

The TAT Affect Scale and the Inventory of Interpersonal Problems:  
How Problems Relate to Interpersonal Affect

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### Abstract

The TAT Affect Scoring System is designed to measure the affect between characters in Thematic Apperception Test stories (Thomas and Dudgeon, 1985). The Inventory for Interpersonal Problems (IIP) is designed to identify the most common interpersonal problems reported by psychotherapy clients (Horowitz, Rosenberg, Baer, Ureno, and Villasenor, 1988). This study used the IIP circumplex model as developed by Alden, Wiggins and Pincus (1990). Theoretically, both the interpersonal problems reported in the IIP and the affect between characters of the stories told in the TAT are related to a person's interpersonal attachment. This study examined the relationship between the TAT Affect Scoring System and the IIP circumplex in a sample of 167 college students. These associations were not significant. No gender or ethnic differences in associations were found.

## Introduction

The Thematic Apperception Test (TAT) is a projective psychological measure that consists of a series of ambiguous pictures. Projective measures are designed to measure an individual's feelings and attitudes towards a topic or relationship without directly asking the individual. Projective measures are useful because an individual may try to hide their feelings if questioned directly or they may be unaware of their feelings or of a way to express them in words. The TAT uses ambiguous drawings to elicit stories from individuals about the scene and the characters within the scene.

Thomas and Dudek (1985) hypothesized that interpersonal affect attributed to the characters in the TAT pictures reflects the quality of affect toward characters in similar roles in real life. They developed an Interpersonal Affect Scale, scored from TAT stories, to study spousal relationships. They hypothesized that married partners with the spouse category as their most positive relationship would have higher marital adjustment scores on the Dyadic Adjustment Scale (DAS, Spanier, 1976) than would married couples who had the parent or nonspouse category as their most positive relationship. Stories with the spouse category as the most positive might contain phrases describing what a wonderful marriage the couple had or how much the husband and wife loved each other. Nonspouse stories might say the same thing except that the people are described as friends instead of partners. Parent stories would involve a child and parent interaction. Thomas and Dudek (1985) believe that individuals who are properly adjusted to the spousal role would also be separated from the parent-child relationship. Therefore, couples with higher marital adjustment scores, as indicated by the Dyadic Adjustment

Scale, would tend to tell stories with characters who are also appropriately adjusted to the spousal role. This hypothesis was supported by their research.

Beyond investigations of marital adjustment, this scoring system appears to be effective for evaluating other interpersonal relationships. However, to this researcher's knowledge, no further research has used the TAT Affect Scoring System. The present study looks at the relationship between the TAT Affect Scoring System and the Inventory of Interpersonal Problems as both pertain to attachment theory.

### Attachment Theory

Attachment theory has long been a subject of study to psychologists. Bowlby (1977) describes attachment as "the propensity of human beings to make strong affectional bonds to particular others" (p. 201). Prior to the mid 1950s, it was believed that bonds between individuals develop as a result of satisfying needs. Based on Lorenz's work (1935), Harlow (1958) published a study on the behavior of young monkeys reared by fake mothers. Harlow found that the monkey will cling to a fake mother that does not feed it as long as the "mother" is soft and comfortable. This led to the theory that attachment is a primary need and the definition that attachment behavior is any behavior that results in an individual gaining or retaining close proximity to another who is conceived as stronger or wiser. The need for attachment and therefore attachment behaviors continue into adulthood and throughout an individual's life.

Bowlby points out that other studies suggest that there is a strong causal relationship between a person's early interactions with their parents and that person's later ability to make affectional bonds. Also, the models of attachment figures that an individual creates in childhood and adolescence tend to remain unchanged into adulthood

and therefore inappropriate models can be perpetuated throughout life. Clinical experience suggests “that the deeper the relationship and the stronger the emotions aroused the more likely are the earlier and less conscious models to become dominant” (Bowlby, 1977, p. 209).

