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Empirical Development of a Scale of Patience

Kenneth C. Dudley

Dissertation submitted to the
College of Human Resources and Education
at West Virginia University
in partial fulfillment of the requirements
for the degree of

Doctor of Philosophy
in
Counseling Psychology

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ABSTRACT

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Kenneth C. Dudley

Patience is a construct not directly studied in the literature. Studies in the psychological literature have typically spoken of patience only as the converse of impatience. The assumption of these studies is that patience exists in the absence of impatience. However, other research proposes a multidimensional model of patience based on qualitative studies. It follows from the multidimensional model that patience exists on a continuum with the potential for different levels or amounts of patience across different situations. The purpose of this study was to develop an objective measure of patience.

To develop a measure of patience an item pool was constructed and reviewed, and then 347 undergraduate students completed items. Factor analysis of this initial administration identified nine factors. A final measure was developed and administered to 312 undergraduate students. To assess validity of the patience scale, students completed the Boredom Proneness Scale, the Student Version of the Jenkins Activity Scale, and a modified version of the Questionnaire Measure of Emotional Empathy in addition to the patience measure. Forty undergraduate students completed the measures at a four-week interval to assess temporal stability. Factor analysis utilized the Scree test and Kaiser eigenvalue rule in determining the number of factors to retain. Equamax rotation was the orthogonal method of factor rotation.

A six-factor model of patience was found with strong reliability for the measure as a whole ($\alpha = .7993$) and adequate for individual factors ($\alpha = .7334 - .5226$). The six factors explained 48.282 percent of the variance. Temporal stability was high ($r = .893$). Support was found for convergent validity. Factor labels are postponement, even-tempered, composure, time abundance, tolerance, and limits of patience.

The Patience Scale is discussed in comparison to a sociotemporal model of patience and the other measures used in the study. Future directions for the use of the scale are discussed.

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Chapter 1: Introduction

Introduction to the Problem

Is it possible to measure patience with adequate reliability and validity? This study seeks to answer this question through the development of a measure of patience.

“Patience is a virtue” (or so we are told) lauded across religious, cultural, and ideological boundaries (Aquinas, 1916; al-Awdah, 2000; Bible, 1948; Dalai Lama, et al., 1997); but there is a dearth of research on the construct of patience itself. Identification of situations where patience is required, or at least preferred, is easy. Staff meetings, Monday morning traffic, crying children, long lines, graduation ceremonies, car alarms at three in the morning, dinner with in-laws, lectures, late arriving airplanes or trains, schedule changes, and co-workers who will not stop talking are each an opportunity for patience. Webster’s Third New International Dictionary (1981) defines patience as “the capacity or habit of enduring evil, ... courageous endurance, ... calm self-possession in confronting obstacles or delays: steadfastness” (p. 1655). Examination of this definition finds it inadequate for operationalized usage in the field of psychology. Patience is a reasonable expectation to most situations of delay. However, without being able to operationally define or measure patience, it is only possible to make this global, sweeping statement. The ability to measure patience creates the opportunity to ask, and then seek, answers to other questions. Having patience is thought to be a good thing. However, it is not known if it is possible to have too much of a good thing. Can patience be detrimental to individuals? Is there a time when patience is too much, and an individual’s patience becomes a factor in others taking advantage of him or her? Are there characteristics that predict a person’s predisposition to patience? We can anticipate patience to be a healthy

response to many situations. When a child is crying incessantly, a parent needs to be patient and not react with anger. We expect others to be patient when waiting in lines and not to react with anger or hostility when delay occurs. Certain occupations require higher levels of patience such as elementary teachers, special education teachers, therapists, counselors, and supervisors in all work settings. All relationships require patience at some time or another.

The initial interest in this topic related to the role of patience across various activities in vocational settings, family settings, individual and geopolitical situations. Psychotherapists must tolerate significant delays and lack of goal achievement with some individuals or characteristic of certain personality disorders. Perhaps patience is a necessary component of the effective clinician. The ability to raise children requires the ability to tolerate the cries of a newborn, the tantrums of the toddler, and the impudence of the adolescent. Patience may be a component in the prevention of abuse of children. The transition into nursing homes for older adults is a difficult time. Many older adults become depressed or agitated shortly after moving in, and mortality is highest within the first month. Perhaps patience is a resilience factor assisting individuals with this type of transition without developing depression or components such as helplessness or hopelessness. Patience may very well be an important characteristic of our world leaders where the ability to adapt to delays and postpone goals without forging ahead with deadly actions has global consequences.

Older adults who are patient may be more resilient and may have fewer negative responses to the transition to nursing home or other long-term care environments. One difficulty in making the transition to a nursing home is the difference in response time to

requests. It is not unusual for residents in nursing homes to wait prolonged periods to receive care such as toileting, turning, or pain medications. This is frequently in contrast to previous experiences at home or hospital where care is immediate. How older adults respond to delay in care may be a significant factor in their transition and may be a factor in the depression that often accompanies the move to long-term care. Older adults who are able to manage their response to the delay of care might experience less agitation and depression. Being patient would therefore act as a protective factor in these situations. The initial plan for research was to evaluate levels of patience in new nursing home residents along with other indices of perceived well-being, health status, and mood.

Expectations were that the literature would reveal several measures of patience with the one most appropriate to the question then selected for use. Exploration of the literature using such search engines as PsychInfo and Medline found not a single published study empirically examining the construct of patience. Only two unpublished studies on the construct of patience were located (Blount & Janicik, 1999, 2000). With the obvious paucity of information available, the project changed directions with the decision to develop a measure of patience. By developing a measure of patience, clarification and testing of the construct of patience occurs and provides theoretical advance. Although the ultimate goal of this research stream is to better understand the patience of older adults, the current research focuses on younger adults.

Recently Blount and Janicik (1999, 2000) proposed a model for understanding patience. In the model, patience is not an innate quality but a cognitive-emotional based process. For Blount and Janicik (1999, 2000) patience initiates when an individual perceives a delay in a situation, then attributes responsibility for the delay followed by

determination of one's level of responsibility for reacting to the delay. The interpretation of delay and attribution of responsibility lead to the individual's cognitive responses to the delay itself. Then comes emotional responding followed by the behavioral manifestations of patience.

According to Blount and Janicik (1999, 2000), patience occurs when there is delay of a goal. These delays can take one of two forms. The first type of delay occurs from the postponing of a goal, when the anticipated achievement of the goal moves back. Examples of such events are the delay of a plane's departure from the airport, the delay of seating at a restaurant, or the delay in the release of a computer program or publication of a book. The second type of delay occurs from the blocking of the goal, that is, when the individual must wait for the conclusion of something. Blount and Janicik (1999) describe this type of delay as one of tolerance. Examples of delays of tolerance can include when one someone is talking incessantly, or when an infant with colic is crying uninterruptedly, or when a car alarm triggers in the middle of the night and is not disengaged.

After identifying a delay, the individual must then evaluate the delay. A key factor is how valuable the time involved in the delay is to the person. Other factors include whether or not the delay was expected and if there is knowledge of the length of the delay. When a delay occurs the result is that the individual experiences waiting. Blount & Janicik (1999, 2000) propose that several factors mediate the waiting experience and thus affect the presence of patience or impatience. Mediating factors include the person's attitude towards waiting, the presence of distractions in the waiting

environment, the setting for waiting, and the ability of the person to distract from the desired goal and for cognitively reframing the waiting situation.

Responsibility for the delay is another key component in the Blount and Janicik (1999) model. Patience is more likely to follow from interpretation of the delay as the responsibility of the situation or oneself whereas impatience is likely when the responsibility for delay is seen as being that of the other person or agent involved. The patience or impatience response also depends upon how the person involved evaluates his or her own responsibility in reacting to the delay. Self-control, social norms and the ability to modify one's own self-interest in the face of a delay all lead towards the individual responding with patience. The absence of self-control, social norms, and the ability to modify one's own self-interest leads towards an impatient response to a delay.

In the Blount and Janicik model, patience follows not simply from the attribution of responsibility and the evaluation of the delay but also includes emotional and behavioral responses. Thus, in responding to delay patient people are more serene and compassionate, whereas impatient individuals respond with blame and anger. Patient persons also are able to self-regulate their reactions behaviorally and/ or cognitively by doing such things as bringing something to do, thinking about something else, or reconsidering the situation in a new way (Blount & Janicik, 2000).

Statement of the Problem

Studies in the psychological literature have typically spoken of patience only as the converse of impatience. The assumption of these studies is that patience exists in the absence of impatience. However, Blount and Janicik (1999, 2000) have proposed a multidimensional model of patience based on qualitative studies. It follows from the

Blount and Janicik model that patience exists on a continuum with the potential for different levels or amounts of patience across different situations.

The significance of this study is that it furthers theoretical understanding of the construct of patience and provides a mechanism for future studies of the construct. Having a reliable and valid measure of patience opens the construct up for empirical examination across situations, and to explore in detail those factors that determine why some individuals have greater levels of patience than others do.

Purpose of the Study

The purpose of this study was to develop an objective measure of patience. Initial development of an item pool incorporated prior measures of the factors of patience, based on appropriate literature, and items individually constructed by this author and others, specifically for this study. After review of the item pool the measure was administered to undergraduate students. The items were then factor analyzed. From this analysis, a final measure was developed, administered, and analyzed.

Research Goals/ Objectives

The goal of this research was to develop a measure of patience and to establish its psychometric properties. This research hypothesized that it was possible to develop an objective measure of patience that is reliable and valid. It was expected that a measure of patience could be developed in which scores are normally distributed, anchored by high levels of patience and impatience. Further, distinct factors were anticipated which distinguish particular components of the construct. Differences on the total score and factor scores between groups will be explored. Groups will be differentiated by gender, age range, relationship status, and ethnicity. Both the total score of the measure and

factor scores were anticipated to show internal consistency as measured by Cronbach's alpha. The measure was expected to show convergent validity through its relationship to measures of related concepts, and to show divergent validity through a lack of relationship to unrelated measures. The final goal of the study was to develop a measure that had temporal stability over a period of four weeks.

Definitions

Delay: The interruption of an individual's progress towards a goal. A delay must involve the passage of time (Blount & Janicik, 1999).

Delay of Gratification: An individual's self-imposed capacity for waiting for a positive reward. During delay, the individual maintains activity directed towards goal achievement (Mischel & Baker, 1975).

Impatience: Negative cognitive, emotional, and behavioral processes and outcomes in response to delay (Blount & Janicik, 1999, 2000).

Patience: A multidimensional construct involving "self-regulatory, coping and prosocial/ responses associated with delay" (Blount & Janicik, 1999).

Postponement: The experience of the delay of a desired goal due to increased time to achieve the desired goal (Blount & Janicik, 1999).

Self-Regulation: "The processes by which people manage their own goal directed behavior in the relative absence of immediate external constraints" (Kirschenbaum, 1987).

Time Urgency: A multidimensional construct whereby an individual experiences time as a scarce resource, is highly aware of time and his or her use of time (Landy et al., 1991).

Tolerance: The delay of a desired goal due to an unpleasant experience that is unending or longer than anticipated (Blount-Lyon & Janicik, 1999).

Chapter 2: Literature Review

Literature Review

Blount and Janicik (1999, 2000) have proposed a multidimensional model for the construct of patience. Their model divides components in three sections: explaining and understanding the delay, evaluation of responsibility for the delay, and responding to the delay. The literature review will begin with the research by Blount and Janicik on the construct of patience. As their papers are unpublished, the review of their work will go in to specific detail to allow for critical understanding by the reader. Following the presentation of the theoretical model and its empirical basis, the components of the model will be reviewed in order. The component of explaining and understanding the delay includes the evaluation of the delay and the evaluation of waiting. The second factor is the evaluation of responsibility for the delay. The third factor, responding to the delay includes discussion of the cognitive, behavioral, and emotional responses to postponement and tolerance delay situations as well as other miscellaneous factors. Encompassed within the responding to the delay is the evaluation of self-responsibility to adapt or react to the delay. The construct of patience relates to several other concepts such as self-regulation, delay of gratification, time urgency, the need for closure, as well as the Type A behavior pattern (TABP). The discussion of the components of patience will review the relatedness of these concepts.

Review of Blount and Janicik Research

Blount and Janicik outline their model in two papers (1999, 2000) based upon five qualitative research studies. Together, these papers describe patience as a cognitive, behavioral, and emotional response to delay. The first paper was an initial attempt to

understand how individuals explain patient and impatient responses to social delays (as compared to intra-personal delays). The second paper focuses on the role of emotion in patience and impatience.

The 1999 research involved two studies that compared the negative (impatient) and patient responses to delay. They described the first study as theory building while the second study provided an initial test of the theory. Study one included students and non-student adults (N=115), who responded to a questionnaire including the questions “Think about the last time you were in a situation in which you were patient (impatient). Briefly, describe the situation and explain why you were patient (impatient)” with the order of the items counterbalanced. The importance of the temporal nature of delay is a principal aspect of the Blount and Janicik model of patience. It is not the absolute amount of time of the delay that matters. Instead, it is the value placed upon the amount of time involved that will determine how an individual reacts. The first study took place in two settings. In the first setting, 30 college age students completed measures within an experimental lab, while the 85 non-student adults completed measures at a public park. Subjects completed descriptions of the most recent incident in which they responded patiently and the most recent one in which they responded impatiently. Subjects responses were coded (with the possibility of multiple patient or impatient responses per subject) and 105 patient responses and 111 impatient responses were obtained with one patient responses and nine impatient responses excluded because they were not social situations. The authors do not detail why the other responses were not interpretable. The student sample was evaluated first to develop the coding system and to establish validity of the methodology. The two authors of the study served as coders of material and they

had inter-rater reliability from 75-100% with an average of 88%. The paper does not provide explanation of the basis of the coding system.

Results of study one of the 1999 research identified the two categories of delay: postponement (waiting for something to begin) and tolerance (waiting for something to end). In postponement situations, Blount and Janicik found that individuals reported the need to fill time while waiting whereas tolerance situations required managing impulses such as the desire to hurry someone or to fall asleep. Thus, these delay situations differ in both the structure of the delay and the type of response necessary to manage the delay.

In addition to the type of delay, student narratives were sorted by the explanations given for patient and impatient responses. The process of determining categories of responses was to read student narratives a number of times “allowing natural groupings to occur” (p. 7). The groupings of explanations were combined together into categories that were theory driven. These theoretical categories were then applied to the adult sample. A criticism of this process is that the coding and subsequent groupings were done by the authors thus creating the potential for biased categorization based on expected theory. Further, there was not discussion of how potential disagreement between groupings was resolved. Blount and Janicik labeled the categories differentiating explanation of patient or impatient responses as (a) evaluation of the delay and waiting, (b) evaluation of others responsibility for the delay, and (c) evaluation of self-responsibility to adapt to the situation.

Evaluation of the delay and waiting responses was the first category distinguishing patient and impatient responses. Patient individuals had less identification of time urgency, knew the approximate duration of the delay, and expected the delay.

The role of time is seen in responses indicating that patient individuals did not feel rushed for time, or felt that time went swiftly. When the delay was unexpected or took longer than expected, respondents reported more impatience. In regards to waiting, patient respondents either had distractions or were able to create distractions, had more positive attitudes towards waiting, and were able to see the delay as a necessary step towards a desired end. The more satisfying the distractions (such as a book to read) the more the situation was evaluated as a patient one and conversely, the lack of distraction “nothing to do”, or the inability to cognitively distract oneself, to not be able to get one’s mind off of the delay, indicated impatient responses. On an attitudinal level, some individuals reported that in general they disliked waiting (impatient) or did not mind waiting (patient). Seeing the delay as a step toward a valued end was indicative of patient responses. For example, waiting in line to get a good seat for an event that was valued by the participant resulted in a patient response whereas when the goal had less value, impatience resulted in the delay. Here is seen the interaction between the value of the goal and the value of time for the individual. The authors point to the temporal nature of patience and its contextual nature.

The second category differentiating patient and impatient responses to delay described by Blount and Janicik (1999) was the evaluation of other-responsibility for the delay. The attention here is external to the individual. The third category reflects the responsibility of the individual in the situation. Both patient and impatient individuals attributed responsibility to another person, although not in every situation. Where impatient individuals identified blame, seeing the other person as responsible due to traits (“incompetence”) or behavior (“moving slow”) patient individuals noted goal

transformation, empathy, or sympathy. In goal transformation responses, the goal becomes that of the other's outcome. Thus, the goal becomes that of the other rather than of oneself. Blount and Janicik do not provide discussion of the mechanism for this transformation nor do they indicate if this is a common or rare event. The authors treat empathy and sympathy as a single construct, indicating that empathy and sympathy "play similar roles" (p. 28) in delay situations. Similar to goal transformation, empathy and sympathy evaluations focus on the other individual and patient responses reflect the notion that although the other individual is responsible for the delay, they were making a best effort to alleviate the delay.

