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The Influence of Language on Thematic Apperception Test Assessment of Defenses in International Spanish-speaking College Students

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Abstract

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Cultural influences, including the use of language, have been shown to affect personality development and are also likely to impact personality assessment results. The influence of language is particularly relevant in story-telling measures such as the Thematic Apperception Test (TAT; Morgan & Murray, 1935). The purpose of this study was to analyze TAT narratives delivered in English and Spanish to assess the application of defense mechanisms based on the Defense Mechanism Manual (DMM; Cramer, 1991) among Hispanic international students. No study to date has provided insight into Hispanic individuals' use of language with the TAT, specifically on scores for the defenses of Denial, Projection, and Identification. The current study utilized a sample of international Hispanic students from a private university in the southeastern United States. The sample consisted of 21 bilingual participants who provided TAT stories in either Spanish or English (Spanish-narrative sample: *N =10*; *M* age = 22.50; *SD* = 2.92; English-narrative sample: *N* = 11; *M* age = 23.36; *SD* = 3.41). Narratives provided in Spanish were expected to yield significantly higher DMM scores than those delivered in English. Interrater reliability results using ICCs showed reliable scores

among six randomly selected narratives for denial (.91), projection (.72), and identification (.94). Multivariate analysis of variance (MANOVA) results demonstrated that the use of defenses was significantly dependent on the language used ($F(3,17) = 5.122$, $p < .05$; Pillai's Trace = .475). Contrary to the hypothesized direction, however, univariate analyses of variance (ANOVAs) demonstrated a significantly higher mean score for Denial ($F(1,19) = 8.29$, $p = .01$; English $M = 8.82$, $SD = 4.64$; Spanish $M = 3.90$, $SD = 2.89$) and Projection ($F(1,19) = 4.63$, $p < .05$; English $M = 13.55$, $SD = 5.43$; Spanish $M = 8.00$, $SD = 6.38$) for TAT stories narrated in English. A Chi-square analysis of homogeneity was conducted to contextualize the aforementioned results in terms of the frequencies of distress-related words (stress, emotional distress, conflict, fear, and guilt) among English and Spanish narratives, which are the bases for defense mechanisms. Results indicated a significant overall association between the language used by participants and distress-related words ($p < .001$). Specifically, words classified in the emotional distress category in English narratives (60.2%) were significantly higher in frequency than those in Spanish narratives (46.0%). On the other hand, words in the conflict and fear categories in Spanish narratives (32.3% and 8.9%, respectively) were significantly higher in frequency than those in English narratives (21.3% and 4.6%, respectively). These findings will allow future psychological assessors to make informed decisions on selection of language for eliciting TAT narratives from Hispanic individuals.

Keywords: students, Central American, South American, Hispanic, Thematic Apperception Test, Defense Mechanism Manual, defenses, narratives.

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Chapter 1: The Influence of Language on Thematic Apperception Test Assessment of Defenses in International Spanish-speaking College Students

The United States is one of the top destinations for international students from Latin American countries such as Guatemala, Honduras, El Salvador, Costa Rica, and Nicaragua. According to Open Doors Data (2021), a U.S Department of State-sponsored program, as of 2019, the number of Central American international students in the United States totaled 23,110. The leading destinations for these students are Texas, Florida, Massachusetts, California, New York, Maryland, Virginia, Pennsylvania, Georgia, and Louisiana. These young individuals arrive in the U.S. for personal and economic growth, seeking opportunities that were limited in their countries. Research has shown that Central American students choose U.S. higher education institutions because of geographic proximity, high-quality education system, a large variety of institutions and higher education programs, safe and diverse living environments, and availability of intensive and short-term English programs to learn or improve English skills. Studying abroad also represents an opportunity for these students to become more competitive in their professional arena and increases their possibilities for better employment with international corporations. In the academic year of 2019 - 2020, El Salvador ranked 20th among the top 25 places of origin for international students attending community colleges in the U.S.; this is an increase of 0.8% when compared to 2018. According to the International Trade Administration (2021), these students'

top fields of study are business and management, engineering, math and computer science, physical and life science, and social sciences.

With the current social-political climate, the Coronavirus Disease-2019 (COVID-19) pandemic has created new opportunities in the education sector for virtual education programs. However, one of the main challenges for Latin American governments is access to the internet and the lack of computers for students. The International Trade Administration (2021) explains that many of these governments have created sponsorship and scholarship programs for students to study abroad. Programs like "Honduras 20/20" prioritize areas under the economic development program "Honduras 2020", which seeks to create new jobs in many sectors of their economy. Other countries like Costa Rica have developed grants for students to study STEM subjects at community colleges in the U.S.

According to a model developed by researchers at the University of Texas, an estimated 311,000 people left the northern region of Central America between the years 2004 and 2020, with the majority bound for the U.S. The U.S Congressional Research Service (2021) describes that migration flows have varied yearly, with 709,000 people leaving the region in 2019, followed by an estimated 139,000 people in 2020. The Central American and South American regions have become a major source of U.S immigration, both legal and illegal. Latin American individuals' leading causes of migration are difficult socio-economic and security conditions that are often exacerbated by natural disasters and poor governance. These factors have long pervaded these countries. Land ownership and economic

power have historically been for a small group of powerful people in these Central American and South American countries, leaving extreme inequality and widespread poverty. In many areas, citizens continue to deal with high levels of malnutrition and low levels of education that limit their growth. Years of violence and little to no security have also overwhelmed Latin American nations. Many gangs and criminal organizations have resorted to violence while also engaging in neighborhood wars that affect innocent citizens. According to the U.S Congressional Research Service (2021), as of 2018, around 71,500 Salvadorians and 247,000 Hondurans had been displaced by violence. These individuals often resort to asylum-seeking in developed countries like the United States.

Resilience and grit are two critical traits of Hispanic individuals. As Hispanic students make up a large portion of international students in the U.S., there is a clear need to gain an understanding of how they conceptualize their transitions to a new country and how these understandings affect their appraisal of themselves and others. Personality measures such as the Thematic Apperception Test (TAT; Murray & Morgan, 1943) are useful tools to assess an individual's underlying perceptions of personality, motives, needs for achievement, problem-solving abilities, and view of interpersonal relationships. Therefore, measures such as the TAT can aid in analyzing Hispanic international students' perceptions, self-attitudes, and interpersonal dynamics. The TAT is also a useful medium by which culture and language can be expressed. The relationship between language, culture, and personality studied through psychological research explain that the language

used in providing TAT narratives needs examination, especially to determine if there are differences among stories told in the native tongue versus the acquired language, which has relevance for test results interpretation. The research between Hispanic international students and TAT continues to be limited. Therefore, there is a need to expand the research on how the TAT evaluates these individuals' perceptions, experiences, needs, and the coping abilities they employ to manage their transitions to a new country, particularly on their use of defense mechanisms to facilitate their adaptations. Defense mechanisms enable individuals to ease their internal conflicts and excessive anxieties while simultaneously increasing their sense of security and self-cohesiveness (Cramer, 1996). The focus of this study was to analyze differences in assessed defenses in the context of probable differences in TAT narratives delivered in Spanish and English among Hispanic international students.

Chapter 2: Review of the Literature

Personality

The term **“**personality” can be traced to the late 14th century term *personalite*, defined by the Online Etymology Dictionary (n.d) as **“**the quality or fact of being a person” (para. 1). In psychology, personality represents the stable characteristics of individuals that demonstrate their behaviors, emotions, and cognitions across life contexts, which reflects individual differences (Beutler et al., 2011). Gordon Allport (1937) defined personality as "the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment" (p. 48), and Raymond Cattell (1950) stated that "personality is that which permits a prediction of what a person will do in a given situation" (p. 2). These seemingly simple definitions have a complex theoretical framework. Theorists like Allport and Cattell have postulated multiple elements that can influence personality, and Cattell's description of personality facilitates the quantitative measurement of personality features.

Many approaches to personality have been proposed by prominent scholars for defining personality and its characteristics. There is not one single paradigm that serves as a theoretical model to explain personality. One of these paradigms is represented in trait theory. A trait is a construct that describes the basic dimensions of personality that are stable and consistent over time. Trait theories agree on some basic tenets of the trait approach. The first is that various characteristics of an individual's personality are more or less stable over time, whereby individual

differences can be identified. The second emphasizes the measurement of these traits through tests (Cloninger, 1996).

Trait explication and measurement have taken many forms over the years. Part of the evolution of trait measurement is due to the hundreds of traits that have been proposed. Allport's personological trait theory (as cited in Cloninger, 1996) delves into many complex aspects of personality, including psychophysical systems such as temperament, functional autonomy, the pervasiveness of traits, and personality's role within an individual's environment. Allport's primary themes of social influence, the self, and the pervasiveness of personality remain applicable today. Cattell's factor analytic trait theory of personality, rooted in prior works of Spearman (1904) and Thurstone (1931) (as cited in Cloninger, 1996), uses the principles of previous theories to bring together and organize the findings of factor analytic studies of personality. Factor analytic trait theory explains that source traits and surface traits reflect underlying variables and their superficial manifestations, respectively. Additionally, it addresses the measurement of personality, prediction of behavior, and research using multivariate analysis.

Among other theories of personality is the psychoanalytic perspective presented by Freud (as cited in Cloninger, 1996), which proposed the concept of the unconscious. Psychoanalysts assume that personality is strongly influenced by the unconscious, which is a dynamic or motivational force that originates in early experiences. A subsequent variation of traditional psychoanalytic theory is the psychosocial perspective of personality, which acknowledged the role of the

unconscious and early experiences but also gave importance to the ego, sense of self, interpersonal relationships, and social/cultural factors. In contrast, behaviorism based on learning theory assumes that personality is defined in terms of behavior. Behavior is said to be determined by external factors in the environment. The humanistic perspective sought to combat the deterministic assumptions of the behavioral and psychoanalytic perspectives with a focus on personal growth and development. The humanistic perspective focuses on the more developed aspects of the human experience, such as creativity and tolerance. Additionally, the humanistic perspective places value on subjective experiences and emphasizes personal responsibility for actions. Unlike the psychoanalytic and psychoanalytic-social perspectives, humanistic theory focuses on the present rather than the past. All of these theories, although disparate in some ways, provide psychologists with various perspectives from which they could research and analyze personality development (Cloninger, 1996).

