer opportunities to interact with family and friends once on campus (Boyd, 1974; Green, 1969).

Haettenschwiller (1971) found that Black students from working class backgrounds expressed conflict over the college student role, displayed more anxiety about the social, cultural, and academic components of the role, and reacted defensively to perceived White racism by expousing separatism. Gibbs (1973) found that these problems of personal identity concerned over 75% of these lower income students.

Social Support

As one variable that is thought to lessen stressful events, social support can be defined as the use individuals make of informal sources of support, such as family and friends, in dealing with a wide range of concerns (Ostrow, Paul, Oritt, & Dark, 1981). While there is general agreement that at least some aspects of social networks reduce adjustment problems (Higher Education Resesrch Institution, 1982; Sedlacek & Brooks, 1976), it is still unclear whether social support has an independent impact on adjustment or only works to buffer the effects of stressful life events.

Barrera (1980) and Hirsch (1979) found evidence which suggested that social support serves as a buffer. However, Andrews, Tennant, Hewson & Vaillant (1978) and Warheit (1979) found that stressful life events and social support each contributed significantly and separately to personal adjustment with no interactive effects. This study further explores these explanations of the role of social support.

Black/Black vs. Black/White Interactions. Blacks, like all students, report a need for individual and group support. However, the Black students were more likely to either turn inward or to other Blacks to meet their needs. Willie & McCord (1972) found that 43% reported not having

been in a racially mixed social group in the six months preceding the survey. Seventy-five percent reported that interracial parties were rare and only an occassional experience, with 73% reporting that all their closest friends were Black.

These experiences of racial exclusivity tended to exceed the Black students' expectations. For instance, 66.6% expected to have parties with other Blacks only, while 75% said that parties they attended were all Black. Also about 20% of the Black students expressed that Blacks should date only Blacks; however, more than 50% dated only Blacks (Willie & McCord, 1972).

In spite of some negative experiences with White peers, the study indicated that some Black and White students were able to communicate and form enduring friendships. However, the general impression was that there was a breakdown in communication when the topic of race relations or racism was introduced. The data indicated that White students had little interest in the problems that troubled Black students, which in turn reinforced the orientation toward Blacks only.

The survey also found that 60% of the Black students sought only Black staff and faculty when in the need of advice about jobs and careers. When these resources were unavailable, only 20% sought advice at all. Willie & Mc-

Cord (1972) attributed this avoidance of White faculty to the reported lack of trust in the White instructors. Some 40-45% reported having never conferred with a teacher during the course of a semester. Of all Black students, 66.6% said that counseling and guidance assistance was impersonal and insufficient, and 75% felt that they got little, if any, help from faculty members and advisors. More current data also supports these results (Smith, 1979).

The strong dependence upon other Blacks for support seems to change to total self-reliance in dormitory environments with 200 or less Black students. (When examining existing support systems, it was found that the ratio of Black to White students was of less importance than the total number in the Black student population.) In addition, the survey found that these relationships tended to be tension filled. This was attributed to the lack of anonymity, personal freedom, flexibility, and privacy that is usually associated with larger populations (Wirth, 1951; Cox, 1965). These Black students felt alienated from both the White institution and peers, perceiving no immediate external source of support.

Black Interaction Styles on the White Campus

Some consistent interaction styles have been identified as common roles for Blacks on White campuses.

"The Conforming Negro or NAACP Negro". This category consists of Black students who assimilate the smoothest into the White institution. Harper (1975) reported that these students try to repudiate racial stereotypes by acting in ways that they felt were most acceptable to the White culture. They attempted to follow the model image by studying diligently, dressing impeccably, speaking "correctly" (White) and honoring all of the rules of White ettiquette. Harper stated that the intent of this behavior was to prove that Blacks could be as intelligent and as perfect as Whites.

Edwards (1970) found this style constituted the second largest group of his participants. Members following this model attended no Black student organization meetings and were ostracized by Blacks who did. Therefore, their associates were usually White or other "Conformers". Their sole purpose was to obtain a degree, get a high paying job and buy a home, preferably outside the Black community.

"The Militant Black". As reported by Harper (1975), this student tended to act out with hostility and aggression, being immediately labelled and avoided by Whites. Their prototypical behaviors and speech reflected the basic concept of Black Power, always willing to protest the White system.

Edwards (1970) found two specific types within this category. The first was the radical activist, which was the third smallest group in his study. They were usually sophisticated in organizing and mobilizing people and only interacted with the White system when trying to prove a point for Black freedom and justice. This student was usually older-academically and chronologically--than other Black students. The members of this category were from middle-class families and entered college by qualifying under traditional standards for entry. Somewhere their focus changed from obtaining a college degree to participation in political activities revolving around the struggle of Black people.

The second category is a more extreme case of the first: the Revolutionary style. Like the radical activist, they placed high value on Black pride, on Afro-American cultural and historical ties with Africa, and on reaffirming the contributions that Black people had made to the growth of America. But, unlike the radical activist, the revolutionary rejects almost all means, except premeditated and calculated violence, as legitimate tactics in the Black liberation struggle. While socio-economic class origins of this style are indistinguishable from other groups, this individual is the most well read and also the most ideological. The revolutionary is

is not a reformer, but one who believes that the entire institutional structure of America must be totally destroyed along with its corruption, oppressive tendencies, and racism. They are suspicious of all Whites and interact with the White system only when unavoidable.

The "Piece of the Action Black" (Harrel, 1979). This interaction style was found to be the most numerous in the 1970 Edwards study. These students were younger than the radical activists and, having only recently discovered a self-identity of Blackness, did not possess the expertise in political issues. This pseudo-militant talked about change, and would do anything up to actions that would jeopardize his/her educational future. The members of this category have high interaction with both Whites and Blacks and justify this behavior by claiming a future return to the Black community to put to work the skills acquired during the college career. In reality, this is almost impossible since they have usually not been exposed to the "Black" community, having been protected from such experiences by middle-class or middle-class minded families.

The "Alienated Black". Burbach & Thompson (1973) and Harper (1975) found that this category to be the most prevalent type on the White campus. This students' belief in Black Power had dissipated. Feeling psychologi-

cally isolated from both the White university community and from other Blacks, these students had become tired of the White world's unfulfilled promises of acceptance and had given up. They could not identify with White diversions and yet saw the Black Student Union as only a "party place". These students felt psychologically powerless. They moved away from the very system from which they sought an education, and yet felt hostile toward other Blacks, being a victim of self-criticism.

There has been much speculation about the causes of this alienation. Willie & Levey (1972) found that Black students tended to move toward separatism to escape the pain the pressures of the traditionally White university. They further found that the Blacks who did attempt to involve themselves in White activities sometimes were hurt by subtle racial comments and hints from White peers. They concluded that White racism was the main contributor.

Hodgkinson (1971) refers to this alienation as being the result of the Black students' state of "subordination squared", that is, Black students having to suffer doubly the subordinate roles of student and Black. (The Black female student would then be subordination cubed, possibly explaining their significantly higher attrition rate.) Pruitt (1970) and Remsick (1979) con-

cluded that alienation resulted from the Black students' becoming aware that behaviors rewarded at White universities were often inconsistent with those rewarded in their previous culture.

Regardless of the reasons, research has found that the experience of alienation plays an important role in the higher attrition rates among Black students (Cortina, 1980; Goodrich, 1980; Suen, 1983). Peterson & Rodriguez (1978) hypothesized that the resulting anger, frustration, and helplessness may lead to the response of leaving the university.

This more current research contradicts Burbach & Thompson (1973) who, using the Dean Alienation Scale (Dean, 1961), found no significant relationship between alienation and general college student attrition. Suen (1983) attributes this to their use of the Dean Alienation Scale which measures the feelings of alienation from "society" as opposed to the University Alienation Scale, that he used. This latter scale measures the students' feelings of alienation within a university environment.

The possible effects of the predominantly White environment upon Black students have been explored and discussed above. However, of equal importance are the effects that Black students beliefs and values may have upon how they interact with and respond to the predominant-

ly White environment. The belief in a just and fair world and its influences upon behavior, values, and interaction styles will be explored next.

Belief in a Just World

Using the Just World Scale (JWS) (Rubin & Peplau, 1973) with university student populations, researchers have found the belief in a just world to have several correlates. From a sample of 180 Boston undergraduates, Rubin & Peplau (1973) reported positive correlations between JWS scores and a 10-item version of the F scale focusing on authoritarian submission. Moreover, authoritarianism has been shown to be related to intolerance for cognitive dissonance (Steiner & Johnson, 1963) and to hostility toward handicapped and underprivileged persons and groups (Christie, 1954; Centers, 1963; Noonan, Barry, & Davis, 1970). These tendencies, which could also be expected to result from a belief in a just world, may offer an explanation to why some Black students actually move away from other Blacks.

Zuckerman (1975) found that high JWS scores were less likely than low scorers to be suspicious of a deceptive experimental manipulation and of a publisher's giveaway offer. Fink & Guttenplan (1975) found a high correlation between JWS scores and Rotter's (1967) Interpersonal Trust Scale which included institutional trust, trust in others'

sincerity, and trust that one will not be taken advantage of by others. All of these reflect a link between the belief in a just world and the uncritical acceptance of authority (Rubin & Peplau, 1975).

Rotter (1966) hypothesized that belief in a just world would be associated with and internal locus of control--the expectation that one can determine one's own rewards and punishments, rather than being at the mercy of external forces. Several studies have found strong support for this hypothesis (Rubin & Peplau, 1973; Zuckerman & Gerbasi, 1975).

On the basis of factor analytic studies, Collins (1974) suggested that the belief in a just world may be one of four separate dimensions that underlie the internal locus of control (the other three being beliefs in a difficult world, a predictable world, and a politically responsive world.). If the world were viewed as unjust, then the possibility of being unrewarded after striving for a goal clearly exists. Therefore the belief in a just world seems to be closely related to one's sense of personal efficacy.

After developing the Protestant Ethic Scale (PES) (Mirels & Garrett, 1971), Garrett (1974) and Lerner (1973) both found that high scorers on the PES and the JWS worked on tedious experimental tasks than those who scored

lower. MacDonald (1972) found that college students who scored high on the JWS and the PES were significantly more likely than low scorers to derogate social victims, agreeing that "most people on welfare are lazy".

No clear sex differences in the belief in a just world have emerged (Rubin & Peplau, 1973; Peplau & Tyler, 1975). Within a UCLA sample Peplau & Tyler (1975) found no relationship between social class (as measured by father's educational level) and scores on the JWS. In the same study JWS scores were negatively correlated with age for men, but not for women. It would seem reasonable that as people grow older and continue to discover injustices that the belief in a just world would decline. Why the age trend was found only for men remains unclear.

Personal Competencies

The least implemented, but most often suggested aggressive technique to improve retention of Black students includes immediate action in: 1) seeking out the students for anticipatory guidance; 2) developing counseling methods to directly counteract students; mistrust, apathy, or hostility (Haettenschwiller, 1971; Vontress, 1968); 3) disseminating information; 4) and teaching skills that should aid in the students' being more effective in functioning in a White setting (Coelho, Hamburg, & Murphey, 1963; Sedlacek & Brook, 1976). Cowen (1977)

recognized personal competencies as noteworthy variables within the primary prevention framework. Coelho, Hamburg, & Adams (1974), D'Zurilla & Goldfried (1971), Geston, Flores de Apodace, Rain, Weissberg, & Cowen (1978) found that social problem-solving and decision-making skills were related to adjustment. Beiser (1971) and Coelho, Hamburg, & Adams (1974) found that interpersonal and planning skills have also been related to adjustment outcomes.

It is not clear whether competencies exert their effects on adjustment directly or whether they mediate the effects of stressful events (Ostrow, Paul, Oritt, & Dark, 1981). While there is some support for the stress buffering hypothesis (Fontana, Dowd, Markus, & Rakiesin, 1976; Vaillant, 1976), there is also research (Andrews, Tennant, Hewson, & Vaillant, 1978) which has found coping skills to reduce general impairment, but which shows no significant interaction between life events and coping. This present study will examine the relationship between a comprehensive set of competencies and adjustment of Black freshmen on predominantly White campuses.

Academic Success and Persistance

Although personal adjustment is a concern, academic performance is a primary challenge for Blacks at predominantly White institutions. Willie & McCord (1972) found

that 23% of all Blacks students, compared to 50% of all White students, had accumulative GPAs of B and above. On the other end of the grade scale the 14% of the Black students doing less than C work was more than four times greater than that of the White students (3%). Of all racial groups, Black freshmen reportedly experienced the greatest difficulty in academic performance. Only 14% of the first year Black students received average grades of B or more after their first semester of study, compared with 4% of the White freshmen.

Presently, the criteria used to predict the academic success and/or failure of Black students on predominantly White campuses appears questionable. Studies that have applied standardized test scores to Blacks have tended to get lower validity than that obtained with the predominantly White samples (Baggaley, 1974; Pfeiffer & Sedlacek, 1974; Farver, Sedlacek, & Brooks, 1975). Clarke (1968) collected data from a Junior College in Florida which concluded that GPAs for White students were better predicted by cognitive measures while GPAs for Black students were better predicted by affective measures. GPAs for Black men were best predicted by the "How I See Myself" (HISM) Autonomy score and GPAs for Black women were best predicted by the 1) Linguistic score of the School and College Ability Test (SCAT), 2) the Study of Values, So-

cial, and Economic scores, and 3) the HISM Teacher-School Factor score.

The Commission on the Higher Education of Minorities (1982) and Burlew (1980) found that academic performance in secondary schools was a much more important predictor of undergraduate grades and persistance than standardized test scores. Burlew (1980) and Tracey & Sedlacek (1984) noted that personal characteristics of Black youth such as aspirations and expectations, self-perceptions, and others' perception could also be used to predict educational attainment. Sedlacek and Brook (1976) proposed seven specific non-cognitive variables that were related to academic success for all students, particularly minority students: positive self-concept, realistic self-appraisal, understanding of and ability to deal with racism, preference for long-term goals over short-term goals availability of a strong support person, successful leadership experience, and demonstrated community service. Lockett (1980) found significant relationships between many of the above with GPA and satisfaction with college among Black students. Tracey & Sedlacek (1984) found that positive self-concept and realistic self-appraisal to be predictive of the academic success of both Black and White students during first semester. However, community involvement, leadership experience, and preference for long-range goals were predictive of first semester grades for

the White student subsample only.

McClain (1967) stated that most Blacks were not capable of competing in the dominant culture because of a lack of personal characteristics necessary for full participation. He administered the Cattell 16 Personality Factor Questionnaire (16 PF) to undergraduate students in two Southern schools. The mean sten scores of the Black male students deviated significantly from the norm for college men on 9 of the 16 primary factors. Blacks were more outgoing, less intelligent, more affected by feelings, more humble, more venturesome more practical, more conservative, more group dependent, and more controlled. Their index for academic achievement was significantly deviant in the direction of failure.

The mean sten scores for Black women also differed significantly from the norms for college women on 9 of the 16 primary factors. Again Blacks were more outgoing, less intelligent, more affected by feelings, more tough-minded, more suspicious, more practical, more shrewd, more apprehensive, and more controlled. Their index for academic achievement was also in the direction of failure. It was concluded that Black students fail more often because their family background was somehow insufficient, producing a less than adequate. individual.

Ausubel & Ausubel (1963) cited unstable family lives,

economic deprivation, poor schools, cultural impoverishment, racism, and social rejection as variables that combine to produce personalities which hinder Blacks from coping in a White world. In three separate projects employing the Edwards Personal Preference Schedule, Brazziel (1964) found that Southern Black students had marked tendencies to be deferent, shy, and dependent. This personality pattern was said to have indicated difficulty in the kind of self-assertion necessary for actual achievement in a White campus environment.

Dispenzierei, Giniger, Reichman, & Levy (1971) studied 500 students (mainly Black) who entered the City University of New York in 1966 under a special program for disadvantaged students. They found, in contrast to Clarke (1968), Baggaley (1974), and Farver, Sedlacek, & Brook (1975), that the better predictors of success for the Black students were cognitive measures (high school GPA and the Otis Intelligence Test results), study habits and attitudes, and reality of aspiration level. (In this study Black students were compared to other Black students.) Harris & Reitzel (1967) found that the Scholastic Aptitude Test (SAT) scores and high school rank had some predictive value (but not to the same extent as it did for the White students) for the academic performance of Black students on predominantly White campuses.

After interviewing Black students, Smith (1979) found that they attributed academic failure to cultural/racial adjustment, financial problems, loneliness and alienation, hostility from White faculty and students, lack of counseling help, scarcity of Black faculty models and poor communication with Black faculty. In a survey of 2,564 Black college students attending 19 predominantly White colleges in the South, Jones (1980) reported that the majority of these students felt an additional burden to bear as minority students on White campuses.

