

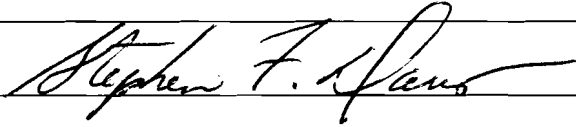
AN ABSTRACT OF THE THESIS OF

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Title: Comparison of Rating Scale and Checklist Versions of the Comprehensive Affect Personality Scales

Abstract approved:



This study investigated the assessment relationships between the four Comprehensive Affect Personality Scales (CAPS). The purpose of this study was to examine the researcher's hypothesis that the CAPS Likert-type scales (Affect State Rating (ASR) scale and Personality Trait Rating (PTR) scale) will be more sensitive in detecting significant differences than will the CAPS Adjective Checklist (ACL) scales (Affect State Checklist (ASC) and Personality Trait Checklist (PTC)). The current research also attempted to clarify the impact of state and trait questioning formats (different temporal directions) used in the CAPS-ACL and Likert-type scales on the assessment of affect and personality. The participants were 107 undergraduate students attending a medium-sized midwestern university. Participants completed the ASC, ASR, PTC, and PTR Scales. Results indicated that the CAPS Likert-type scales were considerably more sensitive to significant differences than the CAPS-ACL scales. More specifically, the researcher obtained four significant differences when using the CAPS Likert-type scales, whereas when using the CAPS-ACL scales no significant differences were obtained. The researcher obtained significant positive correlations between the CAPS-ASR/ASC and the CAPS-PTR/PTC scales. The personality trait correlations indicated one low and five moderate relations. The affect state correlations indicated three substantial, five

moderate, and four low relationships. These results suggest that the differing temporal directions at the beginning of the personality and affect scales influenced participant responses.

COMPARISON OF RATING SCALE AND CHECKLIST VERSIONS OF THE
COMPREHENSIVE AFFECT PERSONALITY SCALES

A Thesis

Presented to

The Division of Psychology and Special Education

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the requirements for the Degree

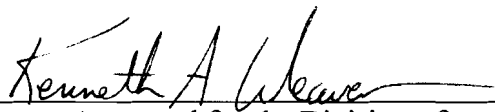
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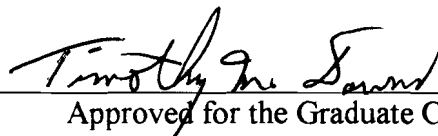
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CHAPTER 1

INTRODUCTION

The assessment of personality is a complex, multifaceted, and demanding task. This chapter examines the general concepts of personality, psychological assessment, positive affect (PA) and negative affect (NA), subjective well-being (SWB), adjective checklist (ACL) and Likert-type scales as they relate to the Comprehensive Affect Personality Scale (CAPS). The final section delineates the rationale for and the predictions of the present study.

Personality

The word personality is derived from the Latin word persona, which refers to a mask worn by actors in classical Greek and Roman dramas (Chaplin, 1985). Throughout the years, theorists have diversely defined personality. Allport (1937) reviewed 50 definitions or descriptions of personality and neatly drew these definitions into a logical conception by defining personality as the dynamic organization, within the individual, of those psychophysical systems that determine unique adjustments to the environment. In contrast, Murray approached the issue of individuality from a different perspective, he highlighted individual uniqueness by explicating the particular and sensitive integration of various characteristics within each person (Exner, 1995). To accomplish this task he illustrated how information derived from many sources, including psychological tests, could be used to develop a unique picture of a person (Exner, 1995). These functional, pragmatic, and diverse views of personality may facilitate understanding of the difficult task of defining personality.

Among the ancient Greeks, psychological assessments were an established adjunct to the educational process (Anastasi, 1968). The beginning of psychological assessment in the United States is usually attributed to Witmer around 1896, but at this time most attempts to use tests to understand people did not include personality testing (Exner, 1995). The early

experimental psychologists of the 19th century generally were not concerned with the measurement of individual differences. The principal aim of psychologists of that period was the formulation of generalized descriptions of human behavior (Anastasi, 1968). The uniformities rather than the differences in behavior were the focus of attention. Thus, finding that one individual reacted differently from another, when observed under identical conditions, was a form of error (Anastasi, 1968). However, Murray and Allport strove to distinguish between the idiographic (single participant) and nomothetic (group) approaches to the study of people (Exner, 1995). Murray and Allport argued for an integration of both; that is, for an approach that would not simply judge a person against others (nomothetic, predominately an American approach) but would contrast the unique features of one person (idiographic, predominately a European approach) against those of others (Exner, 1995).

The study of personality is one of psychology's broadest and most freely defined areas of inquiry. It includes research and speculation on needs, motives, thinking, interests, values, perceptions of self or others, psychopathology, emotions, and a virtually unlimited array of other such diverse topics (Bavelas, 1978). Over the past century psychologists have extensively assessed personality. The vast majority of these assessments are self-report inventories that purport to measure the entire range of personality traits. Some scales, such as Rotter's (1954) Internal-External (I-E) Scale and Zuckerman's (Zuckerman, Joireman, Kraft, & Kuhlman, 1998) Sensation Seeking Scale (SSS) measure just one trait dimension, whereas other scales, measure multiple basic dimensions of personality (source traits). Cattell's (1970) Sixteen Personality Factors Questionnaire (16PF) is an example of the latter type of inventory.

The paradigm shift from psychodynamic therapy to behavioral modification changed the views of personality assessment and challenged traditional broad trait concepts. Behavioral assessment has used narrow, situation-specific trait tests, state self-report tests in given situations, behavioral observations, and performance ratings (Zuckerman, 1979). These types of broad trait measures have been useless to applied psychologists. Behavioral clinicians are not interested in how “anxious” their patients are. They must know in what situations this state is aroused and how it is expressed in subjective, physiological, and overt behavioral terms (Zuckerman, 1979). In the future, when possible, clinicians assessing personality must attempt to measure the overt manifestations (verbally reported and behaviorally observed) of the state in critical situations or analogues of these situations. Above all, future clinicians attempting to measure personality, must sample behavior more than once if they expect to understand or mediate it (Zuckerman, 1979).

Psychological Assessment

Most contemporary psychological tests can be placed in one of two broad categories: (a) mental ability tests, and (b) personality tests. Mental ability tests, such as intelligence tests, aptitude tests, and achievement tests, often serve as gateways to schooling, training programs, and jobs. The primary purpose of contemporary psychological assessment is the same as it has been throughout this century: to evaluate behavior, mental abilities, and other personal characteristics in order to help make judgments, predictions, and hence decisions about individuals (Aiken, 1991). More specifically, assessments can be used for: (a) screening job applicants and promoting employees, (b) classification and placement of people in educational and business settings, (c) educational, vocational, and personal counseling, (d) diagnosing and prescribing psychological and physical treatments in clinics

and hospitals, (e) evaluating cognitive intra-and interpersonal changes due to educational or psychotherapeutic intervention programs, and (f) conducting research on programs or techniques (Aiken, 1991).

In addition to their micro-applications in analyzing individual characteristics, assessments are also used to evaluate psychological environments, social movements, and other psychosocial events on the macro level (Aiken, 1991). Many psychologists prefer to refer to these assessments as personality scales because the questions do not have right or wrong answers, as do the tests of mental ability. However, the effective employment of assessments in many situations usually requires that they are used as an adjunct to skillful interviewing, so that assessment responses may be properly interpreted in the light of other background information about the individual (Anastasi, 1968).

Positive Affect (PA) and Negative Affect (NA)

The following quotation is attributed to Lord Byron. “Man! Thou pendulum betwixt a smile and tear. The great object of life is sensation, to feel that we exist even though in pain” (Maurois, 1930, pg. 126).

Clearly, personality is not a unidimensional concept. It has both positive and negative aspects. In general, mood experiences can be classified most parsimoniously along two very general dimensions, PA and NA, that reflect the extent to which a person is currently experiencing pleasurable (PA) (e.g., joyful, enthusiastic, energetic, confident, alert) and distressing (NA) (e.g., nervous, irritable, guilty, sad, upset) feelings, respectively (Watson & Clark, 1994). Catanzaro and Mearns (1990) have further defined NA as the disposition to experience unpleasant mood states. Moreover, these two broad dimensions are largely independent of one another; thus, for example, currently experiencing a significant

amount of NA places no necessary restriction on the extent to which one is simultaneously experiencing pleasurable, positive feelings (Watson & Clark, 1994). Lord Byron's statement poetically reflects the mercurial nature of the modern assessment of PA and NA. Some theories assume independent unipolar dimensions of PA and NA (Tellegen, 1985; Tellegen, Watson & Clark, 1999). Other theories assume a bipolar positive-negative dimension (Feldman, 1995; Russell, 1989; Russell & Carroll, 1999).

Russell and Carroll (1999) define affect as "genuine subjective feelings and moods" (p. 4). Davidson (1994) further defines affect by indicating that affective style refers to the entire domain of individual differences that modulate a person's reactivity to emotional events. Russell and Carroll may agree with Lord Byron's previous statement because they believe the bipolar model of affect provides a parsimonious fit to the existing data. Russell and Carroll refute the psychometric challenge to bipolarity of affect and they assert that for routine assessment of affective feelings, bipolar response formats are justified. When the actual predictions of a bipolar model are considered and error is taken into account, there is little evidence for independence of what researchers traditionally thought were opposites (Russell & Carroll, 1999).