Across the different theoretical and empirical approaches to the study of personality, it is generally agreed that personality is relatively stable and consistent over time. The search to determine the stability of personality has unfolded research directed toward analyzing personality traits throughout the lifespan. The Five-Factor Model (FFM) explains personality in terms of the five core traits of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (McCrae & Costa, 1999). The FFM adopts the tenets of trait psychology, and it has been examined in diverse populations, assessed in

longitudinal studies, examined with different assessment measures, and used through various case studies. The FFM became the foundation for measures such as the Big Five Inventory (BFI), which measures five dimensions of human personality: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. These dimensions have emerged from analyzing multiple personality tests, supporting the fact that they represent the robust dimensions of individual differences (Cloninger, 1996). Empirical findings based on this model have generally shown stability in personality traits over time. On the other hand, research has also shown evidence of adaptations based on life circumstances.

Among the research examining areas of temporal stability and change in personality, Srivastava and fellow researchers (2003) used the biological perspective from the FFM to identify if aspects of personality remain stable over time. The biological perspective of the FFM proposes the "soft" and "hard" plaster hypotheses. The "hard" plaster hypothesis asserts that all personality traits stop by age 30, while the "soft" plaster proposes that all personality traits slow down by age 30. Their findings supported previous research, demonstrating that personality is stable over time but that external and internal factors can influence it. For example, Srivastava et al. (2003) concluded that conscientiousness appeared to change throughout early and middle adulthood. Additionally, agreeableness demonstrated significant changes later in life, and neuroticism declined for women. These conclusions indicate that personality is generally stable across time; however,

factors such as age and environment can influence it. Another study by Specht and co-authors (2011) investigated changes in the mean levels and rank order of the Big Five personality traits. Specht et al.'s (2011) findings complement Srivastava et al.'s (2003) results, indicating that age and life events can influence personality changes throughout an individual's life. Specifically, age had a curvilinear effect, with the most prominent changes being in young and older ages. These changes were also attributable to social demands, contexts, and experiences.

Recent research studies have approached the investigation of personality stability through trait-score correlation using rank-order correlations and mean-level stability. Borghuis and colleagues (2017) analyzed these correlations by examining the Big Five personality trait stability, change, and co-development in friendship and sibling dyads from age 12 to 22. Their findings support what the literature suggests: the stability of Big Five rank-order traits increases substantially in the formative period of early and middle adolescence and subsequently stabilizes. Individual differences in trait changes were relatively small in magnitude in adolescence for agreeableness but substantial for extraversion, conscientiousness, and emotional stability.

Culture and Personality

Culture is characterized by social and personal systems composed of the values, norms, and beliefs that influence individuals within a given society. Culture can refer to general characteristics such as food and clothing, housing, economy, individual and family activities, community, and religion (Matsumoto & Juang,

2016). Cultures are maintained through generations and create distinctive societies. The social systems within a culture are attributes of society, whereas the personality systems are attributes of individuals. For a long time, it was believed that these systems did not intertwine (Spiro, 1961). However, modern research has illustrated a relationship between the acts of individuals and the regularities of social processes. For example, although there is one overarching social system for a society, that same social system comprises numerous personalities. Because cultures are characterized by shared values, norms, and beliefs, social systems are normative, whereas personality systems are conative, meaning that individuals are motivated by personal inclinations (Spiro, 1961). Nonetheless, culture influences personality in terms of the ways in which people are represented in descriptions of self and others (Chiu & Hong, 2006). The study and subsequent assessment of personality have demonstrated how to consider the social, personal, and cultural aspects that define individuals' motivations and choices of action. Studies have also focused on how language, as a basis of culture, influences personality development.

Language and Personality. The idea that language reflects personality has long been familiar, as it is a medium through which personality development becomes manifested. Language, culture, and cognition are interrelated, as previous research has demonstrated that language plays an important role in cognitive development, which is a component of personality development, from an early age (Vygotsky, 1962). Several prominent theories in psychology explain that culture influences an individual's cognition through the language used. One such theory is

the Sapir-Whorf linguistic relativity hypothesis (Whorf, 1956). In his research, Whorf (1956) explained that linguistic patterns in different languages could potentially impact a person's habitual thinking; thus, the language people speak can affect how they perceive and remember their world. Other studies have delved into the impact of both culture and language on cognition. For example, Ji and fellow authors (2004) examined whether culture and language affect reasoning, using bilingual participants and testing them in their proficient languages. They found culture had a significant effect, independent of language, on how people grouped sets of words. Specifically, Chinese participants grouped words primarily based on their relationships (thematic categorization), whereas European Americans grouped them based on their category (taxonomic categorization). However, language had a substantial effect on some subgroups of participants in that the responses of bilingual Chinese participants' from Mainland China and Taiwan (versus Hong Kong and Singapore) were more relational when tested in Chinese than in English. This latter finding was explained in terms of the age of learning English as a second language, and the cultural context in which was is learned. These findings reflect the complex interactions between culture, language, and styles of thinking and reasoning.

In a study examining personality adaptations by Ramirez-Esparza and colleagues (2006), the researchers focused on cultural frame switching, specifically in terms of personality. Using the Big-Five Inventory, their findings revealed that when speaking English, Spanish-English bilinguals responded in a more

"American" manner, choosing to report themselves as more extroverted, agreeable, and conscientious but less neurotic. This personality pattern is consistent with the personality type of many Americans with whom the bilingual participants had learned to speak English. This study indicated that language influences personality expression through cultural shifts that are appropriate to the individual's overarching sociocultural context. Another study by Chen and Bond (2010) also observed the impact of language on personality. Their research tested the cultural accommodation hypothesis by examining the impact of language use on personality trait expressions in a sample of Chinese-English bilingual participants. Similar to Ramirez-Esparza and colleagues' (2006) results, their findings suggested that the use of a second language activated behaviors that were appropriate to the linguistic social context. In other words, bilinguals adjusted their behavior to match their environment. Specifically, participants demonstrated higher levels of extraversion, openness to experience, and assertiveness when speaking in English than in Chinese, corresponding to their perceptions of normative personality traits in the different cultures (i.e., western traits vs. eastern traits). Chen and Bond's (2010) findings suggest that there are cross-cultural differences in some personality dimensions because language provides cultural cues for responding in a culturally-congruent manner.

Differences in language can be encountered when analyzing open-ended narratives in which individuals are given the space to express aspects of their personalities. Deductive and inductive approaches have been used to examine

common words within narratives. The TAT is one example of assessing for common clusters of words. Likewise, other extraction methods, like the Meaning Extraction Method (MEM), determine groups of words commonly clustered in self-descriptions without pre-defined or biased coding schemes or dictionaries (Chung & Pennebaker, 2008). Ramirez-Esparza and collaborators (2012) used the MEM to compare Mexicans' self-descriptions in Spanish with Americans' self-descriptions in English. They found culture-specific components in how people interpreted their concerns. One example provided by the authors was the term *simpatía* which refers to being affectionate, honest, noble, or tolerant. This term was specific to the Mexican sample, demonstrating that there are culture-specific concepts reflected in the language used.

In sum, studies have illustrated how linguistic differences influence personality traits, as language can affect the way individuals perceive their environment and others. Because language is a facet of culture, and different cultures possess a variety of dialects, vernaculars, and methods of communication, an individual's personality is flexible in the sense that it can adapt to cultural and linguistic influences.

Personality Assessment

Personality assessment methods have evolved over the course of a century to provide psychologists with effective tools to examine, analyze, and make inferences about individuals' characteristics. Personality assessment measures stable personality traits as well as personality states that are known to be fluid and

changing. Personality assessment addresses a person's overall functioning, including self-perception, perception of others, interpersonal relationships, and coping skills when faced with adversity (Krishnamurthy, Hass, et al., 2022). Psychologists have created ways to measure personality and identify those traits that make individuals unique. In the early part of the 20th century, psychologists were at the forefront of developing, constructing, and evaluating psychological tests. The germination of standardized testing emerged from expansions in theories of intelligence and statistical techniques for measurement. During World War I, there was an increased need for psychological tests in order to screen enlisted men, which led to the creation of instruments to measure mental ability. Likewise, personality assessment has had the same history, with the need for instruments to assess military personnel and match them to suitable military positions during World Wars I and II (Harrell, 2017).

In clinical settings, the need to make systematic determinations about psychological adjustment and achieve accurate diagnoses led to the development of tests such as the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1942) and the Rorschach inkblot test (Rorschach, 1921), both of which continue to be used currently for the assessment of personality and psychopathology. These earlier measures led the way for the development of numerous other personality assessment instruments, broadly categorized into self-report inventories and performance-based tests.

Self-report inventories include various questionnaire measures that enable respondents to report their emotions, attitudes, values, opinions, and overall functioning. Self-report inventories convey what the individual is consciously aware of and is willing to share. The information that is shared relies on retrieving information from memory stores, accurate comparison of oneself with other people in general, and communication of that information through response selections (Krishnamurthy & Meyer, 2016). Most self-reporting methods consist of self-descriptive statements rated by answering either "yes" or "no" questions or following a Likert-type rating scale. The first formal self-report measure to assess psychological characteristics was Heymans and Wiersma 1906's 90-item structured rating scale (as cited in Williams et al., 2019). This formal self-report measure laid the foundation for the first systematic effort to develop a self-report personality questionnaire; Woodworth 1920's Personal Data Sheet, which was developed to assist in identifying psychoneurotic individuals who were unfit for duty in the U.S. military during World War I (as cited in Williams et al., 2019). In the years that followed, Downey's (1923) Will-Temperament tests, Travis's (1925) Diagnostic Character Test, Heidbreder's (1926) Extraversion-Introversion test, Thurstone's (1930) Personality Schedule, and Allport's (1928) Ascendance-Submission measure were among the more prominent early successors to Woodworth's questionnaire (Williams et al., 2019). Subsequent self-report inventories were designed to achieve greater reliability and validity of test scores than their forerunners. The development of the Minnesota Multiphasic Inventory (MMPI; Hathaway &

McKinley, 1942) marked the beginning of the reconstruction of self-report inventories. The MMPI represented a departure from prior theoretically-driven self-report personality inventories in following an empirical approach to scale construction. It has since been revised and updated multiple times into the MMPI-2 (Butcher et al, 1989) and MMPI-2-RF (Ben-Porath & Tellegen, 2008/2011) for adults, and the MMPI-A (Butcher et al., 1992) and MMPI-A-RF (Archer et al., 2016) for adolescents, with the most recent version for adults being the MMPI-3 (Ben-Porath & Tellegen, 2020). Other widely used personality self-report inventories include the Personality Assessment Inventory (PAI; Morey, 1991) and the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1977/1987/1994/2015) series.