More recently, research has focused on the previously neglected area of adult attachment behavior. Bartholomew (1990) focuses on adults who consistently avoid intimacy. Bartholomew points out that while infants seem to have an innate tendency to form or avoid attachment, adults have some control over their motivation to attach or avoid. Bartholomew therefore differentiates avoidant adults into two groups: those who want to form attachments but avoid them out of fear and those who say they neither fear nor desire attachments. Bartholomew then proposes a new model of adult attachment based on positive and negative views of the self and others (see Figure 1). This results in

**Figure 1. Bartholomew's Adult Attachment Model**

		Model of Self (Dependence)	
		Positive (Low)	Negative (High)
Model of Other (Avoidance)	Positive (Low)	<p>CELL I  <b>SECURE</b>                      Comfortable with                      intimacy and autonomy</p>	<p>CELL II  <b>PREOCCUPIED</b>                      Preoccupied with                      relationships</p>
	Negative (High)	<p>CELL IV  <b>DISMISSING</b>                      Dismissing of intimacy                      Counter-dependent</p>	<p>CELL III  <b>FEARFUL</b>                      Fearful of intimacy                      Socially avoidant</p>

From "Avoidance of intimacy: An attachment perspective," by K. Bartholomew, 1990, *Journal of Social and Personal Relationships*, 7, p. 147-178.

four categories of attachment: secure (positive view of self and positive view of others), preoccupied (negative view of self and positive view of others), dismissing (positive view of self and negative view of others) and fearful (negative view of self and negative view of others). According to this model, both dependency and avoidance can vary independently of each other. Bartholomew's model has its roots in early parental interaction, but since the models of self and others are not yet formed in early childhood, Bartholomew argues that interpersonal attachment must be formed due to the continuity of the quality of the environment over time.

Bartholomew and Horowitz (1991) conducted two studies to test Bartholomew's (1990) new model of adult attachment. The first study compared self-reports and friend reports across the model and across other assessments of personality and interpersonal functioning. High convergent validity of the model was reported between the self and friend reports and a clinical interview due to the similarity in graphs of group means. The second study attempted to replicate the results of the first study, to include family of origin interactions in the assessment and to compare peer and family attachment interactions. Results were comparable to the first study. Additionally, comparison between peer and family interactions showed that only peer ratings accounted for variance in the dominance aspect of interpersonal problems, while both family and peer ratings contributed to variation in the affiliation aspect.

According to attachment theory, a person develops an attachment style that does not significantly change throughout their lifetime. From this attachment foundation, the person develops a style of relating to other people. Therefore, determining a person's attachment style may give insight into other areas of interpersonal functioning.

### Circumplex Models

As a result of an individual's attachment, the individual develops a consistent manner of dealing with others. The study of interpersonal traits has grown accordingly. In 1979, Wiggins developed a circumplex model of interpersonal traits based on an extensive survey of personality trait descriptions in the English language. Over 4,000 terms were sorted based on their directionality (accepting vs. rejecting), concept of social object (self vs. other) and control and affiliation (status vs. love) resulting in eight bipolar interpersonal variables. Wiggins (1979) argues that there are two advantages to representing this information in a two-dimensional circumplex: it provides a conceptual representation of the content of interpersonal behavior and it allows easy recognition of gaps in a set of variables. Wiggins also points out that the number of sections is only limited by the reliability of the test or the respondents to distinguish between similar terms. The circumplex was cross-validated on four different sets of respondents and was found to be highly generalizable.

Kiesler (1983) produced the 1982 Interpersonal Circle composed of sixteen segments to integrate previous interpersonal research. Kiesler also outlines eleven propositions of complementarity. Complementarity, the idea that a response reinforces the stimulus behavior that preceded it in interpersonal behavior, is identified as a central construct of interpersonal theory. Kiesler states that our interpersonal actions elicit responses designed to confirm our definitions of self. On the interpersonal graph of power and affiliation, complementarity occurs if affiliation is the same (friendly pulls friendly and hostile pulls hostile) and power is opposite (dominance pulls submission and

submission pulls dominance). This means that behaviors on the 1982 Interpersonal Circle are complementary on a horizontal axis.

Orford (1986) examines the basis for the belief in interpersonal complementarity. Orford compared the direction of complementary behaviors as proposed by various models. Kiesler's model (1983) proposes that hostile dominance and hostile submission are complements as well as friendly dominance and friendly submission. Kiesler's model, therefore, has a north-south direction of complementarity. Wiggins's model (1982), however, has a northwest-southeast slant with arrogant and calculating behaviors paired with unassuming and ingenuous behaviors.

As a result of accumulating research on interpersonal traits organized on a circumplex, Conte and Plutchik (1981) tested the hypothesis that "a circular model is parsimonious and a meaningful way to represent the relations that exist among personality trait terms used to describe interpersonal behavior" (p. 701). A circumplex is a model that shows a circular ordering of variables based on their degree of similarity. In a circumplex, adjacent variables will be more highly correlated than nonadjacent variables, with the degree of correlation directly related to the difference in distance around the circle. Conte and Plutchik placed around a circle a list of 223 trait terms based on their similarity to three words as dissimilar to each other as possible without being opposite (quarrelsome, cooperative and withdrawn).