In a study of admission and retention problems for Black students in private and public universities in four major United States regions (South, East, Midwest, and West), Smith (1979) found that attrition and lower academic performance appeared to be rooted in the poor quality of Black student life characterized by hostility toward Blacks. Copeland (1978) explored the causes of Black attrition at predominantly White institutions of higher education. An open-ended 79 variable questionnaire was given to 557 students and 103 dropouts on 4 campuses in seven midwestern and 3 eastern cities. The data was organized around sex, past environment, and current environment. Findings indicated that dropouts went to college for nonspecific reasons more than stayers did. In conflict with

other research results (U.S. Census Bureau, 1975; Astin, 1977; Franklin, 1980; University of Oklahoma, 1981). Copeland found no sex or financial aid difference between those who stayed in school and dropouts. Discrimination, however, was still found to cause most Black attrition at White colleges.

Theoretical Framework

The theoretical framework for this investigation is derived from an ecological model which conceptualizes adjustment as the fit, or congruence, between persons and their environment (Holohan, Willcox, Spearly, & Campbell, 1979). This study will therefore examine specific predictions of interactions between certain variables with GPA and intention to reenroll.

Significance of the Study

In reviewing the literature, several points became evident: First, caution must be taken not to generalize the research results from narrow studies limited to one campus or from campuses with different or unique orientations. In interpreting data there appear to be some institutional factors to consider.

a. **Number of Blacks Enrolled:** In 1970 Proctor found that the ratio of Black to White students was less significant than the total

Black enrollment in determining how Blacks settled into the new White environment.

b. Structure of Setting: 2-year vs. 4-year; private vs. public

c. Geographic Location: Some results from Southern Universities have been at variance with results from other parts of the country.

Second, the researcher must recognize that all Blacks are not the same. Black students differ in socioeconomic status, sex, academic classification, social class, interaction styles, and geographic backgrounds. Ignoring these differences can result in inaccurate overgeneralizations.

Third, current research on the status of the Black student on the predominantly White campus is warranted in order to support or discount possibly outdated information, especially since the status of the Black student on the White campus has changed considerably (Watley, 1971). An example may be that of research which concluded that Black students' personalities were inadequate for success in the White world (Ausubel & Ausubel, 1963; Brazziel, 1964; McClain, 1967). The fact that the settings in these studies were Southern White universities during a period of tense interracial conflict was not addressed. As measured by an instrument normed on White students,

these observed "deficient" personality characteristics could have possibly been the most appropriate responses for Black students given the environmental circumstances. This could have resulted from the fact that early studies in this area were being done by White researchers who were not acquainted enough with the needs of the Black student population to enable them to explore the appropriate issues.

Fourth, research results were often interpreted as deviations from White norms, when in fact, to be different may not necessarily depict deviancy. Because Black students experience college life differently, they may also respond in unique ways that allow them to cope or adjust (Harper, 1975).

This study is a response to the evident plea that the needs of this special population be addressed. Hopefully, it will lead toward understanding a current conceptualization of the general status of this population. The major purposes of this endeavor are to 1) gather information that might lead to the implementation of more effective programs, and 2) encourage further research in retaining Black students on primarily White campuses. The results should also be advantageous to teachers and school counselors in the school systems at the high school and junior high levels.

HYPOTHESES

1. Women will have higher GPAs, but will intend to reenroll less often than men.
2. Students with parents who have college degrees will have higher GPAs and will intend to reenroll more often than those whose parents did not attend college.
3. Students who have high expressed interaction scores as shown on the Fundamental Interpersonal Relations Orientation--Behavior (FIRO-B) will have higher GPAs and will intend to reenroll more often than students with lower expressed interaction scores.
4. Students who report the existence of a satisfactory and well-developed social network on the Social Support Questionnaire will have higher GPAs and intend to reenroll more often than students who do not.
5. Students whose responses indicate more competencies on the Personal Competency Rating Scale will have higher GPAs and intend to reenroll more often than those students indicating fewer competencies.
6. Students' ACT and/or SAT scores will have no signifi-

cant relationship with GPA or the intent to reenroll.

7. Students with higher high school GPAs will have higher GPAs and will intend to reenroll more often than those with low high school GPAs.
8. Students with higher Just World Scale (JWS) scores will have higher GPAs and will intend to reenroll more often than those with lower JWS scores.

METHOD

Participants

The participants of this study will be all Black freshmen who live in the dormitories on the University of Oklahoma and the University of Texas campuses. The population will be limited to native born United States citizens whose college experience begins the Fall 1983 semester. To insure at least a 80% return of the questionnaires, the network methodology will include the following:

1. Seeking financial assistance through research grants in order to offer a $5 per participant incentive to complete and return the questionnaire packet.
2. Asking assistance of Freshmen English and Psychology instructors.
3. Asking assistance of Black Student Services, Black People's Union, Project Threshhold and Black Sororities and Fraternities.
4. Asking assistance of University College.

Approximately 150 questionnaire packets will be distributed.

Instruments

Each survey packet contained the following: the letter of introduction and explanation (Appendix B), Consent for Research Participation Form (Appendix C), the Student Demographic Questionnaire (SDQ) (Appendix D), the Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B; Schutz, 1967) (Appendix E), the Personal Competency Rating Scale (PCI; Paul, Pulton, Ostrow, Morrill, & Kochenor, 1981) (Appendix F), the University Alienation Scale (UAS; Burbach, 1971) (Appendix G), the Just World Scale (JWS; Rubin & Peplau, 1975) (Appendix H), and the Perceived Support Network Inventory (PSNI; Oritt, 1983) (Appendix I).

Student Demographic Questionnaire (SDQ): The SDQ (Appendix D) consists of 12 items addressing participants' personal and academic backgrounds. A question regarding individuals' intent to reenroll the fall semester is also included.

Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B): The FIRO-B (Appendix E) consists of 54 Likert items reflecting three behavioral dimensions: inclusion, control, and affection. Inclusion assesses the degree to which a person associates with others; control

measures the extent to which a person assumes responsibility, makes decisions, or dominates people; and affection reflects the degree to which a person becomes emotionally involved with others (Ryan, 1970). For each dimension, two scores, symbolized by "e" and "w", are obtained. The "e" score represents the person's expressed or manifest behavior. It is the overt, observable behavior. The "w" score represents what the individual wants from other people. Eighteen items correspond to each dimension, with scores ranging from 0 to 7. Higher expressed scores indicate higher frequency of behaviors related to inclusion, control, and affection. Higher wanted scores indicate greater needs for inclusion, control, and affection. Evidence for the instrument's validity is based on factor analysis; reliability estimates measured by a reproducibility score, is .94 for all six scales. The mean coefficient of stability (test-retest) for the FIRO-B over the six scales is .86.

Personal Competency Rating Scale (PCI): The PCI (Appendix F) consists of 30 5-point Likert items designed to assess the extent to which individuals perceive themselves to possess competencies in four general areas: social, personal, problem-solving, and functional. The social subscale addresses interpersonal relationship abilities, including communication, assertiveness, interper-

sonal problem-solving, and intimacy. The personal subscale contains items reflecting an individual's abilities to adapt, plan, exercise self-control, cope with failures, manage anxiety, differentiate feelings, and enhance physical attractiveness. The problem-solving subscale examines problem-solving abilities including aspects of problem definition, alternative exploration, and resource organization. The functional subscale measures the functional competencies involving computational, reasoning, reading, writing and time use abilities. Each of the subscales has been found to add to the overall measure. The instrument does have content validity, however, other psychometric properties are in the process of being examined.

University Alienation Scale (UAS): The UAS (Appendix G) consists of 25 5-point Likert items that are designed to measure components of alienation (powerlessness, meaninglessness, and social estrangement) in college students with reference to the university setting. The construct validity is based on item-to-total analysis and factor analysis by correlating the UAS with the Dean Alienation Scale (Dean, 1961) which measured the feelings of alienation to society as a whole. Reliability estimates consists of split-half coefficients for powerlessness, meaninglessness, and social estrangement subscales

are .79, 89, and .72, respectively. The corrected reliability for the total scale if .92. All scale items have been found to contribute significantly ($p<.01$) to the measurement of the scale's general properties.

Just World Scale (JWS): The JWS (Appendix H) consists of 20 6-point Likert items that assess the extent to which an individual believes in a just world. Eleven of the randomly assigned items, have been designed to represent agreement with a "just world bias" (scored positively) and the other items to represent an "unjust world" bias (scored negatively). Respondents indicate the degree of agreement or disagreement with each statement. Kuder-Richardson internal consistency reliability socres are reported at .80 and .81 respectively for samples of college students from the Boston and Oklahoma areas. Predictive and construct validity claims are documented by Rubin and Peplau (1975).

Perceived Support Network Inventory (PSNI): The PSNI (Appendix I) is a modified version of the Arizona Social Support Interview Schedule (Barrera, 1980) and the Personal Competency Rating Scale (Ostrow, Paul, Oritt, & Dark, 1981). It is a two-part instrument designed to assess social support networs. In part one, Social Network, respondents record first and last initial of all people that they would go to if they needed support

during stressful periods. In part two, Support Network Information, respondents provide six categories of information about each individual listed in part one. Categories represent perceived social support variables as follows: initiation of support, availability of support, satisfaction with support, multidimensionality of support, reciprocity, and conflict. Respondents rate the extent to which a particular variable exists for each network member on 7-point Likert scales. The instrument's similarity to previous instruments, the reliability of which are known (Barrera, 1980; Ostrow, Paul, Oritt, & Dark, 1981), .80, justifies the inclusion in the present study.

PROCEDURE

The researcher will make the necessary contacts to obtain (the projected 150) names of potential participants. Two weeks prior to Spring Break (second semester) each participant will be given a packet containing: a letter of consent form, a copy of each of the measures and a demographic sheet with instructions. The packet will include two FIRO-B instruments in which the participants will be asked to respond to the first as if in a totally Black situation on campus, while in the other as if they were the only Black in a White situation on campus. Each instrument is a pencil and paper test and is self-administered. Monetary incentive would be given to the participants upon completion of the packet if the financial assistance for the research if obtained.

Information gained regarding individual subjects will be held in strict confidence. Code numbers will be assigned to each participant and only this number will be used to identify participants on the psychological instruments and demographic information sheet. The code will be kept in a secure location under the control of the experimenter.

DESIGN AND DATA ANALYSIS

Multiple regression analyses will be conducted to allow the researcher to describe the relationships between sets of the "predictor" variables (demographic characteristics, JWS scores, personal competency subscales, social network variables, interaction styles, feelings of alienation from University, high school GPA, and ACT/SAT scores) and the dependent variables, freshman GPA and persistance in the sample.

Each independent variable will be entered into separate regression analyses with the first year GPA and intent to reenroll as the dependent variables. In the first regression, demographic variables of sex, education level of parents, size of hometown, ACT/SAT scores, high school GPA, and major will be included. A second regression will be conducted to examine the contribution of the belief in a just world to the overall GPA and intent to reenroll. The third will examine the contributions of the social network variables (satisfaction, availability of support, network conflict, conflicted network size, multidimensionality, and reciprocity); the fourth will ex-

amine the contributions of personal competencies (interpersonal skills, problem-solving skills, personal skills, functional skilla); the fifth will examine the Black/Black interaction; the sixth, the Black/White interaction; and the seventh, feeling of alienation from the campus setting.

REFERENCES

Andrews, G., Tennant, C., Hewson, D.M. & Vaillant, G.E. (1978). Life event stress, social support, coping style, and risk or psychological impairment. Journal of Nervous and Mental Disorders, 166, 307-317.

Antonowsky, A. (1967). Aspirations, class, and racial-ethnic membership. Journal of Negro Education, 36, 385-393.

Astin, A.W. (1977). Preventing Students from Dropping Out. San Francisco: Jossey-Bass.

Astin, A.W. (1969). Racial considerations in admissions. Background paper for The Campus and the Racial Crisis in the 52nd Annual meeting of the American Council on Education. Washington, D.C.: American Council on Education.

Ausubel, D.P. & Ausubel, P. (1963). Ego development among segregated Negro children. In A.H. Passow (Eds.), Education in Depressed Areas. New York: Teachers College, Columbia University.

Baggaley, A.R. (1974). Academic prediction of an ivy league college, moderated by demographic variables. Measurement and Evaluation in Guidance, 6, 232-235.

Barrera, M. (1980). The Development and Application of Two Approaches to Assessing Social Support. Paper presented at the Annual Convention of the Western Psychological Association, Honolulu.

Bayer, A. & Baruch, R. (1969). The Black Student in American Colleges. Washington D.C.: American Council on Education.

Beiser, M. (1971). Study of personality assets in a rural community. Archives of General Psychiatry, 24, 244-254.

Boyd, W. (1974). Desegregating America's Colleges?: A Nationwide Survey of Black Students, 1972-1973. New York: Praeger.

Brazziel, W. (1964). Correlates of southern Negro personality. Journal of Social Issues, 20, 57-61.

Burbach, H.J. & Thompson, M.A. (1973). Note on alienation, race, and college attrition. Psychological Reports, 33,

Burbach, H.J. (1971). Alienation among college freshmen: a comparison of Puerto Rican, Black, and White students. Journal of College Student Personnel, 12, 248-252.

Burlew, K.H. (1980). Black youth and higher education: a longitudinal study. Research Report, 143, RIE.

Centers, R. (1963). Authoritarianism and misogyny. Journal of Social Psychology, 61, 81-85.

Centra, J. (1970). Black students at predominantly White colleges: a research description. Sociology of Education, 43, 325-339.

Christie, R. (1954). Authoritarianism re-examined. In R. Christie & M. Jahoda (Eds.), Studies in the Scope and Method of the Authoritarian Personality. Glencoe, Illinois: Free Press.

Clark, K. & Plotkins, L. (1963). The Negro Student at Integrated Colleges. New York: National Scholarship Service and Fund for Negro Students.

Clarke, J. (1968). Identification of Disadvantaged Junior College Students and Diagnosis of their Disabilities. Washington D.C.: U.S. Office of Education.

Cleveland, B. (1969). Black studies in higher education. Phi Delta Kappan, 51, 44-46.

Coelho, G.V., Hamburg, D.A., & Adams, J.E. (1974). Coping and Adaptation. New York: Basic Books.

Coelho, G.V., Hamburg, D.A., Murphey, E.B. (1963). Coping strategies in a new learning environment. Archives of General Psychiatry, 9, 433-443.

The Commission on the Higher Education of Minorities. (1982). Final Report. Higher Education Research Institute: Ford Foundation, RIE.

Copeland, L.L. (1978). An Exploration of the Causes of Black Attrition at Predominantly White Institutions of Higher Education. 1976 Ph.D. Dissertation. University of Michigan, RIE.

Cortina, R.J. (1980). From Educational Access to Academic Success: A Design for Improving Opportunities for Minority Persons in Wisconsin Higher Education in the 1980s. Madison: University of Wisconsin System Committee.

Cowen, E. (1977). Baby steps toward primary prevention. American Journal of Community Psychology, 5(1), 1-9.

Cox, H. (1965). The Secular City. New York: MacMillan Co., p.40.

Crossland, F. (1971). Minority Access to College. New York: Schocken Books.

Dean, D.G. (1961). Alienation: its meaning and measurement. American Sociological Review, 26, 753-758.

Dispenzierei, A., Giniger, S., Reichman, W., & Levey, M. College performance of disadvantaged students as a function of ability and personality. Journal of Counseling Psychology, 18, 298-305.

D'Zurilla, T.J. & Goldfried, M.R. (1971). Problem-solving and behavior modification. Journal of Abnormal Psychology, 78, 107-126.

Edwards, H. (1970). Black Students. New York: Free Press.

Egerton, J. (1969). State Universities and Black Americans. Atlanta, GA: Southern Education Foundation.

Farver, A.G., Sedlacek, W.E., & Brooks, G.C., Jr. (1975). Longitudinal predictors of university grades for Blacks and Whites. Measurement and Evaluation in Guidance, 7, 243-250.

Fields, C. (1970). Black students in a White university. In Financing Equal Opportunity in Higher Education, A College Scholarship Service Colloquium. New York: College Entrance Examination Board.

Fink, H.C. & Guttenplan, R. (1975). Belief in a Just World, Interpersonal Trust, and Attitudes. Unpublished manuscript. Brockport, New York: New York State University.

Fontana, A.F., Dowds, B.N., Markus, J.L., & Rakiesin, J.M. (1976). Coping with interpersonal conflicts through life events and hospitalization. Journal of Nervous and Mental Disorders, 162,

Franklin, P. (1980). Beyond Student Financial Aid. New York: College Entrance Examination Board.

Garrett, J.B. (1974). The Protestant Ethic Personality Variable and Work Behavior. Paper presented at the meeting of the Eastern Psychological Association, Philadelphia.

Gesten, E.L., Flores de Apodace, R., Rains, M., Weissberg, R.P., & Cowen, E.L. (1978). Promoting peer related social competence in school. In M.W. Kent and J.E. Rold (Eds.), The Primary Prevention of Psychopathology, 3: Promoting Social Competence and Coping in Children. Hanover, New Hampshire: University Press of New England.