An alternative to self-report personality questionnaires consists of performance-based measures, which assess an individual's behaviors during a structured problem-solving task (Krishnamurthy & Meyer, 2016). According to Weiner (2012), performance-based personality measures also allow interaction and dialogue between the examiner and respondent, which is decreased when using self-report measures. Therefore, these measures give the examiner the means to assess the respondents' interpersonal dynamics. Some popular performance-based personality measures include the Rorschach (Rorschach, 1921), which involves ambiguous inkblot stimuli, and the TAT (Morgan & Murray, 1935), which involves storytelling in responses to pictorial stimuli.

Storytelling Instruments

Storytelling serves as a mechanism to construct meaning in an individual's life. Therefore, psychology has used this method to examine how individuals represent themselves and their experiences (Cramer, 1996). Stories provide material for studying the human psyche, often being saturated with complex patterns that constitute each individual story. Theorists suggest that one's identity can also be reflected in a story, in which the individual constructs himself or herself, consciously or unconsciously. These self-portrayals can be influenced by the individual's culture, gender roles/norms, and religion. Overall, each story can be considered a person's explanation of his or her psychological reality (Cramer, 1996). The TAT (Morgan & Murray, 1935) provides a glimpse of an individual's unconscious reality through such narratives. The TAT is the most widely used storytelling instrument among personality assessment measures (Morgan & Murray, 1935).

Thematic Apperception Test

The TAT (Morgan & Murray, 1935) was initially developed to measure drives and needs through the test taker's narrative in response to a set of 31 semi-ambiguous picture cards, most of which have one or more individuals present in the picture (Krishnamurthy & Meyer, 2016). Morgan and Murray (1935) hypothesized that the content of a person's imagined stories would provide context to the underlying dynamics of that person's interpersonal relationships and self-attitudes. The data obtained from the TAT was expected to reveal the hierarchy of a person's

needs and the nature of his or her dominant emotions and conflicts (Jain et al., 2017). The instructions for the TAT consist of the assessor asking the test taker to tell a story of what is happening in the picture cards. The test-taker is given complete freedom of what to narrate, although the task is structured to include what is happening in the beginning, middle, and end of the story, including what the people pictured might be thinking and feeling. The narrated stories are recorded verbatim by the examiner.

Thematic Apperception Test Scoring Systems

Multiple scoring systems have been developed over the decades to analyze TAT stories, with the first system being proposed by Murray in 1943. These scoring systems were intended as tools to aid in the organization of the information narrated on the TAT. Most well-known among them is the Bellak scoring system which is an organizational framework based on the significant dimensions of personality organization represented in theories of personality and psychopathology and contemporary clinical practice (Bellak, 1947, as cited in Abrams, 1999). Bellak's system incorporates Murray's (1938) personology theory of need-press relationships and contemporary psychoanalytic or psychodynamic theory (Bellak, 1947, as cited in Abrams, 1999). Bellak's system and his scoring blanks were published as the Bellak T.A.T Blanks and Analysis Sheet (Bellak, 1947), which served as a guide and frame of reference for the narratives and an extraction tool for important themes within those narratives. This system has ten categories that are useful for the interpretations of the narratives: the main theme, main hero, main

needs/drives, conception of environment (world), figures seen as, significant conflicts, nature of anxieties, main defenses against conflicts and fears, adequacy of the superego, and integration of the ego (Bellak & Abrams, 1997). This system does not involve quantitative scoring. In general, the earlier scoring systems of the 20th century have not been widely used or acknowledged in clinical settings, and assessors generally engage in qualitative analysis of themes.

In recent years, two scoring methods have been formalized for the systematic and consistent scoring of the TAT: the Social Cognition and Object Relations Scale (SCORS; Westen, 1995) and the Defense Mechanism Manual (DMM; Cramer, 1991). The Social Cognition and Object Relations Scale (SCORS; Westen, 1995) is an empirically validated and clinician-rated measure used to code narrative material. This scoring instrument provides psychologists with a tool to systematically determine the developmental level or pathology of different individuals based on assessing their object relations (Cramer, 1999). There have been multiple adaptations of the SCORS, depending on the setting it is being used. The most recent SCORS measure is the Social Cognition and Object Relation Scale - Global Rating (SCORS-G; Westen, 1995; Stein & Slavin-Mulford, 2017), which is an expanded version of the SCORS. The SCORS-G consists of eight dimensions, each of which is scored using a seven-point Likert scale, where lower scores indicate more pathological aspects of object representations and higher scores are suggestive of more mature and adaptive functioning. Other SCORS offspring include the SCORS specifically with TAT narratives (SCORS–TAT; Westen,

1990), one for use with clinical interview data (SCORS–CDI), and the Social Cognition and Object Relations Scales–Q Sort (SCORS-Q) for Projective Stories. The SCORS-Q is an empirically validated measure that operationalizes and enables quantitative ratings on five structural dimensions of object relations and provides interpretive descriptors of dominant interpersonal concerns.

Defense Mechanism Manual. The Defense Mechanism Manual (DMM; Cramer, 1991), which is the focus of the current study, was developed to assess the defenses of denial, projection, and identification as revealed in TAT stories. Cramer (1999) explained that the creation of the DMM was influenced by psychodynamic concepts and the theoretical position that defense mechanisms may be characterized as ranging from primitive to mature. These three particular defenses are meant to represent different degrees of maturity. Denial is a defense mechanism that occurs when an individual refuses to accept reality or facts. According to Cramer (1999), denial is the most primitive of the three defenses. The second defense, projection, is defined as when an individual attributes his or her impulses or negative qualities to someone or something else. Cramer (1991) identified this defense mechanism as somewhat more complex and more mature than denial. Identification involves adopting the behavior of a person who is more powerful than, and hostile towards, oneself. This mechanism is referred to as the more complex and mature of all three. These three defenses are coded according to a scoring manual and a set of criteria. Each TAT story is rated for each defense.

The DMM has been validated as a measure of maturity level in children and adolescents, developmental maturity levels among adolescents, and long-term personality stability in adults. Furthermore, research has demonstrated increases in DMM-assessed defenses when individuals are stressed. Specifically, both children and college students have been found to show an increase in DMM scores for the TAT following stress-inducing experimental interventions (Cramer, 2015). According to theorists, defense mechanisms function to reduce anxiety and protect self-esteem. Accordingly, if self-esteem is threatened, the use of defenses increases. These findings support the validity of the DMM in terms of its alignment with a clinical theory that posits an increase in defense usage during times of negative emotional arousal (Cramer, 2015).

Cramer (2017) sought to determine if different TAT cards pull for different defense mechanisms, given that the assessor has the option of either selecting specific cards to present to the test-taker or use a standard set. Card selection is typically done in light of the referral question and the present issues that need to be addressed. The assessor is advised to be aware of each card's pull, as each set might elicit different types of information from the person being tested. Cramer's (2017) findings indicated that, in fact, different TAT cards pull for different defenses. However, the results of her research also demonstrate that card pull is not a fixed entity, but rather it depends on the context (i.e., setting) and the particular TAT cards included in the assessment battery.

Thematic Apperception Test with Ethnic/Cultural Groups

The TAT has been widely used with various ethnic and cultural groups. Lonner (1985) noted that because some degree of storytelling is common in all cultures, the TAT and its extensions have been helpful in the study of diverse cultural groups. Additionally, TAT research has continued in recent studies focusing on cultural groups, with the goal of conducting new normative studies and developing new approaches for interpretation (Dana, 2000).

Studies have demonstrated that the TAT evokes different narratives in people from different cultures. In one of these studies, the authors sought to analyze the utility of the TAT in a longitudinal follow-up study to determine the ethnocultural family role perceptions and values among a sample of Japanese American families (Ching et al., 1995). Their results indicated themes of family interaction patterns and family role perceptions, that persisted across multiple measurements over time among families from the Japanese American community. In other words, themes such as hierarchical status, gender norms, role differentiation, and harmony were salient in the narratives of Japanese American families. Compared to their European counterparts, Japanese American families had prominent themes of interpersonal acceptance and cooperation (Ching et al., 1995). These results demonstrate how the TAT can pick up interpersonal themes salient to specific cultural groups. TAT narratives could also provide psychologists with information about acculturation status in multicultural societies (Dana, 2000).

Language Differences and the Thematic Apperception Test

One of the earliest investigations to analyze the relationship between language, culture, and personality was by Ervin (1964). In her study, Ervin (1964) analyzed language as a means of culture in a sample of bilingual individuals. Her findings suggest that these individuals, who were proficient in both French and English, tended to shift their expressed content depending on the language they used. Specifically, more achievement themes were expressed in English, and more aggression themes were expressed in French. Ervin's (1964) findings were the first to use the Thematic Apperception Test (Murray, 1943) to examine how personality can be expressed through culture. Ervin (1964) concluded that bilingual individuals have two personalities, at least in their vocal production (Chen & Bond, 2010). More studies have since been conducted to analyze the use of the TAT with bilingual populations and how the content of their stories differs depending on the language used. In one such study by Katsavdakis et al. (2001), the TAT was administered to four bilingual psychiatric patients in both a Middle Eastern mother tongue and an acquired tongue and scored on the five object relations scale of the SCORS-Q. The results were analyzed for differences in the sense of self, self-in-relation-to-other, and levels of pathology, and demonstrated differences between stories delivered in the participant's native and acquired tongue. Specifically, in one case, a participant depicted females as more proactive when speaking in English, whereas in her native tongue, she defined females as more reactive to males or family members. Additionally, in her native tongue, the participant

represented relationships as grossly malevolent, whereas in English, her relationships were described as alienating or absent. This study concluded that people tell their stories differently when speaking in their native tongue versus the acquired language.