The final category that Blount and Janicik (1999) identified as differentiating patient versus impatient responses to social delay situations is the evaluation of self-responsibility to adapt to the delay. Patient individuals identified responses that indicated greater level of self-responsibility for the reaction to the delay by reference to social or internal norms or values. Social norms are reflected in statements such as "you're supposed to be patient with children" or "it's my job" (p. 9). Impatient responses on the other hand reflected less self-responsibility and a lack of internal norm by stating, "I'm just not a patient person" (p. 10). Thus, impatient individuals reduce their responsibility and their need to adapt to the delay. When individuals identified values of patience, there was then the self-responsibility to be patient or go counter to one's self-beliefs and values. Here the value of the time lost in delay can be seen as less valuable than one's need to be seen as a good person as demonstrated by the ability to be patient.

Based on attribution of responsibility for the delay (causal attribution) Blount and Janicik (1999) developed three post hoc hypothesis: (a) retrospective explanations of

patience would be more likely to include internal attributions than would explanations of impatience, (b) explanations of impatience would be more likely to include mentions of other-responsibility for the delay than would patient responses, and (c) explanations for responses to postponement delays would be more situation-dependent than would explanations for reactions to tolerance delays due to the role of time scarcity. The authors concluded support for hypothesis one and three, and marginal support for hypothesis two. Blount and Janicik indicate that sixteen percent of patient responses and only five percent of impatient responses indicated self-responsibility. Although significant, the level of self-responsibility among patient responses seems lower than would be expected given the theoretical importance to this category. Although the authors claim marginal support for hypothesis two, the significance value ($p < .075$) is above accepted critical values. Thus, the most appropriate conclusion is that there was no support for the hypothesis that explanations of impatience would be more likely to include mentions of other-responsibility for the delay than would patient responses. It is of interest that attributions of other-responsibility were higher for both patient (46%) and impatient (61%) groups. Thus, it appears more likely that individuals will attribute responsibility externally rather than internally in delay situations regardless of whether they respond in patient or impatient ways to the delay. The third hypothesis was supported. Here, postponement delays had explanations that were more focused on the characteristics of the situation rather than the primary agents in the delay than did tolerance situations. Conversely, tolerance situations may be seen as more focused on the people in the situation than postponement situations. Tolerance situations, by definition, require another being in proximity to the delayed individual whereas in postponement

situations, the other agent may be unclear on difficulty to identify. This conclusion adds to the distinction between postponement and tolerance situations. The rationale for the creation of the post hoc hypotheses was not well identified by the authors. In their discussion, they give a prominent role to issues of time and evaluations of delay but no hypotheses are generated from this category. The hypotheses that were generated have merit for theory development however, there is a lack of discussion for the identification and use of these hypotheses.

The second study of the 1999 Blount and Janicik research followed the initial theory building research. The study consisted of 305 adults and it was controlled for the type of delay. Subjects were adults aged 18-65 and were recruited from the administrative staff of a major university through e-mail recruitment. Subjects completed the questionnaire as part of a larger survey packet. Subjects were asked to recall a certain type of situation in which they remembered “feeling particularly patient” or “particularly impatient”. The three situations of delay were waiting in line, stuck in traffic, and listening to a friend or family member talk. The result was a three by two factorial design with patience/impatience across the three types of delay.

The study utilized the three post hoc hypotheses from the first study: that (a) retrospective explanations of patience would be more likely to include internal attributions than would explanations of impatience, (b) explanations of impatience would be more likely to include mentions of other-responsibility for the delay than would patient responses, and (c) explanations for responses to postponement delays would be more situation-dependent than would explanations for reactions to tolerance delays due to the role of time scarcity. The same criticism of these hypotheses that were identified

earlier continues to stand. The authors did not provide any additional support for their choice of hypothesis or for the exclusion of other possible research questions. Narratives from all subjects were reviewed by three coders, who were blind to the hypothesis (as differentiated from the first study of the paper). Inter-rater reliability was listed as 89-96% with a total of 441 causal attributions identified in 286 of the 305 cases. All three hypothesis received support. More patient responses (19%) than impatient responses (2%) had attributions of self-responsibility ($p < .001$). Other responsibility was more likely in impatient responses (40%) than patient responses (15%). These findings provide support for hypotheses one and two but overlook the finding that there does not appear to be a significant difference in the causal attribution in patient responses (19% self, 15% other). This appears to run counter to the theory driven model. However, it is not identified if any of these cases overlap, that is, patient responses may indicate both types of causal attribution. In this case, it may be that the presence of self-attribution of responsibility leads to a patient response. Hypothesis three found support when 66% of postponement situations and only 25% of tolerance situations identified delay or waiting explanations. Thus, postponement situations are described as more situational whereas tolerance delays are more personal in nature. Taken together, Blount and Janicik conclude that in these studies, patient individuals did attribute greater responsibility to self for the delay and impatient individuals identified external causative factors for delay.

Blount and Janicik then turn attention to discussion of the distinction between patient emotion and patient behavior. They make the point that one can have emotional impatience yet exhibit behavioral patience. As example, standing in line for coffee in the morning, an individual can feel rushed, agitated, and blame the person in front of them

who is ordering the double frothy latte' with half half-and-half and half cream with a twist of nutmeg, yet continue to wait in line without an utterance or well placed shove. The authors proposed three mechanisms for understanding patient behavior: frustration-aversion, self-regulation, and temporal-altruism. Frustration-aversion techniques will be called upon when the individual is feeling impatient. When impatience is experienced as aversive, as a negative outcome, then attempts will be made to reduce the frustration by techniques such as cognitive reappraisal or preparation for waiting. Cognitive restructuring of the situation "sometimes you have to wait" or emotional coping strategies of self-calming statements are acts designed to lower the experience of frustration in a situation. The individual can also reduce the likelihood of frustration by having a behavioral distraction such as a book, knitting, or paperwork to focus attention on. Blount and Janicik report that cognitive or behavioral responses are more common in postponement delays.

In tolerance situations, the mechanisms of self-regulation (such as goal transcendence or the use of standards and social perception) and temporal-altruism (manifested by empathy, sympathy, or the delay of goal in favor of the other's) would be more likely. Cognitive or behavioral distractions are not as viable of options for managing tolerance delay according to Blount and Janicik (1999). In tolerance situations, distraction may cause important material or cues to be missed (such as the next staff meeting date or being called upon in class). Instead, attention to the speaker is necessary. Self-regulation is described as a motivational component encompassing internal standards. Individuals have expectations for their behavior, they know how they "ought" to behave. These standards or schemas are called upon when one's behavior has

potential to act in contrary fashion and thus the individual is able to regulate their response. The internal process of self-regulation takes different forms. Self regulation can manifest through reflecting on self standards and adjusting behavior, social perception such as wanting to be seen as someone who has high tolerance (consider military recruits in basic training) and goal abstraction. Goal abstraction is similar to goal transcendence. One aspect of goal abstraction is that the goal is made less important by consideration of long-term goals. Blount and Janicik indicate that self-regulation is necessary when the individual experiences impatient emotions, that is, they have a negative reaction to a delay and then, in order to behave in a patient manner, must make appropriate cognitive or behavioral adjustments. In temporal altruism as in frustration aversion, the individual does not experience the delay with negative emotional interpretation. In the situation of temporal altruism and patient responses, Blount and Janicik posit that the delayed individual gives up the target goal initially sought in favor of the goal of the other. Here, the emotional response is of empathy or sympathy rather than frustration. Thus, the individual has both a patient emotional response and a patient behavioral response such as tolerating a friend who needs to talk about his disastrous relationship at 2:00 AM.

The theoretical discussion presented by Blount and Janicik (1999) based on their two studies advances the construct of patience from being typically an afterthought to the research on TABP, to a multidimensional model with emotional, cognitive, and behavioral responses. There are potential difficulties in their research. The studies required subjects to self-identify a patient or impatient response. Without control for the type of delay situation or definition of the construct, it is possible that individual

respondents varied in their descriptions. Recall of information and events is notorious for misperception and forgetting of critical incidents. Further, self-report may have skewed the likelihood of presenting impatient responses in a favorable light. The method of the two authors doing the coding of responses in the first study here is questionable. Without blind coding, preconceived ideas may have influenced the manner of coding. Relying on only two coders in the first study also raised the possibility for lowered inter-rater reliability. Despite these concerns, this initial paper provided a theoretical model from which study of the construct of patience could be studied.

The 2000 research of Blount and Janicik has as its focus the cognitive appraisal and emotional responses that characterize patience in response to social delays. The authors again present the importance of time in delay situations. It is not simply the absolute duration of the delay but evaluation of the delay conditions including the absolute duration of the delay, if the delay was anticipated or was not anticipated, distraction possibilities during delay, and opportunity costs. All of the delay conditions were described in the earlier Blount and Janicik (1999) paper on patience except for opportunity costs. Opportunity costs refer to the cost, the penalty, which the delay imposes. A parking ticket if one is delayed at the bakery, a missed appointment due to staying on the phone with a friend, or being late to work because one had to take the next train due to traffic problems are all opportunity costs of delay. The delay conditions reflect cognitive and behavioral responses to delay. Blount and Janicik (2000) are also concerned with the influence on causal attribution on the emotional and cognitive reaction to delay.

Thirteen hypotheses related to patience are tested in the 2000 paper relating to causal attribution, emotional reactions to delay, and cognitive reactions to delay.

Hypotheses include: (1) impatient evaluations of delay will be associated with emotions of anxiety and (2) anger, (3) patient evaluations of delay will be associated with emotions of serenity and (4) compassion. (5) Depersonalized attributions, rather than personalized attributions, will characterize patient evaluations. (6) Impatient emotions and evaluations will be associated with blame and (7) threat appraisals. (8) Patient emotions and appraisals will be associated with sympathy appraisals and (9) challenge appraisals.

Hypothesis surrounding their model of emotion in socio-temporal delay include (10) the effect of attribution on emotion and (11) evaluation will be fully mediated through cognitive appraisal. Finally, (12) cognitive appraisal and, (13) emotion will have a direct effect on evaluation (p. 11-12). Hypotheses one through four and hypothesis eight follow from the 1999 model as presented and discussed. Hypothesis five relates to causal attributions made towards persons (self or other) or non-persons such as fate or God (depersonalized attributions). Blame (hypothesis 6) follows attribution to another for a negative event while threat appraisals (hypothesis 7) are cognitive interpretations of a negative event as a threat whereas challenge appraisals (hypothesis 9) are cognitive interpretations of events as a challenge or opportunity.

Three studies were used to test the various hypotheses. Study one was similar in design to the studies of the earlier Blount and Janicik (1999) research. Studies two and three involved field research during delay situations. Study one examined retrospective evaluation of patience in situations utilized in the 1999 research. Subjects for studies two and three were individuals experiencing real time delays (in line at a museum and waiting

for airline) and evaluated socio-temporal evaluation, emotion, attribution and appraisal related to the delay.

In the first study of this paper, 210 adults (identified as ranging from ages 18 to 65+) completed a narrative and then a questionnaire related to delay designed for the study. Subjects were randomly assigned and asked one of four questions corresponding to a 2 X 2 factorial design with patient/ impatient responses crossed with delay situations (stuck in traffic, waiting in line). Similar to the 1999 studies, respondents were asked to recall being stuck in traffic ($n = 106$) or waiting in line ($n = 104$) and recalling when they felt “particularly patient” or “particularly impatient”. Subjects then were prompted to recall why they felt that way and to provide a narrative account of the situation. The authors report that a third situation involving a tolerance form of delay was included but responses were part of another (as of yet uncompleted) paper. Following completion of the narrative describing the delay situation from either a patient or impatient perspective, subjects completed a questionnaire. The questionnaire consisted of five questions, forty-five thought statements, and forty-four emotional descriptors. The five questions related to the particular delay situation they had written about in the narrative section and used an 11-point Likert scale. Thought statements had an accompanying nine point Likert scale. Respondents were asked to read the thought statements and indicate to what extent the statements characterized their thoughts during the delay situation about which they had completed the narrative. Similarly, the emotion items used a nine point Likert scale and asked respondents to indicate the extent to which each word described how they felt during the delay situation about which they had completed the narrative. The authors identified four dependent measures based upon groupings of items and emotion or

thought statements. These four measures were (a) evaluation, (b) emotion, (c) causal attribution, and (d) cognitive appraisal. Evaluation consisted of four thought statements and one item in question form that related to how rushed for time the individual felt in the situation. Results were indicated in terms of positive or negative evaluation of the situation. A single emotional score was determined based on the 44 emotional statements. A factor analysis of the items resulted in a single factor score determined by 31 items. Causal attribution was measured using three question items and three thought statements. Four attribution targets were identified including self, someone else present, someone else not present, and non-human target (fate, God, luck, life). The cognitive appraisal dependant measure was designed to capture responses of blame and sympathy appraisals and threat and challenge appraisals. This was done by creating thirty-eight thought statements designed to measure each of the constructs identified or their components such as need for situational control or perceived self-efficacy for the threat and challenge appraisals. Factor analysis of the cognitive appraisal items (27 items) resulted in three factors being retained. Factors were identified as related to the type of appraisal and labeled threat, challenge, and blame appraisal conditions. For items in the emotion and cognitive appraisal groups, ANOVA was used to determine differences in items across patient or impatient responses. Only those items showing significant difference, those that distinguished between the groups, were retained for factor analysis. Thirteen items were dropped in the emotion condition and eleven items were dropped in the cognitive appraisal condition.

The criticisms identified with the 1999 study continue to hold for this design. The reliance on memory for an event that may not have been recent (if respondents used

subways for travel) creates problems for possible mistaken or inaccurate recall. To then ask for specific recall of thoughts or emotions during an event of unspecified time in history is highly problematic. The authors report that factor analysis was used in the determination of the four dependant measures but little information is presented regarding these procedures. The eigenvalues of the factors and the cumulative proportion of the variance explained are presented. However, there is no identification of factor loading scores or in depth discussion of the total variance or reliability information. Further, there is limited discussion of the rationale for the use of particular question items, development of an item pool, or discussion of the use of particular thought or emotion statements for each dependent measure.

Results of the first study of the Blount and Janicik (2000) paper show support for hypotheses 1-4. There were significant associations between evaluation scores (patient/impatient) and emotional response scores where patient evaluations were associated with feelings of serenity and compassion and impatience was associated with feelings of anxiety and anger ($p < .0001$ for all associations). Partial support was found for hypothesis 5 related to causal attribution. Impatient respondents were more likely to assign responsibility to themselves or to others in the situation than did patient individuals. There was no difference across respondents attribution of responsibility to others not in the situation or to fate/luck/life/God. The authors report that normalized regression coefficients for patience was significantly associated with blame ($r = -.33$, hypothesis 6), threat appraisals ($r = -.71$, hypothesis 7), and challenge appraisals ($r = .37$, hypothesis 9) but that no significant association was found between patience and sympathy evaluations (hypothesis 8). For their predictions of the model (hypotheses 10-

13), Blount and Janicik (2000) again using normalized regression found that cognitive appraisal mediated the effect of attribution on emotion. Thus, it is the appraisal of the event that is important in evaluation not simply the attribution process (hypothesis 10). So too, cognitive appraisal mediated the effect of attribution on emotion (hypothesis 11). When causal attribution, cognitive appraisal, and emotion were considered as to the effect on evaluation, direct relationships were found between cognitive appraisal and evaluation (hypothesis 12) and emotion and evaluation (hypothesis 13). From the results of hypothesis 10 through 13, Blount and Janicik (2000) developed an emotion based model of sociotemporal evaluation. Important to note in this model is that it is based upon evaluations of postponement conditions only. Less supported are generalizations of the model to situations of tolerance delays. From the model developed based on the first study of the 2000 paper, Blount and Janicik developed studies two and three to explore specific types of cognitive appraisal and emotional responses to postponement delays.