Conte and Plutchik (1981) then attempted to replicate the placement of 40 words by placing them on 23 semantic differential scales. They found that two factors were sufficient to account for the differences in interpersonal trait data, thus placing the information on a two-dimensional graph. The 40 words were plotted on this graph and



found to approximate a circle. Conte and Plutchik also pointed out that since interpersonal traits fit on a circular model, any axis, such as love-hostility, dominance-submission, or extraversion-introversion, is arbitrary and no more important than any other.

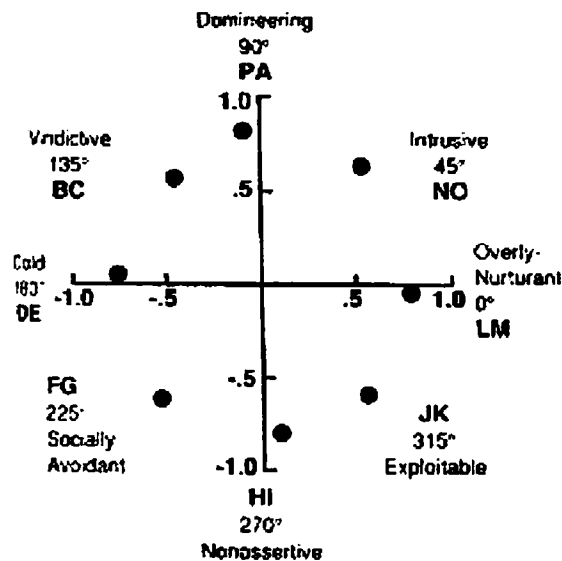
With interpersonal interactions positioned upon a circle, it is easy to identify an individual's pattern of behavior. Once a pattern of interpersonal responding has been developed, it can be hard to change, and this can lead to interpersonal problems.

#### *Inventory of Interpersonal Problems (IIP)*

People who experience interpersonal problems often seek therapy to learn new ways of interacting with others. Consequently, Horowitz, Rosenberg, Baer, Ureno and Villasenor (1988) developed a new measure "designed to help patients and therapists identify interpersonal sources of distress that are often the focus of psychotherapy." The IIP is a self-report inventory that lists different types of interpersonal problems that people may experience. In therapy, the inventory not only helps to systematically identify the client's most common interpersonal problems, but also helps to differentiate between interpersonal and noninterpersonal problems and to track achievements in therapy. Professional psychologists organized 127 items into two groups of ways patients report problems: "It is hard for me to...", and "These are things I do too much." The respondent is asked to rate each problem on how distressing it is for them on a scale from 0 (not at all) to 4 (extremely). Through factor analysis, a general Complaint factor and six subscales (Hard to be Submissive, Hard to be Assertive, Too Controlling, Hard to be Sociable, Too Responsible, and Hard to be Intimate) were developed.

Taking the lead from previous research in the area of interpersonal traits, Alden, Wiggins and Pincus (1990) developed a circumplex model of the IIP subscales (see Figure 2). The IIP Circumplex model consists of eight regions (Domineering, Vindictive, Cold, Socially Avoidant, Nonassertive, Exploitable, Overly Nurturant, and Intrusive) plotted on a graph of dominance (power) and nurturance (affiliation) to form a circle. It has been suggested that the Horowitz et al. (1988) general factor is more reflective of

**Figure 2. Alden, Wiggins, and Pincus IIP Circumplex Model**



From "Construction of circumplex scales for the Inventory of Interpersonal Problems," by L. E. Alden, J. S. Wiggins, and A. L. Pincus, 1990, *Journal of Personality Assessment*, 55, p. 521-536.

systematic measurement method error variance because of the way individuals respond to the test format than in actual perceptual differences between self and others, as originally proposed. Alden et al. (1990) therefore controlled for this factor by ipsatizing the individual item scores to create a clear circumplex structure. Alden, et al. also compared the interpersonal problems circumplex of the IIP to the interpersonal dispositions

circumplex of the Interpersonal Adjective Scales (IAS) and found them to be highly similar.

Critical of the Horowitz et al. study (1988), Barkham, Hardy and Startup (1994) found a different factor structure by including a larger sample with a more balanced sex distribution. The eight factors (Hard to be Assertive, Hard to be Sociable, Hard to be Supportive, Too Caring, Too Dependent, Too Aggressive, Hard to be Involved and Too Open) formed four bipolar factors identified as problems relating to Competition, Socializing, Nurturance and Independence.