A multicultural version of the TAT arose from the need for a psychometrically sound multicultural adaptation designed specifically for use with children and adolescents. The Tell-Me-A-Story test (TEMAS; Constantino & Malgady, 1999) is an offspring of the TAT technique, representing a multicultural projective test for minority and non-minority children, specifically Puerto Rican, Hispanic, Black, and White children. The TEMAS can be described as a psychometrically sound picture story test developed within a dynamic-cognitive theoretical orientation. It is a unique representative of a culture-specific personality test because this test went further than merely modifying the Murray TAT cards (Dana, 2000). Instead, the TEMAS adopted two versions to accommodate minority groups; one version consists of pictures featuring Hispanic and Black characters in an urban setting, while the second version consists of images showing White characters in an urban setting. The TEMAS provides assessors with a culturally sensitive instrument that uses the same technique of storytelling to analyze an individual's unconscious motives, interpersonal relationships, and interactions with their environment.

Both the TAT and TEMAS assess for defenses of projection and identification. However, the TAT emphasizes an individual's intrapsychic

dynamics, whereas the TEMAS prioritizes personality functions as manifested in interpersonal relationships and internalized by the child. The dynamic-cognitive theoretical framework behind the TEMAS reflects the understanding that personality development occurs within a psycho-cultural system. Thus, the normative age range for the use of the TEMAS is ages five to thirteen years, and it can be used clinically with children and adolescents from ages five to eighteen years (Constantino & Malgady, 1999).

Use of the Thematic Apperception Test with College Students

The research literature on TAT correlates for students has generally been sparse. Nonetheless, some TAT studies have centered on establishing TAT correlates for college students. These studies have focused on certain constructs, such as anxiety. One such study by Phares (1961) aimed to evaluate if highly anxious college students will show greater preference for TAT themes involving an accident, threat, or trauma than will low anxious students when matched for a tendency to avoid or cope with threatening stimuli. This evaluation was done by administering an Incomplete Sentences Blank (ISB) and the TAT (cards 4, 6BM, 7BM, 13MF, 14, 17BM, and 20) to 50 general psychology students. The findings of this study confirmed Phares' (1961) hypothesis that anxious students see a greater threat in TAT cards than non-anxious people when their technique for defending against anxiety is controlled.

In another study that explored coping behaviors among college students, Coelho and fellow researchers (1969) hypothesized that pre-college student-TAT

measures of competence would correlate positively with student interview assessments of coping behavior during their freshman year and that this would also predict who would drop out or remain in college. For this study, the authors used an adaptation of the TAT specifically for students. Results confirmed Coelho et al.'s (1969) hypothesis that pre-college student-TAT measures of competence correlated significantly with independent interview assessments of coping behavior. It did, in fact, differentiate those students who remained or dropped out of college.

In the area of bereavement and spirituality, a study by Walker and Balk (2013) sought to measure coping in a sample of 117 bereaved and non-bereaved college students. In addition to the TAT, students answered a set of questionnaires including the Beck Depression Inventory - Second Edition (BDI-II), the Symptom Checklist-90 (SCL-90) for distress, General Health Inventory, Impact of Event Scale-Revised (IES-R), and the Sleep Questionnaire for insomnia. Bereaved students were also administered the PGD Checklist (PG-13; Prigerson et al., 2009). Results show that in bereaved students, the frequency of coping themes in the TAT narratives correlated with the IES-R Avoidance scale (r = .28) and GPA (r = .20). Additionally, the BDI -II and SCL-90 depression sub-scale scores correlated with death/grief themes in TAT narratives (r = .36 and r = .41, respectively).

In a study of motivation, Schultheiss and Brunstein (2001) explored students' motivation patterns by using the TAT and observing common themes of the need for Power, Achievement, and Affiliation (*n* Power, *n* Achievement, and *n* Affiliation). The sample consisted of 188 women and 240 men, ages 18 to 36 years,

from different departments at German universities. The researchers found that higher levels of *n* Power were significantly associated with higher levels of *n* Achievement for both women and men, and higher levels of *n* Affiliation were significantly associated with lower levels of activity inhibition. In addition, higher levels of *n* Power were significantly related to lower levels of *n* Affiliation in women but not in men. The study results were also congruent with the researchers' expectations that picture cues would vary in the relative amount of power, achievement, or affiliation-related themes elicited in participants' stories, as each card has a different pull.

Research on the Thematic Apperception Test and the Defense Mechanism Manual with College Students

Recent studies have focused on the assessment of defense mechanisms portrayed in TAT stories with the use of the DMM. One study by Hibbard and Porcerelli (1998) sought to investigate the psychometric properties of the DMM and its sub-scales scores and identify its validity with a college student sample. A sample of 109 undergraduate students was presented with the TAT, the Defense Style Questionnaire (DSQ), the O'Brien Multiphasic Narcissism Inventory (OMNI), and the Interpersonal Behavior Scale (IBS), among others. The results of this study added further validation to the hierarchy of defenses that Cramer (1991b) had previously introduced. Within this age group, Identification was scored more frequently within this sample than the other two defenses, and Projection was more frequent than Denial. Additionally, the distributions of the DMM scale scores were

relatively normal, except for two sub-scales (Immature Identification and Mature Denial). The DMM sub-scales correlated with DSQ, OMNI, SCL-90, and IBS scores, both when it came to immature and mature functioning (r = .84, r = .68, r = .85, and r = -.32) and (r = .11, r = -.14, r = -.05, r = .61, respectively). The relationship between the DMM and these tests' scores demonstrates that immature functioning appears to be a general psychopathology factor that is related to distress. The DSQ and IBS were the highest correlated measures with the TAT in the area of mature functioning. These findings indicate that the DMM system is a useful scoring tool to use with the TAT in a college student sample, discerning between the different defenses and their level of maturity.

A more recent study by Porcerelli and fellow researchers (2004) examined the relationship between defense mechanisms and violence in a sample of college students. Late adolescence is an important period of development characterized by significant shifts to use more mature defenses. However, immature defense mechanisms may not be sufficient to control aggression. Therefore, Porcerelli et al. (2004) hypothesized that college men with more mature defense mechanisms would report less violent behaviors for conflict resolution with partners and strangers. The findings of this study demonstrated a significant negative correlation between the DMM raw score for Identification and the Conflict Tactics Scale score (CTS; Straus, 1979) (r = -.52). This negative correlation indicates that male students whose conflicts escalate to violent behaviors have not attained the age-appropriate shift to the greater relative use of Identification. In other words, these

students have a developmental lag in ego maturity (Porcerelli et al., 2004). Additionally, DMM projection and denial were significantly positively correlated with the CTS (r = .49 and r = .32, respectively). These results show less use of mature defenses by these participants, which is also related to more violent means of conflict resolution.

Use of the Thematic Apperception Test with Ethnically Diverse College Students

A limited amount of studies have been dedicated to studying the TAT with ethnically diverse college students. These studies provide promising results in terms of the usage and validity of the TAT with ethnically diverse populations. Hibbard and fellow researchers (2000) explored the differential validity of the DMM for coding TAT responses of White and Asian students. Their findings denoted a modest differential validity that favored Asian individuals in two ways: the strength of prediction as results were slightly stronger for Asians, and desirable qualities were over-predicted for Asian people and under-predicted for White individuals (Hibbard et al., 2000). DMM scores were found to be correlated with O'Brien Multiphasic Narcissism Inventory – Second Edition (OMNI-2; O'Brien 1987/1988) scores for the combined sample (Denial r = -.26, Projection r = .08, Identification r = .09), Asian sample (Denial r = .05, Projection r = .29, Identification r = .28), and White sample (Denial r = -.36, Projection r = -.06, Identification r = .03). Results also demonstrated a significant prediction coefficient for Asian and Non-White students but not for White students. These results, in conjunction with the general results, indicate greater validity for Asian

American students. The authors of this study speculated that these results may be due to the personality structure of non-Whites being more classically normal, neurotic, or both than that of White students.

Mexican/Mexican American Students. Suarez-Orozco and Todorova (2006) conducted a study to examine Mexican children's narratives elicited by their modified version of the TAT. The authors also sought to explore how these children experience and conceptualize their move to the United States. In order to do this, they obtained a sample of Mexican, Mexican origin, or Mexican American children, ages 11 to 16, from past longitudinal studies (LISA and archival studies) that followed these participants for five years. These studies were interdisciplinary and comparative, designed to document educational attitudes, academic engagement, and outcomes among recently arrived immigrant youth (Todorova et al., 2008). Suarez-Orozco and Todorova (2006) administered 20 stimulus cards from the TAT. Results from this study show that the most salient themes in the participant's stories were those of individuation, separation, self-doubt, and concerns with one's identity and abilities. These themes were prominent in late adolescence. However, immigrant background, rather than age, proved to be the most important to the narratives. Second-generation Mexicans projected greater isolation, inadequacy, and disengagement compared with recently arrived immigrants. On the other hand, Mexican immigrants from the LISA study projected greater inadequacy than the Mexican immigrants from the archival study. The authors inferred that these differences are due to participants' length of time in the

country. Those in the archival study had been in the country for around four years, whereas participants in the LISA study had been in the country for around seven years. The themes of discouragement, disengagement, and decreased affiliative achievement that was dominant in the second-generation narratives of the archival study also emerged in the narratives of the immigrant children from the LISA study once these children had been in the United States for an extended time. Immigrant newcomers appeared to describe their protagonist's efforts to gather social resources, reflecting their search for help in coping with initial periods of stress. On the other hand, for those who have been in the United States longer, the protagonist becomes bored, disengaged, or gives up, and his or her sense of inadequacy increases. Overall, this TAT study demonstrated how networks of relationships in the youth's new community are crucial to the lives and development of these immigrant children.