For studies two and three specific items from the survey designed for study one were selected and grouped into three categories (a) descriptive/ causal attribution, (b) cognitive appraisal (14 items), and (c) emotional response (16 items). The authors describe that items for cognitive appraisal and emotional response groupings were the “top scoring items” from the first study but little more about their selection. Five descriptive/ causal attribution items were used: “how long have you been waiting”, “was the delay expected”, “how certain are you of the length of the delay”, “do you have something with you that you like or need to do while you wait”, and “how important is the reason for your travel today.” To discern patient or impatient evaluations, the authors report that the five questions from study one and two additional items were used with

reliability reported as ($\alpha = .85$) and therefore identification of evaluations as patient or impatient was felt to be strong. However, the authors provide no rationale for the five items used nor any discussion of the two additional items added.

In study two, 158 adults were surveyed while in line at a museum with participation reported as approximately 50 percent of those approached. Three groups of participants were formed based on the questions they received. The first group of 52 subjects completed 16 questions related to emotional response and two evaluation items (to test hypotheses 1-4). In the second group, 53 subjects completed the evaluation items, attribution items, and descriptive questions (to test hypothesis 5). The third group, 53 subjects, completed the appraisal survey consisting of the evaluation items and 14 appraisal items (to test hypotheses 6,7, and 9). Regarding the descriptive evaluation of the delay, individuals who were more patient had expected to be delayed more so than did impatient respondents. There was no significant difference between groups on the length of delay, duration certainty, or availability of distractions. Results from the participants who completed surveys indicated support for hypothesis one through four. Significant differences were found between patient and impatient evaluations for the emotions of anger, anxiety, calmness, and compassion ($p < .05$ for all conditions). Results of the effect of causal attribution (hypothesis 5) show that impatient respondents placed more responsibility on others and on the museum than did patient respondents. There were no significant differences in ratings for self-responsibility or responsibility attributed to fate/luck/life/God between impatient and patient groups. Finally, 53 participants completed the cognitive appraisal survey with internal consistency high for groupings of threat appraisals ($\alpha = .75$), challenge appraisals ($\alpha = .82$), and blame ($\alpha =$

.72). Items were grouped and corresponding appraisal scores calculated. Using regression, the evaluation scores were predicted using each appraisal score with significant results for threat ($r = -.38$), blame ($r = -.42$), and challenge ($r = .19$). Thus, support for hypothesis 6, 7, and 9 was concluded.

In study three, Blount and Janicik (2000) surveyed 193 adults at O'Hare airport who were waiting for flights during a winter storm period. Blount and Janicik reported an approximate 75% participation rate for those individuals approached. All individuals completed questions of description (patience/impatience) and attribution. Of the 193 participants, 94 completed items of appraisal and 99 completed emotional description items. Reliability for the seven evaluation questions (the same as in study two) was high ($\alpha = .80$). Regarding descriptive variables, impatient individuals waited longer and indicated greater value to their reasons for travel than did patient respondents. This group of impatient respondents also had more distractions that were available. There was no difference in groups on measures of expectation of delay or how certain they were in the length of delay. Blount and Janicik (2000) conclude that descriptive variables add little to the attribution model.

Most respondents attributed delay to the weather. Impatient respondents were more likely to attribute responsibility to the airline or to other people with no difference between groups in attribution directed towards self or fate/luck/life/God.

According to Blount and Janicik findings supported hypotheses 1-4. For the 99 individuals completing the emotional response survey, significant differences were found between patient and impatient groups on feelings of anger, anxiety, calmness, and compassion. Results of the cognitive appraisal items show that items for the appraisal

categories had good reliability; threat ($\alpha = .66$), challenge, ($\alpha = .76$), and specific blame of airline, ($\alpha = .67$), or blame of the weather($\alpha = .64$). There is no discussion in the paper as to the items used to measure blame of airlines or blame of weather. Using regression, the appraisal conditions of threat, challenge, and blame of airlines did contribute significantly to the evaluation and therefore indicating support for hypotheses 6, 7, and 9. Examining the amount of variation explained by components, Blount and Janicik report that appraisal and emotion contribute more than attribution measures, which they conclude provides support to hypotheses 10 and 11.

In sum, the findings of the second and third study supported the notion that emotion plays a role in the evaluation of delay and that in particular, serenity and compassion are emotions related to patience. Of significance is that when cognitive appraisal types (threat, challenge) and emotional measures were considered, the characteristics of the delay such as duration, expectation and availability of distractions were limited in usefulness of explanation of response. Thus, the cognitive and emotional interpretations of a delay are more important than the characteristics of the delay and the delay situation.

Explaining and Understanding the Delay

Evaluating the Delay

Patience can only occur when there is a delay. The nature of the delay and characteristics of the delay are important factors in understanding the reaction to the delay. Delays are not alike. Even when the delay is for the same amount of time two individuals will react differently depending upon the importance of the time involved (Blount, 1995). The same person experiencing a delay of the same time amount may

react differently in one situation than in another. The difference in situations of delay relate to the aspect of time, time urgency, the availability or scarcity of time, if the time length of the delay is known or not, as well as the expectation of the delay.

Time matters: time is a scarce resource that is highly valued in current Western culture (Landy et al., 1991; Lauer, 1981; Perlow, 1999; Schriber & Gutek, 1987). When time is scarce or individuals are more concerned with time, or the lack thereof, they experience time urgency (Burnam, Pennebaker, & Glass, 1975; Landy et al., 1991). According to Landy et al. (1991), time urgency is a multidimensional construct. The authors developed seven Behaviorally Anchored Rating Scale (BARS) measures: (1) time awareness, (2) eating behavior, (3) scheduling, (4) nervous behavior, (5) list making, (6) speech patterns, and (7) deadline control. In a related process, the Landy et al. (1991) research combined the items from the four most common measures of time urgency: Bortner scale, Framingham scale, Jenkins Activity Survey (JAS), and the Thurstone Activity scale, into a single scale (removing duplicated items) with a total of 65 Likert scale items. 190 undergraduates completed the scale followed by factor analysis of the results. After determining that the results identified several components, the authors reanalyzed with factor analysis a subset of 33 items they reported dealt with time urgency or speed. A five factor model by Landy et al. (1991) was identified as the best solution. Although providing support for the multidimensional aspect of the construct this research suffers from a low number of subjects. At least 300 subjects are required to provide stability in factors and alpha may not be as good as it initially appears to be (DeVellis, 1991). Further, the decision to separate out the items related to time urgency and speed was not accompanied by discussion of the rationale of item selection. The authors

discuss these items as a “new scale of 33 items” (p. 646) however they do not present these items separate from the others. As a result, there is no independent analysis of this scale. It is possible that results would be different if only the 33 items were presented to subjects rather than imbedded in a larger scale.

With a sense of time urgency, time becomes more valuable, and a person may become impatient and attempt to save time, even a few seconds (Howton, Lindoerfer & Marriott, 1998), and at the expense of relationships (Lauer, 1981). People differ in their interpretation and value of time (Fraisie, 1984) and the importance of time can differ across setting and situation (Blount & Janicik, 2001). Burnam, Pennebaker, and Glass (1975) found that individuals categorized as Type A estimated a 60 second duration as lasting on the average 52.6 seconds whereas Type B individuals estimated the 60 second interval as 75.0 seconds. Thus, those with the TABP experience time as moving faster (but with greater accuracy than Type B individuals) and this may explain in part the greater experience of time urgency. In their discussion of time perception, Francis-Smythe and Robertson (1999) indicate that time perception involves time management. Time management involves the ability to estimate how long something will take (duration estimation), the ongoing passage of time (prospective duration estimation), and how long something has taken (retrospective estimation). In their research, these authors examined each component of time management. The estimation task involved predicting how long it would take to check the spelling of three pages of writing with the retrospective task that of determining how long the spell check actually took. The prospective duration estimation involved stopping a stopwatch (the face of the watch was covered) after the individual felt ten minutes had passed. Forty-eight subjects completed

these tasks as well as measures of time management behaviors and a measure of perception of the use of time as structured and purposive. They found that those individuals who use time management behaviors, set goals, and have a more structured routine, judged time to pass more quickly than did other individuals (Francis-Smythe & Robertson, 1999). Thus, individuals who endorse low patience qualities feel that time moves faster than do those with higher patience qualities.

Individuals described as having the Type A Behavior Pattern (TABP) are more aware of time (Landy et al., 1991), exhibit more time urgency than those with the type B pattern, and have reduced levels of health (Wright et al., 1995). Studies of TABP across different cultures find similar results (Hagihara, et al., 1997; Nakano, Mochizuku, & Sato, 1996). The TABP individual “is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time”(Friedman & Rosenman, 1977, p. 203). Zyzanski and Jenkins (1970) describe the TABP as “characterized by extremes of competitiveness, striving for achievement, aggressiveness, ... haste, impatience, restlessness, hyperalertness, explosiveness of speech, tenseness of facial musculature, and feelings of being under the pressure of time and challenge of responsibility” (p. 781). Thus, time plays a significant role in the TABP and it is when time is perceived to be scarce that the negative consequences are evidenced.

Identification of individuals with the Type B behavior pattern occurs in the absence of TABP (Zyzanski & Jenkins, 1970). “The person with the Type B Behavior Pattern is the exact opposite of the Type A subject (Friedman & Rosenman, 1977, p. 203-4). Individuals with TABP experience same levels of emotional and behavioral responses to stress as those with Type B pattern, when time is plentiful, but in stressful

situations such as time urgency, those with TABP respond with greater negative emotions and behaviors (Wrzesniewski, 1992). A study by Tett et al. (1992) utilized a simulated stressful work setting to measure Type A dimensions. In this study 82 subjects (61 female) were placed in a managerial role and then subjected to work and time pressures. The setting was a typical office with a desk, chair, and other components of an office. Subjects were informed that the setting was the first day of work for the manager following in-house promotion and that they had 20 minutes before leaving for a meeting. In that time span there were 14 memos or letters to be attended to on issues such as union disputes, broken equipment, customer complaints and so on. While responding to paperwork, a “secretary” would call subjects on an intercom with other needs and messages that they would need to attend to as well. This aspect of the study was designed to add frustration and delay. Measurement by coded observation of the subject’s behavior was compared to the Survey of Work Styles (SWS, Jackson & Gray, 1989). A total of 18 behaviors thought to relate to TABP (e.g. clock watching, rapid speech, hostile attitude) were coded by two independent judges based on audio and video record. The SWS is a 96-item measure of TABP in a job setting. Of significance is the fact that the SWS was completed following completion of the simulation. Individuals responses to the instrument may have been affected by the simulation and may not reflect generalized self-perception. In the study by Tett et al. (1992) then, the goal was to compare self-report of TABP to observed TABP behaviors in a job setting. Three of the eighteen behavior coded by judges were eliminated from the study due to poor inter-rater reliability or because one judge did not code the variable. Results of the study found SWS subscales were associated with observed Type A behaviors. Associations of

significance were SWS scales of impatience (TABP behaviors: interrupting and speaking quickly), time urgency (TABP behaviors: hurrying others and speaking quickly) and work involvement (TABP behaviors: fewer body movements; interrupting others; muttering under breath; and sighing).

The Jenkins Activity Scale (JAS, Jenkins, Zyzanski, & Rosenman, 1971), an objective self-report measure, is the most frequently used measure of the TABP. The original 1965 version of the JAS had 61 items each with four response choices, and was given to 2960 men as part of a larger study known as the Western Collaborative Group Study. The development of the JAS is interesting as the 61 items followed a previous study designed to develop a measure of Type A behavior. This previous study in 1964 found 40 items (out of 64) differentiating type A from Type B individuals, with a sample size of only 76 men (Jenkins, Rosenman, & Friedman, 1967). The 40 items were combined with 21 new items and mailed to over 3000 men with a return rate of 92%. The results did not show any differences by age range of the men. The authors found that 39 items discriminated between Type A and Type B groups. Four groups of respondents were identified: A1, A2, B3, and B4, where A1 identified those highest in Type A and B4 those highest in Type B with a relative normal distribution assumed but not tested. A separate structured interview process had earlier categorized these subjects as Type A or Type B and results of the JAS indicated strong support for the appropriate differentiation of subjects by group. A 72% agreement rate was reported. Unfortunately, the authors distinguished Type A and Type B by combining the A1 and A2 group and the B3 and B4 groups. This grouping may have resulted in pulling the extreme scorers towards the mean and important distinctions between groups may have been lost in this process. It is

of further interest that the JAS was said to be better at identification of Type B men than it was at identifying Type A men. Jenkins, Rosenman, and Friedman (1967) conclude that the JAS is a viable measure of Type A behavior, or coronary prone behavior pattern, as they termed it. There are several concerns with this study. First, and most glaring, is that the sample was entirely male with no other demographic data presented. Thus, the target of the measure is unclear and the generalizability of the measure is in serious question. Unfortunately, the authors do not provide a list of questions in this paper, nor do they provide those items, which identify individuals into the Type A or B category. The discussion of the mean and standard deviation of the measure is unclear and it appears from the paper that those identified as Type A1 (i.e. extreme in Type A) may score at higher levels of Type B than do those identified as Type A2. If this is the case, then a possibility may be that the JAS is measuring those who are likely to endorse extreme feelings in general rather than specifying what responses they are endorsing. When the specific factors of the JAS were identified and labeled “Hard-Driving”, “Job Involvement”, and “Speed and Impatience” in a separate review (Zyzanski and Jenkins, 1970), the same 1965 sample was used thus continuing similar concerns about the JAS. A further problem was the use of the entire 61 items from the 1965 study for a factor analysis despite the inability of 22 of these items to distinguish the Type A from Type B group. In a second study Zyzanski and Jenkins, 1970, explored the factor structure of the 1966 version of the JAS. This version contained 57 items. A three factor model was reportedly supported with a total of 15 items loading significantly. The factor loadings across the three factors is relatively weak with the strongest loading of any item .64 with this being the only loading above .60. Nine items loaded between .40 and .48 with only

four items loading in the .50 to .59 range. The subjects in the 1966 study were again entirely men (N = 984) raising further questions about the value of the findings for generalization purposes.

In a stronger sampling process, Spence, Pred, and Helmreich, 1989, studied 713 students (351 female) using the student version of the JAS developed by Krantz et al. (1974, as cited in Spence, Pred, & Helmreich, 1989). Their findings indicated that the JAS has two subscales independent of each other, impatience and irritability (II) and achievement strivings (AS). Competitiveness is associated with both impatience and irritability (II) and achievement strivings (AS) subscales. The AS factor contains activity level, effort and seriousness towards work where the factor impatience and irritability (II) reflects components of irritability, anger, and impatience. The II subscales have been associated with poor health status whereas the AS scale is associated with work or school performance and achievement motivation (Barling & Charbonneau, 1992; Conte, 1998; Helmreich, Spence, & Pred, 1988; Spence, Helmreich & Pred, 1987; Spence, Pred & Helmreich, 1989).

Wright, McCurdy, and Rogoll (1992) developed a measure to examine the components of Type A behavior pattern identified as time urgency and perpetual activation (the TUPA scale). In a somewhat unique process of item development, the authors asked 10 Caucasian, married men identified as Type A by structured interview, as well as being diagnosed with CHD, to “keep notes on instances of their TU/PA-related behaviors” (p. 352). The study does not indicate how these 10 individuals were prepared for the task by such things as being given definitions of the constructs, guided or educated in self-report/ self-reflection procedures, if examples of questions were

provided, or if contact with researchers occurred during the one week period for review of progress. Of 137 generated items, the senior author removed 64 items leaving an item pool of 73 items. That a single individual was responsible for the determination of item rejection brings into question the construct validity of the measure. There is the possibility of a restricted range or conversely an over-broadened reach of the questions. Validity of the items was evaluated by examining the correlation of responses by a sample of 48 subjects between the 73 pool items and the Augmented Structured Interview (ASI) for TABP. Seven items were identified as uniquely measuring time urgency and nine as measuring perpetual activation with 31 items capturing both time urgency and perpetual activation. Thus, the measure in its final version contained 47 items along with 25 filler items to obscure the purpose of the measure. In addition to the questionable item pool generation, the sample size is extremely low for utilizing factor analysis of the measure as was additionally done. Although coefficient alpha was satisfactory for the TU and PA factors, these results must be viewed with extreme caution given the sample size.