Gibbs, J.T. (1975). Use of mental health services by Black students at a predominantly White university: a three year study. American Journal of Orthro-Psychiatry, 45, 430-445.

Gibbs, J.T. (1973). Black students/White university: different expectations. Personnel and Guidance Journal, 51, 463-469.

Goodrich, A. (1980). A Data-Driven Retention Model for Improving Minority Student Persistence in Higher Education Institutions. Paper presented at the Spring Conference of the Wisconsin Association of Educational Opportunity Program Personnel, Lake Geneva, Wisconsin.

Goodrich, A. (1978). A Data Driven Minority Student Retention Model for Faculty and Administrators in Predominantly White Institutions. Paper presented at the Annual meeting of the American College Personnel Association, Detroit, Michigan.

Green, R. (1969). The Black quest for higher education: an admissions dilemma. Personnel and Guidance Journal, 47, 905-911.

Greising, R. (1969). The high-risk student. North Central Association Quarterly, 43, 328-334.

Haettenschwiller, D. (1971). Counseling Black college students in special programs. Personnel and Guidance Journal, 50, 29-34.

Hamilton, C. (1970). The challenge of Black studies. Social Policy, 1, 14-16.

Harper, F.D. (1975). Black Students/White Campus. Washington D.C.: APGA Press.

Harrell, J.P. (1979). Analyzing Black coping styles: a supplemental diagnostic system. Journal of Black Psychology, 5, 99-108.

Harris, J. & Reitzel, J. (1967). Negro performance in a predominantly non-Negro university. Journal of College Student Personnel, 8, 366-368.

Hart, R. (1969). Toward more effective counseling of minorities. Journal of College Placement, 30, 71.

Hedegard, J., & Brown, D. (1969). Encounter of some Negro and White freshmen with a public multiversity. Journal of Social Issues, 25, 131-144.

Hilton, W. (1968). What the disadvantaged student does not need. Journal of the Association of College Admissions Counselors, 13, 20-22.

Hirsch, B.J. (1979). Psychological dimensions of social networks: a multimethod analysis. American Journal of Community Psychology, 7, 263-277.

Hodgkinson, H. (1971). Subordination squared--the minority student. In R. Altman and P. Snyder (Eds.) The Minority Student on the Campus: Expectations and Possibilities. Berkeley: Center for Research and Development in Higher Education, University of California, 51-58.

Holahan, C.J., Wilcox, B.L., Spearly, J.S., & Campbell, M.D. (1979). The ecological perspective in community mental health. Community Mental Health Review.

Jensen, A. (1969). How much can we boost IQ and scholastic achievement? Harvard Educational Review, 39, 1-123.

Jones, L.G. (1980). Black students enrolled in White colleges and universities: their attitudes and perceptions. Research Report RIE(1979).

Lerner, M.J. (1973). Belief in a Just World Versus the Authoritarian Syndrone: But Nobody Like the Indians. Unpublished manuscript, University of Waterloo.

Lockett, G.C. (1980) A Study of Traditional Measures and Non-traditional Measures Used to Predict the Success of Black College Students. Unpublished doctoral dissertation, Universitity of Missouri, Columbia.

MacDonald, A.D., Jr. (1972). More on the Protestant ethic. Journal of Consulting and Clinical Psychology, 39, 116-122.

McClain, E. (1967). Personality characteristics of Negro college students in the south--a recent appraisal. Journal of Negro Education, 36, 320-325.

McClellan, F. (1970). A Black student's reaction to the present system of financial aid. In Financing Equal Opportunity in Higher Education: A College Scholarship Service Colloquium. New York: College Entrance Board.

Mirels, H.L. & Garrett, J.B. (1971). The Protestant ethic as a personality variable. Journal of Consulting and Clinical Psychology, 36, 40-44.

Noonan, J.R., Barry, J.R., & Davis, H.C. (1970). Personality determinants in attitudes toward visible disability. Journal of Personality, 38, 1-15.

Oritt, E.J. (1983). Perceived Support Network Inventory. Unpublished manuscript. Salt Lake City, Utah: University of Utah Counseling Center.

Ostrow, E., Paul, S.C., Oritt, E., & Clark, V. (1981). Utah Social Network Rating Scale. Unpublished manuscript. Salt Lake City, Utah: University of Utah Counseling Center.

Ott, L.S. (1978). Admissions management with the focus on retention. In L. Noel (Eds.), Reducing the Drop-out Rate. San Francisco: Jossey-Bass, 23-28.

Paul, S.C., Paulton, J.S., Ostrow, E., Morrill, W.H., & Kechenour, E. (1981). Personal Competency Rating Scale. Unpublished Instrument. Salt Lake City, Utah: University of Utah.

Peplau, L.A. & Tyler, T. (1975). Belief in a Just World and Political Attitudes. Paper presented at the meeting of the Western Psychological Association, Sacramento.

Peterson, R., & Rodriguez, M. (1978). Minority student perceptions of a university environment. Journal of College Student Personnel, 19, 259-263.

Pfeiffer, C.M., Jr., & Sedlacek, W.E. (1971). The validity of academic predictors for Black and White students at predominantly White universities. Journal of Educational Measurement, 8, 253-261.

Pfeiffer, C.M., Jr., & Sedlacek, W.E. (1974). Predicting Black student grades with nonintellectual measures. Journal of Negro Education, 43, 67-76.

Pierce, R. & Norrell, G. (1970). White tutors for Black students. Journal of College Student Personnel, 11, 169-172.

Proctor, S. (1970). Racial pressures on urban institutions. In D. Nichols and O. Mills (Eds.), The Campus and the Racial Crisis. Washington, D.C.: American Council on Education.

Pruitt, A. (1970). Black poor at White colleges--personal growth goals. Journal of college Student Personnel, 11, 3-7.

Remsick, J. (1979). Minority plan has a way to go. Milwaukee Journal, 27, 27.

Rosser, J. (1971). Student Opinions and Black Studies. Paper presented at the American Educational Research Association Conference, New York.

Rotter, J.B. (1967). A new scale for the measurement of interpersonal trust. Journal of Personality, 35, 651-665.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80(609).

Rubin, Z. & Peplau, L.A. (1973). Who believes in a just world? Journal of Social Issues, 31, 65-89.

Rubin, A. & Peplau, L.A. (1973). Belief in a just world and reactions to another's lot: a study of participants in the national draft lottery. Journal of Social Issues, 29(4), 73-93.

Sandler, I. (1979). Development of the College Student Life Experiences Scale. Unpublished manuscript, Arizona State University.

Schutz, W.C. (1967). The FIRO Scales. Palo Alto, California: Consulting Psychologist Press.

Sedlacek, W.E., & Brooks, G.C., Jr. (1976). Racism in American Education: A Model for Change. Chicago: Nelson-Hall.

Sedlacek, W.E. & Webster, D.W. (1978). Admission and retention of minority students in large universities. Journal of College Student Personnel, 19, 242.

Smith, D.H. (1979). Admissions and Retention Problems of Black Students at Seven Predominantly White Universities. National Advisory Committee on Black Higher Education and Black Colleges and Universities (DHEW): Washington, D.C.

Steiner, I.D. & Johnson, H.H. (1963). Authoritarianism and tolerance of trait inconsistency. Journal of Abnormal and Social Psychology, 67, 388-391.

Suen, H.K. (1983). Alienation and attrition of Black college students on a predominantly White campus. Journal of College Student Personnel, 24(2), 117-120.

Tracey, T.J. & Sedlacek, W.E. (1984). Noncognitive variables in predicting academic success by race. Measurement and Evaluation in Guidance, 16, 171-178.

U.S. Bureau of the Census (1975). School enrollment--social and economic characteristics of students: October, 1974. Current Population Reports, series p. 20, no. 286. Washington D.C.: U.S. Government Printing Office.

Vaillant, G.E. (1976). Natural History of Male Psychological Health, volume: The Relation of Choice of Coping Mechanisms of Defense to Adults Adjustment. Archives of General Psychiatry, 33, 535-545.

Vontress, C.E. (1968). Counseling Negro students for college. Journal of Negro Education, 37, 37-44.

Warheit, G.J. (1979). Life events, coping stress, and depressive symptomatology. American Journal of Psychiatry, 136, 502-507.

Watley, D. (1971). Black and non-Black youth: finances and college attendance. NMSC Research Reports, 7.

Williams, R. (1969). What are we learning from current programs for disadvantaged students? Journal of Higher Education, 40, 17-25.

Willie, C. & Levey, J. (1972). On White campuses, Black students' retreat into separatism. Psychology Today, 5, 50-52, 76.

Willie, C. & McCord, H. (1972). Black Students at White Colleges. New York: Praeger.

Wirth, L. (1951). Urbanism as a way of life. American Journal of Sociology, Vol. XLIV (July, 1938) reprinted in P. Hart and A. Reiss, Jr. (Eds.), Reader in Urban Sociology. New York: The Free Press.

Zuckerman, M. (1975). Belief in a just world and altruistic behavior. Journal of Personality and Social Psychology, 31, 972-976.

Zuckerman, M. & Gerbasi, K.C. (1975). Belief in a Just World and Trust. Unpublished manuscript, University of Rochester.

A P P E N D I X

B

Letter of Introduction and Explanation

HI!

My name is Robbie and I am presently in the process of completing my doctoral degree from our grand ole University. However, to do so I need and am asking for your help. By completing the enclosed instruments you will not only be helping me complete my degree, but also providing this university with a clearer understanding of your needs so that it might be of better service to you and other Black students on our campus. If you choose to assist me, please finish reading the following instructions before beginning any other part of this packet.

1. Read, provide the required information, and sign the consent form which is the first page following this letter.

2. Closely follow the instructions on each instrument or questionnaire being sure to answer each item. You may feel a pull to respond how you would like to be as opposed to how you are, however, please resist this urge as much as you possibly can.

3. When all items have been completed, seal your envelope and immediately return the packet to your RA or the RA who handed the packet to you.

Thank you very much for your time and participation. If all goes well with the collection of this information, I will happily complete my degree requirements by August 1. I, too, wish you much success and happiness in all your present and future endeavors. Good Luck!

Sincerely,

Robbie J. Steward

A P P E N D I X

C

Consent for Research Participation Form

CONSENT FOR RESEARCH PARTICIPATION

I (print name)_____do hereby consent to participate in a research study concerned with the feelings, attitudes, and behaviors of Black students on this university campus.

I understand that I will be given 6 self-administered measures and demographic questionnaire. Further, I understand that all information provided by me is confidential and that the results will be kept in strict confidence. I will not be individually identified in any verbal or written report of the findings of this study.

My decision whether or not to participate will not prejudice my future relations with the University and/or will not effect my grades in any way. I understand that within a reasonable time following this participation, I will have an opportunity to have an interpretation of the data I furnish if I desire to do so. Also, I understand that my participation in this study is voluntary and that I may withdraw from participation at any time.

_____ _____

SIGNATURE SOCIAL SECURITY #

_____ _____

STREET ADDRESS PRINCIPLE INVESTIGATOR

_____

CITY, STATE, ZIP CODE

_____

DATE

A P P E N D I X

D

Student Demographic Questionnaire

COLLEGE STUDENTS

This questionnaire has been compiled in order to conduct research. Your name, address, and telephone are required, especially if you would like to know the outcome of the study. Please complete the other parts according to the instructions.

NAME_____

SCHOOL ADDRESS_____

TELEPHONE NO._____

1. Birthdate:
2. Sex: M F
3. Hometown (City, State):
4. Major:
5. High School Grade Point Average:
6. Present GPA:
7. ACT or SAT score:
8. Education completed by parents and/or guardians:
   Father:
   Mother:
9. Profession of Father:
   Mother:
10. Annual Family Income:
11. Do you intend to reenroll at this University for the Fall semester?
    Yes___ No_____ (If not, where do you intend to enroll and/or what are your plans? Answer below or on back of sheet.)

A P P E N D I X

E

Fundamental Interpersonal Relations Orientation--Behavior Scale (FIRO-B)

A P P E N D I X

F

Personal Competency Rating Scale (PCI)

A P P E N D I X

G

University Alienation Scale (UAS)

A P P E N D I X

H

Just World Scale (JWS)

A P P E N D I X

I

Perceived Support Network Inventory (PSNI)

A P P E N D I X

J

Student Background Information

TABLE 3

Frequencies of varying education levels of parents of student sample

	OU				UT			
	Father		Mother		Father		Mother	
Level	#	%	#	%	#	%	#	%
1	2	4.9	1	2.6	0	0	0	0
2	16	39.0	17	43.6	4	25.0	5	31.2
3	2	4.9	6	15.4	3	18.7	6	37.5
4	7	17.1	10	25.6	4	25.0	2	12.5
5	6	14.6	2	5.1	2	12.5	2	12.5
6	0	0	0	0	1	6.2	0	0
7	8	19.5	3	7.7	2	12.5	1	6.2

L1 = Elementary
L2 = High School
L3 = Some College
L4 = Bachelors
L5 = Masters
L6 = Ph.D.
L7 = No Response

TABLE 4

Hometown Population
sizes of student sample

Population	OU #	OU %	UT #	UT %
0 - 50,000	14	35.8	3	18.7
50,001 - 100,000	2	5.1	1	6.2
100,001 - 500,000	19	48.7	4	25.0
500,001 - 1,000,000	0	0	3	18.7
1,000,000+	4	10.2	5	13.2

TABLE 5

Frequencies of reported
majors in student sample

Major	#	%
Health Science	13	23.21
Business	14	25.0
Journalism	7	12.5
Engineering	9	16.07
Computer Science	6	10.71
Political Science	2	3.57
Zoology	1	1.78
Education	1	1.78
Undecided	3	5.35

TABLE 6

Responses to "what would most likely be the cause of your leaving the university?" (% of total # responses)

Reason	#	%
Lack of help dealing w/academic problems	4	6.15
Lack of money	12	18.46
Family problems	2	3.08
Personal problems	3	4.61
Feeling alienated	2	3.08
Inadequate study habits	3	4.61
Transfer to better university	8	12.31
No longer interested in attending school	4	6.15
Health problems	2	3.08
I know I will make it.	25	38.46

A P P E N D I X

K

Summary of the means and standard deviations for all variables by university

TABLE 7

Summary of the means and standard deviations for all variables by university

	OU		UT	
Variable	Mean	SD	Mean	SD
HSGPA	3.2	.55	3.4	.33
GPA	2.2	.87	2.1	.79
ACT	15.8	5.68	17.2	3.43
SAT	870.5	98.29	948.6	150.63
EDF	3.0	1.32	3.5	1.29
EDM	2.8	1.04	3.3	1.09
IE1	4.4	1.90	4.8	2.18
CE1	2.2	2.71	4.0	3.42
AE1	3.4	2.42	4.1	1.83
IW1	3.2	3.25	4.3	3.75
CW1	1.9	2.25	1.4	1.29
AW1	4.1	2.37	4.9	2.43
IE2	3.2	2.00	3.5	2.75
CE2	1.8	2.56	3.2	3.00
AE2	2.8	2.27	3.4	2.52
IW2	2.1	2.93	2.9	3.64
CW2	1.6	1.86	1.1	1.03
AW2	3.7	2.29	4.9	2.23
JW	3.8	.42	3.8	.38
ALIEN	2.8	.55	2.9	.52

TABLE 7
(cont.)

	OU		UT	
Variable	Mean	SD	Mean	SD
PI	4.8	1.11	4.8	1.49
PA	5.9	1.21	6.2	.67
PS	6.0	1.06	5.8	.91
PM	3.1	.92	3.4	.85
PR	5.0	1.33	4.9	1.27
PC	6.0	1.29	6.4	.46
PTOT	30.7	4.77	32.1	4.16
PCF	3.8	.54	3.9	.58
PCPS	3.9	.63	4.0	.64
PCP	3.9	.65	3.9	.65
PCS	3.9	.63	4.2	.64
PCTOT	3.9	.51	4.0	.55
POP	472993.3	825298.11	664632.9	664632.88

A P P E N D I X

L

Table Abbreviations

TABLE
ABBREVIATIONS

SEX	1=female 2=male
HSGPA	High School grade point average
GPA	Grade point average
ACT	Standardized test scores
SAT	Standardized test scores
*EDF	Education of father
*EDM	Education of mother
IE1	Expressed inclusion with Blacks
CE1	Expressed control with Blacks
AE1	Expressed affection with Blacks
IW1	Wanted inclusion with Blacks
CW1	Wanted control with Blacks
AW1	Wanted affection with Blacks
IE2	Expressed inclusion with Whites
CE2	Expressed control with Whites
AW2	Expressed affection with Whites
IW2	Wanted inclusion with Whites
CW2	Wanted control with Whites
AW2	Wanted affection with Whites
PI	Initiation of support seeking behavior
PA	Perceived availability of support
PS	Satisfaction with Support Network
PM	Multidimensionality of Support Network

TABLE
ABBREVIATIONS
(cont.)