Much debate as to the proper arrangement of interpersonal problems led to yet another variation of the IIP. Gude, Moum, Kaldestad and Friis (2000) conducted research to investigate how many dimensions should actually be derived from the IIP. In the process, they developed a subscale model consisting of three bipolar dimensions (Assertiveness, Sociability, and Interpersonal Sensitivity). This model correlated highly with the original Horowitz et al. (1988) study, but did not correlate well with the Barkham, Hardy and Startup (1994) model.

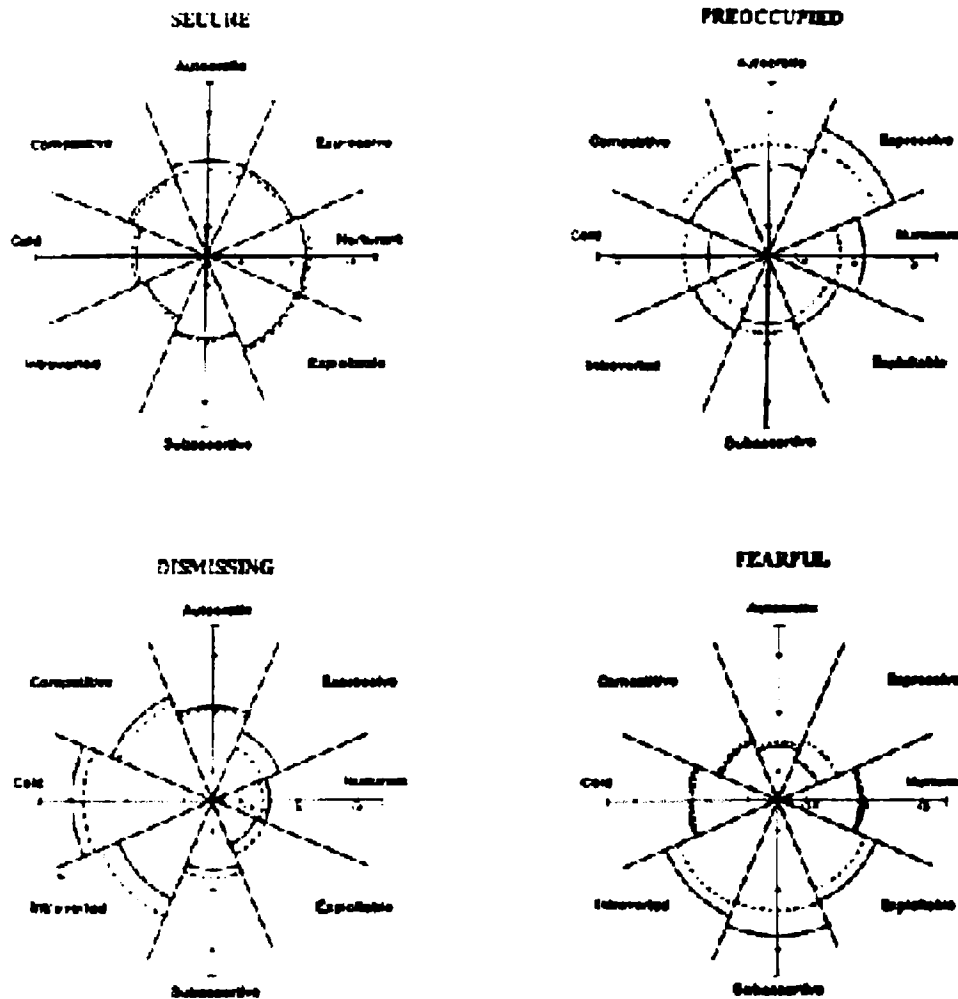
Out of all the different IIP models, the Circumplex model seems to be the most used. The Gude et al. (2000) model seems to have oversimplified the model, while the Barkham, Hardy and Startup (1994) model results in a larger number of scales to analyze. Additionally, Horowitz has used the Alden et al. (1990) Circumplex model in more recent research regarding the IIP (Horowitz, Rosenberg and Bartholomew, 1993).

#### *Combining Attachment, the IIP, and the TAT Affect Scoring System*

In an attempt to combine attachment theory and the study of interpersonal problems, Horowitz, Rosenberg and Bartholomew (1993) investigated the relationship

between Bartholomew's (1990) adult model of attachment and the Inventory of Interpersonal Problems (Horowitz et al., 1988). They based this research on the theory that interpersonal problems arise out of a person's attachment history. The IIP circumplex model (Alden et al., 1990) was used to measure interpersonal problems for the different attachment styles (see Figure 3). This study found that secure individuals, as defined by the adult attachment model, reported no extreme interpersonal problems. Dismissing individuals reported more interpersonal problems in the Cold and Competitive segments, while Fearful individuals reported more problems dealing with passivity (Introverted, Subassertive and Exploitable segments). Perhaps surprisingly, Preoccupied individuals reported more problems in the area of Expressiveness.