The concept of the Type B Behavior Pattern appears similar to the construct of patience in that identification of both occurs in the absence of the opposite. That is, writers typically assume the presence of Type B in the absence of TABP (with the notable exclusion of Jenkins, Rosenman, and Friedman, 1967) and patience as the absence of impatience. Addressing this, Price (1988) proposes a model of the Type B behavior pattern. She specifically identifies anticipated cognitive, emotional, and behavioral characteristics or descriptors of the Type B individual. Price notes that the individual with Type B behavior pattern would appear relaxed, and would be other-

directed in their speech and attention. She notes that the person with Type B pattern would feel calm, would experience a pleasant mood free of impatience, guilt, and hostility. In responding to the unexpected in the type B person, Price posits that the Type B individual would take a long-range perspective and be flexible. In short, Price is describing many of the characteristics proposed here for the patient person but there is no known literature testing this model.

In summary of the research related to evaluation of a delay it is seen that time does indeed matter and time is a factor in whether an individual is patient or not. The internal experience of time, the sense of urgency to achieve a goal or remove a delay, and the knowledge or lack of knowledge of the length of delay all have a role in patience.

Evaluation of Waiting

Postponement delays result in the need for the individual to wait. In general, people do not like to wait. How an individual responds to waiting depends upon how they evaluate and respond to having to wait. Individuals who have to wait for services (such as seating at a restaurant, lines for the bank teller) tend to evaluate the overall event negatively (Taylor, 1994). In studies of delay of gratification, people will give up a greater reward in the future for a lesser reward now (Mischel, 1974; Mischel, Shoda & Peake, 1988). A related concept to delay of gratification is the immediacy effect. The immediacy effect occurs when individuals give greater weight to immediate consumption than they do to delayed consumption (Prelec & Loewenstein, 1991). Studies have shown that people will take \$1000 now rather than wait one year for \$2000 despite the greater fiscal benefit to the delay. Other studies have shown that individuals who are waiting for a desired outcome (goal) overestimate the length of the delay compared to those waiting

for neutral or negative outcomes (Edmonds et al., 1981). Economists studying decision making in delay situations term this process "hyperbolic discounting" (Ainslie & Haslam, 1992). In hyperbolic discounting, people devalue the future (i.e. overestimate the immediate benefit) not in a linear fashion but in one where "reward values are proportional to the size of the reward at long delays, rise sharply as delay approaches zero and yet never become infinite" (Ainslie & Haslam, 1992, p. 67). Thus, the closer one is to a goal, the greater its perceived value, even if its actual value is less than a significantly greater reward at a longer delay. As result, one can expect that the closer to the goal, the greater the value, and the less inclined to wait the individual will be. Therefore, individuals who experience a delay closer to the achievement of the goal may experience greater impatience as will those whose ability to delay gratification is limited.

Evaluation of Responsibility for the Delay

Evaluation of Other's Responsibility

Achieving goals is important. When goal achievement is blocked or delayed or when there is goal success, it is human nature to identify responsibility for the outcome (Blount, 1995; Jones & Davis, 1965). Attribution theory (Weiner, 1985) examines reasons individuals give for success or failure. Factors that relate to the attribution of responsibility include the locus, the stability, and the controllability of the outcome (Jones & Davis, 1965; Weiner, 1990).

Locus of the cause relates to whether the event occurs because of internal or external factors. When success occurs, individuals most often attribute their own innate abilities or efforts as the cause of the outcome and assign external causes for failure (Tesser et al., 1996; Weiner, 1985). Research shows that following success individuals

identified as TABP identify themselves as responsible for the outcome (internal locus) and following failure have greater identification of external causation than do those identified as Type B (Janisse et al, 1996; Leppin & Schwarzer, 1996). In particular, Janisse et al. (1996) found that TABP males have greatest levels of self-serving attributions. Leppin and Schwarzer (1996) found that those with TABP made greater self-serving attributions than those with Type B but acknowledged more self-responsibility for failure when the activity was public (videotaped) than when it was not. The locus of responsibility, the explanation for the outcome occurs more frequently for negative outcomes than for positive ones (Arbona, 2000). When a delay occurs, the individual will experience this event as a negative outcome. In negative outcomes, individuals can place the locus of responsibility on internal or external human agents (i.e. “my fault” or “your fault”), or to external non-human agents i.e. “God’s will”, fate, or bad luck (Blount & Janicik, 2000). When negative outcomes occur, research has shown that when the responsibility is placed with non-human agents the reaction is better than when responsibility is placed with human agents: either self or other (Blount, 1995; Blount & Janicik, 2000). Patience will thus be associated with ability to identify the cause of the delay as external and not assign the responsibility to another. Instead, the patient person will assign responsibility to a source beyond self or others.

Some time-urgent individuals will fault themselves for not having anticipated the delay (Conte et al., 1998). Under situations of time urgency individuals make attributional decisions quicker and hold to these attributions more fervently than those not under time urgency (Kruglanski & Webster, 1996). Thus, those persons who experience time urgency will be more likely to rush to judgment of responsibility for delay and to

hold these beliefs stronger than those who are not experiencing time urgency. Blame occurs when the responsibility for delay is an external agent (Blount & Janicik, 2000; Taylor, 1994). When the cause of event is non-human, the laying of blame and subsequent emotional reaction is not as strong (Blount, 1995; Taylor, 1994). Factors influencing blame include the causality and intentionality of the act (Shaver, 1985).

Causality is similar to the locus of responsibility discussed previously. Intentionality refers to the interpretation of purposefulness of the act. According to Shaver (1985), the victim determines both causality and intentionality. These components of blame are therefore contextual. Thus, in situations of delay the impatient person will be experiencing time urgency and interpret the responsibility for the delay as the fault of another agent (person, restaurant management) more so than the fault of the situation or the environment and to blame the agent for the delay. Delay does not result in either an absolute patient or absolute impatient response. Responsibility, causality, and intentionality are contextual and interpreted by the individual. Thus, there is the possibility of a wide variety of responses to delay across a large spectrum from patient at one extreme to impatient at the other.

Stability relates to the whether the cause of the delay is temporary or permanent, if the event is constant or changing (Weiner, 1990). If one faces thirty-five minute traffic delays every morning then that is a stable situation. Compare the constant, thirty-five minute delay, to the varying five to forty-five minute delays through construction sites. The construction situation varies in its stability. The ability to predict the delay thus makes a difference. Consider the anticipated wait that occurs at the physician's office, waiting in line for the morning Starbuck's latte, or the expected length of a telephone call

with one's mother-in-law, or best friend. When these events take longer than expected, the individual reaction to delay is stronger. The experience of an event as unusual is often associated with greater emotional reaction (Kahneman & Miller, 1986). Thus, it is the expectation of the delay rather than the length of delay that is key. It follows that a person may not mind waiting, and indeed may anticipate waiting five minutes during a staff meeting for a supervisor to review the memos sent the week prior (as is practice) but may become upset and agitated if this takes ten minutes. Expected delays are preferred to unexpected delays and knowing the length of the delay is preferable to not knowing how long delay will last (Blount & Janicik, 2001). When there is uncertainty as to the length of the delay individuals react in stronger and more negative ways (Taylor, 1994). This may explain why many service providers such as Disney and most major airlines now indicate/post the anticipated length of wait for service.

Controllability relates to how much the cause for delay was under the control or not of the responsible agent. When the agent of delay is external and human, then reactions to delay were greater if the perception is that the agent has control over the delay, i.e. they could have moved faster (Taylor, 1994). As summarized by Taylor (1994) "a barrier to service, such as delay, is more likely to cause anger if the delay is perceived to be controllable. The anger will be even greater if the customer perceives that the locus of that control belongs to the service provider" (p. 60). Miller (2001) in discussing injustice, echoes the factors of intentionality and foreseeability in determining responsibility and that the greater the perception that another is responsible for the injustice, the greater the level of anger in response.

Responding to the Delay

Responding to delay in a positive manner is a form of self-regulation or self-control. Despite frustration, one still is able to respond in a socially and/ or individually approved manner. Fisher (1930) identified four factors that increase the ability to withstand delay. These include self-control, habit, and the concern for others. Ainslie and Haslam (1992) identified four methods of self-control; a) extrapsychic devices such as laws or regulations, b) controlling attention, c) controlling the momentum attached to the emotions, that is, reversing negative emotions and d) making personal rules or intrapsychic devices such as personal standards of behavior. Blount and Janicik (1999, 2000) posit that response to delay takes cognitive, emotional, and behavioral forms. Further, delays of postponement are likely to result in different responses than responses to tolerance delays. Patient responses to postponement delays associate with frustration-aversion processes whereas patience following tolerance is associated with self-regulation and temporal altruism. In addition to individual factors of the response, there are factors of the goal in question and social factors that influence the response.

Cognitive

When one focuses on the time involved in delay, the delay seems longer (Fraisie, 1984). Mischel (1996) relates his series of studies of indicating that children from an early age can cognitively adjust their vision of a goal and subsequently extend the time waiting until achievement of the goal (i.e. prolong delay). Mischel terms this ability to cognitively modify the image of the goal and thereby reduce arousal, frustration tolerance. Postponement also increases when children created cognitive images of the reward versus neutral images. When images of the rewards are more arousing (hot), the

delay is not as long as when the transformed image is neutral (cold) (Mischel & Baker, 1975).

Suppression of the goal, that is, refusing to think about the goal, would seem an intuitive approach to responding to a delay. However, Wenzlaff and Wegner (2000) report on studies indicating that that suppression of emotional material is more difficult than suppression of neutral material, and that individuals in an emotional state have greater difficulty with suppression. They also report research indicating that there is a rebound effect to suppression where removal of the suppression activity results in recurrence of the intrusive thought in greater amounts. Wenzlaff and Wegner (2000) further report research by Wegner et al (1993) showing that utilization of thought suppression actually heightened the mood associated with the target mood. That, is, thought suppression actually was associated with an increase in the undesired mood state. Thus, utilizing suppression in cases of delay of a desired goal appears contraindicated as the individual is likely to be in an emotionally heightened state, associate emotions to the image, have greater levels of negative mood, and therefore be at risk for greater thought of the desired goal leading to likelihood of increased arousal in an increasingly ineffective spiral.

Daydreaming may be a beneficial strategy of responding to delay in certain situations. Mueller (1990) describes four types of processes involved in daydreaming- rationalization, roving, reversal, and recovery. Mueller was discussing past goal failure but the first two processes are applicable to situations of delay. *Rationalization* involves modifying the interpretation of the goal delay and can reduce the negative emotional

state. *Roving* occurs when attention shifts to past positive achievement of the delayed goal or to imagining a future where there is achievement of the goal.

Not achieving a goal (or delay of a goal) can be threatening to one's self esteem. Baumeister (1996) describes studies of ways of dealing with threat. He shows that it is possible to ignore, to utilize attentional shifting away from the cause of the stress (avoidance) and reinterpretation (making the best of the situation) in order to reduce the negative implications. Thus, while delayed in traffic one may simply think about last night's baseball game or they may reconsider the importance of the meeting for which they are late.

Delay of a goal may result in the individual reevaluating the situation. One possible response is reinterpretation of the goal. The goal can become less important, or superceded by shifting to other goals (Gollwitzer, 1996; Kruglanski, 1996). One way to accomplish goal shift is to reconsider the delayed goal as not as important as a higher-level goal, or one can reconsider the importance of the goal and thereby diminish its importance (Carver & Scheier, 1998). This same concept is termed transcendence by Baumeister and Heatherton (1996). Transcendence involves shifting attention beyond the immediate situation to attend to concerns that are more global. Baumeister and Heatherton (1996) propose a strength model of self-regulation. In this model, the capacity to self-regulate is limited in each person. Further, fatigue affects individuals, so that self-regulation is worse in conditions of high stress. Thus, in conditions of high demand, a normally patient person may become more irritable, angry, and will hurry others along. Baumeister and Heatherton (1996) note that in their research, the ability to control attention was the key factor in self-regulation with transcendence being a pivotal

form of attentional control. In the case of being delayed behind the slow moving vehicle, the goal of being to a meeting on time is reconsidered as less important as not getting in a traffic accident which would be likely if one were to move in front of the slow vehicle. Alternatively, the individual can decide that the meeting will not be that special; it is only a sub-group meeting of the special topics group of the sub-committee on programs. The process of a child's learning to read can be quite tedious; but teachers and parents will sit through endless readings of Dr. Seuss so that the child can achieve the goal of reading. This involves not simply goal restructuring, but transcendence of one's own goals (not hearing The Cat In The Hat) to those of another.

Standards relate to anticipation or expectations of conditions or states of being (Baumeister & Heatherton, 1996). The use of standards is another cognitive mechanism for responding to delay. Individuals reference internal standards such as personal values and morals to control their behaviors (Bandura, 2001) and use external standards such as laws or rules for behavioral control. An employee may not become angry with his or her boss who is not providing a salary increase because of insubordination rules or perhaps because the person believe it is better to allow others time to make decisions.

Emotional

Patience in response to delay is associated with the emotions of calmness and relates to sympathy, empathy, and altruism whereas impatience is associated with anger and frustration. Researchers characterize negative emotional reactions to delay either as angry (with associated feelings of annoyance, irritation and frustration) or uncertain (with feelings of uneasiness, unsettledness, and anxiety) (Taylor, 1994). When blame occurs it often results in feelings of anger (Blount & Janicik, 2000; Shaver, 1985; Taylor, 1994).

Impatience can manifest externally (hostility) or internally (stress). Hostile, external manifestations of anger include rudeness, antagonism, and disagreeableness (Dembrowski & Czajkowski, 1989). Individuals identified with TABP are more prone to hostility as characterized by more experience or expression of anger and other negative emotions, and acting in a rude or condescending manner as well as a more intense style of interactions (Dembrowski & Czajkowski, 1989). Adolescent boys identified as having TABP lose their temper more, express their anger more and act in more physically and verbally aggressive manners (Farber & Burge-Callaway, 1998). Further, Brody (1985) concludes that due to socialization, girls inhibit anger responses more than boys do. In adults, gender differences exist for hostility expression with women expressing less overt hostility than do men (Davidson & Hall, 1995). Chronic hostility and anger have also been long associated with poor health outcomes including higher rates of chronic heart disease (Miller et al., 1996).

When attribution for the responsibility of delay is external, the result is not automatically blame and anger. Instead, the individual can respond with empathy or sympathy. Empathy is defined as “that unique capacity of the human being to feel the experiences, needs, aspirations, frustrations, sorrows, joys, anxieties, hurt, or hunger of others as if they were his or her own” (Clark, 1980, p. 188). In attributing responsibility in the vehicle registration situation, one may get angry, or they can consider that this is the individual’s first day on the job and he is learning, or that we all have bad days. The emotional response of empathy is that of compassion, warmth, and concern (Batson et al., 1981). To act in an altruistic manner is to give up one’s own desires for the welfare of another (Batson, 1987). Batson and his colleagues (Batson et al., 1981; Coke, Batson &

McDavis, 1978) show that empathy leads to altruistic behaviors. The altruistic act of empathy and acting with compassion is most notable in situations of tolerance delays rather than postponement delays. Many people are willing to stop what they are doing or put goals off if a friend needs to talk or if their child requires comforting and attention. Weiner (1990) found that individuals in a negative situation (staggering and falling) who are perceived to be in control of their situation (being drunk) generate responses of anger in others and less willingness to help whereas those not in control of the situation (carrying a cane and ill) generate sympathy in others and are more likely to receive assistance.

Empathy differs in its magnitude and capacity within and across individuals (Clark, 1980; Duan & Hill, 1996). Empathy has two aspects: cognitive empathy (the ability to take on the role of another) and affective empathy (the ability to match the other's emotions) (Davis, 1983). Duan and Hill (1996) report research that shows that cognitive empathy is associated with altering attribution of behavior and affective empathy associates with helping behavior. Different types of empathy may be more beneficial at a time than others and that at times, a type of, or too much, empathy may in fact be detrimental (Duan & Hill, 1996; Wispe, 1986). Wispe (1986) distinguishes between empathy and sympathy where empathy is the understanding of the experiences of another (both positive and negative) and sympathy refers to the communion with the other. Wispe writes "to know what it would be like if *I* were the other person is empathy. To know what it would be like to *be* that other person is sympathy (p. 318, italics in original). For Wispe, sympathy leads to acting for another in an altruistic manner whereas empathy is more appropriate for situations needing understanding such as

psychotherapy. A necessary component of altruism and empathy is the initial perception of need: empathy will not occur if we do not identify the other person as being in need (Batson, 1987). Batson (1987) identifies three necessary components to perceive another in need: (a) the perception that the other differs in current versus potential state of well-being, (b) sufficient salience between the current and possible state so that a difference is noticed, and (c) the person must be focused on the person in need and not themselves. Thus, the individual who is patient will identify the other person as responsible for the delay but that the delay was not intentional. It can be seen that those persons experiencing time urgency are unlikely to meet the criteria set out by Batson as they will likely not be focused on the other and certainly not considering the other individual's possible state of being. Batson goes on to identify that empathy and altruistic acts may be associated with anticipated rewards such as social approval, receiving esteem, or internal benefits such as seeing oneself as a good person or complying with internal rewards. Identification with the other person may increase the "we-ness" of their perceived distress and increase the likelihood of acting with empathy. This may explain in part why we show less hostility to delays caused by those who are a member of our own in-group.