Tellegen et al. (1999) believe that emotional variations can be represented more informatively (though not exhaustively) by two basic and relatively independent dimensions of PA and NA. If independence and bipolarity views are interpreted as mutually exclusive formations at the same descriptive level, the evidence favors the independence view (Tellegen et al., 1999). Tellegen et al. believe that hierarchical heuristics can be applied to any experiences, behaviors, or events involving affect. For example, researchers (Russell, 1989; Watson & Tellegen, 1985) agree that the structure of mood can be well represented as

a circumplex heuristic. This circular structure of affect has been extracted from people's judgements of the similarity between pairs of mood terms (Russell, 1989), from perceptions of facially expressed emotion (Russell, 1989), and from self-reports of moods (Tellegen et al. 1999; Watson & Tellegen, 1985).

Feldman (1995) defines the mood circumplex as a circular arrangement of terms around two dimensions (valence and arousal). The two dimensions can be partitioned into positive/negative valence and high/low arousal. Positive valence constitutes "satisfied" or "content" and negative valence "depressed" or "anxious." High arousal constitutes "arousal" or "astonished" and low arousal "tired" or "sleepy." The resulting controversy appears central to the psychological assessment and interpretation of PA and NA. Its resolution touches on such basic issues as the processes involved in affect, its causes and consequences, and what strategies to use against crippling negative emotions (Russell & Carroll, 1999).

Watson and Clark (1994) have indicated that PA and NA can be affected by four broad factors: (a) exogenous variables (i.e., transient environmental factors), (b) endogenous rhythms (i.e., innate biological processes that are associated with a natural cycle in affective experience), (c) traits and temperament (i.e., characteristic mean level differences in the tendency to experience positive and negative mood states), and (d) characteristic variability (i.e., stable individual differences in the extremity of one's mood fluctuations). This joint consideration of influences offers a useful working model for understanding the vicissitudes of mood (Watson & Clark, 1994).

Watson and Clark (1994) explain that PA and NA are elicited and elevated in different situations. Negative Affect is elevated in situations involving evaluation or scrutiny

by others, and in response to failure, criticism, and other negative feedback. However, PA is less strongly and consistently influenced by stressful and aversive stimuli.

Positive Affect has been shown to be elevated in situations involving strenuous exercise or other intense physical activity (Watson & Clark, 1994). More generally, it seems that PA is highly responsive to variations in activity level. Simply put, it appears that it is easier to induce a state of high PA through doing rather than thinking, whereas the reverse is true for NA. Lastly, Watson and Clark (1994) explain that NA is a central, organizing feature of neuroticism (trait), whereas PA (state) is a core component of extraversion.

Subjective Well-Being

Subjective well-being (SWB) is a topic closely related to PA and NA. Diener (1994) suggested that SWB comprises people's longer-term levels of pleasant affect, lack of unpleasant affect, and life satisfaction. Subjective well-being research has focused on how and why people experience their lives in positive ways (Diener, 1984). DeNeve and Cooper (1998) pointed out that SWB has four common conceptualizations that differ along affective, temporal, and cognitive dimensions. They explain that PA and NA generally focus on recent occurrences of specific positive and negative emotions and they do not involve cognitive judgements as compared to SWB.

McCrae (1983) has suggested that personality trait measures correspond with state measures of SWB, namely PA and NA. McCrae's argument appears to suggest that personality and PA and NA essentially tap the same underlying construct, but measures of these constructs focus on different time frames. Personality or temperament measures typically focus on one's overall life, whereas PA and NA measures typically focus on experiences within the last day, week, or month (DeNeve & Cooper, 1998). Davidson (1994)

indicated that temperamental qualities of personality refer to early consistent differences that are assumed to be at least partially under genetic control, as evidenced by responses to environmental challenges.

Lazarus (1994) explained that the simplest, most basic, and least controversial of the several personality distinctions is between state and trait. An emotion state usually refers to a transient reaction to specific kinds of adaptational encounters. We say that someone is displaying or experiencing anger at a particular time and place; the state comes and goes with the circumstances. An emotional trait, on the other hand, usually refers to a disposition or tendency to react in a particular emotional way to an adaptational encounter. To speak of trait implies frequent recurrence of the state in diverse but specifiable circumstances (Lazarus, 1994).

Mroczek and Kolarz (1998) showed that when SWB was defined by PA, older adults were happier than younger adults. More specifically, older introverted men had higher levels of PA than younger introverted men. This relation held true when a host of potential confounding variables was controlled, including sex, marital status, education, stress, personality, and physical health. Mroczek and Kolarz also contend that traits are not enough to explain all the variability in SWB. This study suggests that PA and NA play an important role in defining SWB.

Diener, Suh, Lucas, and Smith (1999) did not find a simple answer to what causes SWB. They suggested that researchers should be open to the possibility that different strategies work better in different environments and for different people. Thus, searching for a single cause of SWB is pointless. Instead, researchers need to understand the complex interplay of culture, personality, cognitions, goals, resources, and the objective environment

on SWB. In essence, different variables lead to SWB for people with different values and different goals (Diener et al., 1999). Once these concepts are recognized and delineated, they must then be measured. Measurement of PA, NA, and SWB has often taken the form of an adjective checklist scale.

Adjective Checklist (ACL) Scales

According to Masterson (1974), a checklist format permits unrestricted responses. Individuals can check as few or as many items as they wish and the respondents are not forced to choose from paired items or required to do more with what is basically an experiential phenomenon, than to report its existence or non-existence (Masterson, 1974). Although these assets are of general importance, the checklist format is particularly important for populations requiring research and clinical instruments that are not beset with cognitive complexity (Salzman, Kochansky, Shader, & Cronin, 1972).

Instead of choosing between right and wrong answers, many personality inventories depend on a participant's response to self-descriptive adjectives that reflect their general feelings. Zuckerman and Lubin (1965) improved this basic approach in their Multiple Affect Adjective Checklist (MAACL) by asking participants to check words describing how they "generally" felt in the trait version of the inventory and how they felt "now or today" in the state version. A subsequent study by Spielberger, Gorsuch, and Lushene (1970) attempted to vary the sentence structures of each adjective assessing traits or states in their State-Trait Anxiety Inventory (STAI). In comparison, Zuckerman and Lubin's (1965) approach, with the construction of the MAACL, appears to be more frugal because they merely changed the inventory's directions at the top of each page instead of changing the structure of each item. For example, Spielberger et al. (1970) used, "I am nervous right now" (measuring states of

mood) and “I am a nervous person” (measuring traits of mood) instead of giving one set of directions. Zuckerman (1983) discounted this approach when he remarked that single self-descriptive words used out of the context of a sentence couldn’t define either traits or states.

Zuckerman (1983) explains that we cannot assume that changing the instructions on a test guarantees that it will assess a trait or a state. For this reason Zuckerman (1983) has described four criteria that can be used to differentiate trait and state scales. The first criterion indicates that trait and state tests should have high internal consistency or inter-item reliability on a given testing occasion. However, trait tests should also have reasonably high retest reliability, whereas state versions should have low retest reliability (Zuckerman, 1983). Essentially, the situational factor cannot be ignored in the distinction between trait and states. For example, most people are only anxious in certain situations, and their anxiety states in these particular situations may not be reliable from one occasion to the next (Zuckerman, 1983).

The second criterion considers that trait tests have low correlations with state tests on single occasions, but correlate highly with the means of states over several occasions. The third criterion involves convergent and discriminant validity. The state tests should correlate highly with other state tests given on the same occasion and more highly with other state tests than with trait tests of the same construct. The final criterion points out that state tests are sensitive to immediate state-arousal conditions, whereas trait tests show little or no change as a function of these conditions (Zuckerman, 1983).

Application of the above criteria to extant or newly formed tests could reveal some misclassifications (Zuckerman, 1983). However, it is best to use an appropriate tool for a

particular task. For a researcher to use a trait test to measure change or a single state test to assess a disposition is like using a hammer to drive in a screw or measuring body temperature with an outdoor thermometer. If the researcher is lucky, the less appropriate method might work, but with considerable impreciseness (Zuckerman, 1983).

Given the past research, it is evident that constructing a personality inventory is tedious and difficult. This process requires much more than merely listing a few words that have good face validity to assess an individual's personality. Due to the unreliability of individual items, we tend to construct inventories with strongly correlated items (Zuckerman, 1983). Thus, self-report inventories are much more thorough and precise than our casual observations.

One of the most pressing and persistent problems for researchers interested in personality has been the need for objective and quantifiable measures of variables which are simultaneously valid, yet pose minimal problems in terms of administering, scoring and subject resistance (Masterson, 1974). The ACL approach to personality assessment is an attempt to answer this need. The ACL approach to personality is by no means a new one and can be traced back to the Hartshorne and May studies of the 1930s, in which teachers completed checklists to describe student conduct (Masterson, 1974).

The ACL can be used as an assessment technique by presenting participants with a list of descriptive terms (adjectives) that take into account the behavior(s) under consideration. The participant or an observer who records the behaviors of the participant can complete this list. The recording and scoring procedures vary, but the approach is quite simple requiring a participant to place a check beside the word that most resembles his current (today) or general (past week or month) behavior and then summing up the

responses. Procedural emphasis of an ACL is placed on obtaining a maximum amount of descriptive information with minimal emphasis on the mechanics of response (Masterson, 1974). Proponents believe it is easier to administer and score, yet is sufficiently complex to cover a broad range of observed behavior (Masterson, 1974).