A study by Todorova et al. (2008) analyzed different patterns of the interplay of achievement and affinitive themes in TAT narratives, reflecting the process of adaptation of recently arrived immigrant children from a variety of backgrounds. In their study, 400 participants from the LISA study were recruited and administered the TAT. Their findings demonstrate that the TAT was a beneficial narrative tool that mirrored these children's concerns, emotions, and social relations. The narratives themselves had common themes of education, optimism, and perseverance, with optimism persisting through the several years of the study. Additionally, the hardships and challenges faced by these children did

not eliminate their optimism, but their success stories becomes less convincing. Themes such as others motivating or facilitating achievements emerged in the narratives as well. Affiliative and achievement patterns appeared to be different according to ethnic group. Chinese children portrayed relationships mostly related to the community, whereas Latino children portrayed the most important relationships to be those within the family. Haitian children told stories that were the least empowered, with fewer favorable resolutions, fewer sources of support, and almost no changes with time. Similar to the previous study by Suarez-Orozco and Todorova (2006), this study illustrated the complexity of adolescent development in different cultural contexts, most importantly, in the context of changing cultural environments.

Use of the Thematic Apperception Test with Central Americans

Research with the TAT and Hispanic populations, particularly Central Americans, has been limited. The following sections describe an overview of Central American culture and TAT studies with a Central American sample.

Central Americans are a mobile population due to centuries of political and socio-economic upheaval (Hernandez, 2005). Central America is characterized by countries such as Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Mexico, and Panama. Years ago, many Central Americans, especially those who were professional, skilled workers, and educated, traveled north due to the devastating economic recession and political repression ravaging their countries. Their goal was to seek socio-economic growth in countries like the United States.

From 1998 to 2000, the U.S. Immigration and Naturalization Service (INS) apprehended many Central American refugees escaping their countries' socio-political situations, poverty, and lack of human rights. In 2001, 5% of the total Latino population in the United States was comprised of Central Americans, making these individuals a minority within another minority group.

Central Americans can be compared to other Latino groups in the United States in terms of similar migration and adaptation experiences. However, Central American families also have a unique history of violent war and unstable socio-political and economic situations in their countries, which may accentuate how these experiences may have traumatized their migration process and their potential undocumented status. Many of these Central American families had to depart their countries suddenly, leaving their loved ones behind. With such traumatic migrating experiences, a heightened sense of anxiety is formed due to the uncertainty of their futures. These anxieties can make it difficult for these individuals to adapt to their environment, especially if they are undocumented. Being undocumented also adds a layer of difficulty for this population, as the migration process itself can be difficult, expensive, and sometimes fatal. Once these individuals are able to migrate successfully, they need to become physically and mentally accustomed to their new environment. For many of these families, their hierarchical structure is changed when they acculturate. For example, children usually become proficient in English before their parents do, and their parents often become dependent on their children to translate for them. More family conflicts arise when children begin to acculturate

and assimilate the dominant culture. Central American parents may begin to feel like they have lost their credibility as authority figures. These familial conflicts can generate feelings of loneliness and cause emotional, psychological, and relational symptoms (Hernandez, 2005). However, the minimization of intergenerational gaps between Central American parents and their children appears to create a favorable family cultural transition process (Merali, 2005). These favorable judgments can represent positive ideas of the family's cultural transition process.

Merali (2005) sought to explore the perceived family experiences of parents and adolescents from Central America who experienced minimized intergenerational gaps. The study's sample consisted of 23 individual participants from Guatemala and El Salvador who had lived in Canada for 1 to 10 years. Findings from this study illustrate that the minimization of intergenerational gaps after migration does create positive results for these families. Parents and adolescents reported that they successfully managed their cultural transition process, which is consistent with the theory of acculturation (Berry, 2003). However, parents also reported strong concerns over the acculturation of their children. They viewed acculturation as a means to disrupt familism through their children's need for individual autonomy. The parents' interview responses also demonstrated their need to preserve family unity; thus, maintaining harmonious relationships with their adolescents created positive emotions. Merali (2005) noted that "the family experiences that the Hispanic parents and adolescents disclosed

stand in direct contrast to those reported when intergenerational differences in acceptance of cultural change are acknowledged" (p. 353).

Todorova and fellow researchers (2008) had a diverse sample in their study; however, their research also focused on Central American students in the United States and their interpersonal concerns, anxieties, aspirations, and definitions of achievement as immigrant youth. Regarding the emotional toll these individuals had to endure during their migration process, the stories of Central American students appear to be saturated with themes of sadness and loss that increased throughout this longitudinal study. Around 64% of the Central American group reflected these negative emotions in their TAT stories. One of the Central American student's first narratives for the TAT depicted that the barriers that the story's protagonist faces, such as his inability to play the violin, are related to others' lack of knowledge. In her second narrative, told five years later, the unsuccessful attempt to learn the violin is explained through the protagonist "not having the capacity to learn" (Todorova et al., 2008). The barriers in the participant's story shifted from external to internal stimuli, depicting how the protagonist perceived her problems from other people's fault to her own inability.

Chapter 3: Rationale for the Study and Hypotheses

Although the TAT is widely used in clinical personality assessment, research on this measure has been relatively limited. TAT research is even more sparse with minority groups such as Latinos and Hispanic individuals in the U.S. Recent decades have witnessed greater attention to diversity in personality assessment. With that change came an increase in attention to cultural factors that can influence psychological functioning, such as language, race, ethnicity, nationality, and acculturation. A few recent studies (Todorova et al., 2008) in this area have been dedicated to analyzing the applicability of personality measures such as the TAT to broader populations in the U.S. The Hispanic population in the U.S. has been expanding with changes in immigration policies, and with the heightened drive among individuals from Latino countries to seek better education opportunities. With the increase of Hispanic individuals in the U.S. comes the need to understand how their personality characteristics are shaped by their culture and language.

Language is an essential factor to consider in the context of personality assessment as it can be influential in personality development and expression. People's narratives in storytelling techniques are shaped by cultural influences such as language. The TAT is a tool that allows researchers to analyze those narratives. However, it is noted that research on the impact of language differences with the TAT is scarce. Only two studies have been conducted that have analyzed the differences in the TAT based on the language used in the storytelling. Ervin (1964)

and Katsavdakis (2001) observed how native language elicits different themes in the TAT than those produced in the second language. However, there are no studies that analyze the differences in TAT scores in bilingual students whose native tongue is Spanish. The current study aimed to bridge this gap in research and contribute to the growing psychological literature on Hispanic students using personality assessments such as the TAT.

The purpose of the present study was to compare TAT-based defense mechanism scores when narratives are produced in Spanish and English. Specifically, this study assessed the expression of three defenses, Denial, Projection, and Identification, using Cramer's (1991) DMM. Past research, such as Ervin's (1964) study, analyzed how language influences personality expression as measured by the TAT. Building on this research, it might be reasonable to anticipate that stories in the participant's native language are likely to be more open and elaborated and, therefore, more revealing of the use of defense mechanisms assessed with the DMM.

The hypothesis for this study was that higher DMM scores will be obtained in TAT stories delivered in Spanish than in English. This hypothesis was evaluated in a sample of Hispanic college students in Florida whose primary language is Spanish and whose college education is in English. To contextualize the findings related to this hypothesis, a qualitative and quantitative examination of the TAT narratives was undertaken to identify the nature and frequency of words relating to stress, emotional distress, conflict, fear, and guilt obtained from each group.

Chapter 4: Methods

Participants

Participants of this study consisted of $N = 21$ bilingual Hispanic college students ($n = 10$ for Spanish narratives, $n = 11$ for English narratives) attending Florida Institute of Technology whose countries of origin were Central American and adjacent South American nations. Participants needed to be 18 years or older and be from Hispanic countries such as Venezuela, Colombia, Ecuador, Belize, Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, and Panama. The total sample's mean age was 22.95 ($SD = 3.14$; M age for Spanish-narrative sample = 22.50, $SD = 2.92$; M age for English-narrative sample = 23.36, $SD = 3.41$). The overall sample was gender-inclusive: $n = 10$ (47.6%) men, $n = 10$ (47.6%) women, $n = 1$ (4.8%) other. Table 1 demonstrates further details of the sample's demographic features.

Table 1.
Sample demographics

	Spanish narrative ($N = 10$)		English narrative ($N = 11$)	
Demographic variable	*n*	Percent	*n*	Percent
Gender				
Female	5	50.0%	5	45.5%
Male	4	40.0%	6	54.5%
Other	1	10.0%	0	0.0%
Age				
18	0	0.0%	1	9.1%
19	1	10.0%	1	9.1%
20	2	20.0%	1	9.1%
21	1	10.0%	0	0.0%
22	2	20.0%	1	9.1%
23	0	0.0%	2	18.2%

Table 1 (cont.)

	Spanish sample (N = 10)		English sample (N = 11)	
Demographic variable	*n*	Percent	*n*	Percent
Age				
24	3	30.0%	0	0.0%
25	0	0.0%	1	9.1%
26	0	0.0%	3	27.3%
29	1	10.0%	1	9.1%
Country of origin				
Venezuela	1	10.0%	0	0%
Colombia	3	30.0%	0	0%
Ecuador	0	0%	2	18.2%
Costa Rica	0	0%	1	9.1%
El Salvador	1	10.0%	0	0%
Honduras	0	0%	2	18.2%
Mexico	4	40.0%	1	9.1%
Nicaragua	1	10.0%	1	8.3%
Panama	0	0%	4	36.4%
Year in college				
12	3	30.0%	2	18.2%
13	2	20.0%	4	36.4%
14	3	30.0%	0	0%
15	1	10.0%	0	0%
16	0	0%	0	0%
16+	1	10.0%	5	45.5%
Major in college				
Accounting	1	10.0%	1	9.1%
Aeronautics/ Aeronautical Science	1	10.0%	1	9.1%
Biology (general)	2	20.0%	0	0.0%
Business Administration	2	20.0%	0	0.0%
Clinical Psychology	1	10.0%	0	0.0%
Psychology (general)	0	0.0%	1	9.1%
Electrical Engineering	1	10.0%	0	0.0%
Oceanography	1	10.0%	0	0.0%
Sports Management	1	10.0%	0	0.0%
Chemical Engineering	0	0.0%	1	9.1%
Computer Engineering	0	0.0%	1	9.1%
Engineering (general)	0	0.0%	1	9.1%
Human Centered-Design	0	0.0%	1	9.1%
Marine Biology	0	0.0%	1	9.1%
Mechanical Engineering	0	0.0%	1	9.1%

Table 1 (cont.)

