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Department of Psychology

**A CROSS-CULTURAL EXAMINATION OF INDIVIDUAL VALUES, WORRY, AND
MENTAL HEALTH STATUS**

A Thesis in

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By

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ABSTRACT

This study investigated the generalizability of a social psychological conceptualization of worry developed by Boehnke, Schwartz, Stromberg, and Sagiv (1998) and a pancultural model of individual values developed by Schwartz (1992) to an American sample of mixed ethnicity. More specifically, this study investigated the validity of micro worry (i.e. worry about personal concerns) and macro worry (i.e. worry about broader societal issues) constructs and their relationship to clinical conceptualizations of worry. It was expected that micro worry would be correlated with negative indicators of mental health and personal well being while macro worry would be correlated with positive indicators of these variables. It was also expected that the micro worry construct would be positively correlated with measures of clinical worry.

The construct of value concordance (i.e. the disparity between a participant's endorsement of a value type on the PCVS from the sample mean) was also investigated. It was expected that the endorsement of highly discordant values would be related to negative indicators of mental health and personal well being. Furthermore, this latter effect was predicted to be influenced by ethnicity with value concordance effects predicted to be stronger for African American participants.

Participants were college students of whom 55 were African American women and 67 White American women; male participants included 48 African Americans and 36 White Americans.

Correlations in the predicted direction were obtained between micro worries and self-report measures of positive and negative affect, general mental health status, and life satisfaction. Contrary to expectations, correlations between macro worry and the same self-report measures

were either not obtained or inconsistent with predictions. As expected, correlations between micro worry on the Micro Macro Worries Scale (MMWS) and two other self-report measures of worry derived and validated in a clinical treatment context were found.

Significant effects were discovered for value discordance with self-report measures of macro worry and positive affect. In reference to interaction between ethnicity and value discordance, it was found that: (a) African Americans low in discordance for the value of stimulation report less worry and those high in stimulation discordance report less life satisfaction, (b) White Americans low in discordance for the stimulation value type report more worry, (c) White Americans high in discordance for the self-direction value type report poorer mental health while African Americans high in self-direction discordance report greater mental health, (d) White Americans low in discordance for the tradition value type report more life satisfaction and those high in tradition discordance report less positive affect.

Other findings provided no support for the mediating effects of stress on ethnocultural differences in reported distress and symptoms. Differences between African American and White Americans were significant in individual values, worry, subjective well being, and general mental health status.

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CHAPTER I: INTRODUCTION

In this study, relationships are investigated between verbally reported values, worries, and indicators of psychological distress and subjective well being. These variables have been explored in samples of normal young adults from two major ethnocultural groups in the United States. Present research is focused upon four specific research areas which are described below.

A social psychological conceptualization of worry proposed by Boehnke, Schwartz, Stromberg, and Sagiv (1998) was chosen as the first topic of investigation. In exploring this conceptualization of worry the object facet -- involving macro worries (focused on societal or global issues) and micro worries (focused on issues directly influencing an individual or those in his or her support group) – was assessed in relation to clinical conceptualizations of worry and to overall mental health.

The second research area addressed in this study was that of value concordance. Value concordance is defined as the absolute difference between a participant's endorsement of a value type and the sample mean endorsement of that value type. Within the context of this study, value concordance is conceived as a potential source of impact upon both macro worry and the positive components of subjective well being. Likewise, value concordance is construed as a potential influence within Carter, Sbrocco, and Carter's (1996) framework that is concerned with the impact of belief systems and ethnicity on psychopathology. The role of value concordance within Carter et al.'s (1996) formulation represents the third research area of this study.

The fourth and final research area addressed concerns the relationship of ethnicity to the entire range of variables considered in this study. Relationships have been variously investigated between the several binary combinations of these variables. However, they have not been studied

in the context of one comprehensive project nor have they been explored across ethnocultural lines. Several theoretical formulations have been presented that guide the search for these relationships and these formulations are used as a guide for conducting and explaining exploratory examinations.

In a broader sense, this study was conducted in an attempt to overcome the barrier that has traditionally separated social psychological research on values from the clinical psychological enterprise concerned with worry and other related forms of subjective distress. Similarly, in cross-cultural and ethnocultural research the examination of patterns of normal and abnormal behavior have been pursued in airtight, separate compartments. This point has been recognized as a major issue in psychotherapy (Carter, 1991; Pedersen, 1998; Sue et. al. 1998; Draguns, 1997), diagnostic classification (Mezzich & Kleinman, 1996), and assessment (Draguns, 1996; McFadden, 1999). The present project endeavors to overcome this separation.

CHAPTER II: REVIEW OF LITERATURE

Prior to discussing details of this project, it is necessary to first define and clarify the major concepts involved in this study. To this end, literature will be reviewed pertaining to values and worry, the two major concepts around which this research is organized.

Values

Schwartz and Bilsky (1987) define values as: “(a) concepts and beliefs (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance” (p. 551). Going beyond discrete values, Rokeach (1973) described a value system as “an enduring organization of beliefs concerning preferable models of conduct or end states of existence along a continuum of relative importance.” (p. 13). Value systems, often referred to as value dimensions or value orientations, have often been invoked in explaining variations in both individual and societal value preferences. Cultural values emerge in the course of comparisons of cultures and societies; individual values are typically investigated in relation to other personal attributes (Smith and Schwartz, 1997). Each of these types of values will be discussed in greater detail in the sections that follow.

Cultural Values

According to Smith and Schwartz (1997), cultural values refer to “what is good, right, or desirable in a society or other bounded cultural group” (p. 83). Prominent models of values in

culture include those proposed by Kluckhohn and Strodtbeck (1961), Hofstede (1980, 1991), Trompenaars (1985, 1993) and Schwartz (1994a). In Kluckhohn and Strodtbeck's (1961) formulation, cultural values reflect the manner in which a society or culture copes with a set of five universal problems. On the basis of extensive anthropological fieldwork, Kluckhohn and Strodtbeck (1961) identified five value systems: (a) human nature (evil, mixed, good); (b) person to nature (subjugation to nature, harmony with nature, mastery over nature); (c) time sense (past, present, future); (d) activity (being, being in becoming, doing); and (e) social relations (lineal, collateral, individualistic). Value orientations are viewed by Kluckhohn and Strodtbeck (1961) as dynamic systems of normative cognitions, with behavioral, emotional, and existential elements. Cultural values are formed in the course of dynamic interactions between these value orientations within a cultural group. As a result, cultural values guide the behavior of members within a cultural group and form the basis for their norms and life styles.

Hofstede's (1980) model of cultural values is based on work related cultural values as investigated in samples of multicultural employees of a multicultural corporation in all regions of the world. By means of complex multivariate procedures, Hofstede (1980) extracted the following four factors or dimensions: (a) power distance, (b) uncertainty avoidance, (c) masculinity - femininity, and (d) individualism - collectivism. Power distance refers to the distribution of power within societies and organizations. Cultures low in power distance aspire to narrow the economical, political, and social gulf between those who have power and those who do not. The dimension of uncertainty avoidance involves the degree to which people are comfortable improvising, taking risks, and operating within general guidelines, rather than on the basis of explicit and rigid rules. The masculinity-femininity dimension assesses the extent to which cultures prize traditional male values such as achievement, heroism, and material success,

as opposed to valuing care, comfort, nurturance, and compassion which are thought to reflect values more typically espoused by women. The collectivism-individualism dimension concerns values regarding group harmony and welfare, in contrast to the advancement and cultivation of personal goals and aspirations.

Bond and his network of international associates (Chinese Culture Connection, 1987) extended and complemented Hofstede's (1980) factors by exploring values from a within-culture, emic Eastern point of view. To this end, they developed a Chinese value survey after consulting with several scholars steeped in their Chinese cultural heritage. Proceeding in this manner, Bond's team discovered an additional dimension labeled "Confucian Work Dynamism" that is rooted in Chinese values and concepts, yet applicable in comparative research across cultures around the world. Confucian Work Dynamism features persistence, thrift, a hierarchical ordering of relationships, and a sense of shame, together with emphasis on tradition, reciprocation of favors, and avoiding embarrassment and "loss of face."

Another model of cultural values has been proposed Trompenaars (1985; 1993). Like Hofstede (1980), Trompenaars (1985; 1993) and Smith, Dugans, and Trompenaars (1996) examined value differences of corporate employees in numerous cultures and subjected their findings to a multidimensional scaling analysis. They identified three value dimensions, of which the first two were labeled "Conservatism/Egalitarian Commitment" and "Loyal Involvement/Utilitarian Involvement." The former value dimension contrasts preferences for universalistic relations and status based on achievement. The latter value dimension contrasts preferences for family loyalty and sharing responsibility for mistakes with individual responsibility. The remaining, third, dimension lacks a clear, conceptual referent, and Trompenaars (1996) has refrained from labeling it.

Schwartz' (1994a) theory of cultural values is based on his assumption of three universal cultural challenges. The first of these dilemmas involves the pursuit of autonomy versus integration into a group. The second fundamental challenge revolves around altruism, defined as "selfless concern about the welfare of others" (Back, 1984, p. 52). The third issue involves the three options of exploiting, submitting to, or working with nature. According to Schwartz, the manner in which cultures manage these basic problems results in seven value types arrayed along three bipolar dimensions. To this end, Schwartz (1994a) pooled the national mean of value scores drawn from 54 countries and subjected these findings to a multidimensional scaling analysis. The dimensions that emerged from this analysis were as follows.

The first of these dimensions is labeled "conservatism versus autonomy" and is defined by the manner in which a culture views the person in the context of the larger group. In conservative cultures, an individual gains a sense of meaning through belonging to a group. In autonomous cultures, the individual acquires it through establishing his or her own sense of uniqueness or individuality. Schwartz (1994a) further divided the autonomous pole of this dimension into intellectual and affective autonomy. Intellectual autonomy is characterized by valuing the right of individuals to pursue their own ideas. Affective autonomy is marked by valuing the quest by an individual for an emotionally positive life through the pursuit of pleasure and excitement. This dimension overlaps with the individualism dimension featured in Hofstede's (1980) and Triandis' (1995) writings and partially resembles Kluckhohn and Strodtbeck's (1961) social relations dimension.

The second bipolar dimension was labeled by Schwartz (1994a) "hierarchy versus egalitarianism". This dimension is defined by how a culture views distribution of power and the rigidity of social roles, mores, and customs. In hierarchical cultures, distribution of power is

rigidly defined and the roles of the individual within this society are explicitly spelled out. In egalitarian cultures, the distribution of power is less stringently defined. As a result, people in egalitarian cultures tend to be more autonomous since they are less dependent on rigidly dictated roles of behavior. This dimension overlaps with Kluckhohn and Strodtbeck's (1961) person to nature orientation and is similar to Hofstede's (1980) power distance dimension.

The third dimension identified by Schwartz (1994a) is labeled "Mastery versus Harmony." This dimension refers to a culture's view of control over the physical and social environment. Mastery cultures are characterized by a value system that supports control over nature for personal gain while harmonious cultures cherish respect for the environment and amicable coexistence within the confines of nature. This value is similar to Kluckhohn and Strodtbeck's (1961) person to nature dimension.

Ethnocultural research involving cultural value models.

Much of the research on cultural value models has been conducted cross-culturally. Findings generally support the applicability of the value dimensions within these models across cultures. Researchers have emphasized differences between individualistic and collectivistic cultures. Generally, East Asian countries tend to be collectivistic in value structure (Hofstede, 1991; Triandis, 1995) while nations of North America and Northwestern Europe are more individualistic (Smith & Schwartz, 1997). Smith and Schwartz (1997), however, caution against reifying this distinction and polarizing it into a dichotomy. They propose the addition of a third category, focused on the English-speaking nations. These national cultures are characterized by

an emphasis on self-assertion and emotional expression, concomitant with acceptance of inequality in power distribution.

Ethnocultural research on cultural values within the United States has generally been conducted within the framework of Kluckhohn and Strodtbeck's (1961) model of cultural values. According to Carter (1991), a review of this research indicates similarities between African American and "White" Americans in generally endorsing a mixed alternative solution for the human nature value orientation; mastery alternative for the person to nature value orientation; future solution for the time orientation; doing solution for the activity orientation; and individual solution for the social relations orientation. Latinos or Hispanic Americans, however, display a different set of solutions for these value orientations. According to Carter (1991), they tend to endorse subjugation to or harmony with nature for the person to nature value orientation, present solution for the time orientation, and collateral solution for the social relations orientation.

The relationship of cultural values to mental health.

Few researchers have examined the relationship of cultural values to mental health variables. There are no studies on the relationship of cultural values to worry. However, the relationship of cultural values to subjective well being has been addressed. Arrindell, et al. (1997) explored the interaction of Hofstede's (1980) cultural value dimensions with subjective well being. They found that nations low in uncertainty avoidance displayed higher levels of subjective well being. Arrindel et al. (1997) also documented an interaction of national wealth and masculinity with subjective well being. Higher masculinity was associated with subjective well being in poorer countries but lower masculinity was associated with subjective well being in

richer countries. Draguns (1990, 1997) has extended Hofstede's (1980) four dimensions as well as Confucian dynamism (Chinese Culture Connection, 1987) to account for cross-cultural differences in the characteristic psychiatric symptomatology and preferred modes of psychotherapy. This formulation integrates some of the available data, but remains to be systematically applied as a source of testable hypotheses

Diener (2000) has shown that individualism can influence subjective well being, especially by affecting the standards of individuals in judging their subjective well being. Oishi, Diener, Lucas, and Suh. (1999) demonstrated that satisfaction with esteem needs is more strongly associated with subjective well being in individualistic nations, where personal needs are given preference over group needs, than in collectivistic nations. Similarly, Suh (1999) pointed out that congruence, which involves acting consistently across situations and in accord with one's self, is less related to subjective well being in collectivistic cultures than in individualistic cultures. Also, Suh, Oishi, Diener, and Triandis (1998) found that people from individualistic cultures refer more to their feelings when judging subjective well being whereas people from collectivistic cultures refer more to societal norms, an idea anticipated by Hofstede (1980, 1991), Triandis (1995), and Draguns (1990, 1997).

Individual Value Models

Research on individual value models has generally been dominated by Rokeach's (1973) and Schwartz's (1992) frameworks. Rokeach (1973) contrasts instrumental values that regulate modes of conduct with terminal values regarding end-states of existence. The instrumental value system constitutes a continuum ranging from preferences for competence, e.g. imaginative or

intellectual, to concern for morality, e.g. salvation or forgiveness. The terminal value system falls along a continuum ranging from valuing personal, individual end-states (e.g. wisdom or peace of mind) to social, interpersonal end-states (e.g. brotherhood or peace on earth). According to Rokeach, these two value systems work together as people use instrumental values for achieving terminal values. For example, individuals value forgiveness in order to accomplish brotherhood. However, a factor analysis of the Rokeach Value Survey (RVS) by its originator (Rokeach, 1973) did not provide support for the structure of the model. Further analyses of the model by Feather and Peay (1975), Bond (1988) and Schwartz (1994b) provided only minimal support for the instrumental versus terminal distinction. Proceeding from these findings, Schwartz and Bilsky (1987, 1990) explored an alternative individual values model. Their research led to the development of Schwartz's (1992) individual values model.

In this model, values are primarily defined by the type of goal or motivational concern that they express. Schwartz (1992) described a set of ten universal and distinctive value types: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. These value types and the motivational goals that define them are presented in Table 1. Schwartz (1992) argued that a dynamic relationship exists between these value types and proposed that actions taken in support of one value type either conflict, or are compatible, with value types. Schwartz (1992) further suggested that these conflicts and compatibilities can be ordered around a circumplex represented in Figure 1. Those value types adjacent to one another are proposed to be more compatible while those opposite one another are thought to be more conflicting. The location of the tradition and conformity value types within the same wedge indicates that these two value types share a common motivational goal of “subordination of self in favor of socially imposed expectations” (Schwartz, 1992, p. 40).

Despite their common goal, Schwartz argued that tradition and conformity differ in the object of subordination. In conformity, a person subordinates to people with whom one is in regular contact; with tradition, subordination to more abstract ideals takes place.

Table 1

Definitions of the Motivational Types of Values and the Single Values Used to Index Them.

POWER: Social status and prestige, control or dominance over people and resources (authority, social power, wealth, preserving my public image)

ACHIEVEMENT: Personal success through demonstrating competence according to social standards (ambitious, successful, capable, influential)

HEDONISM: Pleasure or sensuous gratification for oneself (pleasure, enjoying life, self indulgent)

STIMULATION: Excitement, novelty, and challenge in life (daring, a varied life, an exciting life)

SELF-DIRECTION: Independent thought and action -- choosing, creating, exploring (creativity, freedom, independent, choosing own goals, curious)

UNIVERSALISM: Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature (equality, social justice, wisdom, broadminded, protecting the environment, unity with nature, a world of beauty)

(table continues)

Table 1 (continued)

Definitions of the Motivational Types of Values and the Single Values Used to Index Them.

BENEVOLENCE: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, honest, forgiving, loyal, responsible)

TRADITION: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide (devout, respect for tradition, humble, moderate)

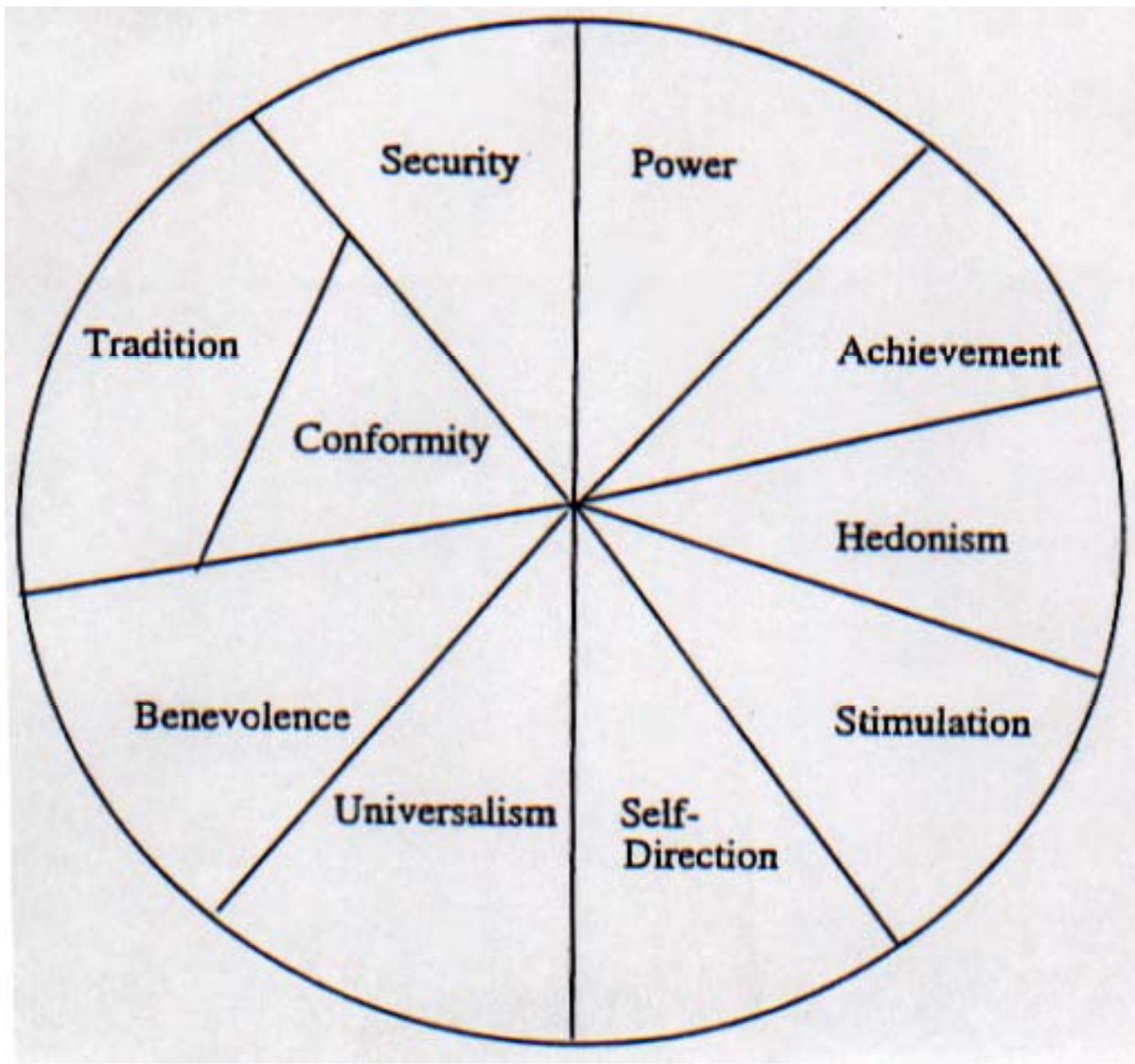
CONFORMITY: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (self-discipline, politeness, honoring parents and elders, obedience)

SECURITY: Safety, harmony, and stability of society, of relationships, and of self (family security, national security, social order, clean, reciprocation of favors)

Note. From “Values and Worries: Theoretical and empirical relations,” by S. H. Schwartz, L.