Based on all of the research, there appears to be an important relationship between an individual's attachment, their later interpersonal problems, and the affect they attribute to story characters. As demonstrated by Horowitz, Rosenberg and Bartholomew (1993), the attachment styles of Dismissing, Fearful and Preoccupied have the highest correlations with the Cold, Socially Avoidant (Introverted) and Intrusive (Expressive) subscales of the IIP Circumplex, respectively. Conceptually, the Dismissing individual does not need nor want to be permanently attached to anyone and therefore presents with interpersonal problems on the Cold subscale. An individual scoring high on the Cold subscale might also tell stories with characters who act similarly with regard to interpersonal interactions. Both the individuals and the characters they describe would

**Figure 3. Interpersonal Problems and Attachment Styles**

From "Interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy," by L. M. Horowitz, S. E. Rosenberg, and K. Bartholomew, 1993, *Journal of Consulting and Clinical Psychology*, 61(4), p. 549-560.

reject others in general and might specifically reject the idea of marriage and the spousal role, resulting in negative spousal scores. Similarly, Fearful individuals, though desiring of relationships, actively avoid others for fear of embarrassment or rejection and therefore score high on the Socially Avoidant (Introverted) subscale. Through past experiences the Socially Avoidant (Introverted) person has developed an overall negative

outlook on all interactions with other people. These individuals will probably tell stories reflecting this negative attitude towards others. Additionally, Preoccupied people tend to score highest on the Intrusive (Expressive) subscale. It seems that these individuals view their peers in such high regard that they try to attract others to them by drawing attention to themselves. Those with Intrusive (Expressive) interpersonal problems will probably tell stories about the positive interpersonal interactions they attempt to attract.

Consequently, there may be a relationship between various scales of the IIP and specific category scores of the TAT Affect System because both are related to an individual's attachment style.

### Hypotheses

Additional predictions of correlation between the TAT Affect Scoring System and the IIP Circumplex are expected, though not necessarily directly related to a specific attachment style. Individuals with interpersonal problems in the Nonassertive (Subassertive) subscale may be in a submissive role as a result of interactions with controlling parents in early childhood. These people might tell stories that involve parents viewed negatively. People who present with problems on the Exploitable subscale tend to be very trusting and may assume a dependent role. These individuals want and need to believe in the fairy-tale of true love where someone will forever care for them, so they would tell stories of loving, happy relationships with spouses. Those scoring high in the Overly Nurturant subscale try to take care of others, even to their own detriment. They will tell stories that hold the role of a parent or caregiver in very high regard, yielding positive parent scores.

To summarize, the following hypotheses will be tested:

1. The net spousal score will be negatively correlated with the Cold subscale.
2. The net spousal score will be positively correlated with the Exploitable subscale.
3. The net nonspousal score will be negatively correlated with the Socially Avoidant/Introverted subscale.
4. The net nonspousal score will be positively correlated with the Intrusive/Expressive subscale.
5. The net parental score will be negatively correlated with the Nonassertive/Subassertive subscale.
6. The net parental score will be positively correlated with the Overly Nurturant subscale.

Other relationships may exist between these measures and any such results will be investigated and discussed.

## Methods

### Participants

This study used data previously collected by Kristin Niemeyer (2000). The sample included 167 undergraduate students enrolled in three different psychology courses at a large southern university. Participants included 122 (73.1%) females and 45 (26.9%) males. All were selected to be between the ages of 18 and 22 years and unmarried. Seventy percent (117) were White, 12.6% (21) were Black, 7.2% (12) were Asian, 6% (10) were Hispanic, and 4.2% (7) were of other ethnicities.