PR	Reciprocity of Support Network
PC	Conflict within Support Network
PTOT	Total Personal Competency Rating Scale scores
JW	Just World Scale scores
PCF	Functional Personal Competency scores
PCPS	Problem-solving Personal Competency scores
PCP	Personal-Personal Competency scores
PCS	Social Personal Competency scores
PCTOT	Total Personal Competency Scale scores
ALIEN	University Alienation Scale scores
POP	Hometown Population Size

* 1=Elementary School
2=High School
3=Some College
4=Bachelors degree
5=Masters degree
6=PH.D. degree

A P P E N D I X

M

Intercorrelations among all measures for OU students

VARIABLE	N	MEAN	STD DEV	SUM	MINIMUM	MAXIMUM
SEX	40	1.35000000	0.48304459	54.000000	1.000000	2.000000
HSGPA	37	3.24135140	0.55081844	119.930000	1.500000	3.970000
GPA	40	2.25050000	0.87811769	90.020000	0.100000	3.750000
ACT	35	15.80000000	5.68117561	553.000000	5.000000	29.000000
SAT	2	870.50000000	98.28782826	1741.000000	801.000000	940.000000
UNITY	40	1.00000000	0	40.000000	1.000000	1.000000
EDF	32	3.00000000	1.31982200	96.000000	1.000000	5.000000
EDM	37	2.83783780	1.04111936	105.000000	1.000000	5.000000
IE1	40	4.40000000	1.90504577	176.000000	0	9.000000
CE1	40	2.20000000	2.71935514	88.000000	0	9.000000
AE1	40	3.45000000	2.42279357	138.000000	0	9.000000
IM1	40	3.20000000	3.25182239	128.000000	0	9.000000
CM1	40	1.87500000	2.25533356	75.000000	0	9.000000
AM1	40	4.10000000	2.37292402	164.000000	0	9.000000
IE2	40	3.25000000	2.60995924	130.000000	0	8.000000
CE2	40	1.77500000	2.56692407	71.000000	0	9.000000
AE2	40	2.80000000	2.26681175	112.000000	0	9.000000
IM2	40	2.15000000	2.93126316	86.000000	0	9.000000
CM2	40	1.40000000	1.86466509	60.000000	0	9.000000
AM2	40	3.75000000	2.29548405	150.000000	0	9.000000
PI	39	4.80230770	1.11422790	187.290000	1.000000	7.000000
PA	39	5.01935900	1.20980068	230.855000	1.000000	7.000000
PS	39	5.97641030	1.06084902	233.080000	1.000000	7.000000
PM	39	3.14910260	0.92184880	122.815000	1.000000	5.000000
PH	39	5.03630820	1.33564087	196.415000	1.000000	7.000000
PC	39	5.94782050	1.29402060	233.915000	1.500000	7.500000
PTOT	39	30.71794840	4.77155040	1197.790000	18.500000	37.720000

VARIABLE	N	MEAN	STD DEV	SUM	MINIMUM	MAXIMUM
JK	54	3.84814333	0.41187589	150.08500	3.000000	5.250000
PCF	40	3.78411750	0.54533997	151.24700	2.120000	4.850000
PCPS	40	3.89625000	0.63197977	155.85000	2.160000	4.830000
PCP	40	3.91850000	0.65800003	156.74000	2.000000	5.000000
PCS	40	3.91675000	0.63741162	156.67000	1.500000	4.770000
PCTOT	40	3.87835000	0.61090660	154.97400	1.950000	4.895000
ALIEN	40	2.78333750	0.55125866	111.33500	1.450000	4.250000
RETURN	40	1.05000000	0.22072214	42.00000	1.000000	2.000000
SHIP	54	472993.3333333	825298.1153879	18046700.00000	2348.000000	3005072.000000

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	SEX	HSGPA	GPA	ACT	SAT	UNIV	FDF	FDM	IE1	CF1	AE1	IM1	CM1
SEX	1.00000 0.0000 40	-0.34048 0.0392 37	-0.12434 0.4446 40	0.32752 0.0548 35	0.00000 . ?	0.00000 1.0000 40	-0.21402 0.2395 32	0.10270 0.5453 37	-0.29529 0.0643 40	0.04296 0.7925 40	-0.35637 0.0240 40	-0.29056 0.0689 40	0.06472 0.6915 40
HSGPA	-0.34048 0.0392 37	1.00000 0.0000 37	0.28969 0.0820 37	0.31442 0.0797 32	1.00000 . ?	0.00000 1.0000 37	-0.04868 0.7984 30	-0.17965 0.3093 34	0.11691 0.4908 37	-0.33027 0.0459 37	0.00957 0.9552 37	0.10065 0.5534 37	0.08970 0.5972 37
GPA	-0.12434 0.4446 40	0.28969 0.0820 37	1.00000 0.0000 40	0.14948 0.3914 35	1.00000 . ?	0.00000 1.0000 40	-0.10141 0.5807 32	-0.12100 0.4756 37	0.20352 0.1300 40	0.00264 0.9871 40	-0.03024 0.8438 40	0.08499 0.6021 40	0.04605 0.7732 40
ACT	0.32752 0.0548 35	0.31442 0.0797 32	0.14948 0.3914 35	1.00000 0.0000 35	0.00000 . 1	0.00000 1.0000 35	-0.09534 0.6294 28	0.11421 0.5264 33	-0.07880 0.6527 35	-0.13934 0.4247 35	-0.02114 0.9041 35	-0.09160 0.6008 35	0.05904 0.7362 35
SAT	0.00000 ?	1.00000 ?	1.00000 ?	0.00000 1	1.00000 ?	0.00000 ?	-1.00000 ?	-1.00000 ?	0.00000 ?	-1.00000 ?	1.00000 ?	1.00000 ?	0.00000 ?
UNIV	0.00000 1.0000 40	0.00000 1.0000 37	0.00000 1.0000 40	0.00000 1.0000 35	0.00000 . ?	0.00000 1.0000 40	0.00000 1.0000 32	0.00000 1.0000 37	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40
FDF	-0.21402 0.2395 32	-0.04868 0.7984 30	-0.10141 0.5807 32	-0.09534 0.6294 28	-1.00000 . ?	0.00000 1.0000 32	1.00000 0.0000 32	0.50809 0.0030 32	0.18875 0.3009 32	0.02001 0.9134 32	0.17055 0.3507 32	-0.08642 0.6341 32	0.15318 0.4026 32
FDM	0.10270 0.5453 37	-0.17965 0.3093 34	-0.12100 0.4756 37	0.11421 0.5268 33	-1.00000 . ?	0.00000 1.0000 37	0.50809 0.0030 32	1.00000 0.0000 37	-0.13295 0.4324 37	-0.17329 0.3050 37	-0.06740 0.6918 37	-0.20914 0.2141 37	0.20116 0.2325 37

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	SEX	HSGPA	GPA	ACT	SAT	UNIV	EDF	EDM	IE1	CE1	AE1	IM1	CM1
IE1	-0.29529 0.0643 40	0.11091 0.4900 37	0.20353 0.1300 40	-0.07280 0.6527 35	0.00000 .	0.00000 1.0000 40	0.19875 0.2609 32	-0.14295 0.4226 37	1.00000 0.0000 40	0.10252 0.4003 40	0.61410 0.0001 40	0.54127 0.0004 40	0.10143 0.5358 40
CE1	0.04298 0.7925 40	-0.33027 0.0459 37	0.00264 0.9871 40	-0.13958 0.4247 35	-1.00000 .	0.00000 1.0000 40	0.02001 0.9139 32	-0.17329 0.3050 37	0.10252 0.5803 40	1.00000 0.0000 40	0.09088 0.5771 40	0.29193 0.0406 40	-0.09198 0.5728 40
AE1	-0.35657 0.0210 40	0.00957 0.9552 37	-0.03026 0.8858 40	-0.02114 0.9041 35	1.00000 .	0.00000 1.0000 40	0.17055 0.3507 32	-0.06700 0.6918 37	0.61410 0.0001 40	0.09088 0.5771 40	1.00000 0.0000 40	0.44098 0.0042 40	-0.22558 0.1655 40
IM1	-0.29056 0.0689 40	0.10065 0.5534 37	0.08490 0.6021 40	-0.09160 0.6008 35	1.00000 .	0.00000 1.0000 40	-0.08602 0.6381 32	-0.30919 0.2101 37	0.54127 0.0003 40	0.26793 0.0946 40	0.44098 0.0042 40	1.00000 0.0000 40	0.18160 0.2615 40
CM1	0.06872 0.6915 40	-0.08979 0.5972 37	0.03605 0.8732 40	0.05908 0.7162 35	0.00000 .	0.00000 1.0000 40	0.15318 0.4026 32	-0.30116 0.2325 37	0.10144 0.5534 40	-0.09198 0.5724 40	-0.22558 0.1655 40	0.18160 0.2615 40	1.00000 0.0000 40
AM1	-0.27739 0.0831 40	-0.07726 0.6495 37	0.14246 0.3805 40	-0.13139 0.4519 35	1.00000 .	0.00000 1.0000 40	-0.01026 0.9556 32	-0.16328 0.3342 37	0.37088 0.0185 40	0.16769 0.3010 40	0.69518 0.0001 40	0.50244 0.0010 40	-0.34257 0.0305 40
IE2	-0.22452 0.1647 40	0.01475 0.9310 37	0.14173 0.3830 40	0.19721 0.2562 35	1.00000 .	0.00000 1.0000 40	0.19017 0.2972 32	0.01042 0.9512 37	0.50891 0.0008 40	-0.07038 0.6661 40	0.52815 0.0005 40	0.16047 0.3210 40	-0.10265 0.5160 40
CE2	0.08582 0.5985 40	-0.34818 0.0347 37	-0.05295 0.7855 40	-0.10258 0.5576 35	-1.00000 .	0.00000 1.0000 40	0.20716 0.1726 32	0.09475 0.5770 37	0.11323 0.4866 40	0.70087 0.0001 40	-0.09850 0.5452 40	0.08586 0.6003 40	0.06360 0.6981 40
AE2	-0.21508 0.1819 40	-0.16315 0.3346 37	-0.05887 0.6993 40	-0.03184 0.8559 35	0.00000 .	0.00000 1.0000 40	0.10562 0.5651 32	0.00051 0.9118 37	0.28020 0.0799 40	0.05241 0.7481 40	0.67843 0.0001 40	0.27549 0.0937 40	-0.22068 0.1712 40
IM2	-0.30966 0.0519 40	0.12189 0.4724 37	0.01162 0.9432 40	0.11483 0.5113 35	0.00000 .	0.00000 1.0000 40	0.10699 0.5600 32	-0.07310 0.6672 37	0.55823 0.0002 40	0.13124 0.4195 40	0.50915 0.0001 40	0.70962 0.0001 40	0.09888 0.5729 40
CM2	-0.01139 0.9444 40	0.06583 0.6987 37	0.10191 0.5315 40	0.15060 0.3890 35	0.00000 .	0.00000 1.0000 40	0.05099 0.7817 32	0.24778 0.1392 37	-0.03320 0.8389 40	-0.27711 0.0834 40	-0.19710 0.2228 40	0.08582 0.6003 40	0.71906 0.0001 40
AM2	-0.30156 0.0151 40	0.04120 0.8047 37	0.13209 0.4165 40	0.23154 0.1808 35	1.00000 .	0.00000 1.0000 40	0.10391 0.5714 32	-0.01279 0.9401 37	0.25794 0.1081 40	-0.10269 0.5283 40	0.61860 0.0001 40	0.33320 0.0356 40	-0.18944 0.2417 40
PI	-0.33045 0.0397 39	0.15507 0.3728 38	-0.08732 0.5971 39	-0.21055 0.2320 38	1.00000 .	0.00000 1.0000 39	-0.40264 0.0223 32	-0.19805 0.2806 37	0.14968 0.3651 39	0.13103 0.4266 39	0.06785 0.5948 39	0.08980 0.5848 39	-0.17898 0.2867 39

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	SEX	HSGPA	GPA	ACT	SAT	UNIV	EDF	EDM	IE1	CE1	AE1	IM1	CM1
PI	-0.33045	0.15507	-0.08732	-0.21055	1.00000	0.00000	0.02551	0.08519	0.19704	-0.21096	0.07224	0.17612	0.06360

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	SEX	HSGPA	GPA	ACT	SAT	UNIV	EDF	EDM	IEI	CFI	AFI	EMI	CMI
PA	-0.27454 0.0910 39	0.30117 0.0417 36	0.00144 0.9931 39	-0.04646 0.7924 34	1.00000 . 2	0.00000 1.0000 39	0.02551 0.8998 32	0.04519 0.8141 37	0.19704 0.2293 39	-0.21096 0.1973 39	0.07224 0.6620 39	0.17612 0.2835 39	0.05308 0.7020 39
PS	-0.25110 0.1230 39	0.20461 0.1505 36	-0.13337 0.4183 39	-0.10785 0.5438 34	1.00000 . 2	0.00000 1.0000 39	-0.16512 0.3665 32	-0.09004 0.5582 37	0.19703 0.2293 39	-0.07418 0.6536 39	0.11967 0.4681 39	0.17900 0.2754 39	-0.02665 0.8721 39
PM	-0.02082 0.8999 39	0.04242 0.8060 36	-0.11515 0.4852 39	-0.16662 0.3463 34	-1.00000 . 2	0.00000 1.0000 39	0.03043 0.8670 32	0.09396 0.5802 37	-0.31620 0.0499 39	-0.29272 0.0705 39	-0.25771 0.1132 39	-0.29504 0.0702 39	0.11150 0.5060 39
PR	-0.10940 0.5074 39	0.10323 0.5046 36	-0.10914 0.5084 39	-0.09339 0.5994 34	1.00000 . 2	0.00000 1.0000 39	-0.30972 0.0845 32	-0.25096 0.1202 37	0.25333 0.1197 39	-0.08688 0.7769 39	0.21748 0.1835 39	0.15256 0.3538 39	-0.15811 0.3426 39
PC	0.01100 0.9470 39	0.23552 0.1667 36	0.13795 0.4176 39	0.28425 0.1033 34	1.00000 . 2	0.00000 1.0000 39	-0.18457 0.3119 32	-0.05257 0.7573 37	0.26219 0.1069 39	-0.10428 0.5276 39	0.13015 0.4297 39	0.10964 0.5064 39	0.34020 0.0341 39
PTOT	-0.21114 0.1969 39	0.27274 0.1075 36	-0.07201 0.6631 39	-0.04643 0.7943 34	1.00000 . 2	0.00000 1.0000 39	-0.30013 0.0951 32	-0.09080 0.5930 37	0.18413 0.2618 39	-0.22706 0.1637 39	0.18612 0.2708 39	0.09397 0.5693 39	-0.05283 0.7827 39
IM	-0.07018 0.6712 39	-0.23527 0.1709 36	-0.05727 0.7067 39	-0.18125 0.3050 34	-1.00000 . 2	0.00000 1.0000 39	0.23947 0.1868 32	0.27803 0.0957 37	-0.11645 0.4802 39	0.11923 0.4667 39	-0.03168 0.8488 39	-0.07678 0.6434 39	-0.08648 0.6007 39
PCF	0.07042 0.6659 40	0.26225 0.1169 37	0.21351 0.1850 40	0.20308 0.2420 35	1.00000 . 2	0.00000 1.0000 40	0.08474 0.6407 32	0.00179 0.9916 37	0.30681 0.0541 40	-0.09687 0.5521 40	0.22945 0.1508 40	0.17906 0.2677 40	0.03523 0.8292 40
PCPS	0.16948 0.2947 40	0.07271 0.6649 37	-0.01382 0.9325 40	0.27133 0.1149 35	1.00000 . 2	0.00000 1.0000 40	0.05420 0.7683 32	-0.15710 0.3531 37	0.30307 0.0121 40	0.07117 0.6626 40	0.26320 0.0764 40	0.12459 0.4444 40	0.06353 0.6970 40
PCP	0.09164 0.5738 40	0.11409 0.5015 37	0.17724 0.2730 40	-0.11820 0.4980 35	1.00000 . 2	0.00000 1.0000 40	-0.03456 0.8511 32	-0.05601 0.7402 37	0.29898 0.0606 40	-0.15531 0.3386 40	0.11166 0.4927 40	0.01546 0.9254 40	-0.04782 0.7695 40
PCS	0.10034 0.2655 40	0.00089 0.9946 37	0.06201 0.7039 40	0.11106 0.5253 35	1.00000 . 2	0.00000 1.0000 40	-0.04094 0.7804 32	0.02049 0.9042 37	0.21052 0.1925 40	-0.10405 0.5069 40	0.20701 0.1991 40	-0.12057 0.4845 40	-0.19230 0.2343 40
PCTOT	0.15901 0.4271 40	0.13145 0.4380 37	0.12673 0.4358 40	0.13037 0.4554 35	1.00000 . 2	0.00000 1.0000 40	0.01008 0.9563 32	-0.05692 0.7384 37	0.36171 0.0218 40	-0.09083 0.5772 40	0.25010 0.1196 40	0.12356 0.4462 40	-0.05100 0.7547 40
ALIEN	-0.21502 0.1809 40	-0.10311 0.5041 37	-0.14258 0.3338 40	-0.08100 0.6437 35	1.00000 . 2	0.00000 1.0000 40	0.14384 0.4159 32	0.10017 0.5553 37	-0.06788 0.6775 40	0.19120 0.2373 40	0.17873 0.2698 40	0.20509 0.2033 40	-0.11370 0.4858 40