Behavioral

Compared to cognitive and emotional strategies, behavioral options are somewhat limited. Behavioral responses to delay include the preparation for waiting and self-distraction. Studies have shown that occupied people tend to estimate time as passing faster than it does (Francis-Smythe & Robertson, 1999). Thus, individuals who can occupy themselves by doing something during a delay should react more positively to the

delay than those with nothing to do. Being prepared for delay can reduce the negative response, and the distraction can make the time of the delay seem to pass more quickly (Blount & Janicik, 2001). This concept seems almost intuitive to parents planning vacations resulting in the giving young travelers books, hand-held video games, or other distractions to avoid the “are we there yet” question. Several large stores (i.e. IKEA) utilize this child distraction technique by having large play areas on-site for youth in order to increase parent’s shopping time. Some restaurants always have the daily newspaper for adults and crayons for children, and physician offices, well known for the likelihood of postponement delay, are notorious for their (outdated) magazines. Other activities commonly used to distract include radios, knitting, “people watching”, and, in a less productive sense, use or abuse of alcohol. Mischel (1996) reports several examples of self-distraction from his research with children. Children who were able to extend their length of delay utilized such strategies as singing, verbal rehearsal, and reminders of the rewards, placing their hands over their eyes and even napping. Review of the above examples of self-distraction indicates that these behavioral opportunities may have limited utility in many situations of patience. Reading a book or napping when experiencing delay at the airport is reasonable, but it would not be productive to do the same thing while in a moving vehicle, or when your mother-in-law is talking to you about a topic she feels is vitally important. In addition, anticipation of all delays is not possible. It may be impractical to always be prepared for waiting although the increasing availability of hand held data ports might alter this.

Other Factors

A factor that may influence the response of patience or impatience is the type of goal in question. There are different types of goals (Karniol & Ross, 1996; Ryan et al., 1996). Karniol and Ross (1996) identify four types of goals: (a) self-constructed goals, (b) goals set in tandem with others (participatory goals), (c) adoption of goals set by others and (d) mandated goals. Self-constructed and participatory goals may be more desirable to a person than are those goals set externally to the individual. Thus, delay of mandated goals (e.g. work performance goals) may not create the same level of reaction as in the case of delay of one's personal goals.

Miller (2001) notes that responding to perceived injustice involves social factors and goals of retaliation. Miller discusses perceived injustices. It is possible to consider delay caused by another as a form of injustice. The nature of the relationship between the agent responsible for the delay and the delayed individual will influence the response. A delay caused by a member of one's own group will often be perceived as less hostile as one caused by a member of an out-group. Thus, impatience is more likely in cases where the delay is the responsibility of another person and that person is outside the group of identity to which the delayed person belongs. If obtaining a car registration is taking an extended period because the perception is that the person at the counter is working slowly, then one may become more impatient if the individual behind the counter is of another ethnic background. In addition to group membership, the power differential of the involved parties will mediate the response to delay. Another social factor is if the delay was public or not. The greater the public knowledge is of the injustice the greater the perception of injustice. Returning to the prior example, the person waiting might

become more upset at the car registration office if there others are present than if he or she is the only one. Miller also discusses the intention of the response. The individual who responds with retaliation may be trying to either restore their own self-esteem or to educate the offender. Anger may thus be a form of self-preservation. Swarz and Bohner (1996) note that when individuals are experiencing negative emotions their self-ratings of ability are lower. Thus, when angry, a person will likely be self critical and thus experience lower self-esteem and respond with anger. Anger is also describes as a public way of challenging demeaning treatment, not simply to increase the individuals self-esteem but to point out the injustice of the other's acts.

Distinction is necessary between impatience and impulsivity. Impulsivity refers to the act of performance of an activity that is harmful to the individual or to others. Often preceding behavioral manifestations of impulse control problems are feelings of tension and arousal (Evans et al., 1998). Dickman (2000) describes two types of impulsivity. The first occurs when an individual does not provide sufficient forethought to the consequences of an action before taking action (dysfunctional impulsivity). This is the common understanding of impulsiveness: acting without thinking (Webster & Jackson, 1997). Functional impulsivity occurs as an optimizing strategy, the individual's cognitive style is one of high error but also high correct response due to the above normal rate of energy. Thus, the functionally impulsive person accomplishes much more but with more errors. Descriptions of impulsivity do not address emotional issues. That is, impulsiveness does not associate with particular emotions although guilt and regret over the acts does at times occur. However, in impatience, the behavior is associated with feelings of anger or frustration. In addition, with impatience, there is the presence of the

delayed goal whereas with impulsivity, there is not a delay but simply acting upon a desire. Thus, although rapid time of decision-making is a factor of impulsiveness (Harmstead & Lester, 2000), it is different than the sense of time-urgency associated with impatience. It may be however, that extreme version of impatience can mimic impulsiveness. Wishnie (1977, as cited in Webster & Jackson, 1997) notes the impulsive individual will attribute responsibility externally, frequently be angry, must have immediate gratification, have a lack of planning or goal setting, replace emotional discomfort with anger, respond to criticism with blame, and “demand immediate relief”. The extremely impatient person, who has high levels of time urgency and lack of empathy, will appear much as the impulsive person does. The experience of blame and anger will be rapid due to the limited cognitive component of patience. Because all delays are external, and because of the inability to delay gratification and the subsequent intolerance of waiting is so great, the extremely impatient person will react virtually automatically with anger and other negative behaviors, he or she will appear impulsive.

Summary and Conclusions

Patience is an understudied construct. If the construct itself has been noted in research, it has primarily been only to note it as the absence of impatience. There is little direct research on what constitutes patience. Blount and Janicik (1999, 2000) have put forth the only existing model of patience. Patience is understood by these authors to have two primary delay triggers, postponement, and tolerance. The delays of tolerance are posited as distinct from those of postponement in their cognitive and behavioral consequences to the delay. Further, other factors of the delay situation and the delay itself will influence the quality of patient or impatient response. The type of delay, the

individual's interpretations of the delay, as well as the role of emotion all play a role in the patient or impatient response.

The current research proposes to provide an objective means of measuring patience through individuals' responses to items relating to delay and the response to delay. This research will not only provide a measure of patience but will also test the Blount and Janicik model of patience.

Chapter 3: Methodology

Methods and Procedures

The purpose of this research is to develop an objective measure of patience that is reliable and valid. A further question is whether the association between factors as predicted by the Blount and Janicik model of patience (1999, 2000) holds true.

The Blount and Janicik (1999, 2000) model details patience not as an innate but as a cognitive-emotional based process. In the model, patience initiates with the presence of a delay, the individual interpretation of a situation as one of delay, followed by the evaluation of the situation, the attributions of responsibility for the delay and the determination of individual's own responsibility for reacting to the delay as well as cognitive responses to the delay itself. Following interpretation of the delay comes emotional responding followed by the behavioral manifestations of patience. This research study predicts that the total patience score and the factors of patience best allow the viewing of patience and impatience as a normally distributed range of scores.

This research has seven methodological phases.

1. Development of the Item Pool
2. Review of the Item Pool
3. Initial Administration of Instrument
4. Analysis of Initial Data
5. Revisions of Instrument
6. Final Administration of Instrument
7. Analysis of Instrument

Participants

Two groups were tested in this study. Participants were selected from undergraduate classes at West Virginia University. Participants were not paid. Some participants were offered extra credit for participation. Specific information regarding each of these two samples is found in section three (initial administration of instrument) and section five (final administration of instrument) of this chapter. There are approximately 15,000 undergraduate students at West Virginia University. Students are predominantly Caucasian (93%), and evenly split by gender. To access a wide breadth of possible participants, classes were selected from the women's studies program, and departments of psychology, community medicine, supportive programming classes, and multidisciplinary studies program. Other programs and some specific classes refused access to their classes. As part of the procedure, students were asked to refrain from completion of the study more than once in the case that a student from one class was in a class from another department. Overall, the sample for these studies was young, Caucasian, and single. This restricted range of respondent demographics limits the ability to generalize findings to other populations.

Procedures

Phase 1: Development of the Item Pool

Review of the existing literature was primary in item generation with harvesting of items from published measures to develop some of the item pool. The basis of development of other items was theoretical, conceptual, or based upon research conclusions. In addition, the author consulted with experts and created specific questions in the measure.

There are many self-report measures of the conceptualized components of patience or associated factors. The Jenkins Activity Scale (Jenkins et al, 1967), the Bortner Scale (Bortner, 1969), and the Framingham Scale (Haynes et al., 1978) are the three most common measures of the Type A Behavior Pattern. The TUPA scale (Wright et al., 1992) measures time urgency. Kruglanski et al., (2000) developed items to capture the concept of locomotion. Mehrabian and Epstein (1972) developed a measure of emotional empathy, and Hogan (1969) addressed cognitive empathy. Price (1995) developed a scale addressing insecurity in relation to the time-urgency-patience and hostility subcomponents of TABP and offers descriptions of the behaviors, speech, mood and other characteristics of the Type B behavior pattern that relate to patience (1988). Blount and Janicik (1999) developed questions in response to their qualitative research in order to measure the emotions associated with patience. Harmstead and Lester (2000) compiled several measures of impulsivity and identified eight primary factors. Use of questions from these measures most strongly associated with the components of the construct of patience (i.e. time urgency, blame) provided content validity. The basis of development of other items was the research in those areas felt to be associated with the construct of patience by review of literature and the theoretical model of Blount and Janicik (1999, 2000). For example, one item developed was, “I tend not to interrupt people” based on Price’s (1995) concept of the Type B personality.

The author generated a total of 37 items for the item pool. To address areas theoretically relevant but absent in existing literature, 25 items were developed. These items include those designed to distinguish responses of patience due to temporal delay versus postponement delays. The other 12 items generated by the author were designed

in order to explore the possibility of identification of an upper extreme of patience, to see if it is possible to be too patient. A complete list of the initial item pool is in Appendix B. Negative scoring occurred for 56 of the 112 items. The format for measurement of items was a self-report Likert scale with a six-point scale from 1 (Strongly Disagree) to 6 (Strongly Agree). The absence of the neutral point forced responses in either the positive or the negative direction.

Phase 2: Review of the Item Pool

Experts in the area of patience (Sally Blount-Lyon, Greg Janicik) and three other doctoral level psychologists from West Virginia University familiar with test construction and the construct of patience reviewed the pilot measure. Blount and Janicik have conducted qualitative research on the construct of patience. They are the authors of the model of patience reviewed in this study (Blount & Janicik, 1999, 2000). At this time, these two individuals are the only known researchers specifically addressing the construct of patience. Information on the construct of patience, a definition of patience, and the purpose of the study was provided to these reviewers with additional materials if requested. They had the opportunity to ask questions and obtain clarification prior to completing review of the materials. No reviewers requested additional information. Reviewers completed a response form asking specific questions of the areas surveyed, appropriateness of questions, identification of problem questions and general suggestions (Appendix C). This review allowed content validity of the measure to be addressed. As the construct of patience is not well defined, in order to increase content validity the decision was made to include a large number of items in the item pool, to request reviewers analyze each item individually, and to suggest additional items.

The reviewers were asked eight questions: 1) Does the item pool fit the construct of patience? 2) Are there any areas of the construct of patience given too much emphasis? 3) Are there any areas of the construct of patience under emphasized? 4) Are there specific questions that appear inappropriate? 5) Are there specific questions that are difficult to understand? 6) Are there specific questions that you recommend be deleted? 7) Are there questions you suggest adding to the item pool? 8) Other comments. Reviewers were also provided a separate form to specifically mark whether to keep or reject each item. One reviewer chose to respond via e-mail in a general fashion to questions three through eight (Appendix D). These e-mail responses do not correspond directly to the questions asked and will not be included below. Details of responses provided by reviewers to these questions are below.

1. Does the item pool fit the construct of patience?
 - “Generally yes. I will provide you with a list in item #4.”
 - Blank response
 - “It depends what the definition of patience is, and in what setting. There are clearly many different scales being combined here. Also-many questions seem pertinent to ADD for example. Also measures of time urgency. It would be helpful if I had more background.”
 - “Some do and others do not.”
 - “Based on the definition of the construct you provided, yes.”
2. Are there any areas of the construct of patience given too much emphasis?
 - “Nothing comes to mind”

- “Too much emphasis on “driving” situations. You either want variance in the situations utilized ... or keep items context free (as much as possible).”
 - “Self-indulgence? - Why. Empathy- too broad in many items.”
 - “Waiting in line.”
 - “Not that I am aware of.”
3. Are there areas of the construct of patience under emphasized?
- “Nope.”
 - “What about an inner calm that might be part of the construct.”
 - Blank response
 - “Perhaps being impatient with others who are not doing things as fast as you want, or not “performing” the way you want, i.e. making mistakes, not learning to do things fast enough, etc.”
4. Reviewers typically combined or crossed referenced responses to questions # 4 and 6. Further, these questions relate to the evaluation of particular items that reviewers also did by filling out the form asking to indicate either to keep or reject each item. Therefore, responses to these two questions and the discussion of response to the keep/reject form follow presentation of responses to other questions.
5. Are there specific questions that are difficult to understand?
- “#8 – Both parts of item seem to reflect impatience.”
 - Blank response
 - “Negatively phrased questions are confusing.”

- “I found them all understandable.”
6. Reviewed in conjunction with question #4.
 7. Are there questions you suggest adding to the item pool?
 - Blank response
 - “I tend to run late”; “I am a very punctual person.”
 - “No.”
 - “Nope.”
 8. Other comments
 - “Your study is worthwhile. Best wishes with it.”
 - Blank response
 - “Wording items to include the feeling of being frustrated may make them more reflective of the construct. More “reverse scored” items may be useful.”
 - Blank response

Reviewers indicated on a separate form their opinion of retention or rejection of items. Each reviewer completed this form and there were no questions without a response. Table 1 provides information on the total number of items identified as rejections by reviewers. There was a wide variety across reviewers in their decision to suggest deletion of particular items. A Chi-square was used to analyze if there were differences between the number of items reviewers suggested be deleted. Using all five reviewers, there was a significant difference ($\chi^2 = 254.0$, $df = 4$, $p < .001$). Considering that one reviewer suggested removal of only one item, this response was excluded as an outlier and the Chi-square run again. These results were also significant ($\chi^2 = 16.98$, $df =$

3, $p < .001$). Thus, reviewers differed on the number of items that they identified for exclusion from the item pool.

Table 2 presents the inter-rater agreement levels for reviewers. The table shows that all reviewers agreed on retention of 44 of the 112 items (39.2% of the items). Agreement among reviewers declined in a linear fashion to the level where there was no absolute consensus on rejection of any single item. Without consideration of the one reviewer who indicated rejection of only a single item, the other four reviewers agreed on rejection of eight items.

Review of materials also involved a peer review to obtain information from a respondent point of view. Reviewers were doctoral students of counseling psychology. Three individuals completed the item pool and responded to specific questions (Appendix E). They also monitored the time it took to complete the questions. Peer reviewers were asked five questions: 1) Were there specific questions that were difficult to understand? 2) Was the material presented in a manner that was easy to follow? 3) Were there any specific difficulties you had with any aspect of the materials? 4) Were you able to complete the packet without becoming fatigued? 5) Was the material presented in a manner that was visually easy to follow? If there was any part that was visually distracting, please identify. Detailed below are the responses to these questions.

1. Were there specific questions that were difficult to understand?
 - “#16 could be hard to understand for undergraduates. #20 could be confusing for same.”
 - “I thought the items were very clear.”

