

### **Ego State Differences in University Students by Gender, Race, and College Major**

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#### Abstract

The purpose of this quasi-experimental study was to investigate transactional analysis ego state differences in gender, race and college major for university students. Three hundred students completed the Ego State Questionnaire-Revised (ESQ-R) voluntarily online. A three-way (gender by race by college major) independent-measures multivariate analysis of variance (MANOVA) revealed that females scored significantly higher than males on the Nurturing Parent (NP) ego state. Results of the study did not support the hypothesis that there might be racial group differences in ego states.

#### Introduction and Literature Review

According to Berne (1961), the structure of personality is comprised of three organs: the extereopsyche, the neopsyche, and the archaeopsyche. These organs manifest themselves phenomenologically and operationally as three types of ego states called Parent, Adult, and Child, respectively (Berne, 1961). Berne (1957) holds that these ego states exert major influence on how people feel and behave in interpersonal relationships. Berne (1961) defines an ego state as a set of related behavior patterns and feelings.

According to the tenets of Functional Analysis, there are five functional ego states: The Free Child (FC) or Natural Child (NC), the Adapted Child (AC), the Adult (A), the Nurturing Parent (NP), and the Critical Parent (CP). Both parts of the Child Ego state (FC and AC) function in a positive and negative manner (Woollams & Brown, 1978). The Positive Free Child (FC) expresses directly what is on his or her mind, has fun without hurting anyone in the process, and expresses natural feelings, needs, and wants in a spontaneous manner (Woollams, Brown, & Huige, 1976). The Negative Free Child (FC), while having fun or expressing self, may injure self or others (Woollams et al., 1976). The Adapted Child (AC) is compliant and rebellious. It also functions in a positive and negative manner. The Positive Compliant Adapted Child uses adapted behavior to avoid pain or get what is desired without being overly compliant. The Positive Compliant Adapted Child (AC) adapts helpfully by complying (Woollams & Brown, 1978). The Negative Compliant Adapted Child adapts harmfully by complying such as in an overextension of self (Woollams & Brown, 1978), i.e., discounting self to please others. The Adapted Child (AC) also functions in a manner that is helpless and one that is highly influenced by drivers (prescriptions for living). The individual is OK if he or she does these: Be Strong, Be Perfect, Try Hard, Hurry UP, and Please Me. Those parts of the Adapted Child (AC) that are helpless or highly influenced by drivers are not perceived as functioning in a positive manner.

The Adult (A) ego state functions in a logical and methodological manner. Its function closely resembles a computer. The Adult (A) is analytical, abstract, and highly cognitive. It is the information processor of the personality.

Both functional parts of the Parent ego state (NP and CP) function in a positive and negative manner that is expressed inwardly toward self (internal) and outwardly toward others (external). The Negative Critical Parent (CP) is condescending, critical, judgmental, moralistic, and authoritative. The Positive Critical

Parent (CP) is strong, powerful, strongly protective, and principled. The Negative Nurturing Parent is caring, concerned, forgiving, reassuring, permissive, and warmly protective (Woollams & Brown, 1978).

Provided a full complement of ego states are available to an individual, he or she has a choice as to which ego state will be used to record what is occurring or from which he or she will respond. Different people spend varying amounts of time and energy in different ego states (Woollams & Brown, 1978) in response to internal or external demands (Heyer, 1979), but all possess a certain ego state profile that gives rise to the enduring character traits commonly termed "personality" (Heyer, 1979). Differential ego state cathexis (activation) is learned behavior that persists as a habitual response pattern, providing consistency of response to objects, persons, and situations.

Although ego states function the same for men and women, differences between the genders on them and other personality characteristics have been identified. These include psychological differences (Lang-Takac & Osterweil, 1992; Rubin, 1983) and physiological differences (Iaccino, 1990). Feingold (1994) used a series of meta-analyses to examine gender differences in personality in the literature (1958-1992) and in normative data for well-known personality inventories (1940-1992). His results indicated that males were more assertive and had slightly higher self-esteem than females while females were higher than males in extraversion, anxiety, trust, and especially, tender-mindedness (e.g., nurturance). His results also indicated that gender differences in personality traits were generally constant across ages, years of data collection, educational levels, and nations.

Heyer (1979) administered a 16-item version of an ego state instrument, the Ego State Profile (ESP), to a cross section of 1044 California Adults in September 1976. He interpreted his findings to indicate that, among the general population, the Critical Parent (CP) ego state was found to be consistently higher among men than among women. He also found that African Americans had a higher Controlling Parent (CP) index than Caucasians and that the Nurturing Parent (NP) ego state in the adult population was significantly higher among women than among men. Heyer's results also indicated that Adult (A) ego state attributes were acknowledged significantly more often among men than among women and that Caucasians placed a higher value on expressing Adult (A) ego state characteristics than African Americans. He noted that the Free Child (FC) ego state was more often expressed by men and younger persons than by women or older persons. Finally, he found that African Americans showed more Free Child (FC) than Caucasians.