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	SEX	HSGPA	GPA	ACT	SAT	UNIV	FDF	FDM	IE1	CE1	AE1	I+1	C+1
RETURN	0.07215 0.6542 40	-0.08819 0.6203 37	-0.06305 0.7851 40	0.00000 1.0000 35	-1.00000 . 2	0.00000 1.0000 40	0.24810 0.0974 32	0.27050 0.1054 37	0.25606 0.1104 40	0.12067 0.4410 40	0.19817 0.2251 40	-0.12151 0.4298 40	-0.04863 0.7120 40
PDP	0.30486 0.0593 39	-0.43299 0.0084 36	-0.16382 0.3408 39	-0.02876 0.8717 38	-1.00000 . 2	0.00000 1.0000 39	-0.04642 0.8041 31	0.18207 0.2866 36	-0.05527 0.7382 39	-0.00662 0.9681 39	0.10652 0.5194 39	-0.10776 0.5159 39	-0.15898 0.3337 39
	AW1	IF2	CF2	AF2	I+2	C+2	AW2	PI	PA	PS	PM	PP	PF
SEX	-0.27754 0.0831 40	-0.22452 0.1637 40	0.04582 0.7985 40	-0.21548 0.1819 40	-0.30966 0.0518 40	-0.01139 0.9488 40	-0.38156 0.0151 40	-0.33085 0.0397 39	-0.27436 0.0910 39	-0.25114 0.1230 39	-0.02082 0.8999 39	-0.10940 0.5074 39	0.01100 0.9470 39
HSGPA	-0.07726 0.6495 37	0.01475 0.9310 37	-0.30818 0.0647 37	-0.16315 0.3346 37	0.12189 0.4724 37	0.06583 0.6987 37	0.04120 0.8067 37	0.15307 0.3728 36	0.34117 0.0417 36	0.24061 0.1505 36	0.00202 0.9860 36	0.14523 0.4006 36	0.23552 0.1667 36
GPA	0.14246 0.3805 40	0.14173 0.3830 40	-0.05295 0.7455 40	-0.02687 0.8693 40	0.01162 0.9432 40	0.10191 0.5315 40	0.11209 0.4165 40	-0.08732 0.5971 39	0.00144 0.9931 39	-0.13337 0.4183 39	-0.11513 0.4852 39	-0.10914 0.5048 39	0.12745 0.4376 39
ACT	-0.13134 0.4519 35	0.19721 0.2562 35	-0.14358 0.4574 35	-0.03184 0.8550 35	0.11083 0.5113 35	0.15660 0.3690 35	0.23154 0.1808 35	-0.21055 0.2320 34	-0.04686 0.7920 34	-0.10785 0.5438 34	-0.16562 0.3063 34	-0.09449 0.5909 34	0.28023 0.1033 34
SAT	1.00000 . 2	1.00000 . 2	-1.00000 . 2	0.00000 . 2	0.00000 . 2	0.00000 . 2	1.00000 . 2	1.00000 . 2	1.00000 . 2	1.00000 . 2	-1.00000 . 2	1.00000 . 2	1.00000 . 2
UNIV	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 40	0.00000 1.0000 39	0.00000 1.0000 39	0.00000 1.0000 39	0.00000 1.0000 39	0.00000 1.0000 39	0.00000 1.0000 39
FDF	-0.01026 0.9556 32	0.19017 0.2972 32	0.20716 0.1726 32	0.10562 0.5651 32	0.10699 0.5600 32	0.05099 0.7817 32	0.10391 0.5713 32	-0.00264 0.9223 32	0.02551 0.8898 32	-0.16512 0.3665 32	0.03083 0.8670 32	-0.30972 0.0845 32	-0.16457 0.3119 32
FDM	-0.16328 0.3342 37	0.01042 0.9512 37	0.00475 0.7770 37	0.04051 0.8118 37	-0.07310 0.6672 37	0.20778 0.1392 37	-0.01279 0.9401 37	-0.19405 0.2494 37	0.08519 0.6161 37	-0.09944 0.5582 37	0.09396 0.5862 37	-0.25996 0.1202 37	-0.05257 0.7578 37
IE1	0.37048 0.0195 40	0.50891 0.0008 40	0.11323 0.4866 40	0.28020 0.0799 40	0.55823 0.0002 40	-0.03320 0.8389 40	0.25704 0.1081 40	0.10488 0.5231 39	0.19703 0.2293 39	-0.31620 0.0499 39	0.25333 0.1197 39	0.26219 0.1069 39
CE1	0.16769 0.3019 40	-0.07038 0.6661 40	0.70087 0.0001 40	0.05201 0.7481 40	0.13128 0.4195 40	-0.27711 0.0454 40	-0.10269 0.5283 40	0.13103 0.4266 39	-0.21096 0.1978 39	-0.07418 0.6536 39	-0.29272 0.0705 39	-0.04688 0.7769 39	-0.10028 0.5276 39
AE1	0.69518 0.0001 40	0.52815 0.0005 40	-0.09858 0.5452 40	0.67833 0.0001 40	0.54915 0.0001 40	-0.19710 0.2228 40	0.61880 0.0001 40	0.08784 0.5909 39	0.07226 0.6620 39	0.11967 0.4641 39	-0.25771 0.1132 39	0.21748 0.1835 39	0.13015 0.4297 39

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	AW1	IF2	CE2	AE2	IW2	CW2	AW2	PI	PA	PS	PM	PF	PC
IW1	0.502204 0.0010 40	0.160087 0.3211 40	0.006500 0.9683 40	0.278480 0.0837 40	0.709862 0.0001 40	0.185502 0.2502 40	0.533520 0.0456 40	0.080000 0.5488 39	0.17012 0.2935 39	0.17000 0.2750 39	-0.206361 0.2052 39	0.152550 0.3534 39	0.120000 0.5000 40
CW1	-0.302557 0.0305 40	-0.162065 0.3160 40	0.064600 0.6981 40	-0.222068 0.1712 40	0.068800 0.6729 40	0.719400 0.0001 40	-0.189844 0.2417 40	-0.178039 0.2867 39	0.065808 0.7029 39	-0.032665 0.8721 39	0.111130 0.5000 39	-0.156111 0.3426 39	0.300200 0.0341 39
AW1	1.000000 0.0000 40	0.571102 0.0104 40	-0.063558 0.6958 40	0.599867 0.0001 40	0.388485 0.0142 40	-0.216754 0.1792 40	0.753518 0.0001 40	0.137611 0.4035 39	0.015901 0.9234 39	0.035586 0.8284 39	-0.209456 0.1250 39	0.190179 0.2421 39	0.035564 0.8241 39
IF2	0.571102 0.0104 40	1.000000 0.0000 40	0.052113 0.7471 40	0.601916 0.0001 40	0.488099 0.0017 40	-0.193488 0.2196 40	0.433078 0.0055 40	0.210435 0.1901 39	0.220000 0.1709 39	0.252045 0.1210 39	-0.000920 0.9557 39	0.143309 0.3848 39	0.210457 0.1858 39
CE2	-0.006556 0.6968 40	0.052113 0.7471 40	1.000000 0.0000 40	0.054576 0.7418 40	0.076616 0.6404 40	-0.193607 0.2253 40	-0.218677 0.1752 40	0.000061 0.7140 39	-0.000848 0.9960 39	-0.047330 0.7749 39	-0.084597 0.6113 39	-0.035222 0.8356 39	0.042232 0.7981 39
AE2	0.599867 0.0001 40	0.601916 0.0001 40	0.054576 0.7418 40	1.000000 0.0000 40	0.489471 0.0012 40	-0.152887 0.3463 40	0.615966 0.0001 40	0.207009 0.2059 39	0.151790 0.3563 39	0.136848 0.4061 39	-0.026284 0.8739 39	0.101900 0.5371 39	0.032402 0.8447 39
IW2	0.504465 0.0142 40	0.488099 0.0017 40	0.076616 0.6404 40	0.489471 0.0012 40	1.000000 0.0000 40	-0.096868 0.5530 40	0.421088 0.0068 40	0.087911 0.7721 39	0.119635 0.4682 39	0.140506 0.3748 39	-0.138497 0.4057 39	0.111861 0.4726 39	0.181167 0.2684 39
CW2	-0.216754 0.1792 40	-0.193488 0.2196 40	-0.193607 0.2253 40	-0.152887 0.3463 40	-0.096868 0.5530 40	1.000000 0.0000 40	-0.029955 0.8504 40	-0.196600 0.2303 39	-0.043899 0.7906 39	-0.120882 0.4638 39	0.040048 0.7880 39	-0.022031 0.1776 39	0.123208 0.4655 39
AW2	0.753518 0.0001 40	0.433078 0.0055 40	-0.218677 0.1752 40	0.615966 0.0001 40	0.421088 0.0068 40	-0.029955 0.8504 40	1.000000 0.0000 40	0.058003 0.7257 39	0.145720 0.3762 39	0.079555 0.6302 39	-0.057226 0.7292 39	-0.164078 0.3049 39	0.150118 0.3618 39
PI	0.137611 0.4035 39	0.210435 0.1901 39	0.000061 0.7140 39	0.207009 0.2059 39	0.087911 0.7721 39	-0.196600 0.2303 39	0.058003 0.7257 39	1.000000 0.0000 39	0.590526 0.0001 39	0.718447 0.0001 39	-0.173335 0.2912 39	0.585450 0.0001 39	0.168332 0.3057 39
PA	0.015901 0.9234 39	0.220000 0.1709 39	-0.000848 0.9960 39	0.151790 0.3563 39	0.119635 0.4682 39	-0.043899 0.7906 39	0.145720 0.3762 39	0.590526 0.0001 39	1.000000 0.0000 39	0.891900 0.0001 39	-0.059082 0.7174 39	0.631104 0.0001 39	0.411975 0.0078 39
PS	0.035586 0.8284 39	0.252045 0.1210 39	-0.047330 0.7749 39	0.136848 0.4061 39	0.140506 0.3748 39	-0.120882 0.4638 39	0.079555 0.6302 39	0.718447 0.0001 39	0.891900 0.0001 39	1.000000 0.0000 39	-0.168375 0.3044 39	0.722270 0.0001 39	0.475700 0.0022 39
PM	-0.209456 0.1250 39	-0.000920 0.9957 39	-0.084597 0.6113 39	-0.026284 0.8739 39	-0.138497 0.4057 39	0.040048 0.7880 39	-0.057226 0.7292 39	-0.173335 0.2912 39	-0.059082 0.7174 39	-0.168375 0.3044 39	1.000000 0.0000 39	-0.122508 0.4596 39	-0.051627 0.7577 39

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	AA1	AA2	AA3	AB2	AB3	AB4	AC2	AC3	AC4	AC5	AD2	AD3	AD4
PP	0.19179 0.2421 59	0.18509 0.2888 59	-0.04322 0.7456 59	0.10190 0.4471 59	0.11861 0.3720 59	-0.22131 0.1776 59	0.16878 0.2049 59	0.04582 0.7301 59	0.63184 0.0001 59	0.72270 0.0001 59	-0.02296 0.8496 59	1.00000 0.0000 59	0.81800 0.0001 59
PC	0.03593 0.8281 59	0.21057 0.1854 59	0.04342 0.7941 59	0.03202 0.8407 59	0.14167 0.2684 59	0.12608 0.3455 59	0.15016 0.2616 59	0.16833 0.3057 59	0.41975 0.0078 59	0.37579 0.0022 59	-0.05103 0.7577 59	0.81800 0.0001 59	1.00000 0.0000 59
PINT	0.10079 0.5415 59	0.25510 0.1170 59	-0.10279 0.4335 59	0.18283 0.2653 59	0.07773 0.6582 59	-0.00075 0.5869 59	0.18578 0.2576 59	0.66583 0.0001 59	0.88205 0.0001 59	0.69225 0.0001 59	0.09257 0.4751 59	0.45155 0.0001 59	0.92481 0.0001 59
IM	-0.10779 0.5136 59	-0.23558 0.1489 59	0.34500 0.0321 59	0.00152 0.9927 59	-0.06004 0.7146 59	-0.00807 0.7695 59	-0.21073 0.1079 59	-0.09710 0.5565 59	-0.14000 0.4104 59	-0.23167 0.1559 59	-0.02648 0.8720 59	-0.10001 0.5296 59	-0.00965 0.9026 59
PCF	0.21864 0.1753 40	0.05105 0.7508 40	0.08712 0.5930 40	0.08973 0.5819 40	0.15838 0.3905 40	0.03202 0.8426 40	0.20194 0.2114 40	-0.00728 0.9649 59	0.04620 0.7800 59	-0.07910 0.6322 59	-0.13227 0.4222 59	-0.07277 0.6598 59	0.10947 0.2867 59
PCPS	0.09378 0.5849 40	0.23374 0.1466 40	0.20502 0.2035 40	0.22874 0.1557 40	0.30241 0.0577 40	0.03132 0.8961 40	0.19730 0.2220 40	-0.02780 0.8685 59	0.12651 0.4455 59	0.03507 0.7322 59	-0.17153 0.2964 59	0.05200 0.7528 59	0.11652 0.4807 59
PCP	0.04554 0.5659 40	-0.07106 0.6615 40	0.00819 0.9603 40	-0.03063 0.8512 40	0.13100 0.4190 40	-0.08438 0.6725 40	-0.10084 0.5358 40	-0.05703 0.8210 59	-0.01570 0.9248 59	-0.09792 0.5552 59	-0.10203 0.5365 59	0.04456 0.7455 59	0.04518 0.7807 59
PCS	0.04736 0.5501 40	0.25447 0.1131 40	0.12597 0.4360 40	0.20149 0.2125 40	0.18553 0.2517 40	-0.20862 0.1950 40	0.09319 0.5674 40	0.04756 0.5041 59	0.11928 0.4695 59	0.02811 0.8802 59	-0.14589 0.3755 59	0.02491 0.8555 59	0.07760 0.5574 59
PCTINT	0.14870 0.3592 40	0.10157 0.5836 40	0.13041 0.4229 40	0.14894 0.3580 40	0.22780 0.1573 40	-0.08532 0.6007 40	0.11247 0.4900 40	0.00272 0.9840 59	0.06184 0.6208 59	-0.03576 0.7859 59	-0.14522 0.2748 59	0.01008 0.9197 59	0.12470 0.4543 59
ALTEN	0.10144 0.3144 40	-0.03302 0.8378 40	0.02429 0.8817 40	0.26074 0.1042 40	0.24960 0.1201 40	0.00808 0.9605 40	0.23979 0.1361 40	0.10655 0.5193 59	-0.06065 0.7138 59	-0.05240 0.6929 59	-0.16154 0.3259 59	-0.07445 0.6700 59	-0.17873 0.2763 59
RETURN	0.15704 0.3990 40	0.24013 0.1350 40	0.33716 0.0334 40	0.27478 0.0859 40	0.19627 0.2228 40	-0.14700 0.3690 40	0.12652 0.4346 40	-0.05220 0.6957 59	-0.06220 0.7068 59	-0.07250 0.6610 59	0.10098 0.5208 59	-0.21601 0.1028 59	-0.05600 0.6978 59
PVP	0.00251 0.9879 59	0.05098 0.7579 59	-0.01809 0.8130 59	0.21359 0.1917 59	-0.05043 0.7421 59	-0.15108 0.3586 59	0.00010 0.9995 59	-0.20734 0.2114 58	-0.13081 0.4337 58	-0.09688 0.5036 58	-0.14507 0.3808 58	-0.20662 0.1056 58	-0.18092 0.2536 58

	PINT	IM	PCF	PCPS	PCP	PCS	PCTINT	ALTEN	RETURN	PVP
SEX	-0.21114 0.1969 59	-0.07018 0.6712 59	0.07042 0.6659 40	0.16988 0.2987 40	0.09168 0.5738 40	0.18038 0.2655 40	0.15901 0.3271 40	-0.21302 0.1869 40	0.07215 0.6552 40	0.50456 0.0593 59