Extant checklist techniques encompass a vast array of personality variables. Some techniques (Gough & Heilbrun, 1965) represent attempts to quantify broad dimensions of the total personality; other techniques (Zuckerman & Lubin, 1965) are oriented toward the quantification of specific personality dimensions. Perhaps the best known and most extensively used checklist is the Gough-Heilbrun ACL (Masterson, 1974). It consists of 300 adjectives commonly used to describe individuals and it yields pertinent information in the form of 24 scale scores (Masterson, 1974). Three of the scales developed by Gough and Heilbrun (1965) are used as indices of test-taking variables and they include: (a) the number of favorable adjectives checked, (b) the number of unfavorable adjectives checked, and (c) defensiveness. Additionally, Gough and Heilbrun (1965), based on relevant criteria, empirically developed four scales that include: self-control, lability, self-confidence, and personal adjustment (Masterson, 1974).

Researchers have also developed adjective checklists to measure affect and mood. The MAACL is the most widely used measure of affect and mood (Zuckerman & Lubin, 1965). The MAACL consists of 132 adjectives with affective connotations (Zuckerman & Lubin, 1965). Scoring the MAACL is based on three scales for anxiety, depression, and hostility, which were developed by Zuckerman and Lubin (1965) using an empirical item-selection approach. The MAACL consists of adjectives, which apply to various mood states. Participants are instructed to indicate their response to each adjective by making a

double check if the word is “definitely applicable” to their mood state at the moment, a single check if “slightly applicable”, a question mark if “uncertain”, and a no if the adjective “definitely” does not apply (Zuckerman & Lubin, 1965).

This brief sampling of two widely used checklists provides a look at the numerous and varied applications of the checklist in personality research. Adjective checklists have been used in an almost infinite variety of experimental paradigms since Hartshorne and May’s work in the 1930s and a tremendous amount of information has been accumulated on the basis of checklist responses (Masterson, 1974).

One of the outstanding features of the ACL as an instrument in personality assessment research is the flexibility and adaptability of the technique to particular experimental designs (Masterson, 1974). A main advantage of the ACL is that it is infinitely repeatable and can be applied to almost any stimulus object making it possible to use the technique as a basis of comparison between two concepts or between the same concept at two points in time (Masterson, 1974). It is therefore feasible, as Gough and Heilbrun (1965) suggest, to use an ACL to describe persons at their best, worst, five years later, as another person sees them, and so on. This fact contributes immeasurably to the flexibility and utility of the approach, and explains why researchers use adjective checklists in a wide variety of comparison paradigms (Masterson, 1974).

Because the ACL approach is conducive to repetition, researchers have used it extensively to determine the effects of various experimental treatments (Zuckerman, 1960). For example, Zuckerman (1960) has reported and replicated the finding that student anxiety, hostility, and depression scores on the MAACL rise (relative to baseline levels) with the threat of an examination. Not only have adjective checklists been used as indices of treatment

outcomes, they also have been used to confirm that specific treatment effects have occurred (Masterson, 1974). Geer and Turteltaub (1967), for example, used the anxiety scale of the MAACL to determine if, in effect, a confederate acting either frightened or calm had communicated the desired effect. Thus, adjective checklists have played a significant secondary, as well as a primary, role in personality research.

Researchers have used the ACL technique to plot the development of and changes in various concepts over time because adjective checklists can be simply and repeatedly administered to the same participants (Masterson, 1974). Zuckerman and Lubin (1965), for example, have used scores on the MAACL to study the occurrence of developmental trends in sensitivity training groups. Studies such as this one suggest the utility of an ACL in measuring changes within a particular group as well as in measuring intergroup differences (Masterson, 1974). The nature of the ACL procedure makes this approach to assessment amenable to the measurement of such things as participant's ideas and concepts of inanimate objects (Masterson, 1974). Among other things, researchers have applied ACL procedures to concepts of historical people like George Washington and Abraham Lincoln, and the description of cities (Gough & Heilbrun, 1965).

As it is typically constructed (Masterson, 1974), the ACL offers the researcher an opportunity to obtain a sizeable amount of information with a minimal amount of difficulty in administration, scoring, and test-taking resistance. The assessment time factor is minimal, as even the lengthiest of the available lists can be administered by researchers in 10 to 15 min (Masterson, 1974). This fact, together with the amount of information obtained, has undoubtedly contributed substantially to the popularity and extensive use of the ACL method (Masterson, 1974). However, because the ACL varies tremendously in its methods of

construction, scoring procedures, length, validity, and reliability, researchers might properly raise questions concerning the adequacy of ACL techniques as methods of assessment (Masterson, 1974).

The hidden strength of the ACL method of assessment lies, not in its speed and ease of administration, but in its flexibility and potential breadth of application. Masterson (1974) indicates that when the characteristics of the technique are duly considered by the researcher, the ACL has limitless value, particularly in probing uncharted areas, and pointing the way to further research. If the ACL is appropriately used by the researcher it can be a quick, easily administered, and valid source of information in personality assessment.

The strengths of the ACL may also function as its greatest weaknesses. Masterson (1974) suggests that there is evidence, for example, that what it gains in an ease of administration and scoring, it may lose in sensitivity. Dichotomous responses such as those required on many checklists, for example, are less precise than those quantified with Likert-type scales. Masterson (1974) explains that the greatest shortcomings of this method of assessment lie, not with the ACL itself, but with its application by the researcher. Perhaps because there is a great deal of face validity associated with most ACL measures, the literature reveals far too many instances of checklists employed by researchers' for experimental purposes with virtually no information provided on such vital concerns as method of test construction, word choice, validity, reliability, and scoring procedures (Masterson, 1974). As a result it becomes crucial to look at these issues regarding the ACL method of assessment.

Reliability refers to the consistency of scores obtained by the same individuals when reexamined with the same test on different occasions, or with different sets of equivalent

items, or under other variable examining conditions (Anastasi, 1968). Essentially, any condition that is irrelevant to the purpose of the test represents error variance. Thus, when the examiner tries to maintain uniform testing conditions by controlling the testing environment, instructions, time limits, rapport, and the other similar factors, the examiner is reducing error variance and making the test scores more reliable (Anastasi, 1968).

It is possible that the amount of error variance associated with a particular ACL fluctuates as the instructions and/or scoring systems are altered. Zuckerman and Lubin (1965) demonstrated that with the MAACL an alteration in the instructions influenced the test-retest reliability of the instrument. An alteration in the instructions on this ACL was reflected, for example, in a change in the test-retest reliability scale for the anxiety scale from an r of .68 for the “general” (trait) form to an r of .21 for the “today” (state) form. Although such an altered reliability coefficient is normal for the “today” form, which is intended, the fact that a simple alteration in instructions can substantially influence reliability suggests that the effects of such alterations in other instruments should be considered (Zuckerman & Lubin, 1965).

Despite optimum testing conditions, no test is a perfectly reliable instrument and therefore each test should be accompanied by a statement of its reliability (Anastasi, 1968). Essentially, a researcher can use correlation coefficients to express the degree of correspondence, or relation, between two sets of scores.

When considering the adequacy of reliable coefficients associated with particular checklists, one immediately confronts the issue of whether a high test-retest coefficient is a necessary or even a desirable attribute for checklist methods of assessment (Masterson, 1974). The question is particularly significant because several of the major checklists report

only modest test-retest coefficients. Gough and Heilbrun (1965), for example, reported that for a sample of men tested twice at 6-month intervals test-retest reliability coefficients ranged from a low of $+0.01$ to a high of $+0.86$ with a mean of $+0.54$. Masterson (1974) suggests that mean figures indicate that the self-image as projected in ACL responses is perhaps not as stable as data from self-report inventories using items and questions. The nature of several existing checklists, in conjunction with coefficients like those reported by Gough and Heilbrun (1965), may suggest two alternatives (Masterson, 1974). The first alternative is that moderate rather than high coefficients are an artifact of test construction, and thus a general characteristic of ACL methods. The second possibility is that low reliability coefficients accurately reflect the variable under consideration and do not reflect inadequacies in the ACL technique (Masterson, 1974).

Zuckerman and Lubin (1965) developed a “today” (participants are instructed to check adjectives describing how they feel today) form of the MAACL to reflect changing rather than enduring dimensions of affect. The implications of low test-retest coefficients would thus seem to vary with the nature of the ACL approach (Masterson, 1974). A reasonably high coefficient would seem imperative for a researcher using an instrument purporting to measure enduring dimensions of personality. However, a very high test-retest correlation would actually suggest to the researcher an insensitivity of an instrument intended to detect changes in personality (specifically state) dimensions (Masterson, 1974).

Zuckerman and Lubin (1965) suggest that it is possible to develop instruments for both purposes. They developed the general form of the MAACL in which participants are instructed to check adjectives which describe how they “generally” feel, with retest reliabilities ranging from $.54$ for hostility to $.70$ for anxiety (Zuckerman & Lubin, 1965).

Using the same list of adjectives with altered instructions they also constructed the “today” form of the MAACL with test-retest reliabilities of .30 (Zuckerman & Lubin, 1965).