- “#8 unclear; #21 synonym for wronged; #51 tough, may be too vague; #64- no “as”; #101- another word for serene.”
2. Was the material presented in a manner that was easy to follow?
- “Yes, organized well and easy to match questions with answer choice.”
 - “Yes – the Likert scale was a little confusing – I might do something so it’s more clear.”
 - “Yes.”
3. Were there any specific difficulties you had with any aspect of the materials?
- “No.”
 - “Just the Likert scale: remembering 1 = I strongly disagree.”
 - “No, clear and concise.”
4. Were you able to complete the packet without becoming fatigued?
- “No problem with length.”
 - “It’s a little long but I imagine you need this number of items.”
 - “Yes, I found the questions interesting.”
5. Was the material presented in a manner that was visually easy to follow?
- If there was any part that was visually distracting, please identify.
- “Okay.”
 - “OK.”
 - “Yes, very well organized.”

Considering both the varied response patterns of reviewers to the keep/reject form and the limited agreement between raters on particular items it was decided that all eight items would be eliminated from the item pool that four of the five raters indicated should be removed. There were 12 items which had three reviewers indicate should be removed from the item pool. Each of these was evaluated for appropriateness of inclusion by the author with four of these 12 items subsequently dropped from the item pool. The eight items kept either addressed the issue of an upper limit of patience (being too patient), identifying a preference for postponement or tolerance, or other aspects of the proposed construct such as empathy or time urgency. Review of the six items identified by peer reviewers as difficult to understand occurred. One of the six items was dropped as part of the expert review process. The decision was to err on the side of inclusion of items rather than exclusion. The two items suggested for inclusion by one reviewer joined the item pool. The final item pool consisted of 102 items. Of these 102 items, 51 were negatively scored. These 51 items made up the initial measure (Appendix F).

Phase 3: Initial Administration of Instrument

The Institutional Review Board (IRB) for human subjects study at West Virginia University approved this study on 03/18/2002 with exempt status. Following IRB approval, initial administration of the measure occurred. This administration was designed to identify those test items most associated with the construct of patience, and to allow the reduction of the number of questions to create a more valid and useful tool of measurement.

The population for this sample was students at West Virginia University enrolled spring semester 2002. Testing occurred in the classroom environment. Participants were

from classes in various departments including psychology, community medicine, supportive programming classes, multidisciplinary studies, and women's studies. An introduction script (Appendix G) was read to all subjects to provide information about the study, informed consent, confidentiality information, and contact information for the researcher and his supervisor. Subjects were provided the measure in a manila envelope. Coding on each envelope matched the identifying code on each measure. Completion of all measures occurred in the classroom and packets were turned in to the author or his representative. Most individuals completed the booklet within 15 to 20 minutes. The measure used language written at the ninth grade reading level as determined by grammatical analysis using Microsoft Word 2000. Wording at this level provided ease of reading. In addition providing wording at the lower level would not confound results with reading ability.

A total of 373 packets were handed out and returned. Factor analysis used 347 packets with 26 packets rejected. There were five packets returned blank (no markings on any forms), and eight packets returned with partial completion or obvious random answering pattern (cascading pattern, or one or more pages not completed), or uniform answering pattern (i.e. all one number response used). One individual began to complete the packet but informed administrator that he had completed it in another class and returned the packet. Another 12 individuals completed the packet outside of a classroom setting. Exclusion of these 12 responses reduced the potential of confounding data by format of test administration.

The sample size of those completing the packet for this administration was 347. Table 3 presents demographic data for this sample. As is seen, the majority of the sample

was female (72.1 % with 2.9 % missing data), and Caucasian (89.6 %). This sample is likely made up of more females than would be expected based on the distribution of gender at the university but similar to the university as a whole for ethnicity, age, and relationship status. Other ethnicity categories endorsed included African American 4.8 %, and Asian 2.7 %, with 3.2 % missing data. In this sample, as anticipated, 95.3% of respondents were under the age of 23 with only 1.5% older than 30. Of those identifying marital status, 93.2 % identified themselves as single, 4.0 % identified “other,” with 1.7 % married, 0.6 % widowed, and 0.3 % divorced. There was 2.3 % missing data from marital status information. Chi-Square analysis found significant differences among all variables of the demographic data ($p < .001$ for all).

Phase 4: Analysis of Initial Administration Data

Evaluation of the data from the initial administration utilized exploratory factor analysis. Factor analysis is valuable in the development of theoretical constructs through the ability to operationalize the construct (Gorsuch, 1974). In the development of a measure, factor analysis presents the best option for testing which factors are present and determining which items speak best to these factors (Kim & Mueller, 1978; Tinsley & Tinsley, 1987). Thus, using factor analysis in the present study increases theoretical development of the construct of patience. Factor analysis allows reduction of a large amount of variables (the item pool) by evaluating the relationships between the variables and then condensing, or summarizing, these variables into latent variables (Gorsuch, 1974). The variance within the multitude of correlations among the large initial variables, are captured by the factors (latent variables) rather than requiring exploration

of the simple correlations between each factor (Stevens, 1996). Thus, a few latent variables can explain the variance for a much larger set of items (DeVellis, 1991). As the construct tested was a proposed one with no prior testing, the study is an exploratory analysis rather than a confirmatory factor analysis (Bandalos, 1996).

Evaluation the significance of the matrix using Bartlett's test was an initial step to ensure that the data were appropriate for factor analysis. Factor extraction methodology was descriptive utilizing principal component analysis (Rummel, 1970). Although estimates of communality are beneficial in many factor analysis procedures, with principle component analysis, communality estimates are unnecessary (Gorsuch, 1974). Communality is an estimate of the proportion of common variance of a variable explained by the common factors (Gorsuch, 1974). The common variance is distinguishable from specific (or unique) variance and error variance (Tinsley & Tinsley, 1987). Gorsuch (1974) writes that when communalities are low, a principle component extraction procedure is preferred. He also states, "as number of variables increase, communality estimates and the method by which exploratory factors are extracted both become less important" (p. 120).

Determination of the number of factors to rotate occurred by interpretation utilizing Cattell's scree test and the Kaiser test (K1, SPSS default) (Zwick & Velicer, 1986). The scree test is a visual guide to determining the number of factors to rotate. The plot of the amount of variance explained by each factor has a visual likeness to a mountainside with the first factors explaining larger amounts of variance than subsequent factors. Cattell describes the curve of this plot, and more particularly the flattened end of later factors, as the rubble at the bottom of a cliff or mountain (Gorsuch, 1974). The

cutoff for the number of factors is where the curve of the plot flattens out (the elbow) (DeVellis, 1991; Gorsuch, 1974). Tinsley and Tinsley (1987) are critical of using the scree test alone given the subjectivity in determining the elbow, although others (Zwick & Velicer, 1986) have determined support for the use of the scree test despite its subjective nature. In addition to the scree test, determination of the number of factors to retain used Kaiser's Eigenvalue > 1 (K1) rule. The K1 rule suggests retention of those factors with an eigenvalue greater than 1.0 and is one of, if not the most, used criterion method (Stevens, 1996). This eigenvalue represents the sum of squared factor loadings, and values above the 1.0 level "explain more variance than the average amount explained by one of the original items" (DeVellis, 1991, p. 97). Criticism has been directed towards the K1 rule when used alone as it may result in the retention of too many factors (Stevens, 1996; Zwick & Velicer, 1986).

Following the determination of the number of factors to retain, an equamax factor rotation assisted interpretation of the data. The choice of equamax over the varimax and quartimax orthogonal rotations was based on its ability to spread variance more evenly across rotated factors (Gorsuch, 1974). Equamax was initially described by Saunders (1962 as cited in Gorsuch, 1974) but in the forty years since has been used much less frequently than either varimax or quartimax rotations. The varimax rotation process attempts to simplify the column of a factor matrix by maximizing variance whereas quartimax rotation maximizes the variance of the rows. Equamax rotation has the property of simplification of both rows and columns and this was the reason for using equamax. The factors that result when orthogonal rotation is used are independent, that is, they are uncorrelated with the other factors. Within oblique methods of rotation, there

is correlation between factors (DeVellis, 1991; Gorsuch, 1974). Most authors indicate that the orthogonal methods of factor rotation are preferred to oblique methods (DeVellis, 1991; Gorsuch, 1974; Tinsley & Tinsley, 1987).

In addition to the factor analysis procedure, item analysis assisted the identification of the most appropriate number of items to retain. Item analysis consisted of item variance, item means, and coefficient alpha (DeVellis, 1991). Item variance informs the variability of a particular item across all respondents. Larger variance will indicate that the item discriminates between individuals, i.e. not everyone is answering the question in an identical manner. Item means were determined to evaluate if the items were generating responses in a varied manner or were averaging towards the extremes indicating uniformity of response across the sample. Cutoff for exclusion based on item mean was set at scores greater or less than one point from the extreme. Thus, the exclusion threshold for items was mean scores greater than 5.0 or less than 2.0. Coefficient alpha was utilized as a measure of reliability using SPSS 9.0. Item analysis followed initial factor analysis and therefore, the process of analysis was one of interaction and integration. In initial stages of the study, if differences were present between the scree plot and K1 rule, the K1 rule determined number of factors to rotate. Although this would potentially lead to acceptance of greater levels of factors earlier on, item analysis would act to reduce those items inflating the number of components.

Evaluation of the data from the initial administration occurred in a multi-step process. First was removal of items with low variance, followed by evaluation of all components in an orthogonal manner using equimax rotation. Following the first wave of item removal was a second equimax analysis. The component matrix from this factor

analysis was reviewed with removal of those items having low factor loadings ($< .30$). Evaluation of internal consistency reliability utilized Cronbach's coefficient alpha (α) following each factor rotation with removal of select items having minimal impact on alpha if removed. Specific targets for removal were those items having high overlap with another question (i.e. the same question in different form) and/ or minimal impact on alpha if removed. Repetition of this process occurred through six equamax analyses. Evaluation of the resulting rotated component matrix identified nine factors.

Phase 5: Revision of Instrument

Based upon the analysis of information from the initial administration data a revision of the instrument occurred. This revision involved the determination of the appropriate length of the measure that allowed for the strongest reliability. The factor and item analysis were the basis for determining removal of items.

Following the factor analysis, 32 items were retained for the instrument with three original items re-written for the final administration. Rewriting items occurred to clear up confusing phrasing, to personalize the question, or rephrased in a positive manner. Five items were added to these items for a final instrument length of 40 items. These items were developed by the author. Addition of items was felt to be important for the study of the construct. Items reflected additions to identified factors of postponement, waiting, time urgency, self-regulation, and flexibility. Those items added were:

- I believe that good things come to those who wait
- I adapt if something comes up to postpone my plans
- I do things without thinking
- I have enough time to do the things that are important to me

- I make quick decisions

Phase 6: Final Administration of Instrument

Following revision of the instrument, a final administration of the instrument occurred. This administration utilized a sample of 326 students from West Virginia University. Of the 326 six packets handed out, there were three returned with no markings on any forms, and 11 were returned partially completed or completed in an obvious random or patterned manner, for a final sample size of 312. This sample was drawn in a similar fashion as those in the initial administration. Table 3 details the demographic characteristics of the final administration sample. Students from undergraduate classes in the departments of psychology, multidisciplinary studies, women's studies, and community medicine participated during Summer I and II sessions of 2002, and the Fall semester of 2002.

Completion of testing occurred during regularly scheduled class periods. All measures were completed in class and were turned in to the author or his representative. Every student in the class was provided with a test envelope. Envelopes were provided to all students to allow those individuals wishing not to participate, the opportunity to do so without added concern or identification by having to actively opt out by not accepting a packet. Coding of envelopes and measures increased confidentiality. A scripted presentation cover letter (Appendix H) describing the test, informed consent, confidentiality, and the purpose of the test as part of a doctoral dissertation study, was read to students at the beginning of each session. In addition to the booklet, subjects received the Glass Model of the Short Student Jenkins Activity Survey (SJAS; Davis & Cowles; Yarnold, Mueser, Grau, & Grimm, 1987) the Boredom Proneness Scale (BPS;

Farmer & Sundberg, 1986), and a modified version of the Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Epstein, 1972) labeled for the purpose of this study as the Empathy Scale (ES). Placing of the measures in the packet in alternating manner occurred to reduce any ordering effect.

To evaluate temporal stability through test-retest reliability, 52 individuals were given the packets at a four-week interval. Table 3 also gives demographic information for the test-retest sample. Of these packets, 12 were unable to be used due to incomplete information resulting in a test-retest sample size of 40.

In this study, construct, convergent, and divergent validity were examined through exploratory factor analysis and correlation techniques. The SJAS, BPS, and the ES were presented to measure validity. The SJAS is similar to the construct of patience in that time press, urgency, and impatience are components of the SJAS. As a result, a relationship between the patience measure and the SJAS would indicate convergent validity. So too, empathy is identified as a plausible component of patience and thus a relationship between the patience measure and the ES also indicates convergent validity. There is no theoretical similarity of boredom to patience and therefore the expectation is for no relationship between the patience measure and the BPS. This lack of a relationship would indicate divergent validity.

Phase 7: Analysis of Instrument

Prior to analysis of the measure, comparisons occurred between the initial administration sample and the final administration sample. T-test with Bonferroni correction measured the differences between the samples. The percentage of responses across categories of gender, relationship status, ethnicity and age range were examined.

For a familywise error rate of $\alpha = .05$ the Bonferroni of $\alpha = .0025$ was used for the each test. Table 4 shows that there were no significant differences between the initial sample and the final sample for any demographic item. The final sample was also compared to the test-retest sample for differences in demographic areas, using the Bonferroni correction at the .0025 level. As table 5 shows, here too, there were no significant results although the category of Caucasian did approach significance ($p = .008$). Thus, the final administration sample did not differ significantly across demographic categories either from the initial administration sample or from the test-re-test sample.

The process of factor analysis was the same as used for the analysis of the initial administration of the instrument. The number of factors to rotate was determined by interpretation utilizing Cattell's scree test and the Kaiser test (SPSS default) (Zwick & Velicer, 1986). Factor rotation occurred using equamax rotation followed by item analysis. As with the initial administration, the process was an interaction and integration of factor analysis with item analysis with internal consistency using alpha measured at each step. Test-retest reliability method was used to evaluate temporal stability over a four-week period. Correlation of factors with the SJAS, BPS, and ES were obtained to evaluate convergent and divergent validity.

Measures

The SJAS (Glass, 1977) is a measure of Type A behavior. The measure is a modification of the Jenkins Activity Scale (JAS, Jenkins, Zyzanski, & Rosenman, 1971) for students. Glass (1977) adapted the questions on the JAS to be appropriate for students (i.e. questions regarding work were modified to reflect questions about school). This self-report measure has 21 items and provides a total score as well as scores on two

subscales: Hard Driving/Competitive and, Speed/ Impatience. Yarnold et al. (1986) examined the reliability of the SJAS with two studies. The initial study explored internal consistency (as measured by Cronbach's alpha) with 810 subjects who were undergraduates. The study included a review of differences by gender and race. Alpha was highest for white males ($\alpha = .62$ – moderately high) and then dropping for non-white males ($\alpha = .51$), white females ($\alpha = .45$) and the lowest internal consistency for non-white females ($\alpha = .40$ – moderately low). Multivariate analysis of this sample found no main effect for gender differences but did find significant results for the main effect of race. White subjects scored significantly higher overall on the SJAS ($p < .0001$). There was no significant interaction effect for gender by race on the overall score. In a second study, Yarnold et al. (1986), using 137 undergraduates, examined temporal stability of the SJAS over a two-week distance and in another sample of 124 subjects examined temporal stability over a three-month period. Over the two week period, correlations on test-retest scores were extremely high among groups ranging from $r = .90$ (non-white females) up to $r = .96$ (white females). Test-retest correlations at three months was lower but still relatively high ranging from $r = .70$ for white females to $.86$ for white males. Yarnold et al. (1986) concluded that the SJAS “showed a moderate level of internal consistency and a high level of reliability over a 2-week and 3-month period” (p. 409). Yarnold (1987) provided norms for the SJAS based on research with 4072 undergraduate students. The mean total score was 7.77 with a standard deviation of 3.25. He concluded that scores above ten and below three are extreme.