## Measures

TAT Affect Scoring System. Interpersonal affect was measured by the TAT Affect Scoring System as designed by Thomas and Dudek (1985). The scoring system measures affect by first placing the characters of stories into categories of “spouse,” “nonspouse,” “parent,” “other,” and “nonattributed affect.” Then, the quality of the affect toward that character is scored on a Likert type 4-point scale from -2 for strong negative feelings to +2 for strong positive feelings (0 is used for a lack of affect within the story). The weighing of affective scores is based on the stimulus pull of the picture and the most frequent responses for each card, as well as the emotional content of the response (Thomas, in press). Scores were summed (positive plus negative) for each category of relationship and this score is referred to as the “net category score”, for example the “net parental score”. Test-retest reliability was .88 and interscorer reliability ranged from .93 to .97 (Thomas & Dudek, 1985). For the present study, all stories were scored independently by two scorers who were trained using the Thomas (in press) scoring manual and practice materials, and disagreements were discussed and resolved.

Inventory of Interpersonal Problems. The Circumplex Scales for the IIP as developed by Alden, Wiggins and Pincus (1990) was used in this study. Alden et al. used ipsatized scores during analysis to eliminate the general factor labeled in the original study (Horowitz et al., 1988). Taking data from two normal university populations (N = 197, N = 273), Alden et al. empirically derived a circumplex model of interpersonal problems and then tested it on a third university sample (N = 974). Cronbach’s Alpha was calculated for each of the subscales (Domineering = .77, Vindictive = .80, Cold = .81, Socially Avoidant = .85, Nonassertive = .85, Exploitable = .82, Overly Nurturant =



.76, Intrusive = .72). Intercorrelations among the subscales resulted in moderate negative correlations between subscales located on opposite sides of the circumplex (convergent validity) and near zero correlations between subscales located at right angles from one another (discriminant validity). In this study, Cronbach's Alpha for the subscales ranged from .78 to .84. To test the hypotheses, an individual's IIP scores were ipsatized by subtracting the individual's IIP mean score from each subscale score. The greatest score above the mean represents the highest scoring subscale for that individual.

### Procedure

Six group-administered TAT stories (cards 1, 2, 3BM, 4, 10 and 13MF) were hand written by all students who chose to participate in a class demonstration of group TAT administration. Each student was given the opportunity to complete an additional questionnaire for extra credit in his or her psychology course. A letter was attached to the front of each packet that stated that return of the packet implied informed consent. Students were asked to return the packet to the researcher or an assistant during a later class meeting or any time in the following four weeks. A numeric code was assigned for each participant's materials to ensure anonymity and to permit matching of story protocols with questionnaires.

### Hypothesis-Testing Analyses

Hypothesis 1: The net spousal score will be negatively correlated with the ipsatized Cold subscale. This hypothesis was tested by a Pearson correlation between the ipsatized Cold subscale and the negative spousal category score of the TAT Affect Scoring System.

Hypothesis 2: The net spousal score will be positively correlated with the ipsatized Exploitable subscale. This hypothesis was tested by a Pearson correlation between the ipsatized Exploitable subscale and the positive spousal category score of the TAT Affect Scoring System.

Hypothesis 3: The net nonspousal score will be negatively correlated with the ipsatized Socially Avoidant/Introverted subscale. This hypothesis was tested by a Pearson correlation between the Socially Avoidant/Introverted subscale and the negative nonspousal category score of the TAT Affect Scoring System.

Hypothesis 4: The net nonspousal score will be positively correlated with the ipsatized Intrusive/Expressive subscale. This hypothesis was tested by a Pearson correlation between the ipsatized Intrusive/Expressive subscale and the positive nonspousal category score of the TAT Affect Scoring System.

Hypothesis 5: The net parental score will be negatively correlated with the ipsatized Nonassertive/Subassertive subscale. This hypothesis was tested by a Pearson correlation between the ipsatized Nonassertive/Subassertive subscale and the negative parental category score of the TAT Affect Scoring System.

Hypothesis 6: The net parental score will be positively correlated with the ipsatized Overly Nurturant subscale. This hypothesis was tested by a Pearson correlation between the ipsatized Overly Nurturant subscale and the positive parental category score of the TAT Affect Scoring System.

## Results

### Descriptive Statistics

Descriptive statistics for each variable are listed in Table 1. Alden et al. (1990) developed and tested the circumplex model of the IIP on undergraduates at the University of British Columbia. Though the present sample is not from Canada, there should be little difference between the two populations on this measure. Regarding the TAT Affect Scoring System, Thomas and Dudek (1985) studied married spouses with ages ranging from 28 to 57 years. The present study, however, only includes unmarried students ranging in age from 18 to 22 years. Since the TAT Affect Scoring System is not being used in this study to determine marital satisfaction, the difference in marital status should not affect this study. In contrast, this study is the first to use the Affect Scoring System on a younger population. Differences between the two populations, however, should be most apparent in the attitudes expressed within the story due to lack of maturity and experience, but should not affect the way in which the stories are scored.