	Spanish sample (N = 10)		English sample (N = 11)	
Demographic variable	*n*	Percent	*n*	Percent
Major in college				
Software Engineering	0	0.0%	1	9.1%
Systems Engineering	0	0.0%	1	9.1%

Instruments

Thematic Apperception Test (TAT; Morgan & Murray, 1935)

The Thematic Apperception Test was the central measure of this study. The TAT consists of 31 semi-ambiguous cards, most portraying one or more individuals in the pictures. A complete set for any individual would consist of 20 stimulus drawings, although only 10-12 cards are typically used per person. Research studies have demonstrated the reliability and validity of TAT scores derived from various scoring systems. Lundy (1988) reported an interrater reliability coefficient of r =.90 and above in comparison of *n* Achievement, *n* Affiliation, and *n* Power scores with expert rater scores. In terms of test-retest reliability of the specific variables of *n* Affiliation, *n* Autonomy, *n* Abasement, *n* Cognizance, *n* Recognition and *n* Counteractive achievement, *p* Dominance, and *p* Recognition based on Murray's (1938) need-press theory, Lindzey and Herman (1955) reported satisfactory temporal consistency of scores, with the highest correlation coefficient being r = .95 and the lowest being r = -.21. Considering the changes an individual might experience in two months, Lindzey and Herman (1955) explain that the variance in

correlations was acceptable. For inter-rater reliability, the highest coefficients were seen for *n* Sex (r = .89), and the lowest was observed for *n* Abasement (r = .55).

Defense Mechanism Manual (DMM; Cramer, 1991)

The Defense Mechanism Manual (DMM) was used as the scoring measure in this study. The DMM was developed to assess defense mechanisms of denial, identification, and projection. Twelve TAT cards – Cards 1, 3BM, 3GF, 6BM, 6GF, 8BM, 8GF, 10, 13MF, 14, 15, and 18GF – were used in the current study from the set of 22 cards for which scoring criteria have been developed in the DMM, representing the typical number of cards administered in TAT assessment. The scoring for each defense is based on seven categories, each designed to indicate a different defense aspect. For Denial, the categories are as follows: Omission, Misperception, Reversal, Statement of Negation, Denial of Reality, Overly Maximizing Positive, Minimizing Negative, and Unexpected Goodness, Optimism, Positiveness, Gentleness. Projection has an additional seven categories to score from: Attribution of Aggressive or Hostile Feeling, Emotions, or Intentions to a Character, or Other Feelings, Emotions, or Intentions that are Normatively Unusual, Additions of Ominous People, Ghosts, Animals, Objects or Qualities, Magical or Circumstantial Thinking, Concern for Protection from External Threat Apprehensiveness of Death, Injury, or Assault, Themes of Pursuit, and Entrapment, and Escape Bizarre or Very Unusual Story or Theme. Lastly, Identification is composed of: Emulation of Skills, Emulation of Characteristics, Regulation of Motives or Behavior, Self-esteem through Affiliation, Work-Delay of Gratification,

Role Differentiation, and Moralism. No scores are given to stories that do not use a defense; however, a single category in one story can be coded more than once. These scores are ultimately summed to produce a total raw score for each of the three defenses.

Evidence for convergent validity of DMM scores with the DSM-IV Defensive Functioning Scale (American Psychiatric Association, 1994), which is considered the "gold standard" for assessing defenses, was provided in Porcerelli et al.'s (2010) study. Results from their study supported the convergent validity of the immature DMM defenses of Denial and Projection. Denial was inversely related to a measure of defense maturity in the DFS (ODF; r = -.28), and it was also significantly correlated with a composite measure of pathological defenses in the DFS (r = .36). DMM Projection correlated inversely with Overall Defensive Functioning (ODF; r = -.22) and significantly with the DFS pathological composite score (r = .32) and Minor and Major Image – Distorting Level defense scores (r = .48).

Meyer (2004) reported overall interrater reliability of .80 for the three DMM scales. Similarly, interrater reliability scores for the DMM ranged from fair to excellent, with the highest coefficient being r =.75 and the lowest being r = .53 (Porcerelli et al., 2010). In another study by Hibbard and Porcerelli (1998), strong interrater reliability coefficients of .74, .86, and .74 were obtained for Denial, Projection, and Identification, using two coders and 25 protocols.

Procedure

After approval from the Institutional Review Board at the Florida Institute of Technology and the Doctoral Research Project committee, Central American and South American participants were recruited from the university's fit-forum listserv for students, SONA research participation system, and through the Latin American Student Association. After providing written informed consent, participants were administered the TAT in a research room in the Psychology building on campus. Participants were given the usual TAT instructions to make up a story involving the characters in the image and to include four elements in such a story: what is happening in the image, what events led up to it, what the people in the story are feeling and thinking, and what the outcome will be. The informed consent and any other identifying information for each participant were secured. Participants were identified with an I.D. number to protect their identity. Half of the participants were expected to respond to the TAT in their native language of Spanish (n = 10), while the other half were expected to respond in English (n = 11). Participants were given the opportunity to enter a lottery to win a $50 gift card. Three participants from each group (Spanish and English) were selected randomly for a total of six gift cards, which were given to them after the completion of data collection.

TAT responses were scored with the DMM and entered in a Statistical Package for the Social Sciences (SPSS) database. A second rater was used for determining interrater reliability. The second rater, who was a bilingual graduate student, scored the defense mechanisms from six TAT stories, three from the

English narratives and three from Spanish. As an initial step, a supplementary practice procedure to the protocols used for the ICCs was completed to determine preliminary congruence between the raters' scores. Three protocols were scored by the second rater with a guide created jointly by the first and second raters to aid in scoring. One protocol in particular (SPA01) appeared to have a lower interrater reliability coefficient than its counterparts; therefore, a re-scoring was completed by both the first and second raters. After the re-scoring, the intraclass correlation coefficients increased. The coefficients were 1.0 for denial and .91 for projection. Although the coefficient for identification increased to .34, it was still low.

Data Analyses

Preliminary analyses consisted of computing descriptive statistics, including means, standard deviations, and percentage data to describe the characteristics of the sample. Additionally, descriptive statistics of DMM scores were generated. Interrater reliability for DMM scores was evaluated through intraclass correlation coefficients (ICCs). Primary analyses consisted of a multivariate analysis of variance (MANOVA) to evaluate the overall difference in DMM scores derived from English and Spanish language narratives, followed by one-way analyses of variance (ANOVA) tests to determine whether there are statistically significant differences between the means of each DMM defense (i.e., Denial, Projection, and Identification).

Qualitative and quantitative analysis of TAT narratives consisted of identifying keywords related to stress, emotional distress, conflict, fear, and guilt,

which were categorized and counted separately for each group. Synonyms of each word were analyzed, and the semantic equivalent was obtained in Spanish. Chi-square analyses were conducted to evaluate for significant differences in their frequencies.

Chapter 5: Results

Preliminary analyses consisted of deriving means and standard deviations for DMM defense categories scores obtained from the Spanish and English narratives, shown in Table 2.

Table 2.

Means and standard deviations of DMM scores for the sample

	Spanish narrative (N = 10)		English narrative (N = 11)	
Defense category	*M*	*SD*	*M*	*SD*
Denial	3.90	2.89	8.82	4.81
Projection	8.00	6.38	13.55	5.43
Identification	7.80	2.78	10.00	3.16

Intraclass correlation coefficients (ICCs) were used to calculate the reliability of the DMM defense ratings for the TAT narratives. Using the ICC model, the interrater reliabilities for the three defense mechanisms were .91 for Denial, .72 for Projection, and .94 for Identification. Each of these coefficients falls in the range considered moderate-to-excellent reliability (>.74; Shrout & Fleiss, 1979).

A one-way MANOVA was conducted to determine the overall difference in DMM scores of Denial, Projection, and Identification derived from TAT narratives provided in Spanish and English. Preliminary assumption checking revealed that defense mechanisms scores were normally distributed for Projection and Identification but not for Denial, as assessed by the Shapiro-Wilk test. There were

no univariate or multivariate outliers for the dependent variables (i.e., defense mechanism scores) as assessed by boxplot and Mahalanobis distance, respectively ($p > .001$). Linear relationships were found for Projection and Identification as assessed by scatterplot, and there was homogeneity of variance-covariance matrices for the three defenses, as assessed by Box's M test ($p = .734$). The MANOVA result was statistically significant, $F(3, 17) = 5.122$, $p = .010$; Pillai's Trace = .475; partial η2 = .475. Univariate analyses of variance (ANOVAs) showed significant differences between mean DMM scores obtained from Spanish and English narratives for Denial, ($F(1, 19) = 8.286$, $p = .010$; partial η2 = .304) and Projection, ($F(1, 19) = 4.632$, $p < .05$; partial η2 = .196) but not for Identification. Results are shown in Table 3. It is noted that Levene's test for equality of variances revealed the assumption of homogeneity of variance between groups was not met for Denial.

Table 3.
ANOVA results for DMM scores obtained from Spanish and English narratives

	Spanish narrative		English narrative				
Defense category	*M*	*SD*	*M*	*SD*	$F(1, 19)$	*p*	η^2
Denial	3.90	2.89	8.82	4.64	8.29	.010	.304
Projection	8.00	6.38	13.55	5.43	4.63	.044	.196
Identification	7.80	2.78	10.00	3.16	2.84	.108	.130

A count of key words derived from TAT stories delivered in each language was undertaken to contextualize the results, as distress and difficulty underlie the use of defense mechanisms. Five hundred and fifty-nine distress-related words from Spanish and English narratives were assigned to stress, emotional distress,

conflict, fear, and guilt classifications. Table 4 illustrates the overall distress-related word frequencies by TAT card, and Appendix C illustrates the nature of words in these categories.