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	PIOI	IS	PCE	PCPS	PCP	PCS	PCTOT	SETPS	RETURN	PDP
IE2	0.255110 0.1174 39	-0.235540 0.1459 39	0.056105 0.7548 40	0.253470 0.1406 40	-0.071040 0.6613 40	-0.256407 0.1151 40	0.142157 0.3836 40	-0.033402 0.8372 40	0.260113 0.1050 40	0.050984 0.7579 39
CE2	-0.130279 0.5335 39	0.365500 0.0221 39	0.084712 0.6030 40	0.220542 0.2035 40	0.008414 0.9603 40	0.123497 0.4460 40	0.120481 0.4629 40	0.020290 0.9017 40	0.333716 0.0334 40	-0.018009 0.9130 39
AE2	0.182263 0.2653 39	0.031156 0.8927 39	-0.008973 0.5919 40	0.227478 0.1557 40	-0.050263 0.7512 40	0.201490 0.2125 40	0.140898 0.3589 40	0.260274 0.1042 40	0.227674 0.0439 40	0.213590 0.1917 39
IW2	0.077722 0.6352 39	-0.000000 0.7140 39	0.123838 0.3945 40	-0.302001 0.0577 40	0.131400 0.4190 40	0.185553 0.2517 40	0.227289 0.1573 40	0.209860 0.1204 40	0.126027 0.2498 40	-0.054435 0.7421 39
CW2	-0.009475 0.9569 39	-0.000007 0.7695 39	0.033202 0.8026 40	0.092132 0.5981 40	-0.086898 0.5725 40	-0.208662 0.1250 40	-0.008532 0.9007 40	0.099898 0.5605 40	-0.143706 0.3900 40	-0.151085 0.3586 39
AW2	0.185746 0.2576 39	-0.210735 0.1979 39	0.261982 0.0114 40	0.197330 0.2224 40	-0.100484 0.5358 40	0.093319 0.5674 40	0.112337 0.4900 40	0.339079 0.1361 40	0.126552 0.4366 40	0.000010 0.9995 39
PI	0.486543 0.0001 39	-0.007110 0.5565 39	-0.000728 0.9649 39	-0.462740 0.9685 39	-0.015743 0.8210 39	0.083756 0.5461 39	0.002772 0.9869 39	0.106835 0.5193 39	-0.015220 0.8457 39	-0.207330 0.2116 38
PA	0.842265 0.0001 39	-0.133400 0.4194 39	0.008620 0.9800 39	0.126831 0.4846 39	-0.015720 0.9248 39	0.119258 0.4895 39	0.081848 0.6200 39	-0.060065 0.7134 39	-0.062220 0.7068 39	-0.130481 0.4337 38
PS	0.842225 0.0001 39	-0.231617 0.1553 39	-0.079100 0.6322 39	0.035507 0.8322 39	-0.007703 0.9552 39	0.029111 0.8802 39	-0.035760 0.8280 39	-0.032480 0.8430 39	-0.072500 0.6610 39	-0.096868 0.5635 38
PM	0.094257 0.5751 39	-0.126900 0.4729 39	-0.132270 0.4222 39	-0.171558 0.2904 39	-0.102083 0.5365 39	-0.145899 0.3755 39	-0.146522 0.3748 39	-0.161500 0.3259 39	0.100494 0.5408 39	-0.145070 0.3848 38
PP	0.835535 0.0001 39	-0.100401 0.5430 39	-0.072770 0.6598 39	0.052000 0.7528 39	0.050436 0.7655 39	0.030943 0.8565 39	0.018665 0.9197 39	-0.070445 0.6700 39	-0.218801 0.1820 39	-0.266622 0.1056 38
PC	0.629456 0.0001 39	-0.064965 0.6926 39	0.189097 0.2467 39	0.110632 0.4907 39	0.000518 0.9997 39	0.077790 0.6574 39	0.123778 0.4553 39	-0.127875 0.2765 39	-0.050000 0.8278 39	-0.140992 0.2534 38
PIOI	1.000000 0.0000 39	-0.288650 0.0770 39	-0.015048 0.0257 39	0.000597 0.9909 39	-0.036554 0.8253 39	0.020665 0.9222 39	-0.006609 1.0707 39	-0.008282 0.9162 39	-0.050083 0.6247 39	-0.224878 0.1671 38

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	PI-I	J+	PCF	PCPS	PCP	PCS	PCTOT	ALTER	RETURN	POP
I+	-0.248650 0.0770 59	1.000000 0.0000 60	-0.172229 0.2048 59	-0.009813 0.7161 59	-0.058061 0.6155 59	-0.010009 0.9130 59	-0.084210 0.5193 59	0.318654 0.0496 59	0.064575 0.7652 59	0.032814 0.8066 58
PCF	-0.015888 0.9257 59	-0.172229 0.2048 59	1.000000 0.0000 60	0.552849 0.0002 60	0.708481 0.0001 60	0.687772 0.0001 60	0.879010 0.0001 60	-0.291652 0.0648 60	0.029452 0.8575 60	0.041174 0.7608 59
PCPS	0.005397 0.9684 59	-0.086015 0.7161 59	0.552849 0.0002 60	1.000000 0.0000 60	0.725554 0.0001 60	0.503562 0.0001 60	0.715506 0.0001 60	-0.192255 0.2548 60	0.062008 0.6857 60	0.208414 0.1277 59
PCP	-0.036653 0.7852 59	-0.038861 0.7755 59	0.708481 0.0001 60	0.725554 0.0001 60	1.000000 0.0000 60	0.732480 0.0001 60	0.820655 0.0001 60	-0.377911 0.0162 60	-0.169848 0.2998 60	0.010115 0.9511 59
PCS	0.022663 0.8722 59	-0.011409 0.9150 59	0.687772 0.0001 60	0.503562 0.0003 60	0.732480 0.0001 60	1.000000 0.0000 60	0.890757 0.0001 60	-0.234047 0.1525 60	-0.066078 0.7095 60	0.252792 0.1129 59
PCTOT	-0.006604 0.9707 59	-0.084210 0.5193 59	0.879010 0.0001 60	0.715506 0.0001 60	0.820655 0.0001 60	0.890757 0.0001 60	1.000000 0.0000 60	-0.329668 0.0378 60	-0.045619 0.7819 60	0.170933 0.2868 59
ALTER	-0.000202 0.6162 59	0.318654 0.0496 59	-0.291652 0.2688 60	-0.192255 0.2548 60	-0.377911 0.0162 60	-0.234047 0.1525 60	-0.329668 0.0378 60	1.000000 0.0000 60	0.009975 0.9404 60	-0.094000 0.4792 59
RETURN	-0.000063 0.0207 59	0.064575 0.7652 59	0.029452 0.8575 60	0.062008 0.7037 60	-0.169848 0.2998 60	-0.066078 0.7095 60	-0.045619 0.7819 60	0.009975 0.9404 60	1.000000 0.0000 60	0.189077 0.2490 59
POP	-0.228878 0.1671 58	0.032814 0.8066 58	0.041174 0.7608 59	0.208414 0.1277 59	0.010115 0.9511 59	0.252792 0.1129 59	0.170933 0.2868 59	-0.094000 0.4792 59	0.189077 0.2490 59	1.000000 0.0000 58

A P P E N D I X

N

Intercorrelations among all measures for UT students

VARIABLE	N	MEAN	STD DEV	SUM	MINIMUM	MAXIMUM
SEX	16	1.3750000	0.5000000	22.0000000	1.0000000	2.0000000
HSRPA	15	3.0413333	0.3307754	61.6200000	3.0000000	4.0000000
GPA	16	2.0682500	0.7984291	33.0920000	0.4280000	3.0900000
ACT	6	17.1666667	3.4302575	103.0000000	12.0000000	21.0000000
SAT	14	948.5714286	150.4323667	13280.0000000	640.0000000	1170.0000000
UNIV	16	2.0000000	0	32.0000000	2.0000000	2.0000000
EDF	14	3.5000000	1.2860195	49.0000000	2.0000000	6.0000000
FDM	15	3.2666667	1.6997835	49.0000000	2.0000000	5.0000000
TF1	15	4.8000000	2.1778102	72.0000000	1.0000000	9.0000000
CE1	15	4.0000000	3.4226139	60.0000000	0	9.0000000
AE1	15	4.0666667	1.8309508	61.0000000	0	8.0000000
TM1	15	4.3333333	3.7548625	65.0000000	0	9.0000000
CM1	15	1.4000000	1.2983506	21.0000000	0	4.0000000
AM1	15	4.9333333	2.8338877	74.0000000	0	9.0000000
TF2	15	3.4666667	2.7481596	52.0000000	0	9.0000000
CE2	15	3.2000000	3.0047581	48.0000000	0	9.0000000
AE2	15	3.4000000	2.5298221	51.0000000	0	9.0000000
TM2	15	2.8666667	3.6423436	43.0000000	0	8.0000000
CM2	15	1.0666667	1.0327956	16.0000000	0	4.0000000
AM2	15	4.8666667	2.2318047	73.0000000	0	9.0000000
PI	15	4.8210000	1.4868233	72.3150000	1.7100000	6.4100000
PA	15	6.2140000	0.6695393	93.2100000	5.0000000	7.0000000
PS	15	5.8493333	0.9150348	87.7400000	3.8100000	7.0000000
PM	15	3.4120000	0.4511689	51.1800000	1.7100000	5.0000000
PH	15	4.9616667	1.2492372	74.4250000	3.0000000	6.8300000
PC	15	6.3196667	0.4658037	94.7950000	5.5700000	7.0000000
PINT	15	32.0776667	4.1659462	481.1650000	23.5000000	35.6000000

VARIABLE		MEAN	STD DEV	SUM	MINIMUM	MAXIMUM
IW	15	3.8333333	0.1495485	57.050000	3.100000	4.000000
PLE	15	3.0933475	0.5420515	43.091000	2.710000	4.451000
PCPS	15	3.9993750	0.0043288	63.91000	3.000000	5.000000
PCP	15	3.9137500	0.0549464	62.62000	2.500000	4.625000
PCS	15	4.1881250	0.0345318	67.01000	3.100000	5.000000
PCTOT	15	4.0056250	0.5533169	64.09000	2.970000	4.[illegible]
ALTER	15	2.9020000	0.5241969	43.53000	1.875000	3.700000
RETURN	15	1.0000000	0	16.00000	1.000000	1.000000
POP	15	729199.9375000	660632.8766217	11667199.00000	7505.000000	1500000.000000

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	SEX	HSGPA	GPA	ACT	SAT	UNIV	EOF	EOM	IE1	CE1	AE1	IM1	CE1
SEX	1.00000 1.0000 15	-0.06347 0.8270 15	0.10754 0.7056 15	0.30108 0.5620 6	0.02841 0.9232 10	0.00000 1.0000 15	0.42102 0.1338 14	0.17931 0.5225 15	-0.37514 0.1663 15	-0.09386 0.8013 15	-0.24157 0.3863 15	-0.05023 0.8922 15	-0.09300 0.7400 15
HSGPA	-0.06347 0.8270 15	1.00000 0.0000 15	0.23461 0.4000 15	0.86441 0.0587 5	0.17377 0.5524 10	0.00000 1.0000 15	-0.21528 0.4598 14	-0.12082 0.6680 15	0.26019 0.3490 15	0.48645 0.0660 15	0.18265 0.5107 15	0.24951 0.2953 15	-0.07285 0.7964 15
GPA	0.10754 0.7056 15	0.23461 0.4000 15	1.00000 0.0000 15	0.57886 0.2287 6	0.49628 0.0711 10	0.00000 1.0000 15	0.12814 0.6624 14	0.55332 0.0324 15	0.00018 0.9995 15	0.26398 0.3418 15	0.16586 0.5072 15	0.12817 0.6489 15	0.21390 0.4440 15
ACT	0.30108 0.5620 6	0.86441 0.0587 5	0.57886 0.2287 6	1.00000 0.0000 6	0.59761 0.4024 6	0.00000 1.0000 6	0.16835 0.7867 5	0.70945 0.1796 5	-0.24526 0.6909 5	-0.73124 0.1603 5	0.47550 0.4141 5	-0.29623 0.6284 5	-0.72763 0.1635 5
SAT	0.02841 0.9232 10	0.17377 0.5524 10	0.49628 0.0711 10	0.59761 0.4024 6	1.00000 0.0000 10	0.00000 1.0000 10	0.07904 0.7974 13	0.02697 0.9271 10	0.21818 0.4537 10	0.68405 0.0070 10	0.07027 0.8113 10	0.52707 0.0528 10	0.63930 0.0130 10
UNIV	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 6	0.00000 1.0000 10	0.00000 1.0000 15	0.00000 1.0000 14	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15
EOF	0.42102 0.1338 14	-0.21528 0.4598 14	0.12814 0.6624 14	0.16835 0.7867 5	0.07904 0.7974 13	0.00000 1.0000 14	1.00000 0.0000 14	0.24881 0.3910 14	-0.18623 0.5238 14	-0.21120 0.4696 14	0.31897 0.2663 14	-0.21021 0.4715 14	-0.09485 0.7481 14
EOM	0.17931 0.5225 15	-0.12082 0.6680 15	0.55332 0.0324 15	0.70945 0.1796 5	0.02697 0.9271 10	0.00000 1.0000 15	0.24881 0.3910 14	1.00000 0.0000 15	-0.21872 0.4822 15	-0.17078 0.5428 15	-0.22229 0.4259 15	-0.38635 0.1540 15	-0.23011 0.4093 15

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	SEX	HSGRA	GRA	ACT	SAT	GPIV	FEP	FPP	IE1	CE1	AE1	IM1	CM1
IE1	-0.37513 0.1665 15	0.26419 0.3370 15	0.00010 0.9995 15	-0.20526 0.6000 5	0.21810 0.4557 10	0.00000 1.0000 15	-0.18625 0.5258 10	-0.21072 0.4422 15	1.00000 0.0000 15	0.33451 0.1584 15	0.50515 0.0568 15	0.16477 0.0000 15	0.30819 0.2658 15
CE1	-0.07554 0.0613 15	0.39045 0.0060 15	0.26390 0.3818 15	-0.73120 0.1603 5	0.69405 0.0070 10	0.00000 1.0000 15	-0.21120 0.4554 10	-0.17078 0.5428 15	0.33451 0.1588 15	1.00000 0.0000 15	0.15958 0.5700 15	0.66705 0.0060 15	0.64296 0.0067 15
AE1	-0.26157 0.3483 15	0.18265 0.5137 15	0.19588 0.4873 15	0.87550 0.0181 5	0.07027 0.8113 10	0.00000 1.0000 15	0.51807 0.2063 10	-0.22220 0.4250 15	0.50515 0.0568 15	0.15958 0.5700 15	1.00000 0.0000 15	0.60676 0.0101 15	0.51858 0.0473 15
IM1	-0.05024 0.8922 15	0.28751 0.2955 15	0.13817 0.6189 15	-0.29823 0.6288 5	0.52707 0.0528 10	0.00000 1.0000 15	-0.21921 0.4515 10	-0.15845 0.5431 15	0.76877 0.0008 15	0.09705 0.0865 15	0.60078 0.0101 15	1.00000 0.0000 15	0.70337 0.0034 15
CM1	-0.00530 0.9798 15	-0.07245 0.7969 15	0.21300 0.4440 15	-0.72765 0.1635 5	0.45930 0.0858 10	0.00000 1.0000 15	-0.09845 0.7281 10	-0.23011 0.4093 15	0.30819 0.2658 15	0.60296 0.0097 15	0.31850 0.2473 15	0.70337 0.0034 15	1.00000 0.0000 15
AM1	0.15940 0.5215 15	-0.14561 0.6096 15	0.16594 0.5540 15	-0.93805 0.0201 5	0.29062 0.3205 10	0.00000 1.0000 15	0.10657 0.7169 10	-0.17968 0.5217 15	0.59024 0.0205 15	0.30294 0.2107 15	0.61015 0.0157 15	0.62796 0.0122 15	0.61936 0.0138 15
IE2	-0.04140 0.8836 15	-0.19124 0.7383 15	-0.11487 0.6835 15	-0.59010 0.2949 5	0.58410 0.0356 10	0.00000 1.0000 15	-0.04201 0.8566 10	-0.09138 0.7460 15	0.52990 0.0322 15	0.59474 0.0221 15	0.16472 0.5590 15	0.57922 0.0237 15	0.60457 0.0170 15
CE2	-0.52504 0.0445 15	0.42948 0.1101 15	0.10054 0.7194 15	-0.55595 0.3305 5	0.34566 0.2261 10	0.00000 1.0000 15	-0.21231 0.4662 10	0.15565 0.5797 15	0.19211 0.4928 15	0.79179 0.0004 15	-0.02456 0.9195 15	0.58192 0.0223 15	0.34021 0.2096 15
AE2	0.03341 0.9058 15	-0.15091 0.5914 15	-0.08327 0.7683 15	-0.50375 0.3869 5	0.33568 0.2867 10	0.00000 1.0000 15	0.25085 0.3670 10	-0.19511 0.4859 15	0.15817 0.5734 15	0.33823 0.2176 15	0.53356 0.0405 15	0.47576 0.0744 15	0.60370 0.0164 15
IM2	-0.59046 0.1857 15	0.10925 0.6983 15	-0.09387 0.7393 15	-0.40050 0.5040 5	0.51468 0.2252 10	0.00000 1.0000 15	-0.00811 0.9781 10	-0.20407 0.4648 15	0.49168 0.0627 15	0.63027 0.0116 15	0.52909 0.0268 15	0.71367 0.0028 15	0.58668 0.0217 15
CM2	0.21822 0.4346 15	-0.17571 0.5306 15	-0.14197 0.5041 15	-0.44248 0.4556 5	0.39567 0.1657 10	0.00000 1.0000 15	-0.27065 0.3403 10	-0.45607 0.0868 15	-0.02541 0.9284 15	0.24290 0.3069 15	-0.15361 0.5807 15	0.30782 0.2657 15	0.50484 0.0283 15
AM2	0.11301 0.6869 15	0.00799 0.9697 15	-0.06410 0.8280 15	0.00000 1.0000 5	0.20815 0.4752 10	0.00000 1.0000 15	0.14081 0.6362 10	-0.27540 0.3203 15	0.52317 0.0454 15	0.20923 0.2786 15	0.59085 0.0183 15	0.55076 0.0300 15	0.55738 0.0388 15
PI	-0.19410 0.4937 15	-0.17724 0.5021 10	0.03376 0.9039 15	-0.59628 0.2170 6	-0.24003 0.4296 10	0.00000 1.0000 15	-0.21125 0.4484 10	-0.22830 0.4321 10	0.07749 0.7926 10	-0.06170 0.8690 10	0.41256 0.1927 10	0.25065 0.3758 10	0.39800 0.1586 10