Examination of the frequency distributions for all variables showed approximately normal distributions with no outliers. The relationships between the TAT net category scores were investigated. The net Nonspouse score was positively and significantly related to the Spouse category score ( $r = .166, p = .033$ ). No significant relationship was found between the net Nonspouse and net Parent scores nor the net Spouse and net Parent scores. Relationships between the ipsatized IIP scores were investigated. The results are listed in Table 2.

### Hypothesis Testing

Each hypothesis was tested using a Pearson product-moment correlation. It was hypothesized that:

1. The net spousal score will be negatively correlated with the Cold subscale. This relationship was not significant ( $r = .012$ ,  $p = .877$ ).
2. The net spousal score will be positively correlated with the Exploitable subscale. This relationship was not significant ( $r = -.046$ ,  $p = .561$ ).
3. The net nonspousal score will be negatively correlated with the Socially Avoidant/Introverted subscale. This relationship was not significant ( $r = -.116$ ,  $p = .137$ ).
4. The net nonspousal score will be positively correlated with the Intrusive/Expressive subscale. This relationship was not significant ( $r = .057$ ,  $p = .465$ ).
5. The net parental score will be negatively correlated with the Nonassertive/Subassertive subscale. This relationship was not significant ( $r = -.026$ ,  $p = .745$ ).
6. The net parental score will be positively correlated with the Overly Nurturant subscale. This relationship was not significant ( $r = .108$ ,  $p = .169$ ).

### Exploratory Analysis

Further analysis revealed no significant correlations between any of the ipsatized IIP scores and the TAT category scores. Correlations between all experimental variables were run separately for males and females with the results listed in Table 3. Partial correlations were conducted on all of the above analyses, with gender and ethnicity

partialled out. No significant changes were found. Correlations between demographics and each variable can be found in Table 4.

### Discussion

The statistical evidence did not support the hypothesized relationships between TAT affect and interpersonal problems. One possible explanation for the lack of significance is that over 70% of the participants were female. Bartholomew and Horowitz (1991) found that female subjects received significantly higher scores in the preoccupied attachment style, which they then linked to interpersonal problems in the Intrusive and Overly Nurturant subscales. However, in this study when gender was controlled, there remained no significant relationship between interpersonal problems and affect in TAT stories. Another possible explanation is that this population was both young and unmarried. The fact that all the participants were unmarried might affect their outlook on the spousal relationship and therefore affect the types of spousal stories they tell. Additionally, youth and the lack of more life experiences may affect the kinds of interpersonal problems experienced and reported, as well as affecting the types of TAT stories told.

The present study found a significant relationship between affect toward spouse and nonspouse characters but no significant relationship between affect toward parent characters and affect toward spouse or nonspouse characters. The relationship between these TAT category scores makes sense when compared with the Bartholomew and Horowitz (1991) study. They found that only peer ratings accounted for variation on both the dominance and affiliative aspects of an individual's interpersonal problems,

whereas they found that parent ratings accounted for variation only on the affiliative axis of the graph of interpersonal problems. These results suggest that although individuals are consistent in their behavior towards their peers (spouse and nonspouse individuals), interpersonal behavior towards parents is determined by something else. An individual chooses the peers they associate with, but not the family they are born into. Since a child is born dependent upon their parents or caregivers, the dominance aspect of behavior between a parent and child is largely predetermined. At some point in life, the child outgrows the submissive role and conflict may erupt. Since this study dealt with college students, it is likely that most are currently in a gray area between dominance and submission with their parents and the results reflected this by the lack of relationship between parent affect and peer affect.

The ipsatized IIP scores used in this study were generally consistent with Alden et al.'s (1990) original design of the circumplex. The ipsatized scores of each subscale were most negatively related to their polar opposite and least related to those subscales which were located 90 degrees in either direction. This supports the circular arrangement of the circumplex design.

One strength of this study was the large sample size. However, over 70% of the participants were female and all were unmarried and currently enrolled in Psychology courses. These things may limit the generalizability of these results. Although gender did not appear to affect the lack of correlation, there were some differences in the types of problems reported and the types of stories told between males and females. Specifically, the intercorrelation of the IIP subscales for females exhibited more of the

expected correlations according to the circumplex model. This is probably due to the lack of a large sample of males.

A primary limitation of this study was conducting a secondary analysis and therefore being limited to the previously administered measures. Since attachment style was not originally measured, the relationship of the TAT and the IIP to an individual's attachment style could not be investigated directly, but only inferred. Another limitation is that all subjects had independently elected to take psychology courses prior to the study. There could be differences in interpersonal relating between people who study psychology versus those who study other fields.