Table 4.
Frequency of distress-related words in Spanish and English narratives

	Spanish narrative		English narrative	
Card #	*n*	%	*n*	%
Card 1	23/235	10%	34/324	10%
Card 3BM	28/235	12%	41/324	13%
Card 3GF	30/235	13%	46/324	14%
Card 6BM	27/235	11%	28/324	9%
Card 6GF	26/235	11%	26/324	8%
Card 8BM	15/235	6%	25/324	8%
Card 8GF	8/235	3%	13/324	4%
Card 10	10/235	4%	6/324	2%
Card 13MF	17/235	7%	30/324	9%
Card 14	15/235	6%	14/324	4%
Card 15	13/235	6%	25/324	8%
Card 18GF	23/235	10%	36/324	11%

A Chi-square analysis of homogeneity indicated a significant overall association between the language used by participants and distress-related words ($p < .001$). Post hoc analysis involving pairwise comparison using the *z*-test of two proportions with a Bonferroni correction showed significant results for emotional distress, conflict, and fear categories. Specifically, words classified in the

emotional distress category in English narratives (60.2%) were significantly higher in frequency than those in Spanish narratives (46.0%). On the other hand, words in the conflict and fear categories in Spanish narratives (32.3% and 8.9%, respectively) were significantly higher in frequency than those in English narratives (21.3% and 4.6%, respectively). The proportions of words classified in the stress and guilt categories for English and Spanish narratives were not significantly different.

Chapter 6: Discussion

Personality measures are essential tools to assess individuals' motives, appraisals of their environment, and interpersonal relationships. Performance-based personality techniques elicit verbal responses to visual images as a means to assess personality dynamics. Krishnamurthy, Brabender, et al. (2022) recently noted that although performance-based tests place less of a demand on language comprehension than self-report measures, language is still relevant because of its use in responding to test stimuli. Thus, vocalized language mediates self-expression in these techniques. The role of language is particularly important in narrative techniques such as the Thematic Apperception Test (TAT; Murray & Morgan, 1943), in which storytelling is the vehicle for self-representation (Cramer, 1996). In light of the connections between language, culture, and personality established through psychological research, the language used in providing TAT narratives bears examination, particularly to determine if there is a different yield from stories told in the native tongue versus the acquired language. However, only two published studies to date (Ervin, 1964; Katsavdakis et al., 2001) have evaluated aspects of this issue with the TAT in bilingual samples. Given the large number of Spanish-speaking students from Central American and South American countries in the U.S., the current study aimed to clarify the role of language in TAT stories and its impact on defense mechanism scores in a sample from this population.

The TAT offers psychologists the ability to analyze Hispanic students' underlying perceptions and the coping strategies they employ to render their world

more manageable. Research has demonstrated how the TAT can be used with Hispanic students and has provided information on the salient themes, needs, and drives of Hispanic individuals (Suárez-Orozco & Todorova, 2006). Previous research has shown that Hispanic students' TAT narratives tend to include salient themes of negative emotional experiences, need for achievement, and relationships (Todorova et al., 2008). Coupling the TAT with scoring tools such as the Defense Mechanism Manual (DMM; Cramer, 1991) has also allowed psychologists to determine how the DMM can be a useful tool to discern an individual's level of maturity and use of defenses. Defense mechanisms have been described in research as a medium by which individuals are able to control excessive anxiety and feelings of guilt while also maintaining a sense of confidence and self-cohesiveness (Cramer, 1996). Despite the use of the TAT with various Hispanic samples, the research on this group with the TAT and DMM is limited. No previous study has analyzed the use of defense mechanisms on the TAT among a Hispanic sample in both their native language of Spanish and acquired language of English. The two studies mentioned earlier evaluated French-speaking participants (Ervin, 1964) and Middle Eastern individuals (Katsadavkis et al., 2001). Thus, the purpose of the current study was to compare TAT-based defense mechanism scores when narratives are produced in Spanish and English. Specifically, this study aimed to assess the expression of three defenses, Denial, Projection, and Identification, using Cramer's (1991) DMM. Understanding the role of language in performance-based

tests like the TAT will allow psychologists to make informed decisions on how language can potentially influence test scoring and interpretation.

The current study included a total sample of twenty-one Hispanic students whose countries of origin were from Mexico, Venezuela, Colombia, Ecuador, Nicaragua, El Salvador, Panama, Costa Rica, and Honduras. Ten participants were randomly selected to narrate their TAT stories in Spanish, while eleven participants were randomly selected to narrate their stories in English. Twelve TAT cards from the set of 22 cards for which the DMM provides scoring guidelines were selected for this study, representing the number of cards used typically in TAT test administration. Because rater reliability is an important prerequisite for research with performance-based personality tests, the reliability of the DMM scores obtained from the primary researcher and a second rater was analyzed prior to central analyses. Intraclass correlation coefficient results demonstrated consistent scoring for six protocols, enabling progression to further analyses.

The first hypothesis of this study concerned the differences in DMM scores between TAT stories delivered in Spanish and in English. It was predicted that TAT stories narrated in Spanish would be more revealing of defense mechanisms than those related in English by bilingual college students. This hypothesis was based on the notion that stories told in an individual's native language will be more open and elaborate. Previous research has shown how native language may elicit different themes in the TAT than those produced in the second language (Ervin, 1964; Katsavdakis, 2001). Thus, expectations were guided by the results of this

research. MANOVA results showed a significant overall effect of language on DMM mean scores. Univariate analyses demonstrated higher DMM mean scores for stories narrated in English than in Spanish for the defenses of denial (generally considered a primitive defense) and projection (considered to be a more mature defense than denial). Interestingly, DMM mean scores for identification, which is viewed as the most mature of the three defenses, were not significantly different across narrative language. These results broadly affirm the importance of language in TAT storytelling but contradict the direction of the hypothesis.

There are two alternative explanations for the findings related to denial and projection. First, these results may be in part due to these students being in an English-speaking culture and an educational institution in which the language of instruction is English. Therefore, these individuals may be more articulate in English, at least in comparison to a typical Hispanic individual who has not been exposed to the education system in the United States. These scores may be descriptive of Hispanic students' immersion in the English language and its effects on TAT defense mechanism scores. A second possibility is that those bilingual Hispanic individuals who speak in the acquired language perceive their external reality and internal states differently than those individuals who use their native language. Specifically, the significantly higher use of denial in the acquired language can signify the need for these individuals to “change reality into something it is not, or to disconfirm the existence of something that is” (Cramer, 1996, p. 87). Similarly, when using projection in the acquired language, Hispanic

individuals may be adding or attributing "some quality of motivation to objects or persons that they do not, in reality, possess" (Cramer, 1996, p. 87). Considering the many theories on the use and need of defense mechanisms, the results of this study demonstrate how Hispanic students who speak in their acquired language apply defense mechanisms to mediate conscious conflicts or anxieties. Previous research also theorized that bilingual individuals tend to adjust their behaviors to parallel the overarching linguistic social context (Ramirez-Esparza et al, 2006; Chen & Bond, 2010). Results from this study seem to offer support for this theory in terms of participants adjusting their cognitions through defense mechanisms to fit with the prominent culture when employing the language of that culture.

In order to further explore the above-mentioned results, qualitative data were extracted and analyzed by counting the frequencies of certain keywords. Words related to stress, emotional distress, conflict, fear, and guilt were examined and counted, as psychological difficulty and distress constitute the bases for employing defense mechanisms. Results of chi-square analyses showed that English language words related to emotional distress had a higher frequency than similar words found in the Spanish narratives. On the other hand, conflict and fear words in the Spanish narratives had a higher frequency than words in the same categorization in the English narratives. A possible explanation for these results could be that there are more words for emotional distress in English than in Spanish. Similarly, there may be more varied words for conflict and fear in the Spanish language. A greater variety of words in either language would allow

students to choose alternative or synonymous words to define emotions in their narratives. For example, among English narratives, a common theme regarding emotional distress was “loss” or the loss of someone/something. Participants used diverse words to describe similar emotions related to loss, such as “grieve,” “distraught,” “pain,” “distress,” and/or “devastated,” among many others. Such a variety of words to describe emotional distress was not observed in the Spanish language, as participants were prone to use the same words repetitively. A similar trend, although in the reverse direction, was observed in the Spanish narratives for words related to fear and conflict. Participants were inclined to use various words such as “asustada,” “terror,” “miedo,” and “impactada” to describe the single emotion of fear in Spanish compared to “scared” in English. Likewise, varied Spanish words such as “engañado,” “perverso,” “golpeó,” and more were used to define conflict between characters relative to a more limited range in English.

These results may also reflect Ervin’s (1964) proposition that language influences the classification of stimuli and that we recall experiences through classification. Thus, bilingual individuals may be classifying stimuli depending on the language being used. In other words, the use of distress words may be congruent with how these individuals have classified previous experiences, where these emotions were felt, depending on the linguistic context at that time. If we extrapolate from this theory, bilingual Hispanic students who have felt emotional distress may have classified such emotions in the language they coded their experience (i.e., English). Similarly, bilingual Hispanic students who have

experienced fear and conflict may retrieve comparable emotions depending on the language they were using at the time (i.e., Spanish). These results also coincide with the sociocultural backgrounds and history of this population at large, where conflict within the native nations is prevalent, and fear is commonplace. Additionally, the process of migration to a new country can create many distressing emotions, especially among a population of young adults seeking higher education. Ervin (1964) describes this occurrence as a shift in language that is associated with a change in social roles and emotional attitudes.

Juxtaposing the results related to the DMM defenses and the distress-related words from which they are purported to arise, some additional observations are worthy of note. Cramer (2017) reported that some TAT cards "pull" for defenses more than others. Specifically, she observed that Card 3BM, which was used in the current study, is among those that pull for defenses of denial and projection, and she identified Card 10 (used in this study) as among those unlikely to give a clear picture of defense use. Table 4, presented in the results section of this study, revealed that Card 3BM produced a relatively larger percentage of distress-related words in both English and Spanish than for most other cards used in this study, whereas Card 10 had a relatively low percentage in both languages. Future research might examine the rate of DMM defenses of denial and projection in relation to these cards in greater detail than was undertaken in the current study.