Sagiv, & K. Boehnke, 2000, Journal of Personality, 68(2), p. 346. Copyright 2000 by Blackwell Publishers. Reprinted with permission of the author.

Figure 1. Schwartz's (1992) model of individual value types.



Note. From "Value as a moderator in subjective well-being," by S. Oishi, E. Diener, E. Suh, and R. E. Lucas, 1999, *Journal of Personality*, 67(1), p. 184. Copyright 1999 by Blackwell Publishers. Reprinted with permission of the author.

Schwartz (1992) argued that the compatibilities and contrasts among these universal value types lead to an integrated structure of value types that can be collapsed into two dimensions. The first of these dimensions is labeled “openness to change versus conservation.” It juxtaposes stimulation and self-direction value types to the security, conformity, and tradition value types. The second dimension is labeled “self-enhancement versus self-transcendence;” its polarities are power, achievement, and hedonism versus universalism and benevolence. Schwartz (1992) suggests that the conflict of hedonism versus conformity and tradition is best viewed as suggesting duality in the meaning of the hedonism value type. Although the hedonism value type opposes the conformity and tradition value types, it does not clearly belong to either the openness to change or the self-enhancement dimension. Hedonism is viewed as having facets of both the openness to change dimension (through its focus on motivation for arousal) and the self-enhancement dimension (through its focus on self).

Cross-cultural research on Schwartz’s model has generated a multiplicity of findings in 54 different countries using data from over 44,000 respondents (Schwartz, 1992). Using multidimensional scaling analyses Schwartz and colleagues have provided evidence for the two-dimensional circumplex model of value types as well as the virtual universality of the value types themselves. For this reason, Schwarz’s value model has been regarded by many investigators as the standard for examining individual values (Oishi, Diener, Lucas, et al., 1999; Oishi, Diener, Suh, & Lucas, 1999; Church & Lonner, 1998).

A final contribution to individual value research was made by Triandis (1995) who focused on the individualism-collectivism dimension within Hofstede’s (1980) theory and explored its reflection in beliefs, attitudes, and values. Triandis (1995) further refined individualism by differentiating its vertical and horizontal varieties. Vertical individualism

involves the acceptance of inequality in the distribution of power while horizontal individualism emphasizes equality in the distribution of power, status, and opportunity. The same distinction is applicable to collectivism. Subsequent research on this formulation, exemplified by Kagitçibasi (1997), has focused on discrete values rather than on an encompassing model of values, which is central to this proposal.

Ethnocultural research involving individual values.

So far, very few cross-cultural or ethnocultural studies of individual values have been reported in the literature. Mayton and Sangster (1992) used the RVS to compare Native American and Caucasian American adolescents. They found that Native Americans have a preference for the instrumental values of helpfulness and obedience while Caucasian Americans place higher value on the terminal value of freedom and the instrumental values of ambition, independence, and capability. Multicultural studies examining differences in individual values between African Americans and Caucasian Americans yielded inconclusive results because of contamination by social desirability (Goldsmith, Stith, & White, 1987; Goldsmith, White, & Stith, 1987).

Moore (1998) investigated differences in value structures between second, third, and fourth generation Japanese Americans using Schwartz's (1992) individual values model. Third and fourth generation Japanese Americans were found to value power, hedonism, achievement, and stimulation significantly more than second generation Japanese Americans while second generation Japanese Americans valued tradition and security significantly more than third and fourth generation Japanese Americans.

The relationship of individual values to mental health.

Researchers have also examined the relationship of individual values to general mental health status. In pursuing the interaction of values with worry and general mental health, Boehnke, Stromberg, et al. (1998) introduced the distinction between macro and micro worries. Macro worries refer to worries about societal or world issues such as an increased crime rate or global warming; micro worries are focused upon personal concerns, such as loss of a job or death of a parent. In Boehnke, Stromberg, et al.'s view this difference is crucial for formulating the relationship between worries and mental health. To this end, these authors studied both macro and micro worries as well as mental health status in Fiji, Israel, and Germany.

Boehnke, Stromberg, et al. (1998) hypothesized that individual values influence the relationship between worry and mental health. No direct relationship was posited between values and mental health, although significant relationships between individual values and worry were predicted. Specifically, macro worries were hypothesized to relate to self-transcendence values (i.e. universalism and benevolence) and micro worries, to self-enhancement values (i.e. power and achievement). Furthermore, micro worry was predicted to correlate with negative mental health while macro worry was expected to show either a positive or no relationship to mental health. Their findings indicated a significant relationship of macro worries to self-transcendence values. Less strongly, micro worries were related to self-enhancement values. As predicted, a significant relationship was also found for worry and mental health status; Micro worries were correlated with negative mental health, while macro worries were found to relate to positive mental health.

In another study, Schwartz, Sagiv, and Boehnke (2000) investigated the relationship of the two kinds of worry in relation to several specific value types. In line with the authors' expectations, an impressive array of positive and negative correlations were obtained between value types, micro worries, and macro worries. More generally, values were found to be more strongly related to macro worries than to micro worries. Schwartz, et al. (2000) traced this pattern of findings to two factors. First, the salience of objective threats that bring about micro worries may lessen the impact of values on micro worries. Second, differences in individual coping styles can also confound this relationship. Among the dimensions studied by Schwartz et al. (1998), the openness to change versus conservation dimension contributed less to the relationship of values to worry than did the self-enhancement versus self-transcendence dimension.

An additional finding regarding the relationship of individual values to mental health status having direct relevance to the present study pertains to value concordance, i.e. the similarity of a person's values to those of their reference group. Boehnke, Stromberg, et al. (1998) found that value concordance was positively associated with macro worry as an indicator of positive mental health status.

Given the fact that values are primarily defined by the goals through which they are expressed (Schwartz, 1992), such goals are a potentially important construct for the further study of individual values and value concordance. According to Diener et al. (1999), achievement of goals is associated with a higher sense of subjective well being, which is generally accepted as a prominent index of positive mental health. Findings drawn from research exploring the relationship of values and goals to subjective well being closely parallel Boehnke, Stromberg, et al.'s (1998) finding regarding value concordance and macro worry.

Oishi, Diener, Sue, et al. (1999) examined the influence of individual values on the relationship between subjective well being and success in value related activities. These authors found that global and intraindividual subjective well being were related to value congruent goal satisfaction. In other words, their findings indicated that individuals reported higher subjective well being when their values were congruent with success in a goal representative of that value. Furthermore, congruence between one's goals and an environment in which those goals are widely shared has been found to be conducive to subjective well being (Sanderson & Cantor, 1997; Cantor & Sanderson, 1999). These findings suggest that, similar to Boehnke, Stromberg, et al.'s (1998) conclusions, congruence between one's values and the values of one's environment is related to the positive expression of well being.

Taken together, findings reviewed above indicate that values play an important role in influencing the relationship of psychosocial factors to general mental health. In line with formulations in the psychopathology and cultural literature, values were found to affect one's general mental health status by influencing goals sought to achieve and the type of worry experienced. Furthermore, there is evidence to suggest that concordance of value structure with one's environment may have an impact upon both worries and subjective well being. It is worth noting that the relationship of values to subjective well being has been explored multiculturally, i.e. across the various ethnocultural groups in the United States; values and worry, however, have only been examined cross-culturally, i.e. in several countries. The task remains to extend this type of research to ethnocultural diversity within the United States.

Worry

Worry emerged and acquired prominence in psychology as a clinical concept (Borkovec, Robinson, Pruzinsky, & Depree, 1983; Davey & Tallis, 1994; Borkovec, Ray, & Stöber, 1998). The social psychological conceptualization of worry developed by Boehnke, Schwartz, et al. (1998) and presented in the previous section is different in both its origin and thrust from the clinical conceptualization of worry. Boehnke, Schwartz, et al.'s (1998) conceptualization is grounded in the social psychological tradition of research on values and attitudes in their sociocultural context. Such research has typically been conducted with samples of normal participants. On the other hand, the clinical conceptualization of worry (Davey & Tallis, 1994; Borkovec, et al., 1998) has been primarily focused on its dysfunctional nature and on the cognitive, emotional, physiological, and behavioral responses associated with excessive worry. Typically, observations were gathered about chronic worriers and investigation was focused on distinguishing normal or nonpathological worry from pathological worry (Tallis, Davey, & Capuzzo, 1994).

In the section that follows a further description of each of these conceptualizations will be presented and literature pertaining to their research will be reviewed. In the process, literature regarding the relationship of worry to indicators of mental health functioning will also be addressed. Literature relevant to the ethnocultural research of worry will be presented in a separate subsection.

The Clinical Conceptualization of Worry

Findings drawn from the clinical literature indicate that worry is characterized by a predominance of negatively valenced thought rather than negative imagery (Borkovec, et al., 1983). This predominant cognitive structure of worry has been found to inhibit emotional responsiveness at the expense of maintaining affective disturbance. Worry has been found to be associated with a number of maladaptive indicators such as affective, physiological, and cognitive rigidity, slowed decision making time, increased procrastination, and perfectionism (Borkovec, et al., 1998). Research into nonpathological worry has also suggested that worries can be discriminated by the domain of life to which they refer (Barlow, 1988; Eysenck & Van Berkum, 1992; Tallis, Eysenck, & Matthews, 1992). Although there is no consensus regarding the number of domains of worry, most research in the clinical literature has supported the findings of Tallis, et al. (1992) who separate worries into the five domains of relationships, lack of confidence, aimless future, work incompetence, and financial concerns (Stoeber, 1998).

Findings regarding the content of worry do not indicate strong differences between dysfunctional and normal worry, other than more worry over threats to physical safety and health among worriers diagnosed with Generalized Anxiety Disorder (GAD; Craske, Rapee, Jackel, & Barlow, 1989; Tallis, et al., 1994). Davey and Levy (1988, 1999) also found that the difference between normal and dysfunctional worry lies not so much in the content of worries as in the cognitive process. Davey and Levy identified three traits that distinguish the chronic worrier. First, the chronic worriers' faulty problem solving style and low problem solving confidence contribute to worry escalating from a normal to dysfunctional or even "catastrophic" level. Second, the chronic worriers' tendency to harbor beliefs about personal inadequacy thwarts their

ability to effectively process topics of worry and exacerbates the worry. Third, these difficulties are maintained by the chronic worrier's tendency to hold dysfunctional beliefs regarding the adaptability and importance of worry.

The Social Psychological Conceptualization of Worry Developed by Boehnke, Schwartz, et al. (1998)

Boehnke, Schwartz, et al. (1998) define worry as a cognitive construct consisting of an object and domain facet. Within their formulation, the object facet of worry consists of micro worries (i.e., worries directed towards an object close to the self) and macro worries (worries focused on a more global object). Based on their review of literature, Boehnke, Schwartz, et al. (1998) distinguished seven domains, or content areas, of worry: health, environment, social relations, meaning, achievement or work, economics, and safety.

According to Boehnke, Schwartz, et al. (1998), the object facet is more important in the explanation of the relationship between worry and positive mental health. They argue that macro worry is associated with positive mental health while micro worry is associated with negative mental health, and their findings provide evidence in support of this argument. In reference to domain, their findings indicate that: (a) the safety domain is the only domain that could not be distinguished by object, (b) the environmental domain generates macro worries and virtually no micro worries, (c) the remaining domains differ significantly by object, and (d) health/safety may comprise a related set and achievement/ economics may also comprise a distinct worry domain.

Differences Between the Social Psychological and the Clinical Conceptualization of Worry

Important differences between the two conceptualizations presented above involve the focus, manner, and facet of worry. The clinical conception is focused on a population of chronic worriers whereas the social conceptualization is focused on non-clinical samples. Although nonpathological worry is explored within the clinical conception (e.g. Tallis, et al., 1992; Davey & Levy, 1988; Davey & Levy, 1999), the emphasis is usually on understanding this worry in relation to the clinical context. Furthermore, the clinical conception concentrates more on the process of worry while the social psychological formulation is concerned with the content of worry. Finally, in the clinical literature, the object facet is not explicitly recognized and emphasis is concentrated on the domain facet. On the other hand, the conceptualization of worry in social psychology sharply differentiates these two facets; moreover, the object facet is considered to be more strongly related to mental health.

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Ethnocultural Research Involving Worry

Research on worry in relation to multicultural and cross-cultural variables has been limited in scope and amount. Although the social psychological conceptualization of worry has been applied in countries as diverse as Fiji, Nepal, Germany, and Israel, it has not been

investigated across ethnocultural groupings within the United States. Likewise, the extensive research into the clinical conceptualization of worry has largely been conducted within the United States and Western Europe, but as yet without reference to ethnocultural diversity within the United States. At this point, findings in this area of research are fragmentary. There is some evidence to suggest that Asian cultures have higher levels of micro worry than European cultures (Boehnke, Stromberg, et al., 1998). In reference to gender differences, Molina and Borkovec (1992) documented greater incidence of worries among women in an American sample. These findings converge with Boehnke, Stromberg, et al. (1998) who noted the same trend in their multinational comparison.

Relevant information concerning cultural differences in worry has also emerged from epidemiological research on GAD, a diagnosis essentially defined by excessive worry. In the Epidemiologic Catchment Area (ECA) study, Blazer, Hughes, George, Swartz, and Boyer (1991) noted higher rates of GAD among women and African Americans. However, these findings failed to be substantiated in more recent and thorough research by Kessler et al. (1994). Karno et al. (1987) reported lower rates of GAD among Mexican Americans in comparison to non-Hispanic Whites. Other epidemiological studies have noted ethnocultural differences in GAD rates within the United States (Carter, Sbrocco, & Carter, 1996; Al-Issa & Oudji, 1998; Horwath & Weissman, 1997).

Cultural psychologists have, moreover, suggested a number of ways in which culture can influence psychological symptoms. It is generally agreed that cultural differences can influence the affective, cognitive, behavioral, and physical processes affecting the development, experiences, and presentation of symptoms. Some of the ways through which such influences are manifested include somatic versus psychological symptom expression, differences in

communicating symptoms of distress, and differences in relationships between the mental health provider and the patient (Guarnaccia, 1997; Carter, Sbrocco, & Carter, 1996; Gamble, 1993; Draguns, 1997; Tanaka-Matsumi & Draguns, 1997).

A research framework for the ethnocultural examination of worry: Carter, et al. (1996).

In a contribution directly relevant to the ethnocultural groups studied in this research, Carter, et al. (1996) proposed a framework for examining differences in anxiety related symptomatology between African and White Americans. Their conceptualization is focused on African American racial identity and acculturation. Carter, et al. (1996) posited that, for African Americans, higher racial identity is associated with: (a) greater suspiciousness towards representatives of the mainstream culture and (b) the holding of alternative beliefs regarding the manifestation and treatment of psychological symptoms that differ significantly from the mainstream. Such suspiciousness and divergence in perspective is expected to skew findings regarding anxiety symptoms, such as worry, between African and White Americans and to lead to greater stress. Specifically, these factors may be partially responsible for any elevated incidences of worry among African Americans and higher levels of insecurity.

Carter, et al. (1996) also propose that acculturation increases convergence of beliefs regarding the manifestation and treatment of psychological symptoms. Carter, et al. (1996) assert that African American individuals with low racial identity and higher acculturation are more likely to experience symptoms, seek services, and benefit from treatment in a manner similar to those of the majority group. Therefore, differences are more likely to be noted in those with high racial identity and low acculturation because of significant belief system differences. Carter, et

al. (1996) recognize that stress also affects the manifestation and treatment of anxiety symptomatology. They assert that levels of stress are often greater for African Americans than they are for White Americans which may contribute to allegedly elevated differences in anxiety symptomatology such as those reported by Blazer, et al. (1991).

CHAPTER III: RATIONALE AND HYPOTHESES

Rationale

In this study an attempt has been made to integrate conceptual and empirical leads from a variety of sources. First, the present research is focused upon the concept of worry. Until recently, worry was largely considered a global construct mainly relevant to clinicians. Although it is intuitively recognized that worry is not limited to the manifestation of psychological disorders, little research has investigated worry in psychologically unimpaired and undisturbed people. In developing a conceptualization of worry as a socially relevant and culturally variable component of everyday experience, Boehnke, Schwartz, et al. (1998) addressed this gap in the literature. In the process, these authors laid the groundwork for the important distinction regarding the object facet of worry. So far, however, this conceptualization of worry has not been explored within the United States nor has it been compared to existing conceptualizations of worry. An objective of the present study was to address these concerns by extending this research to a sample of college students drawn from the American population.

Individual values have also been thought to be reflected in psychopathology (Draguns, 1974, 1980, 2000), but research investigating this prospect has been sporadic and fragmentary. Boehnke, Schwartz, et al. (1998); Boehnke, Stromberg, et al. (1998); and Schwartz, Sagiv, and Boehnke (2000) explored the influence of individual values on worry and, subsequently, other indicators of mental health status. In particular, the findings of Boehnke, Stromberg, et al. (1998) regarding value concordance and its association with macro worry (an indicator of positive mental health status) appears promising. Furthermore, findings regarding the impact of goals

(Oishi, Diener, Suh, et al., 1999) and individual values (Cantor & Sanderson, 1999) on subjective well being also offered information for furthering value concordance research. These latter research findings suggested that, similar to Boehnke, Stromberg, et al.'s (1998) conclusions, congruence between one's values and the values of one's environment is related to the positive expression of well being. Collectively, these findings regarding values and goals provided the impetus for pursuing the investigation of value concordance. Therefore, an additional purpose of this study was to examine the relationship of value concordance to indicators of mental health status within the United States.

Moreover, there are hints in the store of accumulated research findings to suggest that these relationships may be influenced by the person's cultural background, either directly or through the operation of value differences. It has also been recognized that the relationship to the shared United States culture, as well as to the specific and distinct cultures of various ethnic groups, may affect the nature and intensity of worries. This possibility was envisaged by Carter et al. (1996) who introduced belief system differences as relevant variables in studying symptoms and therapeutic response in African Americans. Their formulation, however, has not been tested empirically. This study endeavored to fill this gap through cross cultural examination of value differences in relation to indicators of mental health status.

In the pursuit of these objectives, the proposed study explored individual values, worries, life satisfaction, positive and negative experiences of emotionality, and psychological distress across ethnocultural lines. Significant differences, if any, in these variables may shed further light on their interplay in two major ethnoculturally distinct components of the United States population. The results of this research contributed to a better understanding of these concepts as clinical, social, and possibly cultural constructs.

Hypotheses

The first two hypotheses are based upon findings derived from Boehnke, Schwartz, et al.'s (1998) conceptualization of worry in an American population of young adults. Proceeding from the results obtained by these authors, a negative relationship was hypothesized between micro worry and general mental health (Hypothesis 1) while a positive relationship was hypothesized between macro worry and general mental health (Hypothesis 2).

In Hypothesis 1, a positive relationship was predicted between micro worry and poor mental health (Hypothesis 1a; Hypothesis 1b). Moreover, predictions were proposed of a positive relationship between micro worry and negative affect (Hypothesis 1c), a negative relationship between micro worry and life satisfaction (Hypothesis 1d), and a negative relationship between micro worry and positive affect (Hypothesis 1e).

With respect to Hypothesis 2, a positive correlation between macro worry and symptom based mental health was predicted (Hypothesis 2a; Hypothesis 2b), negative correlations were hypothesized between macro worry and negative affect (Hypothesis 2c) while positive correlations are hypothesized between macro worry and life satisfaction (Hypothesis 2d) and micro worry and positive affect (Hypothesis 2e).

Hypothesis 3 pertains to the relationship of Boehnke, Schwartz, et al.'s (1998) conceptualization of worry within the framework of social psychology to the clinical formulation of the same construct posited by Borkovec, et al. (1983). Since Boehnke, Schwartz, et al. contend that only micro worry, and not macro worry, is related to psychological distress, it was predicted that micro worry will relate positively to measures of pathological clinical worry (Hypothesis 3a) and nonpathological clinical worry (Hypothesis 3b).

A further objective of this proposed study involved the relationship of value concordance to subjective well being. As stated previously, Boehnke, Schwartz, et al.'s (1998) findings suggest that the relationship of value concordance to worry and subjective well being is mostly accounted for by the association of value concordance with positive indicators of mental health status such as macro worry and subjective well being. On this basis, it was hypothesized that concordance of value structure will relate positively to increased macro worry (Hypothesis 4a) and positive indicators of subjective well being such as positive affect (Hypothesis 4b) and life satisfaction (Hypothesis 4c).