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	SEX	HSLOPE	GPA	ACT	SAT	VOCAB	FIT	FDM	IQ	CPI	AFI	IVI	PMI
PA	-0.00079 0.7747 15	0.08511 0.4918 14	-0.37665 0.1976 15	-0.52518 0.5294 6	-0.51075 0.3014 13	0.00000 1.0000 15	0.07524 0.8120 13	-0.25020 0.4805 14	0.50750 0.2257 14	0.12043 0.6808 14	0.08656 0.7777 14	0.26756 0.3551 14	0.29004 0.3203 14
PS	0.14910 0.6210 15	-0.57757 0.1549 14	-0.05855 0.8358 15	-0.73221 0.0980 6	-0.34755 0.2909 13	0.00000 1.0000 15	0.12514 0.6837 13	-0.17147 0.5550 14	-0.08163 0.7815 14	-0.29898 0.2991 14	0.41603 0.1300 14	0.05516 0.9104 14	0.36250 0.2027 14
PM	-0.25107 0.3651 15	-0.15520 0.5962 14	-0.30020 0.2707 15	-0.08252 0.1352 6	-0.29519 0.3272 13	0.00000 1.0000 15	-0.10117 0.5949 13	-0.54512 0.0352 14	0.36809 0.2006 14	-0.05077 0.8592 14	0.56408 0.0356 14	0.40978 0.1066 14	0.35024 0.2196 14
PR	-0.25747 0.3532 15	0.23154 0.4261 14	-0.20071 0.4682 15	-0.28780 0.5802 6	-0.08675 0.7781 13	0.00000 1.0000 15	-0.18632 0.5422 13	-0.51252 0.0609 14	0.02675 0.1261 14	0.33096 0.2478 14	0.56430 0.0340 14	0.51451 0.0604 14	0.30683 0.2740 14
PC	0.19716 0.4812 15	-0.56719 0.1465 14	-0.17158 0.5814 15	-0.20882 0.6913 6	-0.50155 0.3171 13	0.00000 1.0000 15	0.03324 0.9142 13	-0.10672 0.7165 14	0.31808 0.2677 14	-0.17557 0.5447 14	0.25118 0.3884 14	0.17865 0.5411 14	0.14879 0.6002 14
PIHI	-0.23649 0.3953 15	-0.01202 0.9675 14	-0.23888 0.3912 15	-0.87548 0.0223 6	-0.28003 0.3470 13	0.00000 1.0000 15	-0.15873 0.6045 13	-0.06696 0.8023 14	0.06836 0.8697 14	0.15652 0.5931 14	0.61026 0.0205 14	0.09990 0.7357 14	0.01351 0.9636 14
JA	0.12215 0.6645 15	-0.15015 0.5933 15	0.24838 0.3692 15	-0.64437 0.2405 5	0.56650 0.0479 14	0.00000 1.0000 15	-0.12522 0.6607 14	-0.16082 0.5583 15	0.22064 0.4268 15	0.09632 0.7309 15	0.05092 0.8570 15	0.02814 0.9151 15	0.00865 0.9758 15
PCF	-0.02500 0.9268 16	-0.18798 0.5028 15	0.00786 0.9770 16	-0.39091 0.4835 6	-0.50967 0.2813 14	0.00000 1.0000 16	0.15250 0.6027 14	-0.31813 0.2542 15	0.06717 0.8120 15	-0.25225 0.3604 15	0.71471 0.0025 15	0.22202 0.4264 15	0.20175 0.4709 15
PCPS	-0.22068 0.4115 16	-0.22817 0.4176 15	-0.23175 0.4092 16	-0.65242 0.1602 6	-0.21550 0.4841 14	0.00000 1.0000 16	-0.33771 0.2376 14	-0.26981 0.3304 15	0.23700 0.3951 15	0.00089 0.9991 15	0.41568 0.1045 15	0.49543 0.0567 15	0.29987 0.2857 15
PCP	-0.20108 0.4553 16	-0.24098 0.3362 15	-0.49868 0.0507 16	-0.66670 0.1481 6	-0.48219 0.0808 14	0.00000 1.0000 16	-0.17918 0.5309 14	-0.41866 0.1209 15	0.38140 0.1857 15	-0.12696 0.6521 15	0.42998 0.1097 15	0.27055 0.3298 15	0.08240 0.7698 15
PCS	-0.25449 0.3815 16	-0.13061 0.6427 15	-0.37841 0.1526 16	-0.85924 0.0283 6	-0.62110 0.0177 14	0.00000 1.0000 16	-0.15921 0.5867 14	-0.31505 0.2528 15	0.22112 0.4280 15	-0.09196 0.7444 15	0.37994 0.1621 15	0.09149 0.7457 15	-0.09856 0.7267 15
PCTOT	-0.20091 0.4556 16	-0.23964 0.3897 15	-0.33245 0.2252 16	-0.81342 0.0490 6	-0.47947 0.0828 14	0.00000 1.0000 16	-0.15483 0.5972 14	-0.38920 0.1516 15	0.26085 0.3477 15	-0.13214 0.6388 15	0.56017 0.0299 15	0.26921 0.3319 15	0.13063 0.6273 15
ALIEN	-0.27748 0.3160 15	0.03739 0.8121 15	-0.01131 0.9118 15	0.86271 0.2229 5	0.18490 0.5209 14	0.00000 1.0000 15	-0.59350 0.0253 14	-0.08182 0.7268 15	0.07040 0.8017 15	0.23215 0.4051 15	-0.45089 0.0916 15	0.07709 0.7848 15	-0.17949 0.5221 15

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	SEX	HSGPA	GPA	ACT	SAT	UNIV	FOF	FDM	TE1	CE1	AE1	IM1	C1
RETURN	0.00000 1.00000 16	0.00000 1.00000 15	0.00000 1.00000 16	0.00000 1.00000 6	0.00000 1.00000 16	0.00000 1.00000 16	0.00000 1.00000 14	0.00000 1.00000 15	0.00000 1.00000 15	0.00000 1.00000 15	0.00000 1.00000 15	0.00000 1.00000 15	0.00000 1.00000 15
PUP	0.35159 0.1820 16	-0.43405 0.1005 15	-0.38870 0.1467 16	0.18581 0.7328 6	-0.63769 0.0101 16	0.00000 1.0000 16	0.18721 0.4203 14	0.17025 0.5215 15	-0.55151 0.0331 15	-0.48926 0.0001 15	-0.00948 0.1292 15	-0.41741 0.0002 15	-0.69030 0.0040 15
	A×1	B×2	C×2	AB2	I×2	C×2	A×2	P1	PA	PS	PM	PR	I?
SEX	0.13890 0.6215 15	-0.03100 0.8446 15	-0.52504 0.0405 15	0.03341 0.9053 15	-0.57405 0.1457 15	0.21822 0.4346 15	0.11361 0.6869 15	-0.18010 0.4997 15	-0.08079 0.7747 15	0.13910 0.6210 15	-0.25187 0.3651 15	-0.25707 0.3502 15	0.19714 0.4812 15
HSGPA	-0.14361 0.6026 15	-0.09321 0.7343 15	0.03048 0.1101 15	-0.15091 0.5910 15	0.10925 0.6963 15	-0.17591 0.5306 15	0.06709 0.4097 15	-0.17434 0.5421 14	0.00011 0.9910 14	-0.50787 0.1549 14	-0.15520 0.5962 14	0.23158 0.4261 14	-0.50719 0.1065 14
GPA	0.10548 0.5504 15	-0.11487 0.6835 15	0.10054 0.6969 15	-0.04327 0.8783 15	-0.09487 0.7393 15	-0.16197 0.5601 15	0.05414 0.8480 15	0.03378 0.9049 15	-0.07605 0.7876 15	-0.05455 0.8356 15	-0.30028 0.2107 15	-0.20471 0.4643 15	-0.17158 0.5410 15
ACT	-0.93405 0.0201 5	-0.59010 0.2949 5	-0.56595 0.3305 5	-0.50375 0.3869 5	-0.00050 0.5040 5	-0.33244 0.4556 5	0.00000 1.0000 5	-0.59028 0.2174 6	-0.32518 0.5240 6	-0.73221 0.0960 6	-0.62252 0.1352 6	-0.28780 0.5802 6	-0.20882 0.6913 6
SAT	0.28062 0.3295 16	0.56410 0.0356 16	0.30566 0.2501 16	0.35564 0.2407 16	0.31408 0.2752 16	0.39367 0.1637 16	0.20815 0.4752 14	-0.24002 0.4296 15	-0.31075 0.3014 15	-0.14735 0.2404 15	-0.29540 0.4272 15	-0.08675 0.7781 15	-0.30155 0.4171 15
UNIV	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 15
FOF	0.10057 0.7169 14	-0.00201 0.9946 14	-0.21241 0.4862 14	0.25096 0.3870 14	-0.00833 0.9781 14	-0.27006 0.3493 14	0.18081 0.5562 14	-0.21125 0.4884 13	0.07324 0.8120 13	0.12518 0.6837 13	-0.14117 0.6489 13	-0.18432 0.5422 13	0.03320 0.9152 13
FDM	-0.17968 0.5217 15	-0.09134 0.7480 15	0.15563 0.5797 15	-0.19511 0.4859 15	-0.20407 0.4698 15	-0.05697 0.8486 15	-0.27549 0.4203 15	-0.22836 0.4324 14	-0.25020 0.3805 14	-0.17147 0.5520 14	-0.56512 0.0352 14	-0.51252 0.0609 14	-0.10072 0.7165 14
TE1	0.59024 0.0205 15	0.52990 0.0422 15	0.10211 0.7128 15	0.15817 0.5734 15	0.04166 0.8827 15	-0.02581 0.9244 15	0.52317 0.0454 15	0.07739 0.7926 14	0.30730 0.2237 14	-0.08165 0.7815 14	0.56409 0.0206 14	0.42675 0.1281 14	0.51868 0.0677 14
CE1	0.34298 0.2107 15	0.58474 0.0221 15	0.70179 0.0004 15	0.33823 0.2176 15	0.63027 0.0113 15	0.28298 0.3059 15	0.20923 0.2746 15	-0.06170 0.8340 14	0.12081 0.6804 14	-0.29898 0.2991 14	-0.05977 0.8392 14	0.53096 0.0478 14	-0.17537 0.5487 14
AE1	0.61015 0.0157 15	0.16372 0.5599 15	-0.03956 0.8985 15	0.53556 0.0405 15	0.56909 0.0268 15	-0.15361 0.5847 15	0.50865 0.0189 15	0.41256 0.1427 14	0.48653 0.0777 14	0.41003 0.1390 14	0.56404 0.0356 14	0.50850 0.0340 14	0.25118 0.3664 14

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	A=1	IE2	CE2	AE2	I=2	C=2	A=2	PI	PA	PS	PM	PB	PC
I=1	0.86746 0.0122 15	0.57022 0.0257 15	0.34102 0.2123 15	0.47570 0.0748 15	0.71587 0.0029 15	0.50702 0.0257 15	0.55979 0.0300 15	0.25063 0.3754 14	0.21756 0.4551 14	0.03316 0.9134 14	0.00978 0.9734 14	0.51351 0.0006 14	0.17845 0.5411 14
C=1	0.81934 0.0138 15	0.60157 0.0170 15	0.30021 0.2778 15	0.68370 0.0036 15	0.56864 0.0217 15	0.56868 0.0285 15	0.53748 0.0348 15	0.39809 0.1586 14	0.28448 0.3203 14	0.36258 0.2027 14	0.35028 0.2196 14	0.50883 0.2248 14	0.13878 0.5002 14
A=1	1.00000 0.0000 15	0.05610 0.8079 15	0.16825 0.5733 15	0.58467 0.0221 15	0.80768 0.0005 15	0.63337 0.0087 15	0.90557 0.0001 15	0.25091 0.3753 14	0.70503 0.0007 14	0.40095 0.1509 14	0.56433 0.0282 14	0.78018 0.0074 14	0.60733 0.0054 14
IE2	0.65640 0.0079 15	1.00000 0.0000 15	0.50150 0.0371 15	0.68932 0.0084 15	0.70870 0.0013 15	0.59091 0.1897 15	0.58152 0.0230 15	-0.19890 0.4954 14	0.10190 0.5110 14	-0.18683 0.5225 14	0.07853 0.7906 14	-0.55919 0.2072 14	0.28371 0.3256 14
CE2	0.15823 0.5733 15	0.50150 0.0371 15	1.00000 0.0000 15	0.27062 0.3293 15	0.53126 0.0416 15	0.15752 0.5775 15	0.13208 0.6389 15	-0.24657 0.4155 14	0.05320 0.8567 14	-0.40287 0.1128 14	-0.13826 0.6378 14	0.03025 0.7590 14	-0.04874 0.8794 14
AE2	0.58467 0.0221 15	0.68932 0.0084 15	0.27062 0.3293 15	1.00000 0.0000 15	0.73497 0.0018 15	0.58446 0.2087 15	0.57982 0.0236 15	0.26210 0.3653 14	0.21548 0.4595 14	0.36029 0.2281 14	1.27041 0.3498 14	0.49017 0.0752 14	0.19944 0.4982 14
I=2	0.80768 0.0005 15	0.70870 0.0013 15	0.53126 0.0416 15	0.73487 0.0018 15	1.00000 0.0000 15	0.87808 0.7810 15	0.83031 0.0118 15	0.17682 0.5465 14	0.39827 0.1584 14	0.05021 0.8607 14	0.25635 0.3783 14	0.71767 0.0039 14	0.22520 0.4388 14
C=2	0.14397 0.6047 15	0.59091 0.1897 15	0.15652 0.5775 15	0.58446 0.2087 15	0.87808 0.7810 15	1.00000 0.0000 15	0.15907 0.5712 15	-0.15023 0.5986 14	-0.10135 0.7303 14	-0.02639 0.9286 14	0.20223 0.4881 14	-0.14368 0.6241 14	0.04562 0.7502 14
A=2	0.90557 0.0001 15	0.58152 0.0230 15	0.13208 0.6389 15	0.57982 0.0236 15	0.83031 0.0118 15	0.15907 0.5712 15	1.00000 0.0000 15	0.12277 0.6759 14	0.73293 0.0029 14	0.29848 0.2999 14	0.44238 0.1132 14	0.70162 0.0100 14	0.62708 0.0163 14
PI	0.25091 0.3753 14	-0.19890 0.4954 14	-0.24657 0.4155 14	0.26210 0.3653 14	0.17682 0.5465 14	-0.15023 0.5986 14	0.12277 0.6759 14	1.00000 0.0000 15	0.28582 0.3018 15	0.75672 0.0011 15	0.50883 0.0527 15	0.42301 0.1162 15	0.18845 0.5107 15
PA	0.70503 0.0037 14	0.10190 0.5110 14	0.05320 0.8567 14	0.21548 0.4595 14	0.39827 0.1584 14	-0.10135 0.7303 14	0.73293 0.0029 14	0.28582 0.3018 15	1.00000 0.0000 15	0.58919 0.0208 15	0.67150 0.0061 15	0.58209 0.0224 15	0.56657 0.0277 15
PS	0.40095 0.1509 14	-0.18683 0.5225 14	-0.40287 0.1128 14	0.36029 0.2281 14	0.05021 0.8607 14	-0.02639 0.9286 14	0.29848 0.2999 14	0.75672 0.0011 15	0.58919 0.0208 15	1.00000 0.0000 15	0.67799 0.0055 15	0.52028 0.0465 15	0.33370 0.2252 15
PM	0.56433 0.0282 14	0.07853 0.7906 14	-0.13826 0.6378 14	0.27041 0.3498 14	0.25635 0.3783 14	0.20223 0.4881 14	0.44238 0.1132 14	0.50883 0.0527 15	0.67150 0.0061 15	0.67799 0.0055 15	1.00000 0.0000 15	0.74890 0.0022 15	0.50914 0.0258 15