In collecting data, Heyer (1979) used a 16-item instrument on which he presented no reliability or validity information. The instrument on which he did report reliability and validity information was a 50-item questionnaire from which the 16-item questionnaire was derived. The brevity of the 16-item questionnaire raised doubts regarding its reliability and validity and any findings based on it. Results of the Heyer study included only raw means and no statistical analyses were identified or described. Heyer's reported finding that the Nurturing Parent (NP) ego state in the adult population was higher among women than men is consistent with transactional analysis theory. Wyckoff (1974) developed a theory of sex role scripting in men and women that included the purported existence of a stronger Nurturing Parent ego state in women than in men. According to Wyckoff, the Nurturing Parent (NP) ego state is not innate but a product of social interaction. Steiner (1974) also believes that women and men are socialized to develop certain parts of their personalities while suppressing the development of other parts of their personalities.

In 1980 Williams and Williams developed a procedure for measuring transactional analysis functional ego states based on the Adjective checklist. The subject of validity was not clearly addressed in this study. The scoring system used appeared to be based on content validity. The authors indicated that the 44-item scale for each ego state had adequate test-retest reliability. No reliability coefficients were mentioned. Using this scale, they found no mean percentage ego state differences between males and females in a college population of young adults.

In 1988 Turner described the development of a Parent-Adult-Child Drawing Task (PAC-D). This projective

instrument was designed to elicit and assess ego state information from clients. Another projective technique presented by Turner in 1988 for use with the PAC-D was the Transactional Analysis Sentence Completion Form (TASC). The purpose of the TASC was to elicit self-report information.

Loffredo and Omizo (1997) reported a statistically significant difference between undergraduate male and female students on the Nurturing Parent (NP) ego state. The instrument used to measure ego states, the Ego State Questionnaire (ESQ), was developed by the authors and was based on content validity. Test-retest reliability with a two-week interval was .90.

Loffredo and Omizo (1997) in the same study also used the ESQ to investigate differences between African American and Anglo American undergraduate students. A one-way independent-measures multivariate analysis of covariance (MANCOVA) with the effects of age, sex, and socioeconomic status statistically removed revealed no statistically significant differences between African American and Anglo American undergraduate students on any of the five functional transactional analysis ego states or on the other two measures included in the study: locus of control and dogmatism.

The Ego State Questionnaire-Revised (ESQ-R) was created in 2004 to provide an ego state measure with construct validity (Loffredo, Harrington, Munoz & Knowles, 2004). It was also created to address some of the vague psychometric information in previous studies. In addition, an extensive search of the published psychology literature revealed that there had been few studies reported on measures of transactional analysis ego states since 1980.

Using the ESQ-R, most of the Loffredo and Omizo (1997) study was repeated and a new variable, college major, was included in the data collection and analysis. The variable, college major, which is related to vocational interest, was added to the study. Holland (1999) asserted that vocational interest inventories are also personality inventories. Hence, college major was considered a variable of interest in this study which might reflect differences in personality (ego states). No published research is cited in the psychology literature examining differences in functional ego states by college major.

In 1961, Berne proposed the term "comparative psychiatry" (p. 12) for the study of psychiatric characteristics across groups, cultures, and nations (Heyer, 1979). Jones (1978) pooled 361 items from both the MMPI and California Psychological Inventory (CPI), and along with a group form of the Embedded Figures Test (EFT), administered them to a sample of 226 African American and Caucasian junior college students. Abandoning scale scores in favor of multivariate analysis of variance of item responses, Jones found that 80% of the items discriminated at the .05 level or above between African-American and Caucasian junior college students. An important result of this study was that this large magnitude of race differences was obtained when participants were matched on socioeconomic status (SES) and level of education. In this study, Jones appeared to agree with Gynther's (1972) reinterpretation of race as a primary source of variance on personality assessment instruments to be more a function of cultural differences in values, perceptions, and expectations rather than a function of a "deficiency hypothesis" that purports African-American inferiority or deficiency.

The purpose of this study was to repeat parts of the earlier Loffredo and Omizo (1997) study using the ESQ-R and to test the following hypotheses at the .05 level of significance:

- (1) As shown in the previous Loffredo and Omizo (1997) study, female university students should score significantly higher than male university students on the Nurturing Parent (NP) ego state.
- (2) Since college major is related to vocational interest, and since vocation interest inventories are also personality inventories according to Holland (1999), there should be a difference in ego state measures for participants with different college majors.