Another cluster of hypotheses is focused upon ethnocultural variation, if any, in the relationship of value concordance, worry, subjective well being, and general mental health. As discussed earlier, Carter, et al. (1996) suggest that African American beliefs, in particular racial identity and acculturation, influence the report of anxiety symptomatology. They assert that, for African Americans, the more such beliefs are discrepant from mainstream beliefs, the poorer the outcome for seeking help, receiving treatment, and succeeding in treatment. Therefore, for African Americans, greater discordance of beliefs from the mainstream is assumed to be associated with greater levels of psychological distress. Furthermore, belief discordance is considered to be more of a factor for African Americans than for White Americans because of the stress and challenges associated with being a member of a marginalized group within American society.

Although Carter, et al. (1996) are mainly concerned with the beliefs of racial identity and acculturation, this study proceeds from the premise that value differences constitute a higher order concept that captures the essence of the belief variables specified by Carter, et al. (1996). As a superordinate concept, values may be relevant for examining cognitive differences between

sociocultural groups. The available research findings are consonant with this expectation, especially in substantiating the underlying role of values in the formation of racial identity (Carter & Helms, 1990). Furthermore, it has been shown empirically that values are statistically related to a number of lower level belief constructs relevant to personal goals, individualism, collectivism, and self-concept (Oishi, Schimmack, et al., 1998).

If the premise is accepted that values are germane to the belief structures discussed by Carter et al. (1996), their framework can be tested by examining value concordance. It is expected that greater concordance of values with the mainstream is associated with less worry, a higher sense of subjective well being, and a more positive level of general mental health. Furthermore, it is expected that the relationship of value concordance to these variables will be greater for African Americans again on the basis of formulations by Carter et al. (1996). Therefore, it is expected that the relationship of value concordance to macro worry (Hypothesis 5a), micro worry (Hypothesis 5b), pathological clinical worry (Hypothesis 5c), nonpathological clinical worry (Hypothesis 5d), general mental health (Hypothesis 5e and Hypothesis 5f), negative affect (Hypothesis 5g), positive affect (Hypothesis 5h), and life satisfaction (Hypothesis 5i) would be stronger for African Americans as compared to White Americans.

Exploratory Analyses

There is a paucity of objective and systematic research findings regarding Schwartz's (1992) individual values model within the ethnoculturally diverse American population. Although there is no conceptual basis for proposing specific hypotheses, exploratory analyses will investigate certain expectations regarding the endorsement of individual values displayed in

this sample. Using cultural values research as a source of findings, it is reasonable to assume that Americans are consistent with other English speaking nations such as Australia and England in endorsing cultural values (Smith & Schwartz, 1997). As mentioned earlier, Smith and Schwartz (1997) found self-assertion, emotional expression, and acceptance of inequality in the power distribution to be prominent among the values espoused by English speaking nations. The individual value types that best capture these values are represented by the “openness to change” and “self-enhancement” dimensions described by Schwartz (1992): Stimulation, Self-direction, Power, Achievement, and Hedonism. Therefore, it is expected that these values will be endorsed more strongly than other individual value types by participants of both ethnocultural groups included in this study.

In addition to individual value types, differences between African and White Americans in all areas pertinent to this study also deserve further scrutiny. In the absence of a solid conceptual and empirical base, it is premature and arbitrary to formulate explicit predictions. However, exploratory research may provide a useful addition to the available body of findings.

To the extent that socialization and outlook are mediated by culture, it is expected that cultural differences in these variables will be reflected in discrete values and value orientations. Therefore, any such differences between ethnic groups will be noted. Furthermore, since anxiety is generally known to be sensitive to socially stressful conditions or events, and past literature (e.g. Lynn, 1971) suggests that stressful events within a culture result in higher anxiety levels within individuals, it is anticipated that worry will be higher among African Americans by comparison with White Americans. Moreover, since social experience of African Americans may sensitize them to the needs of other human beings who are subject to injustice and

discrimination, it is expected that African Americans would express greater macro worry than White Americans.

In exploring the relationship of ethnicity to the various variables included in this study, an additional potentially relevant factor is that of stress. Stress among ethnocultural minority groups is considered by Carter et al. (1996) to be a variable that may affect the relationship between ethnicity and various indicators of mental health. Therefore, this relationship will be explicitly examined. It is a reasonable expectation that African American participants will report greater amounts of stress than White Americans and it is further expected that this factor will impact the relationships between ethnicity, values, worry, subjective well being, and general mental health.

CHAPTER IV: METHOD

Participants

It was determined by means of a power analysis that a sample size of 154 was required in order to demonstrate .80 power at an effect size of .20 and an alpha level of .05. The effect size of .20 used in conducting the power analyses was determined by averaging the effect sizes found for relationships between macro worry, micro worry, and mental health factors by Boehnke, Stromberg, et al. (1998).

The sample consisted of 234 participants of whom 98 were male (41.9%) and 136 were female (58.1%). There were 103 White (44%) and 103 Black or African American participants (44%). Eleven Latino or Hispanics (4.7%) and 5 Asian or Pacific Islanders (2.1%) were also included in the sample. A total of 12 participants (5.1%) identified themselves as belonging to other ethnic groups.

Among male participants, 49% identified themselves as African American or Blacks, 36.7% as White, 9.2% described themselves as belonging to another ethnic group, 4.1% designated themselves as Latino or Hispanic, and 1% as Asian or Pacific Islander. Amongst female participants, there were 49.3% self-designated Whites, 40.4% African American or Blacks, 5.1% Latino or Hispanics, 2.9% Asian or Pacific Islanders, and 2.2% belonging to other ethnic groups.

The mean age of respondents was 19.97 years of age ($SD = 3.14$). Respondents ranged in age from 18 to 46 with 97% of the sample being equal to or below the age of 23. The mean age of males was 20.29 ($SD = 3.30$). Males ranged in age from 18 to 45 with 96.94% of them being

23 years old or younger. The mean age of females was 19.74 (SD = 3.00). Their ages ranged from 18 to 46 and 97% were no older than 23 years of age. A detailed description of the age by gender distribution is found in Appendix B.

With regard to marital status, 225 of participants (96.2%) indicated that they were single or engaged, 7 (3.0%) reported that they were currently married, and 2 participants (0.9%) were divorced. On the basis of self-report, 143 participants (61.1%) were freshmen or sophomores, 88 were juniors or seniors (37.6%), and two (0.9%) were graduate students.

Participants were recruited by the researcher and offered pay (\$8.00) or psychology class extra credit (if eligible) for participating in the study. Paid subjects were recruited through the use of general announcements distributed throughout the University Park campus. Psychology students were recruited to participate in the study through announcements presented in their classes by their professors.

Description of Measures

Table 2 provides a listing of the different self-report measures used in this study. In the section that follows a more detailed description of these measures will be presented.

Table 2

Summary of Self-report Measures Used in the Present Study.

| Measure | Description |
|--|---|
| Demographic Questionnaire | A questionnaire designed to collect demographic information of study participants |
| Pairwise Comparison Value Survey (PCVS; Oishi, et al., 1998) | A self-report measure of individual values. |
| The Micro Macro Worries Scale (MMWS; Boehnke, Schwartz, et al., 1998) | A self-report measure of micro and macro worries. |
| Trier Personality Inventory – Mental Health subscale (TPIMH; Becker, 1989) | A self-report measure of psychological distress and general mental health status. |
| Brief Symptom Inventory 18 (BSI 18; Derogatis, 2000) | A self-report measure of psychological distress and general mental health status. |
| Worry Domains Questionnaire (WDQ; Tallis, Eysenck, & Matthews, 1992) | A self-report measure of nonpathological worry. |
| Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) | A self-report measure of clinical worry. |

(table continues)

Table 2 (continued)

Summary of Self-report Measures Used in the Present Study.

| Measure | Description |
|---|--|
| Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) | A self-report measure of positive and negative affect. |
| Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) | A self-report measure of life satisfaction. |
| Recent Life Changes Questionnaire (RLCQ; Miller & Rahe, 1997) | A self-report measure of life stress. |

Demographic Questionnaire

A demographic questionnaire was devised that includes questions regarding general demographic information, i.e., age, gender, marital status, grade, major, ethnicity. This instrument is found in Appendix C.

Pairwise Comparison Value Survey (PCVS; Oishi, et al., 1998)

The PCVS is a 45 item self-report questionnaire that measures value types within Schwartz's (1994) model of individual values. This questionnaire consists of 45 dissimilar pairs of values representing Schwartz's ten individual value types. The values of benevolence,

universalism, and conformity are relabeled social relationships, social/ ecological concern, and dutifulness, respectively, in order to provide a clearer definition of each value to the respondent. The respondent is asked to indicate the degree to which he or she prefers one value over the other for each pair using a 7-point scale ranging from -3 (left value is much more important) to 0 (both values are equally important) to $+3$ (right value is much more important). Scale scores on the PCVS are computed by means of a computer program created by the developers of the instrument. Scale scores on the PCVS yield ten scores for each value ranging from -27 to $+27$ with greater numbers indicating stronger endorsement of the value in question.

The pairwise comparison procedure used with the PCVS, was developed in order to address concerns brought up by past researchers (Schwartz, 1992; Ng, 1982) about the formats used to measure individual values. Earlier researchers debated the respective merits of rank ordering and rating for the measurement of individual values versus a rating procedure. Rank ordering procedure was criticized because it does not allow for respondents to endorse values as equally important (Schwartz, 1992). On the other hand, ratings were subjected to criticism for being influenced by response sets. Thus, individuals whose average rating across values was high tended to be statistically different from those whose overall rating of values was low. With the pairwise comparisons, both of these concerns are addressed. On the PCVS, respondents have the ability to rate individual values as equally important while difficulties with response sets are prevented because all respondents have the same mean across items (i.e. 0).

Oishi, et. al. (1998) provided evidence to support the distinctiveness of each value type by demonstrating that correlations with the same value type are higher than correlations with other value types. Oishi et al. (1998) reported the following 16-day test-retest reliability coefficients in support of the reliability of the PCVS subscales (with value type in parentheses):

.77 (Power), .58 (Achievement), .62 (Hedonism), .69 (Stimulation), .61 (Self-direction), .82 (Universalism), .73 (Benevolence), .74 (Tradition), .63 (Conformity), and .54 (Security). Oishi et al. (1998) demonstrated support for the convergent and discriminant validity of the ten value scores by providing data to suggest that a) monotrait-heteromethod coefficients are significantly different from zero and sufficiently large, b) monotrait-heteromethod coefficients are higher than the heterotrait-heteromethod coefficients, and c) pattern of correlations across heterotrait triangles are similar across methods.

Oishi, et al. (1998) also indicated that the PCVS measurement of values is consistent with the circumplex model of individual values proposed by Schwartz (1994). Correlations are highest between adjacent values (e.g. power and achievement) and decrease as the values grow apart. Oishi et al. (1998) also reported that, as the values grow apart, the correlation between values is lowest at the polar opposite position (e.g. power and universalism).

The Micro Macro Worries Scale (MMWS; Boehnke, Schwartz, et al., 1998)

The MMWS is a thirty-five-item measure partially based on the Goldenring-Doctor Scale of Worries (Goldenring & Doctor, 1986). The MMWS can be found in Appendix D. The MMWS distinguishes between the two objects of worry and the seven domains of worry as described by Boehnke, Schwartz, et al. (1998). Seventeen items refer to micro worries about the self and seventeen items refer to macro worries about more global items. In addition, there is one nonspecific item about worries about the future. All items are ordered randomly with two items of the same domain never being adjacent to one another. Respondents are asked to answer each item on a 5-point Likert scale ranging from “not at all worried” (0) to “extremely worried” (4)

about a given item. Scores on the MMWS range from 0 to 17 for either micro or macro worries with larger numbers suggesting greater worry.

Boehnke, Schwartz, et al. (1998) conducted a psychometric examination of the scale in a sample of college students from Israel, West Germany, and East Germany. Findings indicate support for the reliability and validity of the scale. With regard to the reliability of the scale, Boehnke, Schwartz, et al. (1998) report adequate internal consistency in all three subsamples (Cronbach's alphas of .87 [Israel], .87 [East Germany], and .81 [West Germany] for the micro scale and .84 [Israel], .88 [East Germany], and .84 [West Germany] for the macro scale). Four-week test-retest reliability among samples of East and West German students was found to be .84 for micro worries and .73 for macro worries. Evidence for the convergent validity of the scale was indicated by findings of positive correlations in all three samples between micro worry items and scores on scales of trait anxiety and negative affect. Negative correlations in all three samples between micro worry items and scores on scales of satisfaction with life, positive affect, and general mental health provided further support for the convergent validity of the scale.

Since the psychometric properties of the MMWS have not been studied in the United States, data from this study were used to further investigate the reliability and validity of the MMWS. Internal consistency for this sample was adequate for the Micro (Cronbach's alpha = .89) and Macro (Cronbach's alpha = .90) scales of the MMWS. Reliability of scores for a subsample of 42 participants after approximately a two-week retest was found to be .74 ($p < .001$) for micro worries and .70 ($p < .001$) for macro worries. Evidence for the convergent validity of the scale was indicated by findings of positive correlations between micro worry items and scores on the PSWQ ($r = .33$), the WDQ ($r = .52$), BSI-18 ($r = .37$), and negative affect

($r = .43$). Negative correlations between micro worry items and scores on the SWLS ($r = -.32$), and the TPIMH ($r = -.27$) provide further support for the convergent validity of the MMWS.

Trier Personality Inventory - Mental Health subscale (TPIMH; Becker, 1989)

The TPIMH is a 20 item self-report measure of mental health status and can be found in Appendix E. The mental health subscale is part of the larger 120 item Trier Personality Inventory (Becker, 1989). Respondents indicate their agreement with each of the statements on a four-point scale ranging from “always” to “never.” Scores on the TPIMH range from 20 to 80 with higher scores indicating the absence of mental health difficulties. Boehnke, Stromberg, et al. (1998) report scale consistencies of .64 for a Nepalese version of the TPIMH and .81 for the original German language version.

As with the MMWS, psychometric properties of the TPIMH have yet to be explored in the United States. A data set from this study was used to provide information on the reliability and validity of the English version of this measure. The internal consistency of the TPIMH for this sample was adequate (Cronbach’s alpha = .86). Reliability scores for a subsample of 42 participants after approximately a two-week retest were found to be .86 ($p \leq .001$) for the TPIMH. Evidence for the convergent validity of the scale was indicated by findings of a negative correlation between the TPIMH and scores on the PSWQ ($r = -.48$), the WDQ ($r = -.62$), BSI-18 ($r = -.48$), negative affect ($r = -.50$), and micro worry ($r = -.27$). Positive correlations between the TPIMH and scores on the SWLS ($r = .42$) and positive affect ($r = .59$) provide further support for the convergent validity of the MMWS.

Brief Symptom Inventory 18 (BSI 18; Derogatis, 2000)

The BSI 18 is an 18 item measure of psychological distress consisting of items taken from the Brief Symptom Inventory (BSI; Derogatis, 1993). A sample of three items from the BSI 18 is displayed in Appendix F. The BSI 18 and the BSI are part of an integrated series of measures developed to assess psychological distress. Other measures in this series include the Symptom Checklist 90 Revised (SCL-90-R; Derogatis, 1994) and the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). The BSI 18 is composed of three dimensions of somatization (SOM), depression (DEP), and anxiety (ANX). The total sum of these dimensions is equal to the Global Severity Index (GSI), an overall indication of a respondent's level of psychological distress. On the BSI 18 respondents are asked to endorse the frequency of each item using a five point Likert scale ranging from "not at all" to "extremely". Scores on the BSI 18 range from 0 to 24 for the somatization, depression, and anxiety dimensions and 0 to 72 for the GSI. Higher scores on the BSI indicate greater mental health difficulties.

The GSI on the BSI 18 has been found to have strong internal consistency (coefficient alpha = .89) and , although not yet tested with the BSI 18, reasonable test-retest reliability estimates are suggested from data using the BSI ($r = .90$; Derogatis, 2000). Validity of the BSI 18 is supported by its strong correlation with the Symptom Checklist 90 Revised ($r = .93$; Derogatis, 2000). In addition, previous studies have explored the correlation of the somatization, depression, and anxiety dimensions with the Minnesota Multiphasic Personality Inventory (MMPI; Dahlstrom, 1969), the Wiggins content scales (Wiggins content scales, 1966), and

Tryon cluster scales (Tryon, 1966) obtained coefficients approaching .60 or higher (Derogatis, 2000).

Worry Domains Questionnaire (WDQ; Tallis, Eysenck, & Matthews, 1992)

The WDQ is a twenty-five item content-based measure of nonpathological worry. The WDQ assesses frequency of worry across five domains of relationships, lack of confidence, aimless future, work, and financial concerns. Respondents are asked to endorse the frequency of worry for each item using a 5 point Likert scale ranging from “not at all” to “extremely”. Scores on the WDQ range from 0 to 100 for the total score and from 0-20 for each of the five domains. Higher scores on the WDQ indicate greater worry.

Stöber (1998), in a review of the psychometric properties of the WDQ, reported strong internal consistency (Cronbach’s alpha = .91), four week test-retest correlation ($r = .85$), agreement between pairs of peer ratings ($r = .47$), and agreement between self and peer ratings (.49). The convergent validity of the WDQ is supported by results indicating that the WDQ is significantly correlated with a measure of trait anxiety ($r = .79$; Tallis, 1989) and a measure of clinical worry ($r = .67$, Davey, 1992). The discriminant validity of the WDQ is supported by studies demonstrating differential performance on cognitive tests between groups of high and low worriers selected on the basis of their overall score on the WDQ (Tallis, Eysenck, & Matthews, 1991a; Tallis, Eysenck, & Matthews, 1991b).

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990)

The PSWQ is a sixteen-item trait measure of clinical worry and is displayed in Appendix G. The PSWQ was designed to assess the typical tendency of individual to worry, as well as excessiveness of worry and its generality. On the PSWQ, respondents are asked to rate each item on a five-point scale ranging from “not at all typical” to “very typical”. Scores on the PSWQ range from 16 to 64 with higher scores indicating greater worry.

Molina and Borkovec (1994), in a review of the psychometric properties of the PSWQ, reported adequate internal consistency with coefficient alphas ranging from .88 - .95 for studies using samples of college students, a coefficient alpha of .93 for a study using a mixed anxiety disorder sample (Brown, et al., 1992) and a coefficient alpha of .86 for a study using a sample of clients diagnosed with Generalized Anxiety Disorder (Brown, et al., 1992). Researchers examining the test-retest reliability of the PSWQ have demonstrated adequate reliability with results indicating an average Cronbach’s alpha of .84 across intervals ranging from 2-10 weeks (Stöber, 1998). Convergent validity of the PSWQ has been demonstrated by studies indicating that the PSWQ correlates with a single item question about the percentage of time spent worrying ($r_s = .64$, Meyer, Miller, Metzger, & Borkovec, 1990; .65 and .70, Ladouceur, et al., 1992), a measure of student worry ($r = .59$, Davey, 1992), and the WDQ ($r = .67$, Davey, 1992).

In a more recent examination of the psychometric properties of the PSWQ, Stöber (1998) found that the PSWQ displays adequate internal consistency (coefficient alpha = .89) and four-week test-retest reliability ($r = .87$). Stöber (1998) also reported moderate consistency between pairs of peer ratings ($r = .42$) and between self and peer ratings ($r = .55$), as well as a significant negative correlation between the PSWQ and social desirability ($r = -.22$).

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988)

The PANAS is a twenty-item measure designed to measure the two dominant dimensions of affect that have consistently emerged in studies of emotion. These dimensions are referred to as positive affect and negative affect (Watson & Tellegen, 1985). Positive Affect (PA) is described by Watson, Clark, and Tellegen (1988) as “the extent to which a person feels enthusiastic, active, and alert” (p. 1063) and Negative Affect (NA), as “a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness” (p. 1063).

On the PANAS, respondents are asked to indicate the intensity of how much they experience each of the items on a 5-point scale ranging from “very slightly or not at all” to “extremely.” The PANAS can be administered using one of five types of instructions of which each delineates a different time frame in which the respondent experiences the feeling represented by each item (moment, today, past few days, past few weeks, year, general). In this study the “general” instructions were used. A copy of the PANAS scale used in this study is found in Appendix H. Scores on the PANAS are divided into scores for PA and NA. Each of these scores can range from 10 to 50 with higher numbers indicating stronger positive or negative affect.

Watson, et al. (1988) demonstrated that the PANAS has strong internal reliability, with Cronbach’s alphas ranging from .86 to .90 for PA and .84 to .87 for NA based on the type of instructions used. Watson, et al. (1988) also reported that the PANAS has adequate 8-week test-retest reliability with correlation coefficients ranging from .47 to .68 for PA and .39 to .71 for

NA. Strong convergent validity was indicated by correlation between the PANAS and measures of general psychological distress and depression.

Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985)

Satisfaction with life is considered to be a key component of mental well being (Diener & Larsen, 1984). The SWLS is a 5-item unidimensional measure developed by Diener, et al. (1985) to measure this concept and can be found in Appendix I. It differs from more traditional measures of mental well being in that it focuses on positive aspects of mental health. More traditional measures of mental health assess the absence of symptoms or problems rather than exploring positive aspects of mental health such as the overall assessment of one's quality of life (Strupp, Horowitz, Lambert, 1997). Respondents are asked to report their agreement with each item on a 7-point Likert scale ranging from 1 ("Strongly disagree") to 7 ("Strongly agree"). Scores on the SWLS range from 5 to 35, with higher scores indicating greater satisfaction with one's life. Diener et al. (1985) report that the SWLS has very good internal consistency ($\alpha = .87$) and test-retest reliability over a two-month period ($r = .82$). Numerous studies have demonstrated the concurrent and discriminant validity of the SWLS with subjective well-being, life satisfaction, positive affect, negative affect, clinical measures of distress, interviewer ratings, and informant reports (Pavot & Diener, 1993).

Recent Life Changes Questionnaire (RLCQ; Miller & Rahe, 1997)

The RLCQ is a revision of the Schedule of Recent Experiences (SRE; Homes & Rahe, 1967), the most widely cited and most widely recognized life events checklist (Holmes & Rahe, 2000). The premise supporting the development of the RLCQ was the clinical observation that stressful events were associated with deficiencies in one's physical and mental health. The SRE and the RLCQ were developed to provide an instrument for assessing the occurrence of stressful events. The RCLQ is a self administered measure that includes 74 life stress items. The respondent is asked to check all items that have occurred over the past two years divided into six-month increments of time. The RLCQ can be scored using a simple item-count or by computing a scaled score by applying standardized weights to specific items and summing across items. In this study the item count method of scoring the RLCQ was used. Scores on the RLCQ range from 0 to 296 with higher scores indicating greater exposure to stressful events. The RLCQ can be found in Appendix J.

Holmes and Rahe (2000) report that the RLCQ has adequate test-retest reliability over periods from two ($r = .82$) to four weeks ($r = .83$). The RLCQ has been found to correlate with various health indicators such as general psychological distress, number of hospitalizations, and reports of physical symptoms (Pearson r s within the range of .30 to .45).

Data from this study were utilized to further explore the reliability and validity of this measure. Reliability scores for a subsample of 42 participants after approximately a two-week retest was found to be .32 ($p < .05$). After removing an outlier whose score was greater than 4 SD above the mean RLCQ score, the test-retest correlation for the remaining 41 participants was .71. Evidence for the convergent validity of the scale was supported by a number of negative, though

low, correlations between the RLCQ and measures of worry, subjective well being, and general mental health. Positive correlations between the RLCQ and the SWLS ($r = -.17$), BSI 18 ($r = .14$), NA ($r = .18$), and WDQ ($r = .14$) were consistent with expectations for the convergent validity of the RLCQ. After removing outliers (scores greater than 4 standard deviations above the mean score on the RLCQ; $n = 4$), negative correlations were found between the RLCQ and the SWLS ($r = -.18$) and the TPIMH ($r = -.13$). A positive correlation between the RLCQ (after removing outliers) and NA ($r = .15$) provide further support for the convergent validity of the RLCQ.

Procedure

Participants were administered a series of ten questionnaires in the following order: Demographic Questionnaire, PCVS, MMWS, TPIMH, BSI, WDQ, PSWQ, PANAS, SWLS, and the RLCQ. It took approximately 45 – 60 minutes for most participants to complete the questionnaires. 42 participants completed a subset of the questionnaires (MMWS, TPIMH, and RCLQ) approximately two-weeks after the initial administration for the purpose of conducting a psychometric examination of their test-retest reliability. Prior to completing the questionnaires participants were advised of their rights to discontinue participation at any time and each participant was given a copy of the informed consent form (found in Appendix K) to keep for their records. Participants were offered the opportunity to read the informed consent form and ask questions about the study prior to participating. The administration of questionnaires was conducted during a four-hour block of time and participants were given instructions for participating in the study when they arrived. Questionnaires were administered individually or in

groups of three to four people based on how many persons approached the experimenter to participate.

Operationalization of Variables

MMWS scores were divided into two continuous variables representing macro worry (MACRO) and micro worry (MICRO), PANAS scores were converted into two continuous variables representing positive affect (PA) and negative affect (NA). PSWQ, TPIMH, BSI 18, SWLS, WDQ, and RLCQ total scores were represented by six separate continuous variables. PCVS scores were converted into ten continuous variables representing scores on each of the ten value types (Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, Benovolence, Tradition, Conformity, and Security).

The amount of concordance between a participants' rating for each value type and the sample mean rating for the corresponding value type was operationalized by constructing a series of ten continuous variables. Each variable was constructed using the absolute value of the difference between an individual's score on each value from the mean score of the total sample for that value. Therefore, value concordance was ascertained by using variables that measured the amount of discordance between one's endorsement of a value and the sample mean endorsement of that value. Higher scores on this variable indicated high value discordance (and hence less value concordance) while lower scores on this variable indicated lower discordance (and hence greater value concordance).

Gender, ethnicity, marital status, and class in school were operationalized as categorical variables. Age was examined as a continuous variable. In order to test hypotheses comparing

African and White American participants a dichotomous variable (WBETH), identifying only these participants, was constructed.

Participants Excluded from Analyses

Participants were excluded from analysis if they did not complete all of the items on a measure. One participant was excluded from analysis using the MICRO, BSI 18, WDQ, and NA variable for failing to complete all the items comprising these measures. Therefore, analyses using these variables included only 233 of 234 participants. Six participants were excluded from analyses using the TPIMH for failure to complete all of the TPIMH items. Therefore, analyses involving the TPIMH are based on 228 participants.

Participants were also excluded from analyses involving a variable of interest if their overall score on a particular measure was greater than four standard deviations away from the sample mean score for that instrument. Four participants were dropped from analysis for this reason. These participants were excluded from analysis using the RLCQ reducing the total number of participants involved in RLCQ analysis to a total of 230 participants.

Due to small numbers of Latino or Hispanics, Asian or Pacific Islanders, and those belonging to other ethnic groups, ethnic group comparisons were only conducted between African and White Americans. Therefore, the total number of participants involved in ethnicity comparisons was reduced to a total of 206 participants.

CHAPTER V: RESULTS

In this section results of the statistical analyses will be presented, first for hypothesis 1 through 5, then for exploratory analyses, and finally for gender differences. Two-tailed statistical tests were consistently applied and correlation coefficients pertaining to the variables investigated in this study are presented in Appendix L. Given the tentative state of Boehnke, Schwartz, et al.'s (1998) theoretical formulation from which the hypotheses were derived, the use of one-tailed tests was considered premature. An alpha level of .05 was used for all statistical tests.

Hypothesis 1

Hypothesis 1 examined the relationship between Micro Worry and general mental health. More specifically, Hypothesis 1 predicted that micro worry would relate: (a) negatively to general mental health status, (b) positively to negative affect, (c) negatively to life satisfaction, and (d) negatively to positive affect.

Hypothesis 1a predicted a significant negative correlation between MICRO and TPIMH. Furthermore, Hypothesis 1b and Hypothesis 1c predicted significant positive correlations between MICRO and BSI 18, and MICRO and NA respectively. Likewise, Hypothesis 1d and Hypothesis 1e predicted significant negative correlations between MICRO and TPIMH, and MICRO and PA.

Results indicate support for Hypothesis 1 in that Micro Worry correlated in the predicted direction with general mental health as measured by the TPIMH (Hypothesis 1a; $r = -.27, p <$

.001), general mental health as measured by the BSI 18 (Hypothesis 1b; $r = .37, p < .001$), Negative Affect as measured by the PANAS (Hypothesis 1c; $r = .43, p < .001$), and Life Satisfaction as measured by the SWLS (Hypothesis 1d; $r = -.32, p < .001$). Hypothesis 1e was not supported as the correlation coefficient between Micro Worry and Positive Affect as measured by the PANAS ($r = -.06, p = .35$) failed to reach significance.

Hypothesis 2

In contrast to the predictions made for micro worry, Hypothesis 2 predicted that macro worry would relate: (a) positively to general mental health, (b) negatively to negative affect, (c) positively to life satisfaction, and (d) positively to positive affect.

Hypothesis 2a predicted a significant positive correlation between MACRO and TPIMH. Hypothesis 2b and Hypothesis 2c predicted significant negative correlations between MACRO and BSI 18, and MACRO and NA respectively. Lastly, Hypothesis 2d and Hypothesis 2e predicted significant negative correlations between MACRO and SWLS, and MACRO and PA.

Results failed to provide consistent support for this Hypothesis. The significant relationships that were found between Macro Worry, general mental health as measured by the BSI 18 (Hypothesis 2b; $r = .21, p < .001$), negative affect (Hypothesis 2c; $r = .22, p < .001$), and life satisfaction (Hypothesis 2d; $r = -.19, p < .001$) were in a direction opposite to that hypothesized. Hypothesis 2a and Hypothesis 2e, regarding the relationship of Macro Worry with general mental health as measured by the TPIMH ($r = -.07, p = .28$) and Positive Affect ($r = .07, p = .32$), also failed to receive support.

Hypothesis 3

Hypothesis 3 refers to the predicted relationship between micro worry and clinical conceptualizations of pathological worry (Borkovec, et al.,1983) and nonpathological worry (Tallis, Eysenck, & Matthews, 1992). Hypothesis 3a and Hypothesis 3b predicted significant positive correlations between MICRO and PSWQ, and MICRO and WDQ respectively.

In support of Hypothesis 3a, a significant positive correlation was found between Micro Worry and PSWQ ($r = .33, p < .001$). Hypothesis 3b, suggesting a positive correlation between Micro Worry and WDQ, was also supported ($r = .53, p < .001$).

Hypothesis 4

Hypothesis 4 concerns the relationship of value concordance to Macro Worry, Positive Affect, and Life Satisfaction. Hypothesis 4a predicted a negative correlation between MACRO and each of the ten value discordance variables. Likewise, Hypothesis 4b predicted a negative correlation between PA and the value discordance variables while Hypothesis 4c predicted a negative correlation between SWLS and each of these variables.

Results indicate mixed support for Hypothesis 4a regarding the relationship of value concordance to Macro Worry and partial support for Hypotheses 4b regarding the relationship of value concordance to Positive Affect. A significant negative correlation between Macro Worry and Security discordance ($r = -.14; p < .05$) provided support for Hypothesis 4a while significant positive correlations of Macro Worry with Hedonism discordance ($r = .15; p < .05$) and Universalism discordance ($r = .14; p < .05$) ran contrary to this hypothesis. A significant negative

correlation between Positive Affect and Achievement discordance ($r = -.13$; $p < .05$) provided support for Hypothesis 4b. Correlations specific to Hypothesis 4 can be viewed in Table 3.

Table 3

Pearson-Product Moment Correlations Between Value Discordance Variables and Macro Worry, Positive Affect, and SWLS.

| Variable | Macro ^a ($n = 233$) | PA ^b ($n = 234$) | SWLS ^c ($n = 234$) |
|----------------------------|----------------------------------|-------------------------------|---------------------------------|
| Power Discordance | .01 | .05 | -.04 |
| Achievement Discordance | -.06 | -.13* | -.07 |
| Hedonism Discordance | .15* | -.04 | -.06 |
| Stimulation Discordance | .05 | -.04 | -.03 |
| Self-direction Discordance | -.01 | -.09 | -.01 |
| Universalism Discordance | .14* | -.07 | .04 |
| Benevolence Discordance | .03 | -.01 | -.00 |
| Tradition Discordance | .00 | -.06 | -.12 |
| Conformity Discordance | -.12 | -.09 | -.02 |
| Security Discordance | -.14* | .03 | -.04 |

^aMacro Worry. ^bPositive Affect. ^cSatisfaction with Life Scale.

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

Hypothesis 5

Hypothesis 5 predicted that the relationship of value concordance to variables representing worry, subjective well being, and general mental health would be strongest amongst African American subjects. A two step procedure was used to test this hypothesis. First, a dichotomous split of each of the value discordance variables was performed in order to produce ten dichotomous variables representing high and low levels for each of the ten value discordance variables. Next, the resulting dichotomous variables were entered into a series of 2 (high or low levels of each of the ten value discordance variables) X 2 (WBETH) ANOVA equations with each of the variables of interest serving as a dependent variable. This procedure resulted in a series of ten ANOVA equations for each variable.

Hypothesis 5 predicted that a significant interaction effect between the value discordance variables and WBETH would be discovered for each of the ANOVA equations. Furthermore, an examination of the estimated marginal means between groups was expected to yield data indicating that African Americans with low value discordance would report lower levels of distress than all other groups while African Americans with high levels of value discordance would report the highest levels of distress.

Hypotheses 5a through 5i tested the relationship of value discordance and ethnicity to each of the following variables: (a) macro worry (Hypothesis 5a), (b) micro worry (Hypothesis 5b), (c) pathological worry as measured by the PSWQ (Hypothesis 5c), (d) nonpathological worry as measured by the WDQ (Hypothesis 5d), (e) general mental health as measured by the TPIMH (Hypothesis 5e), (f) general mental health as measured by the BSI 18 (Hypothesis 5f), (g) negative affect as measured by the PANAS (Hypothesis 5g), (h) positive affect as measured

by the PANAS (Hypothesis 5h), and (i) life satisfaction as measured by the SWLS (Hypothesis 5i).

Results indicate partial support for Hypothesis 5c, Hypothesis 5e, Hypothesis 5h, and Hypothesis 5i. Hypothesis 5c received partial support through a significant interaction effect for Stimulation discordance by Ethnicity with worry as reported on the PSWQ, $F(1, 102) = 4.05$, $p < .05$. Hypothesis 5e was partially supported by a significant interaction effect for Self-direction discordance by Ethnicity with general mental health as measured by the TPIMH, $F(1, 196) = 7.87$, $p < .05$. Hypothesis 5h was partially supported by a statistically significant interaction effect for Tradition discordance by Ethnicity with Positive Affect, $F(1, 202) = 4.18$, $p < .05$. Last, Hypothesis 5i was partially supported by findings indicating significant interaction effects for Stimulation discordance by Ethnicity, $F(1, 202) = 7.98$, $p < .05$ and Tradition discordance by Ethnicity with Life Satisfaction, $F(1, 202) = 3.98$, $p < .05$.

Estimated marginal means were examined to determine more specifically relationships between groups. With regard to Hypothesis 5c, estimated marginal means between groups are displayed in Table 4. An investigation of these means indicate that African Americans with low Stimulation discordance reported significantly less worry on the PSWQ than White Americans ($p < .05$). This finding provides partial support for Hypothesis 5c in showing that the relationship of value discordance to low levels of pathological clinical worry is strongest for African Americans.

Table 6 also shows that White Americans with low Stimulation discordance report a significantly greater amount of worry on the PSWQ than all other groups. This finding runs contrary to Hypothesis 5c in that it suggests that the relationship of Stimulation value discordance to high scores on the PSWQ is strongest for White Americans.

TABLE 4

Estimated Marginal Mean Scores on the PSWQ^a for Stimulation Discordance (Low or High) by Ethnicity (White or African Americans).

| Stimulation Discordance | PSWQ ^a Mean | 95% Confidence Interval | |
|-------------------------|------------------------|-------------------------|-------------|
| | | Lower Bound | Upper Bound |
| Low | | | |
| White Americans | 50.92* | 46.96 | 54.87 |
| African Americans | 40.98* | 37.48 | 44.48 |
| High | | | |
| White Americans | 47.13 | 43.50 | 50.75 |
| African Americans | 44.98 | 40.84 | 49.11 |

^aPenn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990).

* $p < .05$

In reference to Hypothesis 5e, estimated marginal means between groups are presented in Table 5. Investigation of these means indicate that White Americans highly discordant in Self-direction values score significantly lower on the TPIMH, indicative of greater psychological distress, than any other group ($p < .05$). Furthermore, African Americans highly discordant in Self-direction values score significantly higher on the TPIMH than any other group ($p < .05$). These findings run contrary to Hypothesis 5e and suggest that greater value discordance is related to lower levels of psychological distress for African American participants.

TABLE 5

Estimated Marginal Mean Scores on the TPIMH^a for Self-direction Discordance (Low or High) by Ethnicity (White or African Americans).

| Self-direction Discordance | TPIMH ^a Mean | 95% Confidence Interval | |
|----------------------------|-------------------------|-------------------------|-------------|
| | | Lower Bound | Upper Bound |
| Low | | | |
| White Americans | 60.69 | 58.63 | 62.74 |
| African Americans | 60.00 | 58.00 | 62.00 |
| High | | | |
| White Americans | 57.85* | 55.93 | 59.78 |
| African Americans | 62.91* | 60.81 | 65.01 |

^aMental Health Subscale of the Trier Personality Inventory (Becker, 1989).

* $p < .05$

With regard to positive affect, estimated marginal means between groups of White and African Americans high or low in Tradition discordance are displayed in Table 6. Investigation of these means indicates that White Americans with highly discordant Tradition values report significantly lower levels of positive affect than any other group ($p < .05$). This finding runs contrary to Hypothesis 5h in that it suggests that the relationship between value discordance and positive affect is strongest for White Americans.

TABLE 6

Estimated Marginal Mean Scores of Positive Affect for Tradition Discordance (Low or High) by Ethnicity (White or African Americans).

| Tradition discordance | Mean Positive affect | 95% Confidence Interval | |
|-----------------------|----------------------|-------------------------|-------------|
| | | Lower Bound | Upper Bound |
| Low | | | |
| White Americans | 35.85 | 34.03 | 37.67 |
| African Americans | 35.89 | 33.92 | 37.86 |
| High | | | |
| White Americans | 33.08* | 31.17 | 34.99 |
| African Americans | 37.00 | 35.23 | 38.77 |

* $p < .05$

In reference to Hypothesis 5i, regarding life satisfaction as measured by the SWLS, estimated marginal means between groups are displayed in Table 7. Investigation of these means indicates that African Americans with high Stimulation discordance report significantly lower satisfaction with life than any other group ($p < .05$). This finding provides partial support for Hypothesis 5i in that it suggests that the relationship of value discordance to life satisfaction is strongest for African Americans.

TABLE 7

Estimated Marginal Mean Scores on the SWLS^a for Stimulation Discordance (Low or High) by Ethnicity (White or African Americans).

| Stimulation discordance | SWLS ^a Mean | 95% Confidence Interval | |
|-------------------------|------------------------|-------------------------|-------------|
| | | Lower Bound | Upper Bound |
| Low | | | |
| White Americans | 24.68 | 22.75 | 26.61 |
| African Americans | 23.87 | 22.16 | 25.58 |
| High | | | |
| White Americans | 25.89 | 24.12 | 27.66 |
| African Americans | 19.74* | 17.72 | 21.76 |

^aSatisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).

* $p < .05$

Table 8 presents the estimated marginal means for life satisfaction of White and African Americans high or low in Tradition discordance. Results indicate that White Americans with low Tradition discordance score significantly higher on the SWLS than all other groups ($p < .05$). This finding runs contrary to Hypothesis 5i in that it suggests that the relationship between value discordance and life satisfaction is strongest for White Americans.

TABLE 8

Estimated marginal mean scores on the SWLS^a for Tradition discordance (Low or High) by Ethnicity (White or African Americans).

| Tradition discordance | SWLS ^a Mean | 95% Confidence Interval | |
|-----------------------|------------------------|-------------------------|-------------|
| | | Lower Bound | Upper Bound |
| Low | | | |
| White Americans | 26.63* | 24.80 | 28.46 |
| African Americans | 21.54 | 19.57 | 23.52 |
| High | | | |
| White Americans | 23.92 | 22.00 | 25.84 |
| African Americans | 22.63 | 20.85 | 24.41 |

^aSatisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).

* $p < .05$

Exploratory analyses

Endorsement of Individual Value Types Overall and by Ethnicity

Means and standard deviations for individual value types overall and by ethnicity are displayed in Table 9. As expected, Hedonism, Achievement, and Self-direction represented three of the five most highly endorsed individual value types both overall and by ethnicity.

Unexpectedly, Power, a value type associated with social status and prestige, was one of the least endorsed values. Among White Americans, expectations were most clearly supported as Hedonism, Achievement, Self-direction, and Stimulation represented four of the five most highly endorsed values within that ethnic group.