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	AW1	IF2	CF2	AE2	IW2	CW2	AG2	P1	PA	PS	PM	PR	PF
PR	0.640018 0.0074 14	0.459194 0.2072 14	-0.000025 0.9520 14	0.490017 0.0752 14	0.717467 0.0049 14	-0.105404 0.6281 14	0.561162 0.0180 14	0.423301 0.1162 15	0.562209 0.0228 15	0.520254 0.2405 15	0.284553 0.2962 15	1.000000 0.0000 15	0.184442 0.6076 15
PC	0.668743 0.0006 14	0.284371 0.3250 14	-0.000474 0.9795 14	0.199046 0.4942 14	0.225240 0.4348 14	0.073462 0.7502 14	0.627044 0.0163 14	0.184435 0.5107 15	0.566557 0.0277 15	0.335370 0.2242 15	0.504518 0.0568 15	0.184442 0.6076 15	1.000000 0.0000 15
PINT	0.422745 0.0003 14	0.289040 0.3155 14	0.020623 0.9291 14	-0.300257 0.1536 14	0.576337 0.0310 14	-1.084291 0.7781 14	0.720065 0.0036 14	0.605570 0.0167 15	0.848887 0.0001 15	0.622745 0.0123 15	0.755409 0.0011 15	0.772401 0.0007 15	0.600903 0.0158 15
JW	0.240704 0.3707 15	0.403529 0.1330 15	0.230894 0.4092 15	0.580063 0.1016 15	0.284378 0.3050 15	0.045375 0.8093 15	0.038401 0.8919 14	0.083721 0.7905 14	-0.248868 0.4113 14	-0.103554 0.7206 14	-0.135208 0.6484 14	0.073410 0.8031 14	-0.088337 0.7769 14
PCF	0.455412 0.1059 15	-0.220886 0.4182 15	-0.305084 0.1946 15	0.332990 0.2252 15	0.158417 0.5727 15	-0.073342 0.7937 15	0.362238 0.1844 15	0.658412 0.0076 15	0.682700 0.0124 15	0.657558 0.0001 15	0.809845 0.0003 15	0.384005 0.1578 15	0.337057 0.1629 15
PCPS	0.488526 0.0667 15	0.332225 0.2415 15	0.107340 0.7128 15	0.559869 0.0378 15	0.448641 0.0953 15	0.157869 0.5746 15	0.519488 0.2473 15	0.487507 0.0732 15	0.488985 0.0638 15	0.580448 0.0233 15	0.806058 0.0003 15	0.401486 0.1340 15	0.402781 0.1117 15
PCP	0.554043 0.0390 15	0.324172 0.2854 15	-0.035889 0.8989 15	0.289958 0.2951 15	0.498215 0.0828 15	-0.088033 0.7760 15	0.473497 0.0743 15	0.625869 0.1135 15	0.642727 0.0123 15	0.633267 0.1072 15	0.756041 0.0011 15	0.552456 0.0320 15	0.707564 0.0032 15
PCS	0.380049 0.2143 15	0.120823 0.6591 15	0.009818 0.9728 15	0.380405 0.2706 15	0.367705 0.1780 15	-0.108989 0.6049 15	0.284859 0.3800 15	0.328487 0.2374 15	0.574725 0.0252 15	0.413334 0.1257 15	0.642775 0.0098 15	0.466013 0.0800 15	0.486477 0.0809 15
PCTINT	0.522809 0.0459 15	0.348695 0.2013 15	-0.059227 0.8340 15	0.428659 0.1128 15	0.428495 0.1148 15	-0.035956 0.8987 15	0.408462 0.1305 15	0.525077 0.0444 15	0.654594 0.0081 15	0.536011 0.0408 15	0.808863 0.0001 15	0.508452 0.0550 15	0.560809 0.0298 15
ALIEN	-0.419784 0.1193 15	-0.077780 0.7831 15	0.178285 0.5115 15	-0.468880 0.0779 15	-0.125794 0.6551 15	0.077734 0.7831 15	-0.316935 0.2497 15	-0.369674 0.1871 14	-0.448493 0.1108 14	-0.653094 0.0113 14	-0.512774 0.0604 14	-0.117724 0.6888 14	-0.295522 0.3055 14
RETURN	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15	0.000000 1.0000 15
PUP	-0.405365 0.0417 15	-0.555444 0.0314 15	-0.448445 0.0959 15	-0.410384 0.1287 15	-0.617844 0.0152 15	-0.351264 0.1992 15	-0.557734 0.1905 15	-0.027734 0.9218 15	-0.064554 0.8198 15	0.234174 0.4009 15	0.065574 0.8168 15	-0.541774 0.1603 15	0.262402 0.3379 15

	PINT	JW	PCF	PCPS	PCP	PCS	PCTINT	ALIEN	RETURN	PUP
SEX	-0.230449 0.5953 15	0.122115 0.6605 15	-0.035004 0.9208 15	-0.220844 0.4115 15	-0.201044 0.4553 15	-0.254494 0.3615 15	-0.200941 0.4556 15	-0.277844 0.3160 15	0.000000 1.0000 15	0.351394 0.1920 15

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	PTOT	IN	PTE	PCPS	PCO	PCS	PCTOT	ALTER	RETURN	POP
HSGPA	-0.01202 0.9675 14	-0.15015 0.5933 15	-0.14798 0.5928 15	-0.22017 0.4176 15	-0.20594 0.4562 15	-0.13041 0.6427 15	-0.24960 0.3697 15	0.12720 0.6521 15	0.00000 1.0000 15	-0.03805 0.8960 15
GPA	-0.23808 0.3912 15	0.25456 0.3602 15	0.30786 0.2770 16	-0.22175 0.4092 16	-0.49604 0.0507 16	-0.37481 0.1526 16	-0.52245 0.0232 16	-0.03131 0.9118 15	0.00000 1.0000 16	-0.58274 0.1367 16
ACT	-0.87548 0.0223 6	-0.00457 0.9915 5	-0.59091 0.2455 6	-0.05202 0.1602 6	-0.60670 0.1481 6	-0.85928 0.0283 6	-0.81482 0.0490 6	0.60271 0.2229 5	0.00000 1.0000 6	0.13581 0.7628 6
SAT	-0.24405 0.3870 13	0.53054 0.0479 14	-0.30967 0.2813 14	-0.21330 0.4641 14	-0.48219 0.0808 14	-0.62111 0.0177 14	-0.47947 0.0828 14	0.14499 0.6209 14	0.00000 1.0000 14	-0.63765 0.0141 14
UNIV	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 15	0.00000 1.0000 16	0.00000 1.0000 16
EDF	-0.15873 0.6045 14	-0.12522 0.6697 14	0.15250 0.6027 14	-0.53771 0.2376 14	-0.17918 0.5399 14	-0.15921 0.5867 14	-0.15483 0.5972 14	-0.59350 0.0253 14	0.00000 1.0000 14	0.18741 0.5203 14
EDM	-0.40696 0.0923 14	-0.16402 0.5582 15	-0.31413 0.2542 15	-0.26981 0.3308 15	-0.41866 0.1208 15	-0.31503 0.2528 15	-0.38920 0.1516 15	-0.06182 0.8268 15	0.00000 1.0000 15	0.17976 0.5215 15
IE1	0.49836 0.0697 14	0.22064 0.4294 15	0.06717 0.8120 15	0.23700 0.3951 15	0.36140 0.1857 15	0.22112 0.4284 15	0.26085 0.3477 15	0.07090 0.8017 15	0.00000 1.0000 15	-0.55131 0.0331 15
CE1	0.15652 0.5931 14	0.19032 0.4599 15	-0.24225 0.3840 15	0.00060 0.9981 15	-0.12696 0.6521 15	-0.09186 0.7444 15	-0.13214 0.6388 15	0.23215 0.4051 15	0.00000 1.0000 15	-0.88926 0.0001 15
AE1	0.61026 0.0205 14	0.05092 0.8570 15	0.71871 0.0025 15	0.43568 0.1045 15	0.42998 0.1097 15	0.37996 0.1624 15	0.56017 0.0299 15	-0.45089 0.0916 15	0.00000 1.0000 15	-0.40989 0.1292 15
IM1	0.49990 0.0687 14	0.32413 0.2151 15	0.23202 0.4260 15	0.54583 0.2067 15	0.27055 0.3298 15	0.09149 0.7457 15	0.26921 0.3319 15	0.07709 0.7848 15	0.00000 1.0000 15	-0.81741 0.0002 15
CM1	0.41351 0.1416 14	0.48485 0.0666 15	0.20175 0.4709 15	0.29447 0.2867 15	0.08290 0.7698 15	-0.09856 0.7267 15	0.13663 0.6273 15	-0.17949 0.5221 15	0.00000 1.0000 15	-0.69030 0.0044 15
AM1	0.82755 0.0003 14	0.29709 0.2747 15	0.64012 0.1059 15	0.48526 0.0667 15	0.53493 0.0390 15	0.39009 0.2193 15	0.52209 0.0950 15	-0.41974 0.1193 15	0.00000 1.0000 15	-0.66345 0.0517 15

Correlation Coefficients / Prob > |R| under Ho:Rho=0 / Number of Observations

	PINT	J	PCE	PCPS	PCC	PCS	PCTOT	YLIES	DEFUSE	PCP
IE2	0.2c90c 0.3155 14	0.[illegible] 0.1140 15	-0.[illegible] 0.[illegible] 15	0.[illegible] 0.2415 15	0.24172 0.3454 15	-0.12424 0.4591 15	0.10695 0.6013 15	-0.[illegible] 0.7851 15	0.00000 1.0000 15	-0.[illegible] 0.0517 15
CE2	0.02623 0.9291 14	0.[illegible] 0.3892 15	-0.[illegible] 0.[illegible] 15	0.10380 0.7128 15	-0.03587 0.8990 15	-0.00818 0.7278 15	-0.05722 0.8340 15	0.10285 0.6115 15	0.00000 1.0000 15	-0.[illegible] 0.0089 15
AE2	0.00257 0.1556 14	0.[illegible] 0.[illegible] 15	0.[illegible] 0.3252 15	0.[illegible] 0.0378 15	0.28958 0.2951 15	0.30405 0.2706 15	0.42659 0.1128 15	-0.[illegible] 0.0779 15	0.00000 1.0000 15	-0.[illegible] 0.1287 15
IM2	0.57637 0.0310 14	0.[illegible] 0.3654 15	0.[illegible] 0.[illegible] 15	0.[illegible] 0.0953 15	0.[illegible] 0.0828 15	0.46705 0.1748 15	0.42095 0.1103 15	-0.12579 0.6551 15	0.00000 1.0000 15	-0.[illegible] 0.0152 15
CM2	-0.08291 0.7781 14	0.[illegible] 0.8093 15	-0.[illegible] 0.[illegible] 15	0.15769 0.5746 15	-0.08055 0.7760 15	-0.10000 0.6999 15	-0.03956 0.8887 15	0.07775 0.7831 15	0.00000 1.0000 15	-0.[illegible] 0.1892 15
AM2	0.72005 0.0036 14	0.[illegible] 0.3913 15	0.[illegible] 0.[illegible] 15	0.31048 0.2873 15	0.47397 0.0743 15	0.24059 0.3900 15	0.40862 0.1305 15	-0.[illegible] 0.2097 15	0.00000 1.0000 15	-0.[illegible] 0.1005 15
PI	0.[illegible] 0.0167 15	0.[illegible] 0.8995 14	0.[illegible] 0.[illegible] 15	0.[illegible] 0.0752 15	0.[illegible] 0.1135 15	-0.32087 0.2574 15	0.52507 0.0444 15	-0.[illegible] 0.1971 14	0.00000 1.0000 15	-0.[illegible] 0.9215 15
PA	0.[illegible] 0.0001 15	-0.[illegible] 0.[illegible] 14	0.[illegible] -0.[illegible] 15	0.[illegible] 0.0638 15	0.62727 0.0123 15	0.57425 0.0252 15	0.65859 0.0081 15	-0.[illegible] 0.1109 14	0.00000 1.0000 15	-0.[illegible] 0.8198 15
PS	[illegible] 0.0123 15	-0.10455 0.7236 14	0.[illegible] 0.[illegible] 15	0.58008 0.0233 15	0.43267 0.1072 15	0.01348 0.1257 15	0.63601 0.0108 15	-0.[illegible] 0.[illegible] 14	0.00000 1.0000 15	0.23017 0.4009 15
PM	0.75589 0.0011 15	-0.13524 0.6408 11	0.[illegible] 0.[illegible] 15	0.[illegible] 0.0003 15	0.75041 0.0011 15	0.69275 0.0098 15	0.84863 0.0001 15	-0.51277 0.0608 14	0.00000 1.0000 15	0.[illegible] 0.8164 15
PR	0.77241 0.0007 15	0.[illegible] 0.8051 14	-0.[illegible] 0.[illegible] 15	0.[illegible] 0.1380 15	0.52856 0.0429 15	-0.[illegible] 0.0808 15	0.56832 0.0550 15	-0.11772 0.[illegible] 14	0.00000 1.0000 15	-0.[illegible] 0.1603 15
PC	0.60995 0.0158 15	-0.[illegible] 0.7705 14	0.[illegible] 0.[illegible] 15	0.[illegible] 0.1117 15	0.70756 0.0032 15	0.45077 0.0809 15	0.56444 0.0284 15	-0.29522 0.3055 14	0.00000 1.0000 15	0.[illegible] 0.3379 15
PINT	1.00000 0.0000 15	-0.[illegible] 0.[illegible] 14	0.[illegible] 0.[illegible] 15	0.[illegible] 0.0056 15	0.[illegible] 0.0001 15	0.[illegible] 0.0045 15	0.[illegible] 0.0002 15	-0.[illegible] 0.[illegible] 14	0.00000 1.0000 15	-0.[illegible] 0.8029 15

CORRELATION COEFFICIENTS / PROB > |R| UNDER HO:RHO=0 / NUMBER OF OBSERVATIONS

	PTOT	JW	PCF	PCPS	PCP	PCS	PCTOT	ALIEN	RETURN	POP
JW	-0.05720 0.8400 16	1.00000 0.0000 15	-0.00896 0.9740 15	0.12349 0.6605 15	-0.15900 0.5713 15	0.15322 0.4506 15	-0.01725 0.9513 15	0.13294 0.6364 15	0.00000 1.0000 15	-0.54156 0.0356 15
PCF	0.66504 0.0004 15	-0.64896 0.7639 15	1.00000 0.0000 16	0.06658 0.0008 16	0.57394 0.0201 16	0.57779 0.0191 16	0.79256 0.0003 16	-0.62958 0.0119 15	0.00000 1.0000 16	0.10451 0.7001 16
PCPS	0.07001 0.8056 15	0.12569 0.6605 15	0.06658 0.8038 16	1.00000 0.0000 16	0.72726 0.0010 16	0.78134 0.0000 16	0.90609 0.0001 16	-0.83093 0.1452 15	0.00000 1.0000 16	-0.03471 0.8984 16
PCP	0.43285 0.0001 15	-0.15900 0.5713 15	0.57394 0.0201 16	0.72726 0.0010 16	1.00000 0.0000 16	0.81765 0.0001 16	0.80534 0.0001 16	-0.56711 0.1743 15	0.00000 1.0000 16	0.14897 0.5819 16
PCS	0.68084 0.0045 15	0.15322 0.4506 15	0.57779 0.0191 16	0.78134 0.0004 16	0.81765 0.0001 16	1.00000 0.0000 16	0.91037 0.0001 16	-0.39127 0.1493 15	0.00000 1.0000 16	0.09682 0.7213 16
PCTOT	0.81681 0.0002 15	-0.01725 0.9513 15	0.79256 0.0003 16	0.90609 0.0001 16	0.80534 0.0001 16	0.91037 0.0001 16	1.00000 0.0000 16	-0.52032 0.0484 15	0.00000 1.0000 16	0.09023 0.7397 16
ALIEN	-0.35549 0.1918 15	0.13294 0.6364 15	-0.62958 0.0119 15	-0.83093 0.1452 15	-0.56711 0.1743 15	-0.39127 0.1493 15	-0.52032 0.0484 15	1.00000 0.0000 15	0.00000 1.0000 15	-0.09682 0.7356 15
RETURN	0.00000 1.0000 15	0.00000 1.0000 15	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 16	0.00000 1.0000 15	0.00000 1.0000 16	0.00000 1.0000 16
POP	-0.14824 0.6029 15	-0.54132 0.0356 15	0.10451 0.7001 16	-0.03471 0.8984 16	0.14897 0.5819 16	0.09682 0.7213 16	0.09023 0.7397 16	-0.09682 0.7356 15	0.00000 1.0000 16	1.00000 0.0000 16