(3) In support of Berne's (1961) belief in the study of psychiatric characteristics across groups, cultures, and nations and based on personality differences between African American and Caucasian undergraduates identified by Jones (1978) and attributed to differences in values, perceptions and expectation, there might be racial differences between college students on the functional ego states.

## Method

### Participants

The sample consisted of 300 (77 male, 223 female) undergraduate and graduate students (65.3% Caucasian, 21% Hispanic, 7.3% African-American, 3.7% Asian-American, and 2.7% Other) from the University of Houston-Victoria who ranged in age from 19 to 58.

### Instrument

The Ego State Questionnaire-Revised (ESQ-R) is a 40-item experimenter-constructed, forced-choice instrument based on a five-point Likert scale. The ESQ-R consists of five subscales, each of which measures one of the five functional ego states: Nurturing Parent (NP), Critical Parent (CP), Adult (A), Free Child (FC), and Adapted Child (AC). There are 8 questions for each of the five functional ego states. Each subscale yields a score ranging from 8 to 40. The higher the subscale score, the more often that functional ego state is activated. The split-half coefficient of reliability (total scale) obtained for the ESQ-R was .80. Split-half reliability is obtained by correlating two pairs of scores obtained from equivalent halves of a single test administered once. The coefficient of reliability obtained for each of the five subscales (measuring functional ego states) of the ESQ-R using Cronbach's alpha has been reported (Loffredo, Harrington, Munoz, & Knowles, 2004) as: Nurturing Parent (NP) .83, Critical Parent .78, Adult (A) .69, Free Child (FC) .76, and Adapted Child (AC) .75. Appropriate construct validity has been established for the ESQ-R by VARIMAX factor rotation factor analysis (Loffredo, Harrington, Munoz & Knowles, 2004).

### Procedure

Each participant voluntarily completed the ESQ-R online. All APA Guidelines were followed and the study was approved by the University of Houston-Victoria Committee for the Protection of Human Subjects. Approximately 25% of the participants received extra credit from their instructors for participating in the study. Most of the students were from the School of Business and the School of Arts and Sciences. A distribution of students by college major is presented in Table 1 below. The ESQ-R was computer scored. Participant were instructed to type their college majors.

Table 1.  
Distribution of Participant College Major

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College Major	Number of Students
Mathematical Science	2
Communication	8
Psychology	17
MBA	48
Communication and Psychology	2
Sociology	1
Education	1

Law	1
Accounting/Business Accounting	31
English/English Literature	2
BBA/MBA	2
Business/General Business	34
Computer Information Systems/Computer Science	7
Biology	4
Management/Business Management	17
Grad Student/Masters	2
Exercise Science/Business Management	1
BBA/MIS	1
Business Administration	14
Management	1
Business w/Teaching Certificate	1
MBA-ACC 5 Year	1
BBA	4
Undergrad History, Grad MBA	1
BS Sociology MBA	1
BS Biology/CISM	1
Arts	1
Finance	14
Business Administration/Accounting	1
Industrial Engineering/MBA	1
Accounting/MBA	3
Undergrad Marketing/Pursuing MBA	1
Marketing/Business Marketing	38
English Education	1
BS in Psychology	1
IST/Information Systems Technology	3
Management and Marketing	5
MBA/MHA	1
MIS/Management Information Systems	7
Advertising 1	1
Finance/Marketing	5
BBA/Finance	1
MIS/Finance	2
Business/MIS	1
Operations Management and Marketing	1
Business Administration/Operations Management	1
MIS/Marketing	1
Finance/Operations Management	1
Social and Behavioral Sciences/Communication	1
AAS/General Business	1
Business Law	1
MBA/Finance	1

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### Statistical Analysis

A three-way (gender by race by college major) independent-measures multivariate analysis of variance (MANOVA) was used on the sample participants to investigate group differences in functional ego states.

## Results

A three way (gender by race by college major) independent-measures multivariate analysis of variance revealed a statistically significant difference by gender [power = .81, effect size = .063] relative to the five functional ego states,  $F(5, 199) = 2.68, p < .023$ . and a statistically significant difference by college major [power = 1.0, effect size = .216] relative to the five functional ego states,  $F(21, 995) = 1.31, p < .004$ . Post hoc univariate  $F$  values revealed a statistically significant difference between male ( $M = 31.82, SD = 4.35$ ) and female ( $M = 34.37, SD = 3.85$ ) university students on the Nurturing Parent (NP) ego state,  $F(1, 203) = 12.04, p < .001$  and a statistically significant difference between students by college major on the Nurturing Parent (NP) ego state,  $F(42, 203) = 1.79, p < .004$ , on the Critical Parent (CP) ego state,  $F(42, 203) = 1.44, p = .05$ , and on the Adapted Child (AC) ego state,  $F(42, 203) = 1.54, p < .028$ . However, since many of the college majors had only one participant in that college major category, the Statistical Package for the Social Sciences (SPSS) was not able to complete a post hoc analysis to identify which students in which majors differed on the Nurturing Parent (NP), Critical Parent (CP), and Adapted Child (AC) ego states. Therefore, the statistically significant difference between students by college major obtained could not be considered valid.