TABLE 9

Means and Standard Deviations of Individual Value Types Overall and by Ethnicity.

| Variable | Ethnicity | | | | | |
|----------------|-----------|-----------|-------------------|-----------|-----------------|-----------|
| | Overall | | African Americans | | White Americans | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Power | - 6.18 | 9.74 | - 3.12 | 9.35 | - 8.05 | 9.60 |
| Achievement | 5.30 | 7.03 | 5.62 | 6.08 | 4.94 | 7.69 |
| Hedonism | 5.31 | 6.75 | 3.39 | 7.10 | 7.41 | 5.89 |
| Stimulation | - 1.53 | 7.75 | - 1.85 | 6.98 | - 0.65 | 8.35 |
| Self-direction | 5.07 | 6.78 | 5.11 | 5.91 | 4.84 | 7.68 |
| Universalism | - 7.07 | 8.86 | - 6.74 | 8.58 | - 7.81 | 9.12 |
| Benevolence | 5.22 | 6.73 | 2.74 | 6.32 | 7.84 | 6.54 |
| Tradition | - 4.09 | 8.70 | - 3.05 | 9.09 | - 5.50 | 8.24 |
| Conformity | - 0.34 | 8.98 | - 1.53 | 8.87 | - 2.91 | 9.36 |
| Security | - 1.69 | 7.68 | - 0.56 | 8.09 | - 2.99 | 7.30 |

Differences between African and White Americans in Individual Values

Ethnicity differences in individual values were examined by conducting a series of t-tests between African and White Americans for each of the ten value types (Power, Achievement, Hedonism, Stimulation, Self-direction, Universalism, Benevolence, Tradition, Conformity, and Security). Differences between African and White Americans in endorsement of individual value types were expected, although not hypothesized.

Significant differences were found between African and White Americans for the following value types: Power, $t(204) = -3.74, p < .001$; Hedonism, $t(204) = 4.42, p < .001$; Benevolence, $t(204) = -5.69, p < .001$; Tradition, $t(204) = -2.02, p < .05$; and Security, $t(204) = -2.26, p < .05$. These findings indicate that African Americans endorse significantly higher levels of Power, Tradition, and Security while White Americans report significantly higher levels of Hedonism and Benevolence.

Differences between African and White Americans in Reported Worry

Ethnicity differences in worry were examined by conducting a series of t-tests comparing mean differences between African and White Americans in macro worry, micro worry, pathological worry as measured by the PSWQ, and nonpathological worry as measured by the WDQ. Results are presented in Table 10. As anticipated, results indicated that African Americans reported significantly more macro worry than White Americans. The finding that White American participants displayed significantly more worry on the PSWQ than African Americans ($p < .01$) runs contrary to expectations. No other differences were found between African and White Americans in the self-report of worry.

TABLE 10

Summary of T-tests Examining Ethnicity Differences Between the Worry Variables Investigated.

| Variable | Ethnicity | | | | df | t |
|-------------------|-------------------|-----------|-----------------|-----------|--------|--------|
| | African Americans | | White Americans | | | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | | |
| Macro | 27.89 | 13.79 | 22.39 | 9.75 | 183.72 | 3.30** |
| Micro | 33.06 | 13.85 | 29.90 | 12.74 | 204.00 | 1.70 |
| PSWQ ^a | 42.65 | 12.49 | 48.85 | 15.04 | 197.33 | 3.22** |
| WDQ ^b | 25.47 | 16.40 | 24.05 | 14.67 | 203.00 | 0.65 |

^aPenn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990). ^bWorry Domains Questionnaire (Tallis, Eysenck, and Matthews, 1992).

* $p < .05$

Differences in Reported Stress between African and White Americans

It was expected that African Americans would show greater levels of stress than White Americans and it was also expected that a stress by ethnicity interaction effect would impact variables representing worry, subjective well being, and general mental health. A t-test was performed in order to test for ethnicity differences in reported levels of stress. After creating a

dichotomous variable to represent levels of stress as reported on the RLCQ, a series of 2 (high or low levels stress) X 2 (White or African American) ANOVA equations were performed with each of the variables serving as a dependent variable in order to test for interaction effects.

Contrary to anticipations, there were no significant differences in reported levels of stress as measured by the RLCQ between African Americans and White Americans nor were any interaction effects between stress and ethnicity found in variables representing worry, subjective well being, and general mental health.

Differences between African and White Americans in Other Variables Investigated

In order to investigate ethnicity differences between African Americans and White Americans in other variables of interest (i.e. TPIMH, BSI, PA, NA, SWLS) a series of t-tests were performed. These findings are summarized in Table 11. Findings indicate significant ethnicity differences in general mental health as measured by the TPIMH, positive affect, and life satisfaction as measured by the SWLS. These findings suggest that African Americans reported more positive affect and stronger general mental health status as measured by the TPIMH than White American participants. White American participants, on the other hand, reported greater life satisfaction as measured by the SWLS.

TABLE 11

Summary of T-tests Examining Ethnicity Differences in Other Variables of Interest.

| Variable | Ethnicity | | | | df | t |
|-------------------|-------------------|-----------|-----------------|-----------|--------|--------|
| | African Americans | | White Americans | | | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | | |
| BSIa | 12.43 | 9.98 | 11.52 | 8.30 | 203.00 | 0.71 |
| TPIMHb | 61.38 | 8.22 | 59.17 | 6.39 | 198.00 | 2.13* |
| PA ^c | 36.50 | 7.33 | 34.53 | 6.29 | 204.00 | 2.07* |
| NA ^d | 19.27 | 5.56 | 18.90 | 5.58 | 203.00 | 0.48 |
| SWLS ^e | 22.15 | 7.10 | 48.85 | 15.04 | 204.00 | 3.35** |

^aBrief Symptom Inventory 18 (Derogatis, 2000). ^b Mental health subscale of the Trier Personality Inventory (Becker, 1989). ^cPositive Affect. ^dNegative Affect. ^eSatisfaction With Life Scale (Diener, Emmons, et al., 1985).

* $p < .05$, ** $p < .01$.

Gender Differences Between the Variables Investigated

In this section a description of gender differences in the sample of study participants is provided. Although hypotheses regarding gender were not offered, gender differences were examined due to gender being considered an indispensable unit of measurement in psychological related research.

A series of t-tests were conducted to explore gender differences and significant results are presented in Table 12. Results regarding gender differences indicate that female participants endorsed worry (as measured by the PSWQ), Life Satisfaction, Hedonism, Self-direction, and Benevolence significantly more than male participants while male participants endorsed Macro Worry and Power significantly more than female participants. Furthermore, male participants' endorsements of Achievement and Benevolence were significantly more discordant from the overall mean than were female participants' endorsement of these value types.

The distribution for variables investigated in this study by gender is presented in Appendices M through P. Appendix M contains variables pertaining to worry; Appendix N includes information on subjective well being, general mental health status, and life stress; and distribution of individual value types by gender are presented in Appendix O. The distributions for discordance in individual value types by gender are found in Appendix P.

Table 12

Significant T-tests for Gender Differences Between the Variables Investigated.

| Variable | Gender | | | | | | df | t |
|-----------------------------|----------|-----------|----------|----------|-----------|----------|--------|--------|
| | Male | | | Female | | | | |
| | <u>M</u> | <u>SD</u> | <u>n</u> | <u>M</u> | <u>SD</u> | <u>n</u> | | |
| PSWQ ^{ab} | 43.07 | 12.30 | 98 | 48.26 | 15.08 | 136 | 228.37 | 2.89** |
| SWLS ^c | 22.28 | 7.06 | 98 | 24.69 | 6.91 | 136 | 232.00 | 2.62* |
| Hedonism | 3.98 | 7.03 | 98 | 6.27 | 6.40 | 136 | 232.00 | 2.59* |
| Self-direction ^d | 3.87 | 7.42 | 98 | 5.94 | 6.16 | 136 | 184.49 | 2.26* |
| Benevolence ^e | 4.08 | 7.30 | 98 | 6.04 | 6.18 | 136 | 187.00 | 2.16* |

^aPenn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990). ^bEqual variances not assumed. ^cSatisfaction With Life Scale (Diener, Emmons, et al., 1985). ^dEqual variances not assumed. ^eEqual variances not assumed.

* $p < .05$, ** $p < .01$.

(table continues)

Table 12 (continued)

Significant T-tests for Gender Differences Between the Variables Investigated.

| Variable | Gender | | | | | | df | t |
|-------------------------|----------|-----------|----------|----------|-----------|----------|--------|--------|
| | Male | | | Female | | | | |
| | <u>M</u> | <u>SD</u> | <u>n</u> | <u>M</u> | <u>SD</u> | <u>n</u> | | |
| Macro | 28.71 | 13.33 | 98 | 24.81 | 12.01 | 136 | 231.00 | 2.34* |
| Power | - 3.37 | 9.72 | 98 | - 8.21 | 9.27 | 136 | 232.00 | 3.87** |
| Achievement Discordance | 6.30 | 4.31 | 98 | 5.16 | 4.05 | 136 | 232.00 | 2.08* |
| Benevolence Discordance | 6.21 | 3.97 | 98 | 4.95 | 3.76 | 136 | 232.00 | 2.46* |

* $p < .05$, ** $p < .01$.

Summary of Significant Findings

In summary, findings indicate strong support for the conceptualization of micro worry presented by Boehnke, Schwartz, et al. (1998), based on correlations in the expected direction with general mental health as measured by the TPIMH and the BSI 18, negative affect, life satisfaction, and further clinical conceptualizations of worry (Borkovec, et al., 1998; Tallis, et al. 1992) as measured by the PSWQ and the WDQ. Hypothesized relationships between value concordance and macro worry were supported by negative correlations between macro worry, conformity discordance, and security discordance. The hypothesized relationship between value concordance and positive affect was supported by a negative correlation between positive affect and achievement discordance. The hypothesized relationship between value concordance and life satisfaction received support through a negative correlation between life satisfaction and tradition discordance.

Findings regarding the interaction of value concordance with ethnicity provide support for Hypothesis 5 with respect to Stimulation discordance. Findings indicate that African Americans highly concordant with all other participants in their endorsement of the Stimulation value type display significantly less worry than White Americans. Furthermore, findings indicate that African Americans highly discordant in this value type report significantly lower levels of life satisfaction than all other participants.

The strong endorsement of the Hedonism, Achievement, and Self-direction value types found in this sample is consistent with expectation in the cultural values literature. The endorsement of individual value types by White Americans is also closely aligned with these expectations. Further exploratory findings suggest that African Americans endorse Power, Tradition, and Security value types significantly more than White Americans and that White

Americans endorse the value types of Hedonism and Benevolence significantly more than African Americans.

Exploratory analyses also provided evidence that White American participants, somewhat paradoxically, reported more worry and significantly greater satisfaction with their lives. On the other hand, African Americans reported more macro worry, positive affect, and stronger general mental health status by comparison with White American participants, another unexpected combination of findings.

CHAPTER VI: DISCUSSION

The present study addressed four general issues. The first issue was focused on the experience of worry and its correlates. In particular, the relationship of micro and macro worry with mental health status was investigated as well as the relationship of micro worry (based on the social psychological conceptualization of Boehnke, Schwartz, et al., 1998) with the clinical concept of worry (as formulated by Davey & Tallis, 1994 and Borkovec, et al., 1998).

Predictions about these relationships were tested in Hypotheses 1, 2, and 3.

The second issue pertained to values and the derived concept of value concordance. Hypothesis 4 was advanced to test predictions about the impact of value concordance upon macro worry and subjective well being.

The third issue involved the extension of the concept of value concordance to ethnicity differences, proceeding from the proposal by Carter et al. (1996). Specifically, Hypothesis 5 was formulated to test predictions about the differential effects of value concordance upon African American and White American samples. Carter et al.'s (1996) formulations were further explored in relation to the role of stress, both directly and as a factor influencing ethnocultural differences in overall mental health status.

The fourth issue addressed in this study concerned the relationship of ethnicity to the entire range of variables explored in this study. Findings demonstrated significant differences between African and White American participants in the experience of worry and the endorsement of individual value types. Other findings also provided further insight into ethnic differences in the experience of worry, subjective well being, and general mental health.

In the sections that follow findings specific to these four major issues will be discussed. The relationship of these findings to past research, their relevance for future investigations, and limitations of this study will also be addressed.

An additional section pertaining to gender differences will also be included as part of this discussion. Although gender differences were not explicitly hypothesized they were nonetheless examined. For this reason this section will provide a brief exploration of gender differences noted amongst study findings.

Findings Regarding the Social Psychological Conceptualization of Worry

Findings provide support for the conceptualization of micro worry proposed by Boehnke, Schwartz, et al. (1998). Specifically, they bolster the assertion by these authors that an individual's worry about objects that are close to oneself is associated with negative indicators of general mental health status. Findings also extend results found with Israeli, Fijian, Nepalese, and German samples (Boehnke, Schwartz, et al., 1998; Boehnke, Stromberg, et al., 1998) to an American population. In conformity with these formulations results indicate that micro worry operates similarly to clinical conceptualizations of worry suggested by Borkovec et al. (1998) and Tallis, et al. (1992). The strong correlation of micro worry with the WDQ indicates that micro worry more closely resembles the clinical conceptualization of nonpathological or normal worry proposed by Tallis et al. (1992). This finding is logically consistent given that the research of Boehnke, Schwartz, et al. (1998) and Tallis et al. (1992) is focused on worry as experienced by normal, as opposed to dysfunctional, populations.

Unlike in Fiji, Israel, and Germany (Boehnke, Stromberg, et al., 1998), no gender differences were found in the self-report of micro worry. Apparently, American males and females within the current college-age population are similar in their report of (and possibly their experiences of) micro worry. This finding is surprising because, with clinical conceptualizations of pathological worry such as that measured by the PSWQ, females were found to report significantly more worry than male respondents (Molina & Borkovec, 1993); In fact, this greater incidence of worry has been posited as a significant factor influencing gender differences in the experience of depression (Nolen-Hoeksema, 1987). Although micro worry is similar to clinical pathological worry in its relation to negative indicators of mental health status, the lack of gender differences provides further evidence to suggest that micro worry is more closely related to clinical conceptualizations of normal (as opposed to pathological) clinical worry.

The expectation that macro worry, i.e. concern with societal and global problems, would be associated with more positive indicators of general mental health has not received support in this study. The findings by Boehnke, Schwartz, et al. (1998) have not generalized to a population of American college students.

The social psychological conceptualization has been substantially, but not uniformly, supported by findings of the present study. Findings on micro worry, but not on macro worry, generally conform to the expectations derived from Boehnke, Schwartz, et al.'s (1998) model. Within the American sample used in this research, the social psychological conceptualization of worry operates similarly, although not identically, to existing clinical conceptualizations of worry. In particular, findings indicate that micro worry more clearly reflects clinical conceptualizations of nonpathological worry proposed by Tallis, et al. (1992).

Value Concordance and Its Relationship to Worry and Positive Aspects of Subjective Well Being

Partial support was also obtained for the value concordance relationships hypothesized in this study. Achievement concordance was correlated with macro worry and positive affect, but not life satisfaction. Although several relationships were significant, they were on the whole quite low. Subject to these limitations, findings indicate that value concordance is more strongly associated with the value types of achievement, universalism, and hedonism within the population examined in this study.

Findings regarding achievement concordance suggest that college students who value achievement much more or much less than those around them experience less positive affect. This result is consistent with findings by Sanderson and Cantor (1997) and Cantor and Sanderson (1999) suggesting that congruence of an individual's goals (represented in the present study by individual value types) with the environment supportive of those goals is conducive to subjective well being.

Other findings regarding value concordance were affected by results pertaining to the macro worry concept. In presenting hypotheses specific to value concordance it was expected that macro worry would reflect positive mental health. However, the hypothesis suggesting a relationship between macro worry and positive mental health was not supported. In fact, macro worry functioned similarly to micro worry as an indicator of negative mental health. Therefore, positive correlations between value discordance variables and macro worry reflected a relationship of low value concordance with greater endorsement of a symptom of negative

mental health. Moreover, negative correlations between these variables reflected a relationship of high value concordance to lower endorsement of a symptom of negative mental health.

Keeping the above point in mind, findings demand a different explanation. Positive correlations observed between Universalism discordance, Hedonism discordance, and macro worry variables suggest that lower value concordance is associated with an indication of negative mental health. Similarly, the negative relationship of conformity discordance and security discordance variables with macro worry suggest that lower concordance is associated with lower endorsement of an indicator of mental health, a finding inconsistent with the hypotheses proposed in this study.

The small effects found for hedonism concordance and universalism concordance upon macro worry may have been traceable to these value types representing the most and least strongly endorsed values, respectively. Since these value types were either strongly opposed or supported by the population at large, it is likely that those endorsing these value types in a direction opposite to the sample were particularly susceptible to the effects of value concordance.

Overall, findings regarding the relationship of value concordance to macro worry, positive affect, and subjective well being substantiate the role that value concordance plays in influencing these variables. However, its impact is small and limited to certain value types. Results from this study indicate that the relationship of value concordance to general mental health is more likely to be found in situations where value discordance is major. For this reason, it is suggested that researchers investigate the effect of value concordance in larger, more diverse populations where greater variations in value concordance is likely to be observed. Studying value concordance in settings where certain values are likely to be endorsed highly and in

populations with explicit and specific sociopolitical agendas are particularly promising undertakings.

Findings Regarding the Research Framework Proposed by Carter et al. (1996)

Carter et al.'s (1996) ideas were tested by examining the interaction of value concordance and ethnicity. It was hypothesized that value concordance would affect the relationship of ethnicity with general mental health factors and that African Americans would be more susceptible to the influence of value concordance than White Americans. Findings supported this hypothesis, but only for the Stimulation value type.

For African American participants the Stimulation value type, involving excitement and challenge in life, appeared to be more important than other value types in influencing indicators of general mental health. The less concordant African American's endorsement of this value type than by those around them, the lower was their report of life satisfaction. Furthermore, high Stimulation concordance amongst African Americans was associated with significantly lower amounts of worry. Moreover, for African American participants, lower value concordance was associated with less positive indicators of general mental health. The finding that African American participants, and not White American participants, were susceptible to the effects of Stimulation concordance is also consistent with Carter et al.'s (1996) framework.

A possible explanation for findings regarding Stimulation discordance is suggested from a closer examination of individual value dimensions. Schwartz (1992) reported that the Conservation dimension, featuring value types supportive of status quo, is juxtaposed against the Openness to Change dimension characterized by value types challenging the status quo. It is

plausible to assume that the college setting generally represents environments where openness to change is encouraged and supported. It may also be posited that, in the college milieu, openness to change through the pursuit of academic and artistic goals (as reflected in the Self-direction value type) receives greater encouragement than openness to change through other channels (as reflected in the Stimulation value type). Consistent with these considerations, the Self-direction value type emerged as one of the more highly endorsed value types in this study while the Stimulation value type was one of the least endorsed. It can then be argued that this contrast occurred because the values of those participants who endorsed Stimulation corresponded neither to the assumed values of the college setting nor to the actual values endorsed by their peers. This condition reflects a situation where value concordance is particularly low and, therefore, the relationship between value concordance and mental health is more likely to be noted.

Additional findings concerning the interaction of value discordance with ethnicity provided information helpful for understanding differences between ethnic groups in reported psychopathology. These findings involved differences between African and White American participants in Tradition and Self-direction discordance.

In reference to the Tradition value type, the interaction effect for Tradition discordance and ethnicity on positive affect and life satisfaction is worth noting. For White Americans in this study, the more discordant their endorsements of the Tradition value type from those around them, the less likely they were to report positive affect. Furthermore, low Tradition discordance among White Americans was associated with significantly higher amounts of endorsed life satisfaction. Although this expectation was not substantiated for African American participants, the fact that value discordance was found to impact ethnicity differences in mental health status is consonant with Carter et al.'s (1996) model.

It is also important to note that Tradition, a representative of the Conservation dimension of value types, was not strongly endorsed by the overall sample. On the other hand, the Self-direction value type (a representative of the Openness to Change dimension that opposes Conservation) was one of the most strongly endorsed value types. As a consequence of this disparity, participants who strongly endorsed traditional values were part of an environment where many of their peers held values directly opposed to their own. This situation exemplifies a circumstance where value discordance is particularly strong and hence may affect general well being, and through it, mental health.

Moreover, for White American participants this finding may reflect differences from African American participants in positive affect, life satisfaction, and the tradition value type itself. Since White Americans in this study reported lower levels of positive affect and higher life satisfaction than African American participants, this discrepancy may have influenced findings involving Tradition discordance and these variables. Furthermore, African American participants were less susceptible to this effect since they endorsed the Tradition value type significantly more than White Americans and, therefore, were less likely to experience the level of discordance that White Americans experienced.

Another noteworthy finding regarding the interaction of value discordance with ethnicity involves the Self-direction value type. Discordance in this value type appeared to affect the mental health status of African and White American participants differently and in a way that ran contrary to Carter et al.'s (1996) expectations. For African Americans, the more discordant their endorsement of this value type from others around them, the more positive was their report of their general mental health status. On the other hand, for White American participants, high Self-direction discordance was associated with poorer self-reports of general mental health status.