Farmer and Sundberg (1986) developed the Boredom Proneness Scale (BPS) to measure an individual's predisposition towards the emotion of boredom. In their model

of boredom, Farmer and Sundberg (1986) propose that boredom is “characterized by a lack of interest” (p. 15) in a non-dynamic environment, that is, a situation in which there are few obvious goals either internally or externally. Later studies based on the BPS found that the construct of boredom can be described along five factors: External Stimulation (need for change), Internal Stimulation (ability to self-occupy one’s time), Affective Responses, Perception of Time, and Constraint (personal reaction to a confining situation) using a seven point scoring scale rather than a True-False scoring system (Vodanovich & Kass, 1990). Other studies using the seven point scoring system have shown two primary factors: Needs A Buzz (similar to the external stimulation) and Low Self Regulation (including features of ability to distract and features of time perception). This study used the original true-false scoring system on the BPS. The BPS has 28 true-false items and research shows it to be a reliable measure of a person’s proclivity towards boredom (Farmer & Sundberg, 1986). Farmer and Sundberg (1986) report the mean score on the BPS by gender. Males score slightly higher than did women (10.44 to 9.30) although this difference was not statistically significant. Using the original sample of 233 undergraduates, internal consistency using KR-20 was satisfactory ($\alpha = .79$). Temporal stability over a one-week period was found to be adequate overall ($r = .83$) with a significant difference between gender with females showing more stability ($r = .88$) than males ($r = .74$). Gordon, Wilkinson, McGown, and Jovanoska (1997) examined the validity of the BPS. These authors studied construct validity, convergent validity, and divergent validity of the BPS in a sample of 345 individuals. Using factor analysis, they identified four factors of the construct of boredom, which is consistent with the Farmer and Sundberg model of boredom. The validity study reported a positive

correlation between boredom and negative affect (convergent validity) and negative correlations with extroversion, positive affect, and attentiveness (divergent validity).

In the Questionnaire Measure of Emotional Empathy (QMEE, Mehrabian and Epstein, 1972), empathy was defined as an emotional response to the recognition and sharing of someone else's feelings and studied using a 33 item, eight point Likert scale. This definition of empathy as an emotional, vicarious arousal is in contrast to views of empathy as a cognitive interpretation of another's situation, as a role-taking perspective (Chlopan, McCain, Carbonell, & Hagen, 1985). Mehrabian and Epstein (1972) examined the reliability and validity of the QMEE. Split half reliability for the measure was 0.84 with report that items had significant item-total correlation at the $p < .01$ levels. The authors report different means for males ($M = 23$, $SD = 22$) and females ($M = 44$, $sd = 21$). There are concerns regarding the QMEE. When combined, the average score was 33 with standard deviation of 24. Given that the QMEE has 33 items with a possible range of scores from 0 to 132, (17 items are reversed scored) the average scores on the QMEE would appear to indicate overall low level of emotional empathy by all respondents. The authors do not provide the full range of response options on the -4 to 4 Likert scale, only identifying the two extremes as "very strong agreement" and "very strong disagreement." It can be inferred that the scores valued - 1 and 1 are almost neutral emotional responses. The average scores indicate that males are indicating empathy levels as virtually unempathic (an average of .73 per item) with females only slightly better (1.33 per item). The authors do not provide information as to the amount of variance on individual item scores. Chlopan, McCain, Carbonell, and Hagen (1985) reviewed empathy measures, including the QMEE. These authors reviewed the QMEE

and reported no other studies of reliability and validity other than those completed by Mehrabian and Epstein in the development of the measure. Mehrabian and Epstein (1972) found that the QMEE correlated negatively with a measure of aggression ($r = -.31$) and using step-wise regression analysis, helping behavior was found to be a function of empathy ($\beta = .31$) thus they concluded the QMEE was a valid measure. Given the potential difficulties with reliability using the eight point Likert scale, modification of the QMEE occurred in this study. The questions of the QMEE were used but with a True-False response option. All responses were divided into a high and low empathy category based on the median of total scores for the sample. Statistical comparisons utilized the total score of the scale (termed Empathy Scale, ES, for this study) and scores grouped into the high or low empathy levels.

Chapter 4: Statistical Procedures and Results

Factor analysis procedures followed initial administration of the instrument and after the final administration. Measurement of convergent and divergent validity used comparison of the patience scale and its factors with other measures used. The temporal stability of the total score of the measure over a four-week interval was also examined. All statistical procedures utilized the SPSS 9.0 computer package.

Factor Analysis of Initial Administration Data

A total of six separate factor analytic procedures (table 6) occurred for the initial administration data. Table 6 shows the number of items that were used in each analysis, the number of components with eigenvalues greater than one, the total variance explained by those components with eigenvalues greater than one and finally, table 6 presents the reliability alpha for each analysis. Full tables of total variance and reliability are in appendices M and N.

In the early procedures, all components were extracted to allow for maximum retention of factors and to allow item analysis and evaluation of the component matrix to determine item removal. That is, while removal of many items for low variance occurred or because their removal would not reduce alpha significantly, it was felt to be better to err on the high side of the number of factors to retain, rather than reducing the number before analysis of items and the rotated component matrix could occur. Mean scores for all items fell between 2.0 and 5.0 throughout the analysis of the initial administration. Therefore, there was no removal of items due to extreme mean score.

Table 6: Results of Factor Analyses of Initial Administration

<u>Factor Analysis</u>	<u>Number of Items in Analysis</u>	<u>Components with Eigenvalues > 1</u>	<u>Total Variance Explained</u>	<u>Cronbach's Alpha Level (α) (for scale as a whole)</u>
1	102	30	66.499	-----
2	72	21	63.215	0.8746
3	56	15	60.903	0.8694
4	50	13	59.775	0.8674
5	39	11	60.284	0.8058
6	33	9	56.201	0.7848

In the first factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.820), and of Bartlett's Test of Sphericity ($p = .000$) indicate that the matrix had sampling adequacy and that the correlations within the matrix were significantly high for factorability. Cases with missing data were excluded pairwise. The rotation converged in 29 iterations. The scree plot (Figure 1) shows that a strong elbow appears after approximately seven components; then there tends to be a stepwise pattern through about the 31st factor. An examination of table 6 shows a total of 30 factors with eigenvalues greater than one (see table 7 for full information). These 30 factors account for 66.499 percent of the variance if all were extracted. Following review of the scree plot and eigenvalues was an evaluation of the descriptive statistics (item variance in particular) of the items (table 8). This evaluation resulted in removal of 30 items due to low variance (< 1.125). Low variance indicates that responses of subjects to the question had poor differentiation. That is, most subjects responded to the question in a similar manner thus rendering the item meaningless for purposes of factor analysis. Examples of

items removed include “I maintain self-control of my behavior”, “Most people do the best that they can in situations”, and “Sometimes I do things even though I shouldn’t.” Due to the high number of items removed for low variance the decision was made to move ahead to a second factor analysis and not review reliability data.

After removing of items with low variance, a second factor analysis on the remaining 72 items occurred using equamax rotation. The results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.830) and of Bartlett’s Test of Sphericity ($p = .000$) indicate that the matrix had sampling adequacy and that the correlations within the matrix were significantly high for factorability. The scree plot for this factor analysis (figure 2) shows an initial strong elbow at the eighth factor with a second, less dramatic elbow, at the sixteenth factor. From table 6, The K1 test shows 21 factors with eigenvalues greater than one (table 9 lists full information). These 21 components accounted for 63.215 percent of the variance for this factor analysis. Review of the rotated component matrix (figure 3) for this factor analysis and review of reliability statistics (figure 4) then followed. The rotated component matrix shows that many components consist of unique factors, components with weak loadings, or loadings that are significant but low (i.e. below .40). There were 16 items removed for low variance, low factor loading, or because their removal would have minimal impact on the reliability (α). Examples of items removed at this juncture include “I tend not to interrupt people”, “I believe in fate”, “You cannot be too patient”, and “I believe in the concept of zero tolerance.” Cronbach’s alpha for this factor analysis was quite strong ($\alpha = .8746$) and the alpha level if individual items were removed, never fell below .86.

Using the remaining 56 items a third factor analysis using equamax rotation followed. The results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.855), and of Bartlett's Test of Sphericity ($p = .000$), for this analysis indicate that the matrix maintained sufficiency for factor analysis. The scree plot (figure 5) elbows at ten components, with table 6 showing that 15 factors had eigenvalue greater than one. These 15 components explain 60.903 percent of the variance (table 10). Review of the rotated component matrix (figure 6) with 15 factors shows many of the later components consisting of weak loadings, or loadings that are significant but low (i.e. below .40). Review of the reliability analysis information (figure 7) evidenced that removal of individual items had minimal effect, as alpha remained high ($\alpha = .8694$). Removal of any item would not lower alpha below .86. Six additional items were removed including, "I am absent minded", and "I think before I act," leaving 50 items.

A fourth factor analysis showed Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.858), and of Bartlett's Test of Sphericity ($p = .000$), sufficient. Table 11 shows that total variance explained is 59.775 by the 13 factors whose eigenvalues are greater than one. The scree plot for this analysis (figure 8) shows elbows at six, eight, and eleven factors. Reliability analysis (figure 9) was completed with the decision not to remove items. This figure shows that all items had reasonable variance (greater than 1.125) and alpha remained high ($\alpha = .8674$). Review of the rotated component matrix (figure 10) for this analysis resulted in removal of 11 items as they had weak loadings or significant but low loadings. An example of items removed is "If I am delayed, it is usually not my fault."

The remaining 39 items were then factor analyzed in a fifth procedure using equamax rotation. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.835), and Bartlett's Test of Sphericity ($p = .000$), were sufficient. Eleven components had eigenvalues greater than one, and explained 60.284 percent of the variance in this analysis (table 12). The scree plot indicated an initial elbow at eight factors and another at eleven factors (figure 11). Alpha was strong ($\alpha = .8058$), and other reliability data (figure 12) show items with variance above the cutoff for removal. There was no removal of items for reliability reasons. The rotated component matrix (figure 13) showing the 11 factors had many items with low loadings. From these, six items were removed leaving 33 items.

A sixth factor analysis using the equamax rotation resulted found the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.835), and Bartlett's Test of Sphericity ($p = .000$), were sufficient. Nine components had eigenvalues greater than one (table 13) and these components accounted for 56.201 percent of the variance. The scree plot of this analysis (figure 14) shows an initial curve at seven factors followed by the elbow at nine factors. It is notable that this is the first analysis where the K1 rule and scree plot converged. Evaluation of the reliability of the matrix occurred (figure 15), and, as anticipated, there were no items with low variance, and alpha was high ($\alpha = .7848$). The reliability of this sixth analysis of the initial administration items is high, but it is notable that this alpha level is the lowest of the six analyses. The rotated component matrix (figure 16) converged in 11 iterations. The matrix shows that there are no unique factors (although factor nine is made up of two high loading items). There are few items with low loadings save one (item 57).

Nine factors with loadings ranging from a low of .340 to a high of .860 were retained and labeled (table 14). Reverse scoring for items with negative valence occurred prior to factor analysis. Thus, in the final analysis, scores that are high on a question such as “I am often rushed for time” reflect the reverse. In this example, the individual with a higher score would reflect not feeling rushed for time. Factor labels include postponement, punctuality, time urgency, flexibility, capacity for tolerance, self-regulation, self-awareness of extreme, comfort with ambiguity, and limits of tolerance. Factors typically had an average of three items per factor; with a high of six items for factor four (flexibility) and a low of two on factor nine (limits of tolerance). Factor one, “postponement” is notable in that each of the four items that make up this factor is negatively scored. Each item represents the respondent’s dislike or inability to wait without becoming upset, as well as being quick to anger. Postponement, the situation of having to wait for something to happen, is one of the two categories of patience posited by Blount and Janicik (1999). Individuals scoring high on this factor have greater capacity for waiting. Factor two, punctuality, is also characterized by items with negative phrasing. The factor captures individuals who have difficulty in meeting time goals. Notable is the second item, “I am a very punctual person”, which has a negative factor loading (- .794). Factor three, time urgency, is made up of four items with solid loading scores (.529 - .629) and captures those individuals with a sense of time press. Individuals scoring high on this factor are not pressed for time whereas a sense of being hurried characterizes those scoring low on factor three. Factor four is labeled flexibility. Although four of the six items on factor four had loadings on one or two other factors, they held together best on this factor by higher loadings. Low scoring on this factor

would be seen as mental rigidity, whereas as high scoring reflects the ability to cognitively adapt to changes in the environment, to recognize that some things are beyond one's control. The fifth factor, capacity for tolerance, captures the second primary category of delay posited by Blount and Janicik (1999). Here, individuals scoring high can be in a delay situation caused by something, or someone, taking longer than expected, without becoming upset. Factor six, self-regulation, is made up of three items. All reflect the ability to relax and not to experience negative responses, but instead indicate feeling greater levels of calm and serenity. The seventh factor, self-awareness of extreme, is made of three items that reflect the respondent's awareness of waiting too long. This factor captures the area of the potential of negative consequences for being too patient. Individuals scoring high on this factor endorse problems related to inaction in the face of delay. Factor eight, labeled comfort with ambiguity, reflects individuals who are able to tolerate uncertainty. Individuals scoring low on this factor dislike unsettled situations or those without clear expectations. The final factor, factor nine (limits of tolerance), consists of two items with high loadings that reflect the belief that there is potential for patience and tolerance to be too great.

Table 14: Factor labels and Factor Loadings for initial administration

Factor	Factor Loadings
Factor 1: Postponement	
1. I get upset while waiting.	.705
10. I am quick to anger	.626
81. I don't like to wait in line.	.624
58. I do not like to wait to get a table at a restaurant.	.596
* Complex items loading on one other factor; ** Complex items loading on two other factors	

Factor 2: Punctuality	
24. I tend to run late.	.860
101. I am a very punctual person.	-.794
35. I am often rushed for time.	.552 **
Factor 3: Time Urgency	
19. I have too much to do and not enough time to do it in.	.619
23. I have trouble finding time to get my hair cut.	.582
18. I anticipate a green light by looking at the yellow light for the opposite traffic.	.570 *
86. I often face unexpected changes, frequent interruptions, inconveniences, or “things going wrong”.	.529
Factor 4: Flexibility	
12. I get upset if I have things left to do at the end of the day.	.651
42. I often try to control things that are beyond my control.	.617
51. I tend to plan ahead.	-.591 *
67. I get anxious when things don’t stay on schedule.	.508 *
14. I frequently feel like hurrying others.	.447 **
57. I work fast.	.340 **
Factor 5: Capacity for Tolerance	
98. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.731
38. I often lose track of what people are saying if they go on for too long.	.652
30. I cannot tolerate children who cry for a long time.	.575 *
82. When I am angry, I have a hard time not thinking about what is upsetting me.	.449 *
96. I get bored when I wait.	.423 **
* Complex items loading on one other factor; ** Complex items loading on two other factors	
Factor 6: Self-regulation	

65. I get things accomplished without undue stress.	.655
55. I consider myself as easy going .	.628 *
66. I live a calm, predictable life.	.511 *
Factor 7: Self Awareness of Extreme	
93. By the time I speak out it is too late.	.750
63. I wait too long to act.	.656
21. If I want something I get it.	.548
Factor 8: Comfort with ambiguity	
59. I always know about what time of day it is	.690
5. I do not like it when things are ambiguous	.610
47. When I have to wait it is often someone else's fault.	.400 *
Factor 9: Limits of Tolerance	
20. You can be overly patient.	.804
80. You can be too tolerant.	.776
* Complex items loading on one other factor; ** Complex items loading on two other factors	

Factor Analysis of Final Administration of Instrument

After revision of the instrument, a second administration of the instrument took place. The process for the statistical analysis of the data from the second administration was a similar design as that which followed the analysis following the initial administration of the measure. Table 15 presents the results from the three factor analysis procedures for the final administration data. The table shows the number of items that were used in each analysis, the number of components with eigenvalues greater than one, the total variance explained by those components with eigenvalues greater than

one and finally, the table presents the reliability alpha figure for each analysis. Full tables of total variance and reliability are in the appendices.