The three-way (gender by race by college major) independent-measures MANOVA did not reveal a statistically significant difference by race on any of the five functional ego states,  $F(20, 661) = .72, p = .81$ . The three-way (gender by race by college major) independent MANOVA also did not reveal any interactions between gender and race,  $F(20, 661) = 1.06, p = .39$ ; between gender and major  $F(55, 925) = 1.04, p = .40$ ; between race and major,  $F(125, 984) = 1.08, p = .26$ ; or between gender, race and major,  $F(25, 741) = .69, p = .87$  on any of the functional ego states.

## Discussion

As hypothesized, there was a statistically significant difference between male and female university students on the Nurturing Parent (NP) ego state as found by the validated Ego State Questionnaire-Revised. Females scored significantly higher than males on this dimension. In addition, the study found that there were differences in ego state measures for participants with different college majors. However, due to small sample sizes of some majors these differences could not be evaluated. The data did not support the hypothesis of racial group differences between university students in the functional ego states.

The differences in gender in the Nurturing Parent ego state are consistent with Heyer's (1979) results and Loffredo and Omizo's (1997) findings of higher Nurturing Parent scores for females than males and contradict the findings of Williams and Williams (1980) who found no mean percentage differences in ego states in a college population of young adults. In explaining the lack of gender differences, Williams and Williams contend that the descriptors of the ego states are very broad and evenly distributed across both "masculine" and "feminine" dimensions. However, this statement does not square with the likelihood that the characteristic of "nurturing" is more commonly associated with traditionally female roles. The Nurturing Parent ego state then could be tilted toward the "feminine" pole of gender characteristics more so than the other ego states.

Taylor (2002) contends that women are more likely to nurture in society because they have a "tending instinct" that is biologically adaptive to the species. Nurturing of children is a natural byproduct of this instinct but it also extends to others. For example, Kelleher and Fox (2002) found that mothers of infants in their first month of life were not only working to promote the health and well-being of their infants during this early post-partum period but also the health and comfort of their male partners often at their own expense.

Taylor's argument that women are more instinctually driven to nurture has supportive data but is still open to debate. However, it is well established that there are social factors that support women and dissuade

men from engaging in nurturing behavior. For example, Rane and Draper (1995) found that men and women who engaged in nurturing touch of young children were regarded by men as lower in "goodness" than their women counterparts. Avoidance of this form of nurturing touch by men was seen by the authors as due to gender stereotyping. Furthermore, nurturing behavior was perceived by the participants as a "feminine" characteristic. These findings and interpretations relate to Wyckoff's (1974) notion of sex role scripting discussed earlier. It is possible therefore that the findings of higher levels of Nurturing Parent for women in this study may be due to a greater tendency among women to disclose these "feminine" characteristics than men. Alternatively, these results may be tapping into actual gender differences in nurturing behaviors. In order to make this determination, future similar studies should use peer ratings of nurturance behavior to tease out possible self-report bias.

As noted above, there were no racial group differences found between university students on the functional ego states. It may be that the lack of statistically significant differences across the five racial groups used in this study reflect a high degree of acculturation in all group members. All participants in this study were matriculating at a predominantly Caucasian institution, the University of Houston-Victoria. One way to mitigate possible confounding effects of acculturation in a similar study might be to replicate this study with a sample comprised of less acculturated participants. Such a sample might include African-American students from a predominantly African-American university as well as bilingual Hispanic and Asian students. Another possible explanation for the lack of differences could be that the small sample size of the non-Caucasian participants did not allow sufficient power to detect differences. Finally, it might be that racial group personality differences are no longer as pronounced or no longer exist.

Williams and Williams note that there is a positive relationship between the Adult ego state and the Nurturing Parent. Transactional Analysts attempt to engage the Adult ego state when conducting therapy because it responds to logic and reason. By engaging the Adult perhaps they are also activating the Nurturing Parent which is a source of altruism and cooperation that is beneficial to the individual and to society at large. These therapists should be aware of gender issues that may lead to lower initial baselines in males in the Nurturing Parent ego state. Therapy for these individuals may involve placing more emphasis on increasing the energy levels of this ego state while considering the possible biological or social inhibitors that act to suppress this goal. On the flip side, women may be more likely to have higher Nurturing Parent baselines which would serve to enhance the possible therapeutic outcome, especially if the nurturing tendencies are given permission to nurture the self.

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