The explanation offered for these findings is consistent with the results concerning tradition discordance discussed above. Individuals who did not strongly endorse Self-direction were more likely to endorse the Tradition value type since it represents a dimension opposite to Self-direction. As a result, these individuals were likely to experience the negative impact associated with Tradition discordance. African Americans were less likely to suffer the impact of tradition discordance since, as a group, they endorsed Tradition more strongly than White Americans and, therefore, did not experience as discordant a relationship.

Further research should be undertaken to explore reasons why African Americans highly discordant in Self-direction reported better mental health than other participants. A possible explanation for this finding may be the high concordance amongst African Americans in their endorsement of value types representing the conservation dimension. It will be recalled that Conservation is the dimension composed of the Tradition, Security, and Conformity value types and that it is opposite to Self-direction. It is therefore likely that low endorsement of the Self-direction value type will be reflected in higher endorsement of Tradition and Security. Since White Americans did not endorse Tradition and Security strongly, they were more susceptible to the effects of value discordance referred to above. On the other hand, African Americans, though still discordant from the overall sample, are thought to be more concordant with other African Americans in their endorsement of these value types since they display a tendency to value them more than White Americans. This concordance of value type endorsements between African American participants may be sufficient to produce a positive effect on mental health.

Carter et al. (1996) also predicted that African American participants would report greater stress than White American participants due to their marginal status within the American society. This finding, however, failed to materialize. Furthermore, reported stress was not found

to influence the relationships among ethnicity and indicators of mental health as proposed by Carter et al. Caution is indicated in interpreting these findings. Prejudice and racism has not disappeared from the daily lives of African Americans, as well as other minorities; however, these stressors were not incorporated into the stress measure used in this study. In the future, it is imperative to develop such measures of stress so as to adequately and objectively assess the impact of such stressors.

In general, the findings obtained in this study suggest that value concordance is important to consider for examining differences in self-reported psychopathology between ethnic groups. In particular, the Stimulation value type conformed more closely to Carter et al.'s (1996) expectations than the other value types did.

The Relationship of Ethnicity to Variables Examined in this Study

Ethnicity Differences in the Endorsement of Individual Values

In reference to individual values, findings indicated that African American participants endorsed Power, Security, and Tradition more than White American participants while White American participants endorsed the Hedonism and Benevolence value types more than African Americans. The finding regarding African American's endorsement of the power value type is noteworthy, given that cultural value research has often suggested that Whites (based on international evidence from Euroamerican cultures) value power and individual control more than others (Kluckhohn & Strodtbeck, 1961; Smith & Schwartz, 1997). This finding can be attributed to African Americans' status as a group with little power within American society, in

perception and in actuality, both historically and in the present. It can be argued that low power ethnic groups are more likely to strive for power that they perceive as lacking.

Results regarding the Tradition value type are also consistent with findings drawn from the cultural value literature. Research on cultural values has shown that many cultures in Asia, Africa, and Latin America reflect greater respect for traditional beliefs and customs (Smith & Schwartz, 1997). This impression is paralleled by the strong endorsement of the Tradition value type by African Americans.

The finding regarding White American participants' greater endorsement of the Hedonism value type, concerned with self-indulgence and sensual pleasure, is worth noting but at this time it is difficult to speculate as to its reason. It will be left to future researchers to examine, replicate, and further explore the meaning of this finding.

As indicated in a previous section, findings indicate that African American college students, through their greater endorsement of the Tradition and Security value types, place more emphasis on the conservation dimension proposed by Schwartz (1992) than do White Americans. This dimension, composed of the Tradition, Conformity, and Security value types, emphasizes maintenance of status quo.

This latter finding appears to be paradoxical when real world events are taken into consideration. Soon after the completion of this data collection there was a great deal of turmoil experienced on the Penn State University Park campus following a number of death threats against African American student leaders. These events led African American students to actively challenge status quo at the University and to demand the implementation of policies for promotion of greater racial tolerance.

At first glance, it appears as if these events reflected behaviors that are inconsistent with the values endorsed by African American participants. However, these findings pose less of a paradox if: (a) the object to which the Conservation dimension is focused is taken into account and, (b) ethnocultural differences in the Self-enhancement dimension, characterized by an emphasis on valuing individual needs over group needs, are considered.

In examining the Conservation dimension it is important to recognize that the aspects of status quo with which one is concerned may differ across groups. Thus, a possible reason why the endorsed values may not have reflected actual events for African American students may be because Conservation did not reflect a preference for maintenance of status quo within a predominantly White college setting. Instead, greater endorsement of Conservation may have expressed a preference for maintaining the integrity of African American customs and traditions – an expectation supported by African American participants' strong endorsement of the Tradition and Security value types. Findings regarding the Self-enhancement dimension indicate that African American respondents valued individual over group needs through the pursuit of social status and prestige (via their greater endorsement of the Power value type). On the other hand, White American participants valued individual needs over group needs via their pursuit of pleasure (as evidenced by their greater endorsement of the Hedonism value type). These findings suggest that threats to the security of African Americans may trigger attempts to protect individual needs through the pursuit of power. That is indeed what happened; power was sought by challenging the Penn State University administration to change the racial climate through the institution of specific policies.

Ethnicity Differences in Worry, Subjective Well Being, and General Mental Health Status

White Americans were found to report significantly more worry than African Americans, a finding that runs contrary to theoretically based expectations. Lack of a difference in stress levels between African and White American participants may lead to a possible explanation of this finding. It is reasonable to surmise that greater worry among African Americans, when it does occur, does so in response to greater levels of experienced stress. Since findings did not reflect any differences in levels of stress between the two groups in this study, there is no reason to expect any discrepancies in worry.

For another possible explanation of this finding one may turn to the ethnicity differences in the endorsement of individual values. It is possible that African Americans' greater valuing of tradition may serve as a buffer against worry by providing an avenue for channeling increased anxiety through culturally sanctioned customs and behaviors. Similarly, it is possible that White Americans' greater endorsement of the Hedonism value type may lead to increased worry since they are likely to "take chances" and engage in risk taking activities that increase the likelihood of future stress. These possibilities remain to be explored in future research.

As anticipated, African American participants reported significantly more macro worry than White Americans. These findings document a distinctive mode of processing worry in African Americans and may be indicative of dissatisfaction with status quo.

Findings regarding the greater report of positive affect for African American participants, greater life satisfaction for White American participants, and lower reported levels of psychological distress for African Americans raise questions that remain to be addressed in

future research. As is the case with worry, ethnic differences in the endorsement of individual values provide an opportunity for at least a partial explanation of these findings.

The Relationship of Gender to Variables Examined in this Study

Findings regarding gender differences indicated that female participants reported greater amounts of pathological clinical worry, life satisfaction, and less macro worry than male participants. In addition, female participants endorsed the value types of Hedonism, Self-direction, and Benevolence significantly more than did males. These value differences suggested that female participants displayed a tendency to place more importance on pursuing pleasure, being artistically or intellectually creative, and being concerned about the welfare of close friends and relatives than did males. These findings, in part, reflected feminine values as posited by Hofstede (1980) in his worldwide study. Male participants, on the other hand, placed greater importance on the pursuit of power and prestige than did female participants, again consistent with Hofstede's findings.

Findings regarding gender differences in the report of worry are consistent with past research (Molina & Borkovec, 1993). With regards to other gender differences, the impact of findings on future research remains to be examined. As with ethnicity differences, a greater understanding of these differences may be helpful in further understanding the role of gender differences in the normal and pathological experience of subjective states.

Limitations of the Current Study

Prior to concluding, limitations specific to three areas will be identified. These limitations include study design and selection procedures, their relation to measurement issues, and limitations pertaining to the generalizability of findings.

The study's correlational design did not permit examination of causation between variables. Although results may provide leads for theorizing about causal relationships, the present findings are entirely relational. Moreover, participants were not randomly selected and, therefore, it cannot be inferred that the sample population is representative of the population at large or of the ethnocultural groups compared. In addition to the restrictions of the sample composition in age, education, and marital status, its representativeness was further called into question by recruitment procedures and the methods of reimbursement for study participants. These additional limitations lessened the study's internal validity and should be kept in mind in any future attempts to replicate and extend this research.

The second area of limitations specific to the present study involved measurement issues such as the use of self-report measures and the increased chance of Type I errors. Self-report measures were the sole instruments used for assessing constructs specific to this study. The use of additional methods (e.g. psychophysiological devices, diagnostic interviews, expert observation) as a substitute or adjunct would have increased the likelihood of more substantive findings. The risk of Type I errors stemmed from the large number of variables and analyses included in the present study, whereby an unknown proportion of significant results could have occurred. Although this probability was to some extent reduced by the use of two-tailed tests, the

problem remains, and the findings reported should be replicated before they are considered definitive.

A final limitation of this study involves the generalizability of findings. Due in part to the limitations previously discussed, the extent to which results can be generalized is uncertain. Caution must be used in generalizing any of these results beyond the study sample. Furthermore, due to the lack of random selection, it should not be assumed that study findings generalize even to other students at Penn State University. Although this study has expanded research concepts not previously explored in the United States, it has been studied in a very limited group of the American population. Nonetheless, these findings are helpful as tools for framing future studies in samples both more representative and diverse.

Conclusions and Recommendations for Future Research

In concluding, a number of points will be offered. First, although anticipated findings regarding the social psychological conceptualization of worry did not fully materialize, considerable amounts of incremental information were obtained. These results support the applicability of formulations and findings pertinent to this concept in the American context and invite future research. In particular, future research into the construct of micro worry may be helpful in differentiating the experience of worry amongst clinical and normal populations.

Second, this study examined the major research variables in two ethnoculturally distinct groups. Such research had not yet been undertaken in African American and White American groups. To fill this gap, this study applied Schwartz's (1992) model of individual values which purports to be universal having been studied in numerous cultures.

Now that the initial steps have been taken for understanding individual value differences between African and White Americans it is important that research into this area be continued. In particular, the distinction between cultural and individual value differences has been found fruitful. Although cultural value differences are pertinent for understanding differences across national cultures, individual value differences are more appropriate for examining the individual level constructs ordinarily explored within the psychological literature. Therefore, in order to investigate values within the framework of multicultural psychology it is important to first establish a baseline for ethnic differences in individual, rather than cultural, values. This objective was partially accomplished in this study.

Findings regarding individual value differences and value discordance also provide important tools for consideration in the assessment and treatment of psychopathology between cultural groups. By expanding the understanding of how value differences may influence the assessment and treatment of psychopathology between ethnic groups it is possible to use this information to develop strategies (e.g. community level interventions, empathic interview techniques, alternative measures of distress) for more accurately counteracting psychopathology within the multicultural spectrum of the American population.

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APPENDICES

Appendix A

Glossary of Acronyms Used in the Present Study

| Acronym | Description |
|---------|---|
| BSI 18 | Brief Symptom Inventory 18 |
| MACRO | Macro worry |
| MICRO | Micro worry |
| MMWS | The Micro Macro Worry Scale |
| NA | Negative Affect |
| PA | Positive Affect |
| PANAS | Positive and Negative Affect Schedule |
| PCVS | Pairwise Comparison Value Surevy |
| PSWQ | Penn State Worry Questionnaire |
| RLCQ | Recent Life Changes Questionnaire |
| SWLS | Satisfaction with Life Scale |
| TPIMH | Trier Personality Inventory – Mental Health subscale |
| WBETH | Variable identifying participants endorsing either African or White American Ethnicity |
| WDQ | Worry Domains Questionnaire |

Appendix B

Frequencies of Age: Respondents Grouped by Total Sample, Females, and Males

| Frequency (Percent of Total Sample) | | | |
|-------------------------------------|-----------|-----------|-----------|
| Age | Total | Female | Male |
| 18 | 69 (29.5) | 43 (18.4) | 26 (11.1) |
| 19 | 54 (23.1) | 37 (15.8) | 17 (7.3) |
| 20 | 48 (20.5) | 28 (28.0) | 20 (8.5) |
| 21 | 29 (12.4) | 15 (6.4) | 14 (6.0) |
| 22 | 20 (8.5) | 6 (2.6) | 14 (6.0) |
| 23 | 7 (3.0) | 3 (1.3) | 4 (1.7) |
| 24 | 2 (0.9) | 1 (0.4) | 1 (0.4) |
| 26 | 1 (0.4) | 1 (0.4) | 0 (0.0) |
| 34 | 1 (0.4) | 0 (0.0) | 1 (0.4) |
| 35 | 1 (0.4) | 1 (0.4) | 0 (0.0) |
| 45 | 1 (0.4) | 0 (0.0) | 1 (0.4) |
| 46 | 1 (0.4) | 1 (0.4) | 0 (0.0) |

Appendix C

Demographic and Historical Information

Demographic and Historical Information

Although your personal information remains confidential, we are interested in general characteristics of those who participate in this study. Please spend a moment answering these general questions.

- 1) What is your participant (identification) number? _____
- 2) How old are you? (Age in years): _____
- 3) What gender are you? (circle one): Male Female
- 4) What is your marital status? (check all that apply)

| | |
|--|-----------------------------------|
| <input type="checkbox"/> Single | <input type="checkbox"/> Engaged |
| <input type="checkbox"/> Married | <input type="checkbox"/> Divorced |
| <input type="checkbox"/> Separated (due to marital difficulties) | <input type="checkbox"/> Widowed |
- 5) Are you a ? (check one):

| | |
|--|------------------------------------|
| <input type="checkbox"/> Freshman | <input type="checkbox"/> Sophomore |
| <input type="checkbox"/> Junior | <input type="checkbox"/> Senior |
| <input type="checkbox"/> Graduate student (master or doctoral level) | |
- 6) What is your major? (if undeclared please write "undeclared"):

- 7) Which of the following best describes your ethnic or racial background? (circle one):

| | | |
|-----------------------------------|-------------------------------|---------------------------|
| Native American or Alaskan Native | Latino or Hispanic | Asian or Pacific Islander |
| White, not of Hispanic origin | Black, not of Hispanic origin | |
| Other: _____ | | |

Appendix D

MMWS

MMWS

Below is a list of things that many people say they worry about. Please read each of the statements and using the scale below fill in how worried, if at all, you are about it. Please do not go back and change your previous answers.

- | 0 | 1 | 2 | 3 | 4 |
|-----------------------|---|---------------------|---|----------------------|
| Not at all Worried | | Somewhat Worried | | Extremely worried |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
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| 34. _____ | | | | |
| 35. _____ | | | | |

Appendix E

TPIMH

TPI-MH

This questionnaire contains a series of statements regarding certain styles of behavior, thinking, feeling, and attitude that you display more or less often. You should indicate for each of them how frequently the behavior, thought, or feeling occurs in your case. To do this, place a cross in one of the four answer categories, “always”, “often”, “sometimes”, or “never”.

EXAMPLE:

| | | Always | Often | Sometimes | Never |
|----|--|--------|-------|-----------|-------|
| 01 | On important holidays/ anniversaries, I.... send greeting cards to friends/relatives. | | | | |

As you can see, there is a blank space in this sentence (marked with four dots) where a word is omitted. You should mentally insert one of the four frequency categories into this blank place, the one that is most appropriate for you. For example, if you “always” send greeting cards, choose the category “always” to complete the sentence mentally. Mark this answer with a cross in the leftmost square following the sentence. This square has “always” written above it. But, for example, if you only “sometimes” send greeting cards enter a cross in the third box from the left, the one with “sometimes” written above it. You don’t have to spend a long time thinking about your answers. There aren’t any right or wrong ones. We are interested more in your personal viewpoint. Don’t think about which answers might make a “good impression” either. You can rest assured that your answers will be kept absolutely confidential by us

PLEASE ANSWER ALL OF THE QUESTIONS! Choose the answer category each time that is most appropriate for you. Some of the statements have wordings or meanings that are similar to previous statements. Please give your responses to these statements also, even if you have the impression that you have already answered them before.

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(appendix continues)

Appendix E (continued)

TPIMH

| | | Always | Often | Sometimes | Never |
|----|---|--------|-------|-----------|-------|
| 01 | When something important has to be decided, I... know exactly what I want. | | | | |
| 02 | I... feel that I am well-matched for life and its difficulties. | | | | |
| 03 | I... feel inferior to other people. | | | | |
| 04 | I am... well able to represent my own interests | | | | |
| 05 | I am... successful in business and personal matters. | | | | |
| 06 | I...allow myself to be easily influenced by others. | | | | |
| 07 | I... have a feeling of passivity and inner emptiness. | | | | |
| 08 | I... view the future with complete confidence. | | | | |
| 09 | When I encounter a difficult situation, I... trust my ability to master it. | | | | |
| 10 | I... feel full of energy and enterprise. | | | | |
| 11 | I... feel somewhat awkward among others. | | | | |
| 12 | My mood is... good. | | | | |
| 13 | I... have an inferiority complex | | | | |
| 14 | I am... in good physical and mental condition. | | | | |
| 15 | It is... true that I can't stand myself. | | | | |
| 16 | I... have the feeling that things are too much for me. | | | | |
| 17 | I am... successful in satisfying my needs. | | | | |
| 18 | I... act by the motto that I am responsible for my own happiness. | | | | |
| 19 | It's... hard for me to keep my mind on a task or a job. | | | | |
| 20 | I... let myself be easily intimidated by others. | | | | |

Appendix F

Sample BSI 18 Questions

HOW MUCH WERE YOU DISTRESSED BY:

- 1) Faintness or dizziness
- 2) Suddenly scared for no reason
- 3) Feeling blue

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Appendix G

PSWQ

PSWQ

Enter the number that best describes how typical or characteristic each item is of you, putting the number next to the item.

| 1 Not at all typical | 2 | 3 Somewhat typical | 4 | 5 Very typical |
|----------------------------|-----|---|---|----------------------|
| ___ | 1. | If I don't have enough time to do everything I don't worry about it. | | |
| ___ | 2. | My worries overwhelm me. | | |
| ___ | 3. | I don't tend to worry about things. | | |
| ___ | 4. | Many situations make me worry. | | |
| ___ | 5. | I know I shouldn't worry about things, but I just can't help it. | | |
| ___ | 6. | When I am under pressure I worry a lot. | | |
| ___ | 7. | I am always worrying about something. | | |
| ___ | 8. | I find it easy to dismiss worrisome thoughts. | | |
| ___ | 9. | As soon as I finish one task, I start to worry about everything else I have to do. | | |
| ___ | 10. | I never worry about anything. | | |
| ___ | 11. | When there is nothing more I can do about a concern, I don't worry about it any more. | | |
| ___ | 12. | I've been a worrier all my life. | | |
| ___ | 13. | I notice that I have been worrying about things. | | |
| ___ | 14. | Once I start worrying, I can't stop. | | |
| ___ | 15. | I worry all the time. | | |
| ___ | 16. | I worry about projects until they are all done. | | |

Appendix H

PANAS

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

| | | | | |
|--------------------------------|----------|------------|-------------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Very slightly or not at all | a little | moderately | quite a bit | extremely |

| | |
|--------------------|------------------|
| _____ interested | _____ irritable |
| _____ distressed | _____ alert |
| _____ excited | _____ ashamed |
| _____ upset | _____ inspired |
| _____ strong | _____ nervous |
| _____ guilty | _____ determined |
| _____ scared | _____ attentive |
| _____ hostile | _____ jittery |
| _____ enthusiastic | _____ active |
| _____ proud | _____ afraid |

Appendix I

SWLS

SWLS

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

- 1 = strongly disagree
- 2 = disagree
- 3 = slightly disagree
- 4 = neither agree nor disagree
- 5 = slightly agree
- 6 = agree
- 7 = strongly agree

- _____ 1. In most ways my life is close to my ideal.
- _____ 2. The conditions of my life are excellent.
- _____ 3. I am satisfied with my life.
- _____ 4. So far I have gotten the important things I want in life.
- _____ 5. If I could live my life over, I would change almost nothing.