In summary, the current study aimed to expand the currently limited literature on the Thematic Apperception Test among ethnically diverse groups such

as Hispanic individuals. This study is the first of its kind to use the TAT with Hispanic college students fluent in both English and Spanish and from different backgrounds, experiences, and sociopolitical contexts. The findings of this study ultimately highlight a key point:

- Language has an important role in DMM defense mechanisms scores derived from TAT narratives. Thus, psychologists should aim to make informed decisions on what language to use when administering personality tests like the TAT to Hispanic individuals. Diversity-sensitive psychological examiners have to navigate their examinee's contexts, which include linguistic contexts, to allow them to feel more comfortable and familiar with the assessment being administered (Cimbora & Krishnamurthy, 2018). Furthermore, recently released professional practice guidelines for personality assessment (Krishnamurthy, Hass, et al., 2022) discuss the appropriate use of linguistic interpreters when deemed necessary. The current results suggest that scores derived from a narrative technique such as the TAT may differ depending on the language employed by bilingual examinees, which warrants careful thought by test examiners in the provision of language options and/or use of interpreters.

This study illustrated how Hispanic participants employ the use of defense mechanisms when speaking in their acquired language, which informs psychologists on how these individuals may use language to modify their cognitions and perceptions to render their environment more navigable when

speaking in a language other than their native tongue. Nonetheless, this study did not demonstrate whether DMM from English language narratives represent defenses more accurately than in Spanish, in other words, if the frequency of defense mechanisms in English implies greater psychological difficulty.

The limitations of this study must also be discussed. A significant limitation of this study was its sample size. Although significant differences were shown, the sample only consisted of twenty-one Hispanic students from the Florida Institute of Technology. Additionally, the sample of this study needed to be adjusted throughout the course of the study as the initial sample of students from Central American nations was small. Therefore, students from nations such as Colombia, Venezuela, and Ecuador were added to the present study. Additionally, due to the limited sample, a Type II error is likely to occur. Future studies should focus on collecting a larger sample of Hispanic students in order to increase the generalizability of results. Moreover, future studies could expand the focus to compare the differences in the utilization of defenses among a Hispanic community sample. A study of this type could be further expanded by examining TAT narratives delivered in other languages. For example, previous research has used participants of Asian and Middle Eastern descent. Lastly, to avoid the probability of over-pathologizing this population in the application of defense mechanisms, other scoring methods or external measures such as the Defense Mechanism Rating Scale Q-sort version (DMRS-Q) (Di Giuseppe et al., 2014) and the Defense

Mechanism Inventory (DMI) (Juni, 1998) may also be used as supplements to analyze differences among this population.

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Appendix A

Student Participant Informed Consent Form

Purpose of the Study:
This study is being conducted by Ilenia Perez-Palen M.S., a clinical psychology doctoral student at Florida Institute of Technology, under the supervision of Dr. Radhika Krishnamurthy, PsyD., ABAP. The study's purpose is to analyze differences in scores obtained from Thematic Apperception Test narratives provided in Spanish and English by Central American international students. This research will build upon the psychological literature regarding the Thematic Apperception Test among different cultural groups.

What will be done:
You will be asked to complete a basic demographic information questionnaire, and provide responses to the Thematic Apperception Test in either Spanish or English. The research procedure will take approximately 45 minutes to1 hour to complete.

Benefits of participation:
Participants will be given the opportunity to enter a raffle to win a $50 gift card. Six students will be selected randomly (subject to change). Participants will contribute to research in personality assessment of diverse cultural groups.

Risks of participation:
There are no risks or discomforts expected as a result of participating in this study. Participation is entirely voluntary, and you have the right to withdraw your participation from the study at any time. If you experience any discomfort due to participation in this study and would like to receive counseling, you may contact Counseling and Psychological Services (CAPS) at FIT at 321-674-8050.

Confidentiality:
You will not be identified by name in any of the research documents. Your narratives will be assigned an alphanumeric identification code, and all findings will be tied to only that code. This consent form signed by you will be stored and locked in a separate location from the results you provide to ensure further confidentiality.

How the results will be used:
The results of this study will be used for scholarly research purposes only. Scores, narratives, and any identifying information will not be released to you or any other party. The research findings may be presented at a local and/or national conference or as research findings in a professional psychology journal.

Contact information:
Should you have any questions or concerns about this study, please contact Ilenia Perez-Palen at iperezpalen2019@my.fit.edu or the research advisor Dr. Radhika Krishnamurthy at rkrishna@fit.edu. The Florida Institute of Technology Institutional Review Board's chair, Dr. Jignya Patel, may be contacted at FIT_IRB@fit.edu or 321- 674 -7347 to verify the study's approval.

By signing below:

1. You are affirming that you are 18+ years of age.
2. You are acknowledging that you have read the information provided and agree to voluntary participation in this research.

Participant's Name:_____
Participant's Signature:_____
Date: _____

Appendix B

Demographic Questionnaire

Please provide the following information about yourself:

1. Age: _____

2. Gender: _____

3. Year in college: _____

4. Major in college: _____

5. Are you Hispanic/Latinx? Yes No

6. Nationality/Citizenship: _____

7. Country of family of origin: _____

8. Country your family currently resides in: _____

9. Native language: _____

10. Are you multilingual? Yes No

11. Languages you speak: _____

Appendix C

Frequencies of Words for Stress, Emotional Distress, Conflict, Guilt, and Fear in English and Spanish

Frequency of Words for Stress, Emotional Distress, Conflict, Guilt, and Fear in English and Spanish

Distress-related words	English narratives ($N = 11$)	Spanish narratives ($N = 10$)
Stress	Very rough time; economic problems (x2); sacrifice (x3); tired (x13); exhausted (x2); frustrated (x3); tiredness; fired; stressed; condolences; impotent; uncertainty; frustration.	Cansado; frustracion; situacion economica; Estresado; presionado; frustrado; estresado; Estresada (x2); apresura; Frustracion (x3); saturado.
Emotional Distress	Sad (x2); sadness (x3); desperation; regret (x3), not happy; depression; anger (x3); Grief; anxiety; grief (3x); Drained; crying (x3); sad (x11); pain (x2); distress (x3); devastating; Dreadful; overwhelmed (x2); Sad (x5); depressed (x3); devastated; pain; crying (x2); hurt (x3); Sad (x6); crying (x3); kill herself; devastated; jealous; hurt; Overwhelmed; trauma; stuck (x2); Upset (x3); desperate; cry (x3); miserable; distress; Causing a mess; world expects of her; death; Suffering; cry; hurt (x3); sad; break down; nervously; nervous; Sad (x4); upset (x6); devastated; crying; anguish; she feels betrayed; hurt; anger (x5); mad; trauma; flashbacks (x3); restless;	Traumatizado; preocupados (x2); ansioso; sufre; decepcionado; Abrumado; preocupado (x2); preocupado (x3); decepcionado; Preocupada (x2); No esta muy feliz; Decepcionada; nerviosa; no se quiere morir; overwhelmed; decepcionar; Triste (x13); llorando (x3); dolor (x2); angustia; agonia (x2); enojo (x2); desespero; nuncan seran felices; miserable; Angustiada (x4); triste (x2); llorando (x2); deprimida; enfurecido; enojado; miserable; sufrimiento; Llorando (x2); triste (x5); desconsolada; desesperada (x2); desesperadamente; Triste (x9); devastada (x2); destrosada; Llorando (x3); triste (x3); enojada (x3); agonia; Desesperada (x2); dolor (x2); triste (x2); sufrio; enojado;

Appendix C (cont.)

Distress-related words	English narratives (N = 11)	Spanish narratives (N = 10)
Emotional Distress (cont.)	Sad (x6); crying (x3); upset (x2); furious; devastated; Pain (x2); destroyed; grieve; nervous; Emotionally drained; sadness (x4); desperate; upset (x3); distraught; distress; ; Sad (x5); depressed; hurt (x2); Loss; panicked; dread; worried; Sad (x4); crying; angry; destroyed; worried; anxiety.	Rabioso; triste (x3); llorar (x2); tristeza; depresion; Triste (x3); angustiado (x2); rabia (x2); llorando; Llorando; triste; Tristeza (x7); enojo; agonizada.
Conflict	Forced (3x); fight (x2); domestic abuse; war (5x); challenge; cheating; conflicted; invasion; attack; Breakup; Small fight; misunderstanding (x2); war; Forced(x2); rebel; broke-up (x3); arguing; fight; unfaithful; cheater; killed her (x3); Lash out; affair; breaking-up; Torture; Forced (x3); Battle; enemy; killed her; end her life; fighting; took her life; pushed; Beat; leave this man; he killed; Nagging; stole; arrested; torturing; killed; not interested; prisoner; war; Forced; broke-up; war (x2); wounded-in-battle; War (x2); crossed some boundaries; fight (x2).	Mato a su mujer (x2); Engañando; Golpeo; perverso; enfrentarla; desmembraban; los mato (x2); Guerra (x5); trampa; Castigo; pelea (x3); robe; matar (x4); asesino (x2); enganando; cuerno; escaparse; captiva; Exigiendo; Guerra; inapropiado; rechazar; abuso; ahorcando; traiciono, asesinarla; enfrentarlo; Burla; robada; robaron; matando; Escapar (x5); abusan (x2); guerra; sacara de la casa; matara (x2); golpes; matado; matarla; asesino, matando; bien duro con ella; Robaron (x2); cuernos; infidelidad; terminara; mate; incomoda (x2); Regano; molestar; matar; Pelea; enfrentar; No esta deacuerdo (x2); tension; entrometerse; molesto; engañar; no puede complacer;

Appendix C (cont.)

Distress-related words	English narratives (N = 11)	Spanish narratives (N = 10)
Fear	Scared; avoid; shocked; scared (x2); Repulsion; Shocked (x2); Shock (x2); scared; Surprise; shock (x2); scared.	Miedo (x2); Shock; asustada; miedo;miedo (x2);Soprendida (x2); impactada (x2); Sorprendida; asustada; Sorprendida (x3); miedo (x2);Terror; Sorprendido; miedo; terror; asustada.
Guilt	Remorseful (x2); Guilt; Guilt (x2); Guilt (x4); guilt; Guilty.	Culpable; vergüenza (x2); culpa (x3); pena; cobarde (x3); Apenado; Remordimiento; Vergüenza; pena; Culpable.