Future research should be conducted in this area to investigate the relationships between attachment style, interpersonal problems and affect in TAT stories. A study with a more gender balanced participant sample may yield different results. Additionally, the participant pool might contain both married and unmarried individuals to determine if there is a difference in responding on the TAT Affect Scale.

This study was the first investigating the relationship between an individual's interpersonal problems and the types of TAT stories they tell. Further research on this topic may result in a greater understanding of affect in TAT stories. It is also important to determine how attachment affects an individual's interpersonal problems in order to properly treat the problem at its source. In the future, additional assessment measures can be developed to allow for better reporting of the interpersonal problems people face.

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Table 1. Descriptive Statistics for the TAT and Inventory of Personal Problems

*Descriptive Statistics*


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<b>Variables</b>	<b>M</b>	<b>SD</b>	<b>Range</b>
Net TAT Nonspouse Affect	-.6506	2.14580	-7.00 to 4.00
Net TAT Parent Affect	-.0120	2.40703	-6.00 to 8.00
Net TAT Spouse Affect	-.4699	2.03209	-7.00 to 5.00
Ipsatized IIP Domineering	-.3146	0.46304	-1.49 to 1.19
Ipsatized IIP Vindictive	-.3057	0.41670	-1.35 to 1.15
Ipsatized IIP Cold	-.2817	0.49775	-1.61 to 0.95
Ipsatized IIP Socially Avoidant	.1619	0.56351	-0.93 to 2.14
Ipsatized IIP Nonassertive	.2804	0.55898	-1.23 to 2.06
Ipsatized IIP Exploitable	.2393	0.48974	-0.92 to 1.56
Ipsatized IIP Overly Nurturant	.3241	0.56133	-0.92 to 2.10
Ipsatized IIP Intrusive	-.0600	0.52443	-1.61 to 1.54

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Table 2. Relationship between ipsatized IIP scores

	Domineering	Vindictive	Cold	Socially Avoidant	Nonassertive	Exploitable	Overly Nurturant	Intrusive
Domineering	1							
Vindictive	.43***	1						
Cold	.21**	.51***	1					
Socially Avoidant	-.37***	-.07	.27**	1				
Nonassertive	-.62***	-.48***	-.24***	.29***	1			
Exploitable	-.39***	-.50***	-.49***	-.18*	.42***	1		
Overly Nurturant	-.16*	-.47***	-.52***	-.35***	.03	.47***	1	
Intrusive	.33***	.02	-.37***	-.56***	-.28***	.02	.22**	1

\*.  $p < .05$ .  
 \*\*.  $p < .01$ .  
 \*\*\*.  $p < .001$ .

Table 3. Correlations between all experimental variables for males and females

	Domineering	Vindictive	Cold	Socially Avoidant	Nonassertive	Exploitable	Overly Nurturant	Intrusive
Male	1							
Female	1							
Male	.42**	1						
Female	.43***	1						
Male	.18	.48***	1					
Female	.20*	.52***	1					
Male	-.32*	-.29	.09	1				
Female	-.42***	.02	.32***	1				
Male	-.55***	-.52***	-.21	.35*	1			
Female	-.64***	-.45***	-.22*	.32***	1			
Male	-.43**	-.40**	-.41**	-.20	.18	1		
Female	-.37***	-.53***	-.51***	-.17	.47***	1		
Male	-.21	-.36*	-.41**	-.29	-.08	.53***	1	
Female	-.12	-.52***	-.56***	-.36***	.04	.44***	1	
Male	-.03	-.17	-.56***	-.26	-.02	.27	.16	1
Female	.46***	.09	-.31***	-.66***	-.36***	-.05	.24**	1

\* .  $p < .05$ . \*\* .  $p < .01$ . \*\*\* .  $p < .001$ .

Table 4. Correlations between demographics and each variable

	Net Nonspouse Score	Net Parent Score	Net Spouse Score	Domineering	Vindictive	Cold	Socially Avoidant	Nonassertive	Exploitable	Overly Nurturant	Intrusive
Gender	-.04	.05	-.18*	-.13	-.11	-.13	-.13	.17*	.11	.11	.05
Age	-.01	-.03	.09	.00	-.03	-.00	.00	.04	.04	-.09	.02
Ethnicity	.09	.05	.09	-.08	-.02	-.09	.14	.04	-.01	-.05	.04

\* .  $p < .05$ .