The measurement of transitory states does not, of course, excuse ACL measures from reliability considerations (Masterson, 1974). When researchers measure variables which are subject to change, the adequacy of the measure is still dependent on the reliability of scores in measuring the variable at any given time (Masterson, 1974). Zuckerman and Lubin (1965) suggest that any instrument purporting to measure transitory states should report low test-retest reliabilities but high coefficients of internal consistency.

In regards to validity, researchers frequently criticize the ACL because of its low discriminant validity (Masterson, 1974). The fact that two of the most thoroughly developed and frequently used checklists simultaneously face the problem of poor discriminant validity in spite of differences in scope, focus, and methods of construction (the MAACL was empirically developed; the ACL rationally) suggests the possibility that substantial scale intercorrelations may characterize ACL measures (Masterson, 1974). Differences in scoring procedures, methods of construction, and the lack of reliability statistics for many available instruments make definitive conclusions difficult (Masterson, 1974).

Masterson (1974) has shown that low discriminant validity of ACLs poses problems of interpretation in evaluating experimental outcomes. An experiment, for example, which determines that several significant differences exist between groups on the basis of scores on an ACL with intercorrelated scales suggests that these groups differ in several important respects, as indicated by significantly different scale scores (Masterson, 1974). However, these significantly different scale scores might, because of scale intercorrelations, reflect only one or two substantial differences between groups. Thus, intercorrelations muddy the

interpretation of test results, and checklists of this nature may consequently be less appealing for specific research purposes than factorially pure instruments (Masterson, 1974). For these reasons, some researchers have turned to other formats, such as the Likert-type scale.

Likert-Type Scales

Likert-type scales are frequently employed in applied and laboratory research.

Likert-type scaling is also one of the more widely used methods by which educational and psychological researchers determine peoples' attitudes toward an object or event. For example, applied researchers often require participants to report their experiences, feelings of anxiety, and self-confidence using Likert-type scales (Dobson & Mothersill, 1979).

In general, little systematic consideration has been given to the defining characteristics of Likert-type scales: (a) the number of response categories or (b) the category labels or anchors (Dobson & Mothersill, 1979). Mattell and Jacoby's (1972) research indicates that the number of response categories is independent of the reliability (internal consistency, stability) and validity (predictive and concurrent) of measurement. Although it has been demonstrated that common statistical analyses are generally robust with regard to violations of measurement scaling assumptions, the selection of equidistant categorical labels would avoid potential problems (Dobson & Mothersill, 1979).

The effects of the 5-, 7-, and 9-point ratings on the rank orderings of the category labels in the Dobson and Mothersill (1979) study were minimal. This study demonstrated a method whereby Likert-type scales can be constructed with equidistant categorical labels. Additionally, they showed that interval scale scores could be employed by researchers in selecting category labels for 5-, 7-, and 9-point scales that satisfy the assumption of equidistant points. Dobson and Mothersill's research also showed that the differences in the

number of rating categories can have some effect on the relative scaled distance between the categories. The optimal use of a Likert-type scale approach to measurement involves constructing scales with five or six alternatives and corresponding equidistant category labels selected from the available scale values for the appropriate dimension (Dobson & Mothersill, 1979).

Oaster's (1989) research with the Texas Social Behavior Inventory found that increased stability was associated with increases in the number of alternatives per Likert scale. Oaster used four different response alternative formats (3, 5, 7, and 9 items) and the resulting alpha coefficients were respectively .56, .69, .86, and .81. Oaster's results showed, except for the 9-item Likert-type scale, that increases in reliability estimates accompanied increases in the number of response alternatives for each Likert-type scale format (3 through 7).

Oaster (1985), earlier studied the effect with 5 forms of the Marlowe-Crowne Social Desirability scale having either 2, 4, 6, 8, or 10 alternatives per choice point. He concluded that, for the even-numbered response format (with no midpoint), alpha coefficients increased with the number of alternatives, from 2 through 8. Theoretically, it seems tenable to assert that reliability of self-ratings increases as the number of alternatives per choice point increases from 3 through 7 (Oaster, 1989). Given the widespread use of self-report measures with response formats similar to those employed in the present study, the practical implications appear to be relevant and numerous.

Ahlawat (1986) investigated the assumption that semantic negative and semantic positive items measure the same construct in Likert-type scales. Ahlawat was further driven by the widespread prevalence among test developers to unquestionably accept this

assumption. The test constructors' conviction in this assumption is further fortified by empirically obtained high indices of homogeneity (or internal) consistency contrary to warnings from psychometricians that homogeneity neither implies, nor guarantees the unidimensionality of the trait being measured by the test (Ahlawat, 1986). On the basis of correlational as well as variance related analyses, Ahlawat (1986) concluded that semantically negative and semantically positive item contents did not essentially measure the same construct. Furthermore, researchers using double negative Likert-type format items created ambiguity and confusion for the participants (Ahlawat, 1986). In a unique study to determine if teachers' responses indicated that they were probably in favor or against parents visiting classrooms, Cooper (1976) devised a test designed to determine within given probability levels, whether the teachers' responses to Likert-type scales differed from what might be expected randomly. Cooper's test is based on three assumptions: (a) all points on the scale are equally spaced (equal appearing intervals), (b) participants responded independently of one another (independent data), and (c) each point on the scale has equal likelihood of response for each participant (equal response probabilities). Bardo (1978) indicated that Cooper's exact probability test should be used only when empirical data can logically be assumed to be free of systematic errors that affect item response probabilities.

In a response to Cooper's (1976) research, Bardo (1978) disagreed with the third assumption and explained that empirical responses to Likert-type scales are subject to systematic errors that make equal response probabilities unlikely. Bardo (1978) enumerated some of these systematic errors as follows: (a) error leniency (the constant tendency of a rater to rate too high or too low, (b) error of central tendency (hesitancy on the part of the participants to give extreme responses), (c) logical error in rating (tendency of participants to

respond in similar ways to items that they presuppose to be logically related), (d) the halo effect (tendency of participants to give similar responses to specific items because of their relationship to the general construct being measured), and (e) proximity error (the tendency of participants to give similar responses to items that occur close to one another in a specific test). Bardo (1978) indicated that corrections can be made for some of the above errors, however, the error of central tendency is not readily modified.

Research (Watson & Tellegen, 1999) has demonstrated that the use of a frequency format (i.e., one in which participants rate what proportion of a specified time period they have experienced each mood state) produced substantially stronger bipolarity in psychological opposite mood terms such as happy and sad. Watson and Tellegen (1999) also indicated that dichotomous checklist formats (i.e., yes-no or true-false) yielded similar results (in terms of reliability, validity, and underlying structure) to those obtained with Likert-type ratings and other response formats.

Research (Watson, 1998) has indicated that highly similar PA and NA factors emerged regardless of six different time frames (“right now,” “today,” “during the past few days,” “during the past few weeks,” “during the past year,” and “in general”) or response formats (adjective checklists and Likert-type scales) used. According to Watson (1998) there may be contexts in which it is most useful to study pleasantness, unpleasantness and/or arousal, but others in which it is more informative to examine PA and NA or the frequency/intensity of affect. Lubin and Whitlock (1999) were sensitive to previous research (Watson, 1998; Zuckerman & Lubin, 1965; Zuckerman, 1983) concerning temporal questioning formats and the measurement of the frequency/intensity of PA and NA when creating the Comprehensive Affect Personality Scale (CAPS). As a result, they developed an

inventory containing scales that measure both active (states) and passive (trait) affect. This distinction remains an important issue for future personality assessment researchers (Watson, 1998).

Comprehensive Affect Personality Scales (CAPS)

To date, no standardized inventory simultaneously measures both personality (traits) and affect (states). In response to this assessment deficit Lubin and Whitlock (1999) developed the CAPS. The CAPS is the only such instrument that purports to assess both personality and affect level data simultaneously, allowing individuals the best opportunity to describe themselves fully in terms of these aspects of human functioning. Further, numerous studies have shown that such health related processes as resilience, appraisal, and coping, all of which are crucial for the arousal and regulation of affect, can also be fruitfully understood as personality processes (Lubin & Whitlock, 1999).

The rationale for the development of the CAPS scales derives from a number of studies over the past 20 years regarding the independence of PA and NA, and the intimate and complex relation between personality and affect traits. Inclusive, these studies suggest that combining affect traits and personality traits in the same instrument should facilitate both research and practice (Lubin & Whitlock, 1999). These trait and state assessments (such as the CAPS) are defined by scores on scales, not by individual items. In most trait tests researchers make assumptions of additivity: participants' scores remain the same even if they represent the endorsement of different items on the same scale, as long as the total number of items endorsed does not change (Zuckerman, 1983).

Researchers can utilize affect traits or temperamental states to measure how we are feeling today. Lubin and Whitlock (1999) compiled a sample of 152 adjectives with either

positive or negative affect connotations to form the preliminary lists of items for the CAPS affect scales. Then they administered these items to a sample of 1073 college students who were randomly split into validation and cross validation groups. Next, they factor analyzed the data from this validation group; the positive items separately from the negative items. These factor analyses for the CAPS validation group yielded five interpretable negative (depression, hostility, agitation, anxiety, and shyness) and five interpretable positive (self-satisfaction, cheerfulness, health/fitness, other-centered and adventurous) factors.