Table 15: Results of Factor Analyses of Final Administration

<u>Factor Analysis</u>	<u>Number of Items in Analysis</u>	<u>Components with Eigenvalues > 1</u>	<u>Total Variance Explained</u>	<u>Cronbach's Alpha level</u>
1	40	12	59.111	.7639
2	34	10	56.746	.8152
3	28	6	48.282	.7993

In the factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.759), and of Bartlett's Test of Sphericity ($p = .000$), indicate that the matrix had sampling adequacy and that the correlations within the matrix were significantly high for factorability. Exclusion of cases with missing data occurred pairwise. The rotation converged in 19 iterations. The scree plot for this analysis (figure 17) shows a somewhat smooth curve with subtle elbows at eight, ten, and twelve components. There were 12 components with eigenvalues greater than one and these components explained 59.111 percent of the total variance (table 16). Using equamax to rotate the full 12 components, the component matrix (figure 18) had weak loadings on factors ten through twelve. There were no individual items with low loadings and therefore, no items were removed. The reliability of the measure shows Cronbach's alpha to be strong at .7639 (figure 19). Item twelve was removed for low variance (1.1063). Five items were removed because of negative correlations on item – total correlation: items 5 (- .1313), 10 (- .2238), 21 (- .0915), 35 (- .0553), and 39 (- .1460). Factor analysis then occurred using the remaining 34 items.

For the second factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.774), and of Bartlett's Test of Sphericity ($p = .000$), indicate that the matrix had sampling adequacy and that the correlations within the matrix were significantly high for factorability. Exclusion of cases with missing data occurred pairwise. The rotation converged in 32 iterations. The scree plot shows a strong elbow at eight factors (figure 20). There were ten components with eigenvalues greater than one and these components explained 56.746 percent of the total variance (table 16). As the K1 rule has been shown to overestimate the number of factors to retain, the decision was made to force eight factors in an equamax rotation solution. The eight factors explain 50.538 percent of the variance with the rotated component matrix (figure 21) converging in 22 rotations. Reliability analysis (figure 22) indicates that all items have sufficient variance. Cronbach's alpha was high at .8152. Analysis of the rotated component matrix indicates no unique factors (although factor eight is made up of two high loaded items) and all components have strong and multiple loadings.

The eight factors with loadings ranging from a low of .327 to a high of .703, were retained and labeled (table 17). Reverse scoring for items with negative valence occurred prior to factor analysis. Thus, in the final analysis, scores that are high on a question such as "I am often rushed for time" reflect the reverse. The eight factor labels are postponement, even-tempered, composure, time abundance, tolerance, limits of patience, action focused, and attribution of responsibility.

Factor one, postponement, is characterized by patient responses to one of the two types of delay described by Blount and Janicik (1999). Individuals high on this factor report the ability to wait in different situations without becoming upset or agitated.

Factor two is labeled even-tempered. This component has four items that loaded solely on this factor. The factor characterizes responses that indicate individuals are relaxed, easy going, and do not react with great stress to situations. Factor three, composure, has the highest number of loadings with six items. This factor is characterized by responses indicating the individual is not over-burdened, is able to stay cool, calm, and collected when angry or in the face of other difficulties. Factor four is labeled time abundance, and captures diminished levels of time urgency. The five items composing the time abundance factor are characterized by the individual responding in a manner that indicates that they have sufficient time to accomplish things, do not feel rushed, and exist at a comfortable pace. Factor five is labeled tolerance, and represents the indication that respondents are able to endure situations of delay when there is presence of a noxious stimulus. This factor is characteristic of the second type of delay in the Blount and Janicik (1999) model. Factor six, limits of patience, consists of three items with strong loadings that reflect the belief that there are negative consequences if action in the face of delay is itself delayed. Factor seven, action focused, is notable for two negative loadings on items one and seventeen. This factor has the lowest loadings across its items. Characterizing this factor is a belief in action and focus on the current situation, with the possibility of losing track of time. The final factor, factor eight, consists of two items, and addresses attribution. This factor is characterized by the attribution of responsibility to oneself or another rather than to a metaphysical condition such as fate.

Table 17: Factor labels and Factor Loadings for Patience Scale

FACTORS	Factor Loading
FACTOR 1: Postponement	
37. I make quick decisions	.654
32. I don't like to wait in line.	.640 *
24. I do not like to wait to get a table at a restaurant.	.595
36. I get bored when I wait.	.583
2. I get upset while waiting.	.562 *
FACTOR 2: Even-tempered	
9. If someone or something is taking too long I am able to think about other things and not get upset.	.635
22. I consider myself as easy going.	.613
3. I am not easily irritated.	.601
27. I get things accomplished without undue stress.	.598
FACTOR 3: Composure	
8. I have too much to do and not enough time to do it in.	.600 *
29. I get anxious when things don't stay on schedule.	.522 **
33. When I am angry, I have a hard time not thinking what is upsetting me.	.512
34. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".	.439 *
19. I often try to control things that are beyond my control.	.425 *
11. If I want something I get it.	.399 **
FACTOR 4: Time Abundance	
13. I have trouble finding time to get my hair cut.	.703
28. I live a calm, predictable life.	.582 *
15. I am often rushed for time.	.559 *
30. I have enough time to do the things that are important to me.	.457 *
23. I work fast.	.327 **
* Complex items loading on one other factor; ** Complex items loading on two other factors	

FACTOR 5: Tolerance	
38. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.666
18. I often lose track of what people are saying if they go on for too long.	.656
14. I cannot tolerate children who cry for a long time.	.602
7. I anticipate a green light by looking at the yellow light for the opposite traffic.	.413 *
6. I frequently feel like hurrying others.	.359 ***
FACTOR 6: limits of patience	
26. I wait too long to act.	.679
31. You can be too tolerant.	.631
16. I am too tolerant of other people.	.579 *
FACTOR 7: Action focused	
1. I believe that good things come to those who wait	-.583
17. I do things without thinking.	-.512 *
25. I always know about what time of day it is.	.425 *
4. I get upset if I have things left to do at the end of the day.	.429 *
FACTOR 8: Attribution of responsibility	
20. When I have to wait it is often someone else's fault.	.687
40. It is my own fault if I am delayed.	.643 *
Rotation converged in 22 iterations. Item cutoff at .30	
* Complex items loading on one other factor; ** Complex items loading on two other factors, *** Complex items loading on three other factors	

Reliability analysis of the factors using Cronbach's alpha evidences that internal consistency for factors is sufficient ($\alpha > .50$) for the first six factors but unacceptable for factors seven and eight (table 18). Factors seven and eight (capacity for uncertainty, attribution) have poor internal consistency (factor seven: $\alpha = .0384$, factor eight, $\alpha = .3648$). Options for responding to this situation include continuation with results without discussion of the unreliable factors, or removing items and running a subsequent factor

analysis. The decision was made to remove the six items that constitute factors seven and eight and to run another factor analysis using the remaining 28 items.

Table 18: Reliability Scores (Cronbach's alpha α) for Final Administration Factors

Factor	1	2	3	4	5	6	7	8
	Postponement	Even-tempered	Composure	Time Abundance	Tolerance	Limits of Patience	Capacity for Uncertainty	Attribution of Responsibility
	0.7334	0.6288	0.6007	0.5834	0.5409	0.5226	0.0384	0.3648

For the third factor analysis, results of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.794), and of Bartlett's Test of Sphericity ($p = .000$), indicate that the matrix had sampling adequacy and that the correlations within the matrix were significantly high for factorability. Exclusion of cases with missing data occurred pairwise. The rotation converged in 11 iterations. The scree plot (figure 24) shows a strong elbow at six factors. There were eight components with eigenvalues greater than one and these components explained 55.689 percent of the total variance (table 19). As the K1 rule tends to overestimate the number of factors to retain, and the last two factors are close to the cutoff of eigenvalue > 1.0 , the decision was made to force six factors using equamax rotation solution. These six factors explain 48.282 percent of the variance. The rotated component matrix (figure 25) converged in 11 iterations. Reliability analysis (figure 26) indicates that all items have sufficient variance. Cronbach's alpha was high at .7993. Analysis of the rotated component matrix indicates no unique factors and all components have strong and multiple loadings. As can be seen the factors are identical to those of the second factor analysis, with minimal differences in factor loadings, and no items loading on more than two factors. As a result, the same

factor labels are retained from the earlier analysis (table 20). As all factors remained the same as in the second analysis, the reliability of factors also remains the same. The reliability levels of the six factors are presented in table 21. The measure is labeled the Patience Scale.

Table 20: Factor labels and Factor Loadings for Patience Scale

FACTORS	Factor Loading
FACTOR 1: Postponement	
24. I do not like to wait to get a table at a restaurant.	.670
32. I don't like to wait in line.	.666 *
36. I get bored when I wait.	.615
37. I make quick decisions	.605
2. I get upset while waiting.	.575 *
FACTOR 2: Even-tempered	
22. I consider myself as easy going.	.635
9. If someone or something is taking too long I am able to think about other things and not get upset.	.630 *
3. I am not easily irritated.	.590
27. I get things accomplished without undue stress.	.582
FACTOR 3: Composure	
8. I have too much to do and not enough time to do it in.	.601 *
29. I get anxious when things don't stay on schedule.	.560
33. When I am angry, I have a hard time not thinking what is upsetting me.	.556
34. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".	.441 *
19. I often try to control things that are beyond my control.	.429 *
11. If I want something I get it.	.410 **
* Complex items loading on one other factor; ** Complex items loading on two other factors	

FACTOR 4: Time Abundance	
13. I have trouble finding time to get my hair cut.	.742
15. I am often rushed for time.	.588 *
28. I live a calm, predictable life.	.494 *
30. I have enough time to do the things that are important to me.	.437 *
23. I work fast.	.420 *
FACTOR 5: Tolerance	
38. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.690
18. I often lose track of what people are saying if they go on for too long.	.663
14. I cannot tolerate children who cry for a long time.	.559
7. I anticipate a green light by looking at the yellow light for the opposite traffic.	.516
6. I frequently feel like hurrying others.	.373 **
FACTOR 6: limits of Patience	
26. I wait too long to act.	.699
31. You can be too tolerant.	.632
16. I am too tolerant of other people.	.571 *
Rotation converged in 11 iterations. Item cutoff at .30	
* Complex items loading on one other factor; ** Complex items loading on two other factors	

Table 21: Reliability Scores (Cronbach's alpha α) for Final Administration Factors

Factor	1	2	3	4	5	6
				Time		Limits of
Postponement		Even-tempered	Composure	Abundance	Tolerance	Patience
	0.7334	0.6288	0.6007	0.5834	0.5409	0.5226

Comparison of the six factors of the final administration can be compared to the nine factors identified following the initial administration of the instrument. Factor 1, postponement, shared three of its five items with the factor of the same label in the initial

administration. Factor 2 of the final administration (even-tempered) shared two of its four items with factor 6 (self-regulation) of the initial administration factors. Composure (factor 3) had two items from factor 3 (time urgency) and two from factor 4 (flexibility) of the initial administration. Time abundance (factor 4) had single items from four different factors of the initial administration (factors 2, 3, 4, 6). Factor 5 (tolerance) contained three items from factor 5 (capacity for tolerance) of the initial administration analysis. Factor 6 (limits of patience) had a common item with factor 7 (self-awareness) and a common item with factor 9 (limits of tolerance) from the initial administration factors. Overall, postponement and tolerance factors appeared to be highly stable throughout the administrations whereas time abundance and the limits of patience factors were relatively unstable. It is of note that factor 8 of the initial administration (Comfort with Ambiguity) had none of its items remain in the final administration factors. All items from factors 3 (Time Urgency), 5 (Capacity for Tolerance), and 6 (Self-Regulation) were items that were a part of factors in the final administration factor matrix.

Analysis of Measures

Evaluation occurred of each measure used in the study (PS, SJAS, BPS, and ES). Development of normative data for the total score and factor scores and when appropriate comparison of these results to existing norms occurred. Table 22 reports the full descriptive statistics for each of the measures. For each measure, an ANOVA test explored differences in responses between genders.

Table 22 excerpt: Descriptive Statistics for Scales and Factors

	N	Min	Max	Mean	Std Dev.
PS Total	308	40	142	87	15.16
SJAS total	304	2	19	8.85	3.65
BPS total	290	1	24	10.9	4.78
ES total	298	5	38	20.5	5.22

Patience Scale (PS)

Results of the measure developed for this study, the Patience Scale show a mean score of 87 (out of a possible 168), with a standard deviation of 15.16 (table 22).

Responses to the scale had a normal distribution (Kolmogorov-Smirnov $Z = .920$) (figure 23). Scores ranged from 40 to 142, with the majority of responses between 72 and 102 with extreme scores (> 2 sd) beyond 57 and 117. Results of ANOVA (table 23) indicate that although there is no significant difference in total score on the Patience Scale by gender ($F = 1.320$, $p = .252$), two significant differences in factor scores exist. Males and females did not differ in their total score on the Patience Scale however, on factor two, even-tempered, males scored significantly higher than did women ($F = 4.946$, $p = .027$). Males also scored significantly higher than did women on factor three, composure ($F = 11.019$, $p = .001$).

Student version of the Jenkins Activity Scale (SJAS)

Total scores of the SJAS had a mean score of 8.85 with a standard deviation of 3.65 (table 19). These levels are higher than previously published norms of mean score of 7.77 with standard deviation 3.25 (Yarnold, 1896). ANOVA of the SJAS (table 24)

failed to show significant differences between gender ($F = .315$, $p = .575$). On factor scores, significance occurred with the factor of impatience, where males scored higher than females ($F = 8.696$, $p = .03$).

Boredom Proneness Scale (BPS)

The mean score for this sample on the BPS was 10.94 with standard deviation of 4.78 (table 19). On average, men scored higher ($M = 11.96$) than did women ($M = 10.13$). ANOVA result (table 25) shows that mean scores of the BPS by gender were significantly different ($F = 10.361$, $p = .001$). The mean scores on the BPS in this sample are higher than those reported by Farmer and Sundberg (1986) where men scored higher than women (10.44 to 9.30) although this difference was not significant in their study.

Empathy Scale (ES)

As detailed, the Empathy Scale is a modification of the QMEE. Responses to the ES were in true false format instead of the eight point Likert scale on the QMEE. The sample was split into high and low empathy levels at the median point (ES total = 21). The sample has a mean ES total score of 20.5 with standard deviation of 5.0 (table 19). For the purposes of this study, individuals with high levels of empathy are those scoring 21 or greater while those with low levels of empathy score 20 or less. ANOVA of ES (table 26) shows significant difference of high scorers by gender ($F = 45.495$, $p < .001$). When the scores were divided into groups of high and low scores, women were identified as having high empathy on the Empathy Scale than did men.

Comparison of Measures

Testing the validity of the patience scale occurred by comparing the scores of the Patience Scale and its factor scale scores to other measures. Correlational analysis examined the relationship of the Patience Scale and its factor scores to the SJAS total and SJAS factor scores, the BPS total score, and those who score high on empathy (table 27). These analyses assessed convergent and divergent validity. Based on research of components of the model of patience (i.e. time urgency, type A), the Patience Scale was anticipated to be convergent from the SJAS with a negative association, convergent with the Empathy Scale with a positive association, and without relationship to the Boredom Proneness Scale.

Table 27: Correlation table: Measures and factors

Correlations	PS total	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	SJAS tot	SJAS IMP	SJAS HDC	ES total	ES high	BPSTOT
sjastot	-.489**	-.285**	-.249**	-.405**	-.444**	-.196**	-0.09	1					
SJASIMP	-.459**	-.359**	-.218**	-.293**	-.309**	-.459**	.023	.586**	1				
SJASHD C	-.361**	-.164**	-.154**	-.359**	-.398**	-0.05	-0.11	.896**	.262**	1			
Empathy Scale total	-0.01	0.07	-0.07	-.223**	-0.04	0.039	0.05	-0.1	-.122*	-0.07	1		
Empathy scale high score	-.122*	-0.05	-0.09	-.306**	-0.06	-0.02	0.044	-0.03	-0.035	-0.02	.807**	1	
BPSTOT	-.291**	-.324**	-.329**	-0.1	-.116*	-.223**	.122*	-0.03	.222**	-.140*	-.151*	-.121*	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Convergent validity was examined by the correlation of the patience scale and its factors with the Student Version of the Jenkins Activity Scale and its factors. Table 27 shows a significant negative relationship between the Patience Scale total score and the SJAS total score ($r = -.489$). Thus, individuals scoring high on patience are scoring low

on the measure of type A behavior pattern. This provides support for convergent validity. The total score of the Patience Scale did not significantly correlate with the Empathy Scale on the total score but did have a significant negative correlation with the high scoring group ($r = -.122$). A significant positive relationship result had been anticipated to provide support of convergent validity. Although no relationship of the Patience Scale total score with the total score on the Boredom Proneness Scale was expected, results indicate a significant negative correlation ($r = -.291$). Thus, individuals scoring high on patience scored low on boredom proneness. As a result of the negative correlation with the BPS divergent validity of