Appendix J

RLCQ

To answer the questions below, place a check in one or more of the spaces to the right of each question. If the event in question happened to you within the past two years, indicate when it occurred by marking in the appropriate column: 0-6 months ago, 7-12 months ago, etc. If you experienced an event more than once over the past two years, mark all appropriate spaces. If the event did not occur over the last two years (or never occurred), leave all boxes empty.

| Within the time period listed have you experienced: | 19-24 | 13-18 | 7-12 | 0-6 |
|--|----------------|----------------|----------------|----------------|
| | mo. ago | mo. ago | mo ago. | mo. ago |
| Health | | | | |
| an injury or illness which: | | | | |
| kept you in bed a week or more, or sent you to the hospital? | _____ | _____ | _____ | _____ |
| was less serious than above? | _____ | _____ | _____ | _____ |
| major dental work? | _____ | _____ | _____ | _____ |
| a major change in eating habits? | _____ | _____ | _____ | _____ |
| a major change in sleeping habits? | _____ | _____ | _____ | _____ |
| a major change in your usual type and/or amount of recreation? | _____ | _____ | _____ | _____ |
| Work | | | | |
| a change to a new type of work? | _____ | _____ | _____ | _____ |
| a change in your work hours or conditions? | _____ | _____ | _____ | _____ |
| a change in your responsibilities at work: | | | | |
| more responsibilities? | _____ | _____ | _____ | _____ |
| fewer responsibilities? | _____ | _____ | _____ | _____ |
| promotion? | _____ | _____ | _____ | _____ |
| demotion? | _____ | _____ | _____ | _____ |
| transfer? | _____ | _____ | _____ | _____ |
| troubles at work: | | | | |
| with your boss? | _____ | _____ | _____ | _____ |
| with coworkers? | _____ | _____ | _____ | _____ |
| with persons under your supervision? | _____ | _____ | _____ | _____ |
| other work troubles? | _____ | _____ | _____ | _____ |
| a major business readjustment? | _____ | _____ | _____ | _____ |
| a retirement? | _____ | _____ | _____ | _____ |
| a loss of job: | | | | |
| laid off work? | _____ | _____ | _____ | _____ |
| fired from work? | _____ | _____ | _____ | _____ |
| a correspondence course to help you in your work? | _____ | _____ | _____ | _____ |
| Home and Family | | | | |
| a major change in living conditions (home improvements or a decline in your home or neighborhood)? | _____ | _____ | _____ | _____ |
| a change in residence? | | | | |
| move within the same town or city? | _____ | _____ | _____ | _____ |
| move to a different town, city, or state? | _____ | _____ | _____ | _____ |
| a change in family "get togethers"? | _____ | _____ | _____ | _____ |
| a major change in health or behavior of family member (illness, accidents, drug or disciplinary problems)? | _____ | _____ | _____ | _____ |
| a marriage? | _____ | _____ | _____ | _____ |
| a pregnancy? | _____ | _____ | _____ | _____ |
| a miscarriage or an abortion? | _____ | _____ | _____ | _____ |
| a gain of a new family member? | | | | |
| birth of a child? | _____ | _____ | _____ | _____ |
| adoption of a child? | _____ | _____ | _____ | _____ |
| a relative moving in with you? | _____ | _____ | _____ | _____ |
| a spouse beginning or ending work outside the home? | _____ | _____ | _____ | _____ |

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(appendix continues)

Appendix J (continued)

| Within the time period listed have you experienced: | 19-24 mo. ago | 13-18 mo. ago | 7-12 mo ago. | 0-6 mo. ago |
|---|--------------------------|--------------------------|-------------------------|------------------------|
| Home and Family (cont.) | | | | |
| a child leaving home: | | | | |
| to attend college? | _____ | _____ | _____ | _____ |
| due to marriage? | _____ | _____ | _____ | _____ |
| for other reasons? | _____ | _____ | _____ | _____ |
| a change in arguments with your spouse? | _____ | _____ | _____ | _____ |
| in-law problems? | _____ | _____ | _____ | _____ |
| a change in the marital status of your parents: | | | | |
| divorce? | _____ | _____ | _____ | _____ |
| remarriage? | _____ | _____ | _____ | _____ |
| a separation from spouse | | | | |
| due to work? | _____ | _____ | _____ | _____ |
| due to marital problems? | _____ | _____ | _____ | _____ |
| a divorce? | _____ | _____ | _____ | _____ |
| the birth of a grandchild? | _____ | _____ | _____ | _____ |
| the death of spouse? | _____ | _____ | _____ | _____ |
| the death of another family member: | | | | |
| child? | _____ | _____ | _____ | _____ |
| brother or sister? | _____ | _____ | _____ | _____ |
| parent? | _____ | _____ | _____ | _____ |
| Personal and Social | | | | |
| a change in personal habits (your dress, friends, lifestyle, etc.)? | _____ | _____ | _____ | _____ |
| beginning or ending school or college? | _____ | _____ | _____ | _____ |
| a change of school or college? | _____ | _____ | _____ | _____ |
| a change in political beliefs? | _____ | _____ | _____ | _____ |
| a change in religious beliefs? | _____ | _____ | _____ | _____ |
| a change in social activities (clubs, movies, visiting, etc.)? | _____ | _____ | _____ | _____ |
| a vacation? | _____ | _____ | _____ | _____ |
| a new, close, personal relationship? | _____ | _____ | _____ | _____ |
| an engagement to marry? | _____ | _____ | _____ | _____ |
| girlfriend or boyfriend problems? | _____ | _____ | _____ | _____ |
| sexual difficulties ? | _____ | _____ | _____ | _____ |
| a "Falling out" of a close personal relationship? | _____ | _____ | _____ | _____ |
| an accident? | _____ | _____ | _____ | _____ |
| a minor violation of the law (traffic ticket, etc.)? | _____ | _____ | _____ | _____ |
| being held in jail (DUI, felony, etc.)? | _____ | _____ | _____ | _____ |
| the death of a close friend? | _____ | _____ | _____ | _____ |
| a major decision regarding your immediate future? | _____ | _____ | _____ | _____ |
| a major personal achievement? | _____ | _____ | _____ | _____ |
| Financial | | | | |
| a major change in finances: | | | | |
| increased income? | _____ | _____ | _____ | _____ |
| decreased income? | _____ | _____ | _____ | _____ |
| investment and/or credit difficulties? | _____ | _____ | _____ | _____ |
| a loss or damage of personal property? | _____ | _____ | _____ | _____ |
| a moderate purchase (such as an automobile)? | _____ | _____ | _____ | _____ |
| a major purchase (such as a home)? | _____ | _____ | _____ | _____ |
| a foreclosure on a mortgage or loan? | _____ | _____ | _____ | _____ |

Appendix K

Informed Consent Form

The Pennsylvania State University

Title of project: A multicultural examination of values, worry, and subjective well being
 Person in charge: Mario G. Nicolas
 (302) 677-2674

1. This section provides an explanation of the study in which you will be participating:

A. The study in which you will be participating is part of a research project intended to understand the interaction between individual values, worries, and psychological well being. By conducting this study, we hope to improve our understanding of the varying ways that values can influence one's experience of worry and their overall sense of well being or satisfaction with life.

B. If you agree to take part in this research, you will be asked to complete a series of pencil and paper measures. Your answers, together with those of approximately 200 others, will be used to draw conclusions about how values interact with worry and well being.

C. Your participation in this research will take from approximately one to one and one-half-hours. Approximately fifty of you will be asked to return in approximately two-weeks to complete a small subset of these questionnaires a second time. This second session should last less than a half-hour. The principal investigator will contact you by telephone or email to schedule this second session if necessary.

D. In participating in this research, you may experience some minor embarrassment in responding to some of the questionnaire items. In order to ensure confidentiality, your name will be associated with a number assigned to you when you sign-in to participate in the study. Your name will NOT be included on any of the questionnaires that you complete. The list identifying individual participants by assigned number will be filed separately under lock and key and will be kept away from completed questionnaires. This information will be used to contact you for a second session or to follow-up with you should the information suggest that you are a danger to yourself or others.

E. In return for your participation, you will receive extra credit as arranged with your course instructor or you may receive \$5.00 per hour as compensation.

F. If you do not wish to participate in this research, you may earn equivalent extra credit by preparing a two page written critique of a related published study.

2. This section describes your rights as a research participant:

A. You may ask any questions about the research procedures and they will be answered. Further questions should be directed to the person in charge or his research advisor using the following contact information:

Mario G. Nicolas, Capt, USAF, BSC
 300 Chad Street
 Dover AFB, DE 19902
 Phone: (302) 677-2674
 Email: mario.nicolas@dover.af.mil

Juris Draguns, PhD
 Penn State University
 417B Moore Bldg.
 University Park, PA 16801
 Phone: (814) 863-1751

B. Your participation in this research is confidential. Only the person in charge will have access to your identity and to information that can be associated with your identity. In the event of publication of this research, no personally identifying information will be disclosed. To make sure your participation is confidential, only a code number appears on the answer sheet for your questionnaire. Only the researchers can match names with code numbers.

C. Your participation is voluntary. You are free to stop participating in the research at any time, or to decline to answer any specific questions without penalty.

OVER -->
 (appendix continues)

Appendix K (continued)

3. This section indicates that you are giving your informed consent to participate in the research:

Participant:

I agree to participate in the scientific investigation of Captain Mario G. Nicolas as an authorized part of the education and research program of the Pennsylvania State University.

I understand the information given to me, and I have received answers to any questions I may have had about the research procedure. Because the validity of the results of the study could be affected if the purpose of the study is fully divulged to me prior to my participation, I understand that the purpose of the study cannot be explained to me at this time. I understand that I will have an opportunity to receive a complete explanation of the study's purpose following my participation in the study. I understand and agree to the conditions of this study as described.

To the best of my knowledge and belief, I have no physical or mental illness or difficulties that would increase the risk to me of participation in this study.

I understand that I will receive extra credit as arranged with my course instructor OR I may receive \$5.00 per hour as compensation.

If I am eligible to receive extra credit, I understand that I may earn equivalent extra credit by preparing a two page written critique of a related published study.

I understand that my participation in this research is voluntary, and that I may withdraw from this study at any time by notifying the person in charge.

I am 18 years of age or older.

I understand that I will receive a signed copy of this consent form.

Signature

Date

Researcher:

I certify that the informed consent procedure has been followed, and that I have answered any questions from the participant above as fully as possible.

Signature

Date

Appendix L

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 1 | 2 | 3 | 4 | 5 |
|------------------------|--------|---------|---------|---------|---------|
| 1. Macro Worry | -- | | | | |
| 2. Micro Worry | .51*** | -- | | | |
| 3. PSWQ ^a | .08 | .33*** | -- | | |
| 4. WDQ ^b | .17* | .52*** | .48*** | -- | |
| 5. Positive Affect | .07 | .06 | -.27*** | -.31*** | -- |
| 6. Negative Affect | .22** | .43*** | .51*** | .56*** | -.22** |
| 7. SWLS ^c | -.19** | -.32*** | -.30*** | -.54*** | .35*** |
| 8. TPIMH ^d | -.07 | -.27*** | -.48*** | -.62*** | .59*** |
| 9. BSI 18 ^e | .21** | .37*** | .44*** | .56*** | -.26*** |
| 10. Power | -.12 | .11 | -.19** | .04 | .13 |
| 11. Achievement | -.18** | -.01 | -.05 | -.09 | .18* |

^aPenn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990). ^bWorry Domains Questionnaire (Tallis, Eysenck, & Matthews, 1992). ^cSatisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). ^dMental health subscale of the Trier Personality Inventory (Becker, 1989). ^eBrief Symptom Inventory 18 (Derogatis, 2000).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|--------|--------|------|------|---------|
| 12. Hedonism | -.17* | -.01 | .06 | .06 | -.21** |
| 13. Stimulation | -.02 | .04 | -.10 | .08 | -.07 |
| 14. Self-direction | -.05 | -.02 | -.06 | .05 | .10 |
| 15. Universalism | .34*** | -.03 | .00 | -.00 | -.09 |
| 16. Benevolence | -.13* | -.07 | .11 | .12 | -.27*** |
| 17. Tradition | .08 | .00 | .09 | -.09 | .03 |
| 18. Conformity | .08 | -.09 | .13* | -.08 | .06 |
| 19. Security | .06 | .05 | .03 | -.06 | .07 |
| 20. Power Discordance | .01 | .00 | .01 | .07 | .05 |
| 21. Achievement Discordance | -.06 | -.04 | -.01 | .03 | -.13* |
| 22. Hedonism Discordance | .15* | .07 | -.04 | .03 | -.04 |
| 23. Stimulation Discordance | .05 | -.05 | -.05 | .06 | -.04 |
| 24. Self-direction Discordance | -.01 | -.17** | .03 | .01 | -.09 |
| 25. Universalism Discordance | .14* | .00 | .07 | -.04 | -.07 |
| 26. Benevolence Discordance | .03 | .05 | -.04 | .01 | -.01 |
| 27. Tradition Discordance | .00 | .01 | -.02 | -.02 | -.06 |

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 1 | 2 | 3 | 4 | 5 |
|----------------------------|-------|------|------|------|------|
| 28. Conformity Discordance | -.12 | -.00 | -.02 | .01 | -.09 |
| 29. Security Discordance | -.14* | -.13 | -.01 | -.07 | .03 |
| 30. RLCQ ^f | -.04 | .09 | .10 | .13 | -.11 |

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 6 | 7 | 8 | 9 | 10 |
|------------------------|---------|---------|---------|--------|---------|
| 6. Negative Affect | -- | | | | |
| 7. SWLS ^c | -.38*** | -- | | | |
| 8. TPIMH ^d | -.50*** | .42*** | -- | | |
| 9. BSI 18 ^e | .63*** | -.29*** | -.48*** | -- | |
| 10. Power | .08 | -.18** | .11 | -.12* | -- |
| 11. Achievement | -.02 | -.04 | .23*** | -.18** | .30*** |
| 12. Hedonism | -.07 | .07 | -.12 | -.17** | -.24*** |
| 13. Stimulation | .06 | -.06 | -.11 | -.02 | .01 |
| 14. Self-direction | -.03 | -.07 | .06 | -.05 | -.17* |
| 15. Universalism | .12 | -.09 | -.05 | .12* | -.25*** |
| 16. Benevolence | .02 | .03 | -.22** | .07 | -.28*** |
| 17. Tradition | -.05 | .09 | .07 | -.10 | -.20** |
| 18. Conformity | -.12 | .17* | -.06 | -.05 | -.36*** |

^cSatisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). ^dMental health subscale of the Trier Personality Inventory (Becker, 1989). ^eBrief Symptom Inventory 18 (Derogatis, 2000).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|------|--------|-------|-------|--------|
| 19. Security | -.02 | .09 | .06 | -.01 | -.01 |
| 20. Power Discordance | .06 | -.04 | -.04 | .07 | .28*** |
| 21. Achievement Discordance | -.02 | -.07 | -.06 | -.11* | -.06 |
| 22. Hedonism Discordance | -.01 | -.06 | .04 | .01 | -.02 |
| 23. Stimulation Discordance | -.06 | -.03 | -.09 | -.01 | -.10 |
| 24. Self-direction Discordance | -.06 | -.01 | -.07 | -.02 | -.07 |
| 25. Universalism Discordance | .04 | .04 | -.07 | -.01 | -.16* |
| 26. Benevolence Discordance | -.05 | -.00 | -.00 | -.06 | .09 |
| 27. Tradition Discordance | -.08 | -.12 | .01 | -.07 | .05 |
| 28. Conformity Discordance | -.04 | -.02 | .02 | -.06 | .16* |
| 29. Security Discordance | -.19 | -.04 | .06 | -.18* | .08 |
| 30. RLCQ ^f | .15* | -.18** | -.13* | .10 | .06 |

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 11 | 12 | 13 | 14 | 15 |
|--------------------------------|---------|---------|---------|---------|--------|
| 11. Achievement | -- | | | | |
| 12. Hedonism | -.08 | -- | | | |
| 13. Stimulation | -.03 | .13* | -- | | |
| 14. Self-direction | .15* | .15* | .18** | -- | |
| 15. Universalism | -.39*** | -.10 | -.00 | -.03 | -- |
| 16. Benevolence | -.28*** | .15* | -.11 | -.14* | -.02 |
| 17. Tradition | -.25*** | -.31*** | -.41*** | -.31*** | -.11 |
| 18. Conformity | -.27** | -.24*** | -.32** | -.25*** | -.07 |
| 19. Security | -.04 | -.16* | -.32*** | -.32*** | -.13* |
| 20. Power Discordance | .14* | .00 | .05 | .06 | .02 |
| 21. Achievement Discordance | -.10 | .10 | -.07 | -.02 | .21** |
| 22. Hedonism Discordance | -.17* | -.23*** | -.01 | -.04 | .16* |
| 23. Stimulation Discordance | .00 | .03 | .13 | .07 | .02 |
| 24. Self-direction Discordance | -.07 | -.11 | -.16* | -.26*** | .09 |
| 25. Universalism Discordance | -.25*** | -.15* | -.05 | -.13* | .41*** |
| 26. Benevolence Discordance | -.07 | -.01 | .02 | -.13* | -.02 |

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 11 | 12 | 13 | 14 | 15 |
|----------------------------|------|--------|------|-------|------|
| 27. Tradition Discordance | .00 | -.18** | -.05 | -.15* | -.05 |
| 28. Conformity Discordance | .05 | -.01 | -.11 | -.01 | -.09 |
| 29. Security Discordance | .05 | .08 | .04 | -.08 | -.06 |
| 30. RLCQ ^f | -.06 | -.00 | .08 | -.12 | -.01 |

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 16 | 17 | 18 | 19 | 20 |
|--------------------------------|-------|--------|--------|------|------|
| 16. Benevolence | -- | | | | |
| 17. Tradition | -.03 | -- | | | |
| 18. Conformity | .03 | .33*** | -- | | |
| 19. Security | -.13* | .08 | -.03 | -- | |
| 20. Power Discordance | -.14* | -.17** | -.19** | -.06 | -- |
| 21. Achievement Discordance | .10 | -.11 | -.04 | .01 | .02 |
| 22. Hedonism Discordance | .08 | .15* | .04 | -.04 | -.09 |
| 23. Stimulation Discordance | -.02 | -.11 | .06 | -.03 | -.05 |
| 24. Self-direction Discordance | .13 | .14* | .15* | .11 | -.11 |
| 25. Universalism Discordance | .10 | -.02 | .14* | .02 | -.03 |
| 26. Benevolence Discordance | -.00 | -.02 | .04 | .05 | .10 |
| 27. Tradition Discordance | -.05 | .21** | .02 | .12 | -.04 |
| 28. Conformity Discordance | -.01 | -.05 | .02 | .03 | .06 |
| 29. Security Discordance | -.03 | -.14 | -.03 | .10 | .02 |
| 30. RLCQ ^f | .05 | -.05 | -.04 | .09 | .04 |

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 21 | 22 | 23 | 24 | 25 |
|--------------------------------|------|------|------|------|------|
| 21. Achievement Discordance | -- | | | | |
| 22. Hedonism Discordance | .06 | -- | | | |
| 23. Stimulation Discordance | -.12 | .03 | -- | | |
| 24. Self-direction Discordance | .07 | .13* | .09 | -- | |
| 25. Universalism Discordance | .04 | .04 | -.10 | .09 | -- |
| 26. Benevolence Discordance | .07 | .14* | .07 | .10 | -.10 |
| 27. Tradition Discordance | .02 | .15* | .07 | .11 | .02 |
| 28. Conformity Discordance | .08 | .01 | .03 | -.01 | -.09 |
| 29. Security Discordance | .11 | .08 | .00 | .08 | .04 |
| 30. RLCQ ^f | .01 | .02 | .02 | -.07 | -.04 |

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

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

(appendix continues)

Appendix L (continued)

Two Tailed Pearson Product Moment Correlations between the Variables Investigated.

| Variable | 26 | 27 | 28 | 29 | 30 |
|-----------------------------|------|------|------|------|----|
| 26. Benevolence Discordance | -- | | | | |
| 27. Tradition Discordance | -.03 | -- | | | |
| 28. Conformity Discordance | .03 | .04 | -- | | |
| 29. Security Discordance | .05 | .10 | .14* | -- | |
| 30. RLCQ ^f | .04 | -.06 | -.02 | .16* | -- |

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

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

Appendix M

Means and Standard Deviations of Worry Variables Overall and by Gender

| Variable | Gender | | | | | |
|-------------------|----------|-----------|----------|-----------|----------|-----------|
| | Overall | | Male | | Female | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Macro Worry | 26.45 | 12.70 | 28.71 | 13.33 | 24.81 | 12.01 |
| Micro Worry | 31.93 | 13.41 | 31.45 | 13.17 | 32.28 | 13.61 |
| PSWQ ^a | 46.09 | 14.19 | 43.07 | 12.30 | 48.26 | 15.08 |
| WDQ ^b | 25.31 | 16.12 | 26.76 | 16.13 | 24.26 | 16.09 |

^aPenn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990). ^bWorry Domains Questionnaire (Tallis, Eysenck, and Matthews, 1992).

Appendix N

Means and Standard Deviations of Subjective Well Being, General Mental Health, and Life Stress Variables Overall and by Gender

| Variable | Gender | | | | | |
|---------------------|----------|-----------|----------|-----------|----------|-----------|
| | Overall | | Male | | Female | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Positive Affect | 35.65 | 6.84 | 35.07 | 7.21 | 36.07 | 6.55 |
| Negative Affect | 19.31 | 5.73 | 19.74 | 5.93 | 19.00 | 5.59 |
| SWLS ^c | 23.68 | 7.06 | 22.28 | 7.06 | 24.69 | 6.91 |
| TPIMH ^d | 60.35 | 7.34 | 60.12 | 7.65 | 60.51 | 7.13 |
| BSI 18 ^e | 12.09 | 9.35 | 11.87 | 9.36 | 12.26 | 9.37 |
| RLCQ ^f | 16.49 | 8.52 | 16.74 | 0.86 | 16.75 | 0.84 |

^cSatisfaction With Life Scale (Diener, Emmons, et al., 1985). ^dMental health subscale of the Trier Personality Inventory (Becker, 1989). ^eBrief Symptom Inventory 18 (Derogatis, 2000).