The state forms of the CAPS are called the Affect State Checklist (ASC) and the Affect State Rating-Scale (ASR). The ASC is based on an ACL response format and the ASR on a Likert-type response format. They are useful for measuring transient affect or mood (“How you feel now-today”). The Trait Forms of the CAPS are called the Personality Trait Checklist (PTC) and the Personality Trait Rating-Scale (PTR). The PTC is based on an ACL response format and the PTR on a Likert-type response format. They are meaningful for measuring more enduring dispositional affect or mood (“How you generally feel”). This combination makes the CAPS inventories (ASC/PTC and ASR/PTR) unique because they contain scales that measure both active (states) and passive (traits) affect (Lubin & Zuckerman, 1998).

The development of a test, such as the CAPS, has many implications for professionals in the field of psychology. The clinician, for example, is frequently faced with a number of complex and important issues about diagnosis, screening, malingering, suicide potential, violence potential, and therapy readiness. There is reason to believe that the CAPS might provide assistance with several of these issues. It is also expected that the CAPS, once fully validated in numerous settings, with a wide variety of populations, will have additional

applications. These applications include counseling psychology and related mental health fields (social support and stress management), behavioral medicine and health psychology (adjustment/recovery from surgical/treatment procedures), vocational and career counseling, and industrial/organizational psychology (personality and individual differences). Further, numerous studies have shown that such health related processes as resilience, appraisal, and coping, all of which are crucial for the arousal and regulation of affect, can also be fruitfully understood as personality processes (Lubin & Whitlock, 1999). The CAPS is self-administered and permits respondents to report how they feel (trait affect scales) and how they generally perceive themselves (personality scales). In essence, a single instrument combining both affect and personality that is relatively brief and of acceptable validity would be valuable in clinical research and practice.

Lubin and Whitlock (1999) assessed the reliability of the CAPS by using both internal consistency and test-retest methods. They assessed the internal consistency of the CAPS by using Cronbach's alpha. Alpha's ranged from .71 to .93 across men and women. Lubin and Whitlock assessed the test-retest reliability of the CAPS on a sample of college students ($N = 69$) who completed the CAPS twice at a 6-week interval. Test-retest reliabilities ranged from a low of .55 to a high of .83 indicating that each scale was relatively stable across a 6-week period.

Given the past research, constructing a personality inventory is tedious and difficult. This process requires much more than merely listing a few words that have good face validity to assess an individual's personality. Due to the unreliability of individual items, inventories are conducted with strongly correlated items (Zuckerman, 1983). Thus, self-report inventories are much more thorough and precise than our casual observations. The

construction of the CAPS reflects this difficult and laborious process.

Summary and Rationale

The majority of the research suggests that PA and NA (whether assessed bipolarly or unipolarly), SWB, and the development and use of Likert-type scales and/or adjective checklists impact the interpretation and conceptualization of research results pertaining to personality states and traits. This research domain continues to be a complex and highly debated area. Past research has addressed these issues, but the effects of examining states and traits as a comprehensive assessment have not been adequately examined. To date no standardized inventory simultaneously measures both personality (traits) and affect (states). The CAPS is the only instrument that purports to measure both personality and affect level data simultaneously, allowing individuals the best opportunity to describe their current (today) and enduring (over the past year) emotions. Additionally, the assessment results of personality and affect may be influenced by the researcher's choice of inventory format (Likert-type scales or adjective checklists).

Research Questions

Based on the previously mentioned literature, the following research questions were developed:

Research Question 1: Will the Likert-type scales (CAPS-ASR and PTR) be more sensitive and detect more significant differences than the ACL scales (CAPS-ASC and PTC)?

Research Question 2: Will the affect (CAPS-ASC and ASR) state scores derived from an ACL and a Likert-type scale differ due to different response categories and temporal instructions?

Hypothesis 3: The CAPS personality trait scores (PTC and PTR) derived from an ACL and a Likert-type scale will differ due to different response styles and temporal instructions. As a result, the participant responses to the personality questions will yield moderate ($r = .40$ to $.60$) to substantial ($r = .60$ to $.80$) correlations based on Best and Kahn's (1989) correlation coefficient criterion.

describe their feelings “today.” The CAPS-ASR and ASC scales included the same 78 adjectives in alphabetical order. This affect dimension consisted of 10 scales: 5 negative scales (anxiety, depression, hostility, agitation, and shyness) and 5 positive scales (self-satisfaction, other-centeredness, cheerfulness, health/fitness, and adventurousness).

The CAPS-PTC was administered to participants to assess 5 personality traits utilizing a 53-item adjective checklist that asked each participant to indicate how they generally feel. The CAPS-PTR assessed the same 5 personality traits utilizing a five-item Likert-type scale format (1 = Not At All, 2 = Very Little, 3 = A Bit More, 4 = Quite A Bit, and 5 = A Great Deal) that asked each participant to indicate how they generally feel. The CAPS-PTC and PTR scales included the same 53 adjectives in alphabetical order. This personality dimension consisted of five scales: extraversion, agreeableness, conscientiousness, openness, and emotional stability.

The informed consent document included a brief description of the procedures, approximate completion time, possible risks or benefits from this study, and information regarding the participant’s right to withdraw from the study at any time without reprimand. Additionally, the researcher provided contact information to the participants in case any questions arose.

Procedure

The researcher obtained approval for this study from the Institutional Review Board. Students volunteered to participate by signing their name to a centrally located research form. During each research session, the researcher distributed an informed consent document (see Appendix E) to each participant. After the informed consent documents were collected, the researcher distributed the questionnaire packets. A demographics form (Appendix F) was

Scoring the CAPS-PTR questionnaire required the examiner to add each of the five personality trait sub-scale (extraversion, agreeableness, conscientiousness, openness, and emotional stability) scores separately. The five personality sub-scale scores were then separately recorded into an SPSS program.

Scoring the CAPS-ASC questionnaire required the examiner to add each of the 10 affect sub-scale scores (self-satisfaction, cheerfulness, health/fitness, other-centered, adventurous, depression, hostility, agitation, anxiety, and shyness) independently. This process yielded 10 separate affect sub-scale scores. Next, the 10 sub-scales were grouped into positive (self-satisfaction, cheerfulness, health/fitness, other-centered, and adventurous) and negative (depression, hostility, agitation, anxiety, and shyness) affect categories. The five positive affect scores were added together and this total was called the positive affect total. The five negative affect scores were also added together and this total was called the negative affect total. The 10 affect sub-scale scores and the positive and negative affect total scores were then separately recorded into an SPSS program.

Scoring the CAPS-PTC questionnaire required the examiner to add each of the five personality trait sub-scale (extraversion, agreeableness, conscientiousness, openness, and emotional stability) scores separately. The five personality sub-scale scores were then separately recorded into an SPSS program.

CHAPTER 3

RESULTS

Participants were administered the Comprehensive Affect Personality Scales (CAPS), which included the Affect State Checklist (ASC), Affect State Rating Scale (ASR), Personality Trait Checklist (PTC), and the Personality Trait Rating Scale (PTR), during each research session. The results were analyzed by SPSS for Windows software. An alpha level of .05 was used for all analyses.

General Overview

A series of one-way analyses of variance (ANOVAs) with the factors of sex (male or female), age (traditional (18 to 22 years old) or non-traditional (23 to 47 years old)), marital status (single, married or divorced), Greek affiliation (Greek or non-Greek), and class (Freshman, Sophomore, Junior or Senior) was performed on the CAPS Adjective Checklist (ACL) (ASC and PTC) and Likert-type scale (ASR and PTR) scores to investigate the researcher's hypothesis that the Likert-type scales will be more sensitive in detecting significant differences than will the ACL scales. The researcher hypothesized that the Likert-type scales will obtain more significant differences than the ACL scales.

The CAPS personality trait (PTR and PTC) scale scores were correlated to investigate the researcher's hypothesis that the personality trait scores would yield moderate ($r = .40$ to $.60$) to substantial ($r = .60$ to $.80$) correlation coefficients because of the response directions given to participants at the beginning of each personality scale. The CAPS affect state (ASC and ASR) scale scores were correlated to investigate the researcher's hypothesis that the affect state scores would yield low ($r = .20$ to $.40$) to moderate correlation coefficients because of the response directions given to participants at the beginning of each affect scale.

The correlation coefficient ranges used for this research were based on Best and Kahn's (1989) criterion for evaluating the magnitude of a correlation. Best and Kahn interpret their correlational coefficient ranges as follows: (a) negligible ($r = .00$ to $.20$), (b) low ($r = .20$ to $.40$), (c) moderate ($r = .40$ to $.60$), (d) substantial ($r = .60$ to $.80$), and (e) high to very high ($r = .80$ to 1.00).

Each statistical comparison is discussed separately, in terms of the significant ANOVA results obtained by the CAPS Likert-type scales (ASR and PTR) and the CAPS-ACL scales (ASC and PTC), respectively. See Table 1 for the significant demographic comparisons regarding the CAPS-ASR and ASC scales. See Table 2 for the significant demographic comparisons regarding the CAPS-PTR and PTC scales. The correlation coefficient comparisons between the CAPS personality scale (PTR and PTC) scores and the affect scale (ASR and ASC) scores are discussed next. See Table 3 for the CAPS personality scale correlation coefficients and Table 4 for the CAPS affect scale correlation coefficients.

Positive Affect (PA) and Negative Affect (NA) Results Based on the CAPS-ASR Scores

Participant demographics were independently and systematically compared with the six CAPS-PA (self-satisfaction, cheerfulness, health/fitness, other-centered, adventurous, and the PA total) and six NA (depression, hostility, agitation, anxiety, shyness, and the NA total) sub-scale scores. A series of one-way ANOVAs (age for PA and NA sub-scales) was performed on the ASR scores. The age demographic was divided into two groups, traditional (18-22 years old) and non-traditional (23-47 years old) participants. Results showed significant effects for depression, $F(1, 105) = 5.08$, $p = .02$, anxiety, $F(1, 105) = 4.26$, $p = .04$, and negative total score, $F(1, 105) = 5.40$, $p = .02$. Specifically, the results indicated that traditional participants ($M = 32.70$, $SD = 13.13$) perceived themselves to be more

depressed, than did non-traditional participants ($M = 24.94$, $SD = 14.21$). The results also indicated that traditional participants ($M = 17.38$, $SD = 6.34$) perceived themselves to be more anxious than did non-traditional participants ($M = 14.06$, $SD = 5.65$). Lastly, results showed that traditional participants ($M = 94.87$, $SD = 27.50$) perceived themselves to be more negatively oriented than non-traditional participants ($M = 77.89$, $SD = 32.04$). See Table 1 for the CAPS-ASR and ASC significant demographic comparisons.

Personality Trait Results Based on the CAPS-PTR Scores

Participant demographics were independently and systematically compared with the five CAPS personality trait sub-scales (extraversion, agreeableness, conscientiousness, openness, and emotional stability). A series of one-way ANOVAs (sex for personality trait sub-scales) were performed on the PTR scores. Results showed a significant effect for openness, $F(1, 105) = 4.84$, $p < .01$. Specifically, the results (higher scores on all PTR scores were equated with more intense trait feelings) indicated that women ($M = 29.10$, $SD = 5.35$) perceived themselves to be more open than men ($M = 24.30$, $SD = 4.94$). See Table 2 for the CAPS-PTR and PTC significant demographic comparisons.

PA and NA Affect Results Based on the CAPS-ASC Scores

Participant demographics were independently and systematically compared with the six CAPS-PA (self-satisfaction, cheerfulness, health/fitness, other-centered, adventurous, and the PA total) and six NA (depression, hostility, agitation, anxiety, shyness, and the NA total) sub-scale scores. One-way ANOVAs were performed on the ASC scores. No significant effects were obtained.

Table 1

CAPS-ASR and ASC Significant Demographic Comparisons and Effect Sizes for Non-significant Comparisons

	<u>Sex</u>		<u>Age</u>		<u>Marital Status</u>		<u>Greek Affiliation</u>		<u>Class</u>	
	ASR	ASC	ASR	ASC	ASR	ASC	ASR	ASC	ASR	ASC
<u>Affect</u>										
Self-Satisfaction	.001	.000	.000	.014	.010	.015	.007	.001	.021	.009
Cheerfulness	.004	.006	.009	.032	.007	.005	.023	.002	.003	.050
Health/Fitness	.059	.073	.025	.144	.021	.004	.050	.058	.047	.089
Other-Centered	.000	.008	.002	.048	.056	.002	.006	.024	.034	.098
Adventurous	.008	.033	.026	.002	.065	.007	.000	.007	.099	.043
Positive Total	.012	.013	.009	.052	.005	.004	.050	.002	.037	.021
Depression	.008	.010	*	.021	.023	.002	.005	.019	.015	.033
Hostility	.001	.009	.021	.008	.027	.006	.001	.004	.027	.026
Agitation	.011	.006	.030	.005	.056	.006	.012	.000	.021	.056
Anxiety	.005	.019	*	.054	.038	.020	.003	.024	.012	.046
Shyness	.002	.002	.003	.017	.011	.003	.001	.002	.009	.023
Negative Total	.006	.019	*	.034	.050	.005	.005	.018	.019	.038

* $p < .05$

Effect sizes were calculated by the researcher for non-significant comparisons by using Eta squared.

Table 2

CAPS-PTR and PTC Significant Demographic Comparisons and Effect Sizes for Non-significant Comparisons

	<u>Sex</u>		<u>Age</u>		<u>Marital Status</u>		<u>Greek Affiliation</u>		<u>Class</u>	
	PTR	PTC	PTR	PTC	PTR	PTC	PTR	PTC	PTR	PTC
<u>Personality</u>										
Extraversion	.001	.005	.002	.001	.024	.013	.018	.000	.060	.019
Agreeableness	.005	.001	.000	.004	.047	.032	.004	.002	.011	.023
Conscientiousness	.009	.001	.005	.007	.030	.004	.002	.001	.028	.038
Openness	*	.008	.017	.041	.044	.038	.001	.022	.029	.043
Emotional	.014	.006	.042	.000	.010	.011	.011	.001	.041	.018
Total Score	.007	.000	.001	.008	.029	.029	.003	.002	.062	.007

* $p < .05$

Effect sizes were calculated by the researcher for non-significant comparisons by using Eta squared.

Personality Trait Results Based on the CAPS-PTC Scores

Participant demographics were independently and systematically compared with the five CAPS personality trait sub-scales (extraversion, agreeableness, conscientiousness, openness, and emotional stability). One-way ANOVAs were performed on the PTC scores. No significant effects were obtained.

CAPS-PTR and PTC Correlation Results

The five CAPS-PTR scale (openness, extraversion, conscientiousness, agreeableness, and emotional stability) scores were correlated with the five CAPS-PTC scale (openness, extraversion, conscientiousness, agreeableness, and emotional stability) scores. These correlations indicated one low ($r = .20$ to $.40$) and five moderate ($r = .40$ to $.60$) correlations between the PTR and PTC scale scores. All correlations were significant ($p < .01$) and positive; openness, $r(105) = .55$, extraversion, $r(105) = .54$, conscientiousness, $r(105) = .45$, agreeableness, $r(105) = .43$, and emotional stability, $r(105) = .37$. See Table 3 for the CAPS-PTR and PTC correlation coefficient comparisons.

CAPS-ASR and ASC Correlation Results

The 10 CAPS-ASR scale (agitation, anxiety, health/fitness, depression, adventurous, self-satisfaction, cheerfulness, hostility, other-centered, and shyness) scores were correlated with the 10 CAPS-ASC scale (agitation, anxiety, health/fitness, depression, adventurous, self-satisfaction, cheerfulness, hostility, other-centered, and shyness) scores. These correlations indicated four low ($r = .20$ to $.40$), five moderate ($r = .40$ to $.60$), and three substantial ($r = .60$ to $.80$) relations between the ASR and ASC scale scores. All correlations were positive and significant at the .01 level except for shyness; agitation, $r(105) = .62$, anxiety, $r(105) = .61$, total negative affect, $r(105) = .60$, health/fitness, $r(105) = .61$,

Table 3

CAPS-PTR and PTC Correlation Coefficient Comparisons

	<u>PTC</u>					
	Op	Ex	Co	Ag	Ts	Es
<u>PTR</u>						
Openness (Op)	.55**	--	--	--	--	--
Extraversion (Ex)	--	.54**	--	--	--	--
Conscientiousness (Co)	--	--	.45**	--	--	--
Agreeableness (Ag)	--	--	--	.43**	--	--
Total Score (Ts)	--	--	--	--	.43**	--
Emotional Stability (Es)	--	--	--	--	--	.37**

**p < .01

depression, $r(105) = .57$, total positive affect, $r(105) = .52$, adventurous, $r(105) = .43$, self-satisfaction, $r(105) = .42$, cheerfulness, $r(105) = .36$, hostility, $r(105) = .35$, other-centered, $r(105) = .32$, and shyness, $r(105) = .24$. See Table 4 for the CAPS-ASR and ASC correlation coefficient comparisons.

Table 4

CAPS-ASR and ASC Correlation Coefficient Comparisons

	<u>ASC</u>											
	Ag	Ax	Hf	Tn	De	Tp	Ad	Ss	Ch	Ho	Oc	Sh
<u>ASR</u>												
Agitation (Ag)	.62**	--	--	--	--	--	--	--	--	--	--	--
Anxiety (Ax)	--	.61**	--	--	--	--	--	--	--	--	--	--
Health/Fitness (Hf)	--	--	.61**	--	--	--	--	--	--	--	--	--
Total Negative Affect (Tn)	--	--	--	.60**	--	--	--	--	--	--	--	--
Depression (De)	--	--	--	--	.57**	--	--	--	--	--	--	--
Total Positive Affect (Tp)	--	--	--	--	--	.52**	--	--	--	--	--	--
Adventurous (Ad)	--	--	--	--	--	--	.43**	--	--	--	--	--
Self-Satisfaction (Ss)	--	--	--	--	--	--	--	.42**	--	--	--	--
Cheerfulness (Ch)	--	--	--	--	--	--	--	--	.36**	--	--	--
Hostility (Ho)	--	--	--	--	--	--	--	--	--	.35**	--	--
Other-Centered (Oc)	--	--	--	--	--	--	--	--	--	--	.32**	--
Shyness (Sh)	--	--	--	--	--	--	--	--	--	--	--	.24*

*p < .05

**p < .01

CHAPTER 4

DISCUSSION

Clearly, personality is not a unidimensional concept. It incorporates enduring personality traits, transient affect, and positive and negative components. These elements appear to compound the difficulty inherent in assessing personality. In response to this daunting task, Zuckerman and Lubin (1965) suggest that it is possible to develop an instrument that measures these diverse personality components. Several years later researchers (Lubin & Whitlock, 1999) developed a standardized inventory called the Comprehensive Affect and Personality Scales (CAPS). Lubin and Whitlock (1999) purport that the CAPS is the only instrument that has the ability to assess both personality and affect data simultaneously, thus allowing individuals the best opportunity to describe themselves fully in terms of these aspects of human functioning. However, several questions remain unanswered. Should a Likert-type or checklist scale version of the CAPS be used to measure personality and affect? Do the differing temporal directions at the beginning of the affect and personality scales influence participant response sets?