^fRecent Life Changes Questionnaire (Miller & Rahe, 1997).

Appendix O

Means and Standard Deviations of Individual Value Types Overall and by Gender

| Variable | Gender | | | | | |
|----------------|----------|-----------|----------|-----------|----------|-----------|
| | Overall | | Male | | Female | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Power | - 6.18 | 9.74 | - 3.37 | 0.98 | - 8.21 | 0.80 |
| Achievement | 5.30 | 7.03 | 4.45 | 0.77 | 5.92 | 0.56 |
| Hedonism | 5.31 | 6.75 | 3.98 | 0.71 | 6.27 | 0.55 |
| Stimulation | - 1.53 | 7.75 | - 1.72 | 0.80 | - 1.40 | 0.66 |
| Self-direction | 5.07 | 6.78 | 3.87 | 0.75 | 5.94 | 0.53 |
| Universalism | - 7.07 | 8.86 | - 5.83 | 1.00 | - 7.96 | 0.69 |
| Benevolence | 5.22 | 6.73 | 4.08 | 0.74 | 6.04 | 0.53 |
| Tradition | - 4.09 | 8.70 | - 4.13 | 0.91 | - 4.06 | 0.73 |
| Conformity | - .34 | 8.98 | 0.10 | 0.95 | - 0.66 | 0.75 |
| Security | - 1.69 | 7.68 | - 1.43 | 0.76 | - 1.88 | 0.67 |

Appendix P

Means and Standard Deviations of Discordance for Individual Value Types Overall and by Gender

| Variable | Gender | | | | | |
|----------------|----------|-----------|----------|-----------|----------|-----------|
| | Overall | | Male | | Female | |
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> |
| Power | 7.98 | 5.57 | 8.55 | 0.67 | 7.57 | 0.48 |
| Achievement | 5.64 | 4.19 | 6.03 | 0.47 | 5.22 | 0.36 |
| Hedonism | 5.21 | 4.28 | 5.50 | 0.49 | 5.14 | 0.38 |
| Stimulation | 6.57 | 4.09 | 6.43 | 0.47 | 6.53 | 0.36 |
| Self-direction | 5.22 | 4.30 | 5.93 | 0.50 | 4.87 | 0.37 |
| Universalism | 7.13 | 5.24 | 7.91 | 0.68 | 6.59 | 0.39 |
| Benevolence | 5.48 | 3.89 | 6.36 | 0.44 | 5.17 | 0.35 |
| Tradition | 7.36 | 4.62 | 7.52 | 0.54 | 7.38 | 0.39 |
| Conformity | 7.42 | 5.03 | 7.74 | 0.58 | 7.46 | 0.45 |
| Security | 6.29 | 4.39 | 5.94 | 0.52 | 6.64 | 0.39 |

Appendix Q

Permission to use the Pairwise Comparison Value Survey

(Oishi, Schimmack, Diener, & Suh, 1998).

-----Original Message-----

From: Shigehiro Oishi [mailto:soishi@tc.umn.edu]

Sent: Thursday, September 21, 2000 4:01 PM

To: Nicolas Mario G Capt 436MG/SGOMH

Subject: Re: Permission to use PCVS

Hi,

Please use the scale as you wish. I will e-mail you tomorrow the program that you may want to use when computing the scale scores.

Thanks for your interest. Hope your research will go well. FYI, Shalom Schwartz has done research on the relation between values and worry. I think his paper is already published in J of Personality.

Shige

Appendix R

Permission to use the Micro Macro Worries Scale (Boehnke, Schwartz, & Stromberg, 1998).

-----Original Message-----

From: klaus.boehnke@phil.tu-chemnitz.de [mailto:klaus.boehnke@phil.tu-chemnitz.de]

Sent: Friday, December 08, 2000 7:48 AM

To: Nicolas Mario G Capt 436MG/SGOMH

Subject: Re: Permission to use Micro Macro Worry Measure

Dear Capt Nicolas,

please feel free to use our scale in any way you deem appropriate. I suppose you also have stumbled across our more recent paper on Worries and Values in the Journal of Personality. It might also contain interesting information for your project.

Once you finished your dissertation, it would be nice to have a copy of your text.

I keep my fingers crossed for your work.

Best regards
Klaus Boehnke

Appendix S

Permission to use the Trier Personality Inventory – Mental Health Subscale (Becker, 1989).

-----Original Message-----

From: Mario Nicolas [[SMTP:mgnico@earthlink.net](mailto:mgnico@earthlink.net)]

Sent: Thursday, February 17, 2000 7:17 AM

To: mario.nicolas@dover.af.mil

Subject: [Fwd: TPI]

Dear Mr. Nicolas,

I give you the permission to use the English version of the TPI for your dissertation project. A copy of the instrument will be sent to your work adress. You will also receive some informations about the test.

Unfortunately, I don't have normative data for the USA (only for German speaking countries). I wish you much success in your dissertation project. Probably, you want to inform me about your results.

Yours sincerely,

Prof. Dr. P. Becker

Appendix T

Permission to Reproduce Items from the Brief Symptom Inventory 18 (Derogatis, 2000).

December 12, 2001

Mario G. Nicolas, Capt, USAF, BSC
Dover AFB Life Skills Support Center
Dover AFB, DE 19902-5300

Dear Mr. Nicolas:

NCS Pearson, Inc., being the exclusive publisher and distributor of the BSI®18 (Brief Symptom Inventory 18) test, hereby grants you permission to reproduce up to three (3) items from the BSI 18 test in your dissertation entitled, *A Cross-Cultural Examination of Individual Values, Worry, and Mental Health Status*.

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4. This permission is granted singularly for the dissertation entitled *A Cross-Cultural Examination of Individual Values, Worry, and Mental Health Status*. Future revisions of the volume are not covered by this permission.

If you have any questions, please call me at (952) 939-5126 or email me at kheisick@ncs.com.

Sincerely,

Kristie Heisick
Product Manager

Appendix U

Permission to use the Penn State Worry Questionnaire

(Meyer, Miller, Metzger, & Borkovec, 1990)

-----Original Message-----

From: Thomas Borkovec [mailto:tdb@psu.edu]

Sent: Friday, December 08, 2000 9:24 AM

To: Nicolas Mario G Capt 436MG/SGOMH

Subject: Re: Permission to use the Penn State Worry Questionnaire (PSWQ)

Hi, Mario. You have permission to use the PSWQ in your research. Frank Tallis went into private practice some time ago and somewhere in England, and I'm afraid that I don't have any current contact information for him. If the questionnaire itself in its entirety appears in a published article, it is de facto in the public domain and it can be freely used in research. Best wishes. Tom

Good afternoon Tom. I am sending this email in order to once again ask your permission to use the PSWQ for my dissertation project entitled "A multicultural examination of values, worry, and subjective well being" (I seem to have misplaced your email originally granting me permission to use the PSWQ). Please send me a response stating if I have permission to use your measure. I would also like to use the Worry Domains Questionnaire (WDQ)... would you happen to have the contact information for Frank Tallis so that I can request permission to use the WDQ? Thank you in advance for your assistance.

Mario Nicolas, Capt, USAF, BSC

Dover AFB Mental Health Clinic

Phone: (302)677-2674 (comm.)/ 445-2674 (DSN)

Fax: (302) 677-2675

T. D. Borkovec

Department of Psychology

Penn State University

University Park, PA 16802

(814) 863-1725

Fax: (814) 863-7002

e-mail: tdb@psu.edu

Appendix V

Permission to use the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988).

-----Original Message-----

From: Kibler, William [mailto:WKibler@apa.org]

Sent: Thursday, December 07, 2000 4:52 PM

To: 'Nicolas Mario G Capt 436MG/SGOMH'

Subject: RE: Permission to use PANAS

Dear Capt. Nicolas:

Thank-you for contacting the APA regarding the use of the PANAS. APA published the article in the Journal of Personality and Social Psychology, however, we do not hold the copyright on any Scales or Instruments used in compiling the article. Permission then comes from the author, which you have, so you are free to use the PANAS. (You may wish to reference the article containing the PANAS in your References.)

If you have further questions, please feel free to contact us at any time.

Sincerely,

William G. Kibler

Webmaster, APA Journals

<http://www.apa.org/journals> <<http://www.apa.org/journals>>

United States Marine Corps

1981 - 1985

-----Original Message-----

From: Nicolas Mario G Capt 436MG/SGOMH [mailto:Mario.Nicolas@dover.af.mil]

Sent: Thursday, December 07, 2000 2:40 PM

To: 'journals@apa.org'

Subject: FW: Permission to use PANAS

I am interested in formally gaining permission to use the Positive and Negative Affect Scales (PANAS). I have been granted permission to use the PANAS by it's author (see attached email) but I was informed that I must contact APA for further permission since the PANAS was published in an APA Journal (Journal of Personality and Social Psychology, 1988, 54(6), 1063-1070). Please inform me of what procedures are required to gain complete permission for using the PANAS. Thanks in advance for your assistance.

Mario Nicolas

-----Original Message-----

From: watson david [SMTP:dwatson@blue.weeg.uiowa.edu]

Sent: Thursday, September 21, 2000 4:28 PM

To: Nicolas Mario G Capt 436MG/SGOMH

Subject: Re: Permission to use PANAS

(appendix continues)

Appendix V (continued)

Permission to use the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988).

Mario:

Thanks for your interest in the PANAS. To use the PANAS, you need to do two things. First, you need to obtain my permission, which I am happy to grant you. Second, you need to contact the American Psychological Association (APA), and secure their permission as well (which they routinely grant for research purposes). Because the PANAS originally was published in an APA journal, APA is the official copyright holder.

Good luck with your research.

Sincerely,

David Watson, Ph.D.

Professor of Psychology

Appendix W

Permission to use the Recent Life Changes Questionnaire (Miller & Rahe, 1997)

December 7, 2000

Mr. Mario Nicolas
510 Cypress Drive
Magnolia, DE 19962

Richard H. Rahe
Sierra Biomedical Research Corporation
Veterans Affairs Medical Center
1000 Locust Street
Reno, NV 89520

Dr, Rahe,

My name is Mario Nicolas and I am a doctoral student at Penn State University currently employed as a master's level psychologist for the US Air Force. I am contacting you to formally request permission to use your measure (Recent Life Changes Questionnaire [RLCQ]; Miller and Rahe, 1997) for my dissertation project. My project ("A multicultural examination of values, worry, and subjective well being") will involve an examination of the relationship between values, worry, and subjective well being amongst a sample of active duty Air Force members. The RLCQ will be used to assess the impact of stressful life events on significant findings.

Thank you in advance for your assistance.

*13 Dec 00
You have
my permission
Good luck in
your research
R. Rahe, M.D.*

Sincerely,

Mario G. Nicolas
Mario G. Nicolas

Appendix X

Permission to Reprint Table 1

-----Original Message-----

From: [Malcolm Allison \[mailto:Malcolm.Allison@blacksci.co.uk\]](mailto:Malcolm.Allison@blacksci.co.uk)
Sent: Monday, July 16, 2001 5:36 AM
To: 'Mario.Nicolas@dover.af.mil'
Subject: FW: Permission to reprint table as part of my dissertation

Dear Capt Nicolas,

Your message has been passed on to me; we are happy for you to republish the table from Schwartz et al's article in the Journal of Personality; we would simply ask that you cite the copyright & original source & that reprinting is by permission of Blackwell Publishers.

Yours sincerely,

[Malcolm A.J. Allison](mailto:Malcolm.Allison@blacksci.co.uk)
 Permissions Assistant
 Blackwell Publishers/ Blackwell Science Ltd/ Polity Press
 Osney Mead
 OXFORD OX2 0EL
 UK

tel: (+44) (0)1865 206427
 fax: (+44) (0) 1865 206096

www.blackwellscience.co.uk
www.blackwellpublishers.co.uk
www.polity.co.uk

-----Original Message-----

From: [Nicolas Mario G Capt 436MG/SGOMH \[SMTP:Mario.Nicolas@dover.af.mil\]](mailto:Nicolas.Mario.G.Capt.436MG@SGOMH)
Sent: Saturday, July 14, 2001 6:42 PM
To: 'jninfo@blackwellpublishers.co.uk'
Subject: Permission to reprint table as part of my dissertation

I am attempting to gain permission to reprint a table from an article > that appeared in your journal. The author has given me permission to use this table (see below) but I understand that the article is copyrighted to you. The table > appears in "Values and Worries: Theoretical and empirical relations," by S. H. Schwartz, L. Sagiv, & K. Boehnke, 2000, Journal of Personality, 68(2), p. 346. Thank you in advance for your > assistance..

[Mario Nicolas, Capt, USAF, BSC](mailto:Mario.Nicolas@dover.af.mil)
 Chief, Psychological Services
 Dover AFB Mental Health Clinic
 Phone: 302-677-2674 (Commercial)/ 445-2674(DSN)
 Fax: 302-677-2675 (Commercial)/ 445-2675 (DSN)

(appendix continues)

Appendix X (continued)

Permission to Reprint Table 1

-----Original Message-----

From: [Shalom Schwartz \[<mailto:msshach@mscc.huji.ac.il>\]](mailto:msshach@mscc.huji.ac.il)
Sent: Friday, May 11, 2001 10:44 AM
To: [Nicolas Mario G Capt 436MG/SGOMH](#)
Subject: [Re: Permission to reprint table as part of my dissertation](#)

[You have my permission to reprint that table.](#)

[Shalom Schwartz](#)

[At 09:22 AM 05/05/2001 -0400, you wrote:](#)

[Good morning Dr. Schwartz. This is Mario Nicolas again, I have had contact with you in the past few years regarding your theory of individual](#)

[values and it's relation to micro/macro worry. Thank you so much for assisting me with those matters. I have another request that I hope you can](#)

[assist me with. I would like to include a reprint of your table of the ten](#)

[motivational types of values included in Schwartz, Sagiv, and Boehnke \(2000; Journal of Personality\) in my dissertation project. May I have permission to include a reprint of this table in my dissertation? Thank you](#)

[for your assistance... Mario Nicolas, Capt, USAF, BSC Chief, Psychological Services Dover AFB Mental Health Clinic Phone: 302-677-2674](#)

[\(Commercial\)/ 445-2674\(DSN\) Fax: 302-677-2675 \(Commercial\)/ 445-2675 \(DSN\)](#)

[Professor Shalom H. Schwartz](#)

[Department of Psychology](#)

[The Hebrew University of Jerusalem](#)

[Jerusalem 91905, Jerusalem](#)

[ISRAEL](#)

[Ph: 972-2-5882964 or 5883024 \(office\)](#)

[Ph: 972-2-5817892 \(home\)](#)

[e-mail: \[Shalom.Schwartz@huji.ac.il\]\(mailto:Shalom.Schwartz@huji.ac.il\) and \[msshach@huji.ac.il\]\(mailto:msshach@huji.ac.il\) Fax: 972-2-5881159 \(office\)](#)

[Fax: 972-153-2-5817892 \(home\)](#)

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Appendix Y

Permission to Reprint Figure 1

-----Original Message-----

From: [Malcolm Allison \[mailto:Malcolm.Allison@blacksci.co.uk\]](mailto:Malcolm.Allison@blacksci.co.uk)
Sent: Tuesday, May 08, 2001 5:02 AM
To: 'Mario.Nicolas@dover.af.mil'
Subject: FW: Permission to use figure from Oishi, Diener, et al. (1999)

Dear Capt Nicolas,

Thank you for contacting us; Blackwell Publishers are happy to grant permission in this instance & would only ask that you cite copyright & original source when using this material.

Yours sincerely,

Malcolm A.J. Allison
Permissions Assistant
Blackwell Publishers/ Blackwell Science Ltd/ Polity Press
Osney Mead
OXFORD OX2 0EL
UK

tel: (+44) (0)1865 206427
fax: (+44) (0) 1865 206096

-----Original Message-----

From: [Nicolas Mario G Capt 436MG/SGOMH \[SMTP:Mario.Nicolas@dover.af.mil\]](mailto:Mario.Nicolas@dover.af.mil)
Sent: Monday, May 07, 2001 6:21 PM
To: 'jninfo@blackwellpublishers.co.uk'
Subject: FW: Permission to use figure from Oishi, Diener, et al. (1999)

I am attempting to gain permission to reprint a figure from an article that appeared in your journal. The author has given me permission but he requested that I contact you for final permission (see below). The figure appears on p. 184 of Vol. 67 (1) of the Journal of Personality; February 1999 ("Value as a moderator in Subjective Well Being"). I tried to contact your company through the U.S. phone number for "permissions" but this number is apparently no longer in service. Please inform me of what procedures I would need to complete in order to gain permission to use this figure in my dissertation. Thank you in advance for your assistance...

Mario Nicolas, Capt, USAF, BSC
Chief, Psychological Services
Dover AFB Mental Health Clinic
Phone: 302-677-2674 (Commercial)/ 445-2674(DSN)
 ➤ Fax: 302-677-2675 (Commercial)/ 445-2675 (DSN)

(appendix continues)

Appendix Y (continued)

Permission to Reprint Figure 1

-----Original Message-----

From: [Shigehiro Oishi \[<mailto:soishi@umn.edu>\]](mailto:soishi@umn.edu)
Sent: Sunday, May 06, 2001 9:35 PM
To: [Nicolas Mario G Capt 436MG/SGOMH](#)
Subject: [Re: Permission to use figure from Oishi, Diener, et al. \(1999\)](#)

Hi,

[I personally don't mind using it at all. But, the article is copy righted by the Journal of Personality. So you will have to contact the publisher and get permission from them.](#)

[Shige Oishi](#)
[Nicolas Mario G Capt 436MG/SGOMH](#) wrote:

[Good morning Dr. Oishi. This is Mario Nicolas again, I had contacted you a few months ago and you assisted me in my analysis of PCVS data. Thank you so much for assisting me with that matter. I have another request that I hope you can assist me with. I would like to include a reprint of your figure representing Schwartz and Sagiv's \(1995\) value types in my dissertation project. This figure is included in Appendix B of your 1999 article \("Values as a moderator in subjective well-being" published in Journal of Personality\). May I have permission to include this figure in my dissertation? Thank you for your assistance...](#)

[Mario Nicolas, Capt, USAF, BSC](#)

[Chief, Psychological Services](#)

[Dover AFB Mental Health Clinic](#)

[Phone: 302-677-2674 \(Commercial\)/ 445-2674\(DSN\)](#)

[Fax: 302-677-2675 \(Commercial\)/ 445-2675 \(DSN\)](#)

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VITA

PERSONAL DATA

Name: Mario G. Nicolas
Home Address: 510 Cypress Drive; Magnolia, DE, 19962
Work Address: 436 Medical Group/ SGOH; Life Skills Support Center; 263 Chad Street
Dover AFB, DE 19902-5300
Telephone: (302) 698-1831 (Home); (302) 677-2674 (Work)
Email: mgnico@altavista.com
Date of Birth: August 11, 1969
Birthplace: Queens, NY
Citizenship: United States of America

EDUCATION:

Doctorate in Psychology (APA-Accredited Clinical Psychology Program): The Pennsylvania State University, University Park, PA (1995-2001). Dissertation Topic: A cross-cultural examination of individual values, worry, and mental health status. Dissertation defense passed: August 9, 2001.

Major Advisor: Juris Draguns, Ph.D.

Clinical Psychology Intern (APA-Accredited Clinical Psychology Internship): Wilford Hall Medical Center, Lackland AFB, TX (1997-1998).

Master of Science in Psychology (APA-Accredited Clinical Psychology Program): Master's Thesis: Ethnicity Dimensions and Their Relation to Achievement and Conduct. The Pennsylvania State University, University Park, PA (1995-2001).

Major Advisor: Kevin Allison, Ph.D.

Behavioral Medicine Extern. University of Alabama at Birmingham School of Medicine, Behavioral Medicine Unit, Division of General and Preventative Medicine.

Bachelor of Arts in Psychology. The University of North Carolina at Chapel Hill (1987- 1991).

CURRENT CLINICAL DUTIES

Outpatient psychotherapy and testing services for military beneficiaries. Roles include serving as chief of Critical Incident Stress Management Team (CIST), program manager of Alcohol and Drug Abuse Prevention and Treatment Program (ADAPT), and alternate Family Advocacy director. Duties include counseling, critical incident stress interventions, development and implementation of prevention initiatives, fitness for duty evaluations, substance abuse evaluations, emergency consultation, supervision, and coordination of care with other medical professionals.