Hypotheses Overview

The purpose of this study was to investigate the researcher's hypothesis that the Likert-type scales will be more sensitive in detecting significant differences than will the checklist scales. Before the specific hypotheses are addressed, a more general problem should be acknowledged. Spurious significance may have influenced the results of this study due to the number of comparisons that were made between the Likert-type and ACL scale scores. However, the significant comparisons for the ASR and ASC scales were all shown by the ASR scale. Spurious differences would not have clustered themselves around this specific

dimension. Additionally, the CAPS personality (PTR and PTC) and affect (ASR and ASC) scale scores were correlated to investigate the researcher's hypothesis regarding the effects of the temporal response directions given to the participants at the beginning of each personality and affect scale.

Hypothesis 1

Are the results obtained by the CAPS Likert-type scales (ASR and PTR) different from the CAPS checklist scales (ASC and PTC)? The analyses yielded several significant differences that were informative. For example, when comparing the differences (see Tables 1 and 2), the CAPS Likert-type scales were considerably more sensitive to the demographic differences than were the CAPS checklist scales when the researcher compared these scales with the age and sex demographics. At this point, the exact reasons for these demographic differences are unknown. These results suggest support for Hypothesis 1. More specifically, the CAPS Likert-type scales obtained four significant differences on the age and sex demographic variables, whereas the CAPS checklist scales did not obtain any significant differences. The reader should keep in mind that these two scales consisted of the exact number of identical adjectives (78 for the affect scales and 53 for the personality scales) used to assess affect states and personality traits.

The data were consistent with Masterson's (1974) findings that although checklists are easy to administer and score, their dichotomous responses are less precise and sensitive than those quantified with Likert-type scales. Moreover, the defining characteristics of Likert-type scales including, the number of response categories and the category labels or anchors, if used diligently, will increase the sensitivity of their results. The results of this

research suggest that a Likert-type scale would be the preferred assessment tool for the CAPS.

Hypotheses 2 and 3

It was hypothesized that the personality trait scores would yield moderate ($r = .40$ to $.60$) to substantial ($r = .60$ to $.80$) correlation coefficients and the affect scale scores would yield low ($r = .20$ to $.40$) to moderate correlation coefficients. The affect state correlations indicated three substantial, five moderate, and four low relations. The personality trait correlations indicated one low and five moderate relations. Nine of the 12 (75%) affect correlations supported Hypothesis 2. Additionally, all of the personality correlations (6 of 6) supported hypothesis 3. The data also showed that the personality trait correlation coefficients (the range was $.37$ to $.55$) were less variable than the affect state correlation coefficients (the range was $.24$ to $.62$). These results suggest support for the researcher's Hypotheses 2 and 3. These results suggest that the differing temporal directions at the beginning of the affect and personality scales influenced participant responses.

Research Limitations

There were limitations to this research. Self-report inventories are subject to questioning based on the quality of the responses given by the participants. Because the participants were given class credit for their participation, but not for their effort, and because their responses were anonymous, their responses may not have accurately reflected their true affect or personality qualities.

Another limitation concerns the temporally different directions given at the beginning of each scale. For example, the participants may not have recognized that affect scales asked how they were feeling "during the past week including today" and that the personality scales

asked how they “generally thought of themselves.” It should be noted that these directions were emphasized before each testing session to attenuate this potential problem.

Lastly, a related limitation concerns the participants’ literacy. The participants may not have understood some of the adjectives used to describe affect and personality. This confusion may have caused participants to disregard adjectives they were not familiar with and possibly over emphasize words they were familiar with.

Future Research Possibilities

There are several possibilities for future research. Because the researcher utilized a college student sample in the current study, it might be interesting to study a different participant population. The brevity, lack of intrusiveness, and low cognitive demand of the CAPS make it attractive for research with the aged. In light of increasing life spans, it may be interesting to use the CAPS to study the affect and personality characteristics of this growing population. The CAPS could also be employed on a daily basis to monitor affect or mood fluctuations for documentation purposes of a patient’s status in a managed care inpatient setting. Additionally, it may be interesting to more clearly delineate the influences of the temporal questioning formats used in the CAPS. Lastly, it may be fruitful to research the contexts in which it is more informative to examine positive and negative affect or the frequency/intensity of affect. For example, it may be interesting to examine previous research (Watson & Clark, 1994) indicating it is easier to induce a state of high positive affect through doing rather than thinking, whereas the reverse is true for negative affect.

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APPENDICES

Appendix A

Comprehensive Affect Personality Scale: Affect State Checklist

CAPS-ASC

M _____ F _____ Age _____ Highest Grade Completed (H.S. Grad = 12) _____

Marital Status: _____ Single _____ Married _____ Separated _____ Divorce _____ Widowed

INSTRUCTIONS: Below is a list of words that describe feelings people have. Please read each one and check those that describe your feelings **TODAY**.

- | | | |
|-----------------------|------------------------|-------------------------|
| _____ 1. active | _____ 27. glad | _____ 53. rejected |
| _____ 2. adventurous | _____ 28. gloomy | _____ 54. rough |
| _____ 3. affectionate | _____ 29. good-natured | _____ 55. sad |
| _____ 4. afraid | _____ 30. happy | _____ 56. safe |
| _____ 5. aggressive | _____ 31. healthy | _____ 57. satisfied |
| _____ 6. agitated | _____ 32. hopeless | _____ 58. secure |
| _____ 7. alone | _____ 33. hostile | _____ 59. shaky |
| _____ 8. angry | _____ 34. impatient | _____ 60. shy |
| _____ 9. annoyed | _____ 35. irritated | _____ 61. soothed |
| _____ 10. athletic | _____ 36. joyful | _____ 62. sound |
| _____ 11. awful | _____ 37. lonely | _____ 63. steady |
| _____ 12. blue | _____ 38. lost | _____ 64. sturdy |
| _____ 13. calm | _____ 39. low | _____ 65. suffering |
| _____ 14. cautious | _____ 40. mad | _____ 66. sullen |
| _____ 15. cheerful | _____ 41. mean | _____ 67. sympathetic |
| _____ 16. complaining | _____ 42. merry | _____ 68. tame |
| _____ 17. cooperative | _____ 43. mild | _____ 69. tense |
| _____ 18. cruel | _____ 44. miserable | _____ 70. thoughtful |
| _____ 19. daring | _____ 45. nervous | _____ 71. tormented |
| _____ 20. devoted | _____ 46. panicky | _____ 72. trim |
| _____ 21. disgusted | _____ 47. peaceful | _____ 73. understanding |
| _____ 22. energetic | _____ 48. physical | _____ 74. unhappy |
| _____ 23. enraged | _____ 49. pleased | _____ 75. upset |
| _____ 24. fit | _____ 50. polite | _____ 76. whole |
| _____ 25. frightened | _____ 51. powerful | _____ 77. wild |
| _____ 26. furious | _____ 52. quiet | _____ 78. worrying |

Appendix B

Comprehensive Affect Personality Scale: Affect State Rating Scale

CAPS-ASR

M _____ F _____ Age _____ Highest Grade Completed (H.S. Grad = 12) _____

Marital Status: _____ Single _____ Married _____ Separated _____ Divorce _____ Widowed

INSTRUCTIONS: Below is a list of words that describe feelings people have. Circle the number that best describes HOW MUCH YOU HAVE FELT EACH WORD DURING THE PAST WEEK INCLUDING TODAY. The numbers below equal:

1 = (Not at all), 2 = (A little), 3 = (More than a little), 4 = (Quite a bit), 5 = (A great deal)

- | | | | | | |
|-----------------|-----------|------------------|-----------|-------------------|-----------|
| 1. active | 1 2 3 4 5 | 27. glad | 1 2 3 4 5 | 53. rejected | 1 2 3 4 5 |
| 2. adventurous | 1 2 3 4 5 | 28. gloomy | 1 2 3 4 5 | 54. rough | 1 2 3 4 5 |
| 3. affectionate | 1 2 3 4 5 | 29. good-natured | 1 2 3 4 5 | 55. sad | 1 2 3 4 5 |
| 4. afraid | 1 2 3 4 5 | 30. happy | 1 2 3 4 5 | 56. safe | 1 2 3 4 5 |
| 5. aggressive | 1 2 3 4 5 | 31. healthy | 1 2 3 4 5 | 57. satisfied | 1 2 3 4 5 |
| 6. agitated | 1 2 3 4 5 | 32. hopeless | 1 2 3 4 5 | 58. secure | 1 2 3 4 5 |
| 7. alone | 1 2 3 4 5 | 33. hostile | 1 2 3 4 5 | 59. shaky | 1 2 3 4 5 |
| 8. angry | 1 2 3 4 5 | 34. impatient | 1 2 3 4 5 | 60. shy | 1 2 3 4 5 |
| 9. annoyed | 1 2 3 4 5 | 35. irritated | 1 2 3 4 5 | 61. soothed | 1 2 3 4 5 |
| 10. athletic | 1 2 3 4 5 | 36. joyful | 1 2 3 4 5 | 62. sound | 1 2 3 4 5 |
| 11. awful | 1 2 3 4 5 | 37. lonely | 1 2 3 4 5 | 63. steady | 1 2 3 4 5 |
| 12. blue | 1 2 3 4 5 | 38. lost | 1 2 3 4 5 | 64. sturdy | 1 2 3 4 5 |
| 13. calm | 1 2 3 4 5 | 39. low | 1 2 3 4 5 | 65. suffering | 1 2 3 4 5 |
| 14. cautious | 1 2 3 4 5 | 40. mad | 1 2 3 4 5 | 66. sullen | 1 2 3 4 5 |
| 15. cheerful | 1 2 3 4 5 | 41. mean | 1 2 3 4 5 | 67. sympathetic | 1 2 3 4 5 |
| 16. complaining | 1 2 3 4 5 | 42. merry | 1 2 3 4 5 | 68. tame | 1 2 3 4 5 |
| 17. cooperative | 1 2 3 4 5 | 43. mild | 1 2 3 4 5 | 69. tense | 1 2 3 4 5 |
| 18. cruel | 1 2 3 4 5 | 44. miserable | 1 2 3 4 5 | 70. thoughtful | 1 2 3 4 5 |
| 19. daring | 1 2 3 4 5 | 45. nervous | 1 2 3 4 5 | 71. tormented | 1 2 3 4 5 |
| 20. devoted | 1 2 3 4 5 | 46. panicky | 1 2 3 4 5 | 72. trim | 1 2 3 4 5 |
| 21. disgusted | 1 2 3 4 5 | 47. peaceful | 1 2 3 4 5 | 73. understanding | 1 2 3 4 5 |
| 22. energetic | 1 2 3 4 5 | 48. physical | 1 2 3 4 5 | 74. unhappy | 1 2 3 4 5 |
| 23. enraged | 1 2 3 4 5 | 49. pleased | 1 2 3 4 5 | 75. upset | 1 2 3 4 5 |
| 24. fit | 1 2 3 4 5 | 50. polite | 1 2 3 4 5 | 76. whole | 1 2 3 4 5 |
| 25. frightened | 1 2 3 4 5 | 51. powerful | 1 2 3 4 5 | 77. wild | 1 2 3 4 5 |
| 26. furious | 1 2 3 4 5 | 52. quiet | 1 2 3 4 5 | 78. worrying | 1 2 3 4 5 |

Appendix C

Comprehensive Affect Personality Scale: Personality Trait Checklist

CAPS-PTC

M _____ F _____ Age _____ Highest Grade Completed (H.S. Grad = 12) _____

Marital Status: _____ Single _____ Married _____ Separated _____ Divorce _____ Widowed

INSTRUCTIONS: Below is a list of words that describe feelings people have. Please read each one and check those that are an accurate description of you.

- | | | |
|-------------------------|---------------------------|--------------------------|
| _____ 1. ambitious | _____ 19. friendly | _____ 37. playful |
| _____ 2. appreciative | _____ 20. generous | _____ 38. practical |
| _____ 3. attractive | _____ 21. gentle | _____ 39. relaxed |
| _____ 4. carefree | _____ 22. growth-seeking | _____ 40. reliable |
| _____ 5. changeable | _____ 23. helpful | _____ 41. restless |
| _____ 6. charming | _____ 24. humorous | _____ 42. sensitive |
| _____ 7. clear-thinking | _____ 25. imaginative | _____ 43. serious |
| _____ 8. considerate | _____ 26. impulsive | _____ 44. sentimental |
| _____ 9. creative | _____ 27. individualistic | _____ 45. sincere |
| _____ 10. curious | _____ 28. industrious | _____ 46. sociable |
| _____ 11. defensive | _____ 29. inventive | _____ 47. soft-hearted |
| _____ 12. deliberate | _____ 30. jolly | _____ 48. supportive |
| _____ 13. dependable | _____ 31. lively | _____ 49. temperamental |
| _____ 14. dissatisfied | _____ 32. moody | _____ 50. thorough |
| _____ 15. easy-going | _____ 33. natural | _____ 51. touchy |
| _____ 16. excitable | _____ 34. organized | _____ 52. trusting |
| _____ 17. forceful | _____ 35. original | _____ 53. wide interests |
| _____ 18. forgiving | _____ 36. outgoing | |

Appendix D

Comprehensive Affect Personality Scale: Personality Trait Rating Scale

CAPS-PTR

INSTRUCTIONS: Please think of yourself GENERALLY and circle the number that is most descriptive of how you are generally. The numbers below equal:

1 = (Not at all), 2 = (A little), 3 = (More than a little), 4 = (Quite a bit), 5 = (A great deal)

- | | | | |
|---------------------|-----------|--------------------|-----------|
| 1. ambitious | 1 2 3 4 5 | 30. jolly | 1 2 3 4 5 |
| 2. appreciative | 1 2 3 4 5 | 31. lively | 1 2 3 4 5 |
| 3. attractive | 1 2 3 4 5 | 32. moody | 1 2 3 4 5 |
| 4. carefree | 1 2 3 4 5 | 33. natural | 1 2 3 4 5 |
| 5. changeable | 1 2 3 4 5 | 34. organized | 1 2 3 4 5 |
| 6. charming | 1 2 3 4 5 | 35. original | 1 2 3 4 5 |
| 7. clear-thinking | 1 2 3 4 5 | 36. outgoing | 1 2 3 4 5 |
| 8. considerate | 1 2 3 4 5 | 37. playful | 1 2 3 4 5 |
| 9. creative | 1 2 3 4 5 | 38. practical | 1 2 3 4 5 |
| 10. curious | 1 2 3 4 5 | 39. relaxed | 1 2 3 4 5 |
| 11. defensive | 1 2 3 4 5 | 40. reliable | 1 2 3 4 5 |
| 12. deliberate | 1 2 3 4 5 | 41. restless | 1 2 3 4 5 |
| 13. dependable | 1 2 3 4 5 | 42. sensitive | 1 2 3 4 5 |
| 14. dissatisfied | 1 2 3 4 5 | 43. serious | 1 2 3 4 5 |
| 15. easy-going | 1 2 3 4 5 | 44. sentimental | 1 2 3 4 5 |
| 16. excitable | 1 2 3 4 5 | 45. sincere | 1 2 3 4 5 |
| 17. forceful | 1 2 3 4 5 | 46. sociable | 1 2 3 4 5 |
| 18. forgiving | 1 2 3 4 5 | 47. soft-hearted | 1 2 3 4 5 |
| 19. friendly | 1 2 3 4 5 | 48. supportive | 1 2 3 4 5 |
| 20. generous | 1 2 3 4 5 | 49. temperamental | 1 2 3 4 5 |
| 21. gentle | 1 2 3 4 5 | 50. thorough | 1 2 3 4 5 |
| 22. growth-seeking | 1 2 3 4 5 | 51. touchy | 1 2 3 4 5 |
| 23. helpful | 1 2 3 4 5 | 52. trusting | 1 2 3 4 5 |
| 24. humorous | 1 2 3 4 5 | 53. wide interests | 1 2 3 4 5 |
| 25. imaginative | 1 2 3 4 5 | | |
| 26. impulsive | 1 2 3 4 5 | | |
| 27. individualistic | 1 2 3 4 5 | | |
| 28. industrious | 1 2 3 4 5 | | |
| 29. inventive | 1 2 3 4 5 | | |

Appendix E
Informed Consent Document

Appendix E Informed Consent Document

Read and sign this consent form. If you have any questions please ask the experimenter.

The Division of Psychology and Special Education at Emporia State University supports the practice of protection for human participants participating in research and related activities. The following information is provided so you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw from the study and you will not be subjected to reprimand or any other form of reproach.

Participants will be asked to complete the Comprehensive Affect Personality Scales (CAPS), as well as a brief demographic questionnaire, which will take approximately 20 minutes to complete. The CAPS has been used previously and presents no risks to participants.

Questions or comments about this study should be directed to John A. Juve, Division of Psychology and Special Education, (316) 340-0671.

Thank you for your participation.

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I Likewise understand that I can withdraw from the study at any time without being subjected to reproach."

Participant

Date

THE EMPORIA STATE UNIVERSITY COMMITTEE FOR THE
PROTECTION OF HUMAN PARTICIPANTS HAS REVIEWED THIS
PROJECT.

Appendix F
Demographics Information

Instructions For Participants

1. Place the last four digits of your social security number in this space _____ and at the top of each of the following pages. We will be disassembling and reassembling these packets and we want to keep the packets for each participant together.

2. Please complete the following information before proceeding:

Age _____

Sex M _____ F _____

Academic Classification: Freshman _____
 Sophomore _____
 Junior _____
 Senior _____
 Graduate Student _____

Sorority or Fraternity Member? Yes _____ No _____

3. Read all instructions carefully and answer questions honestly and to the best of your ability.

Your cooperation and participation is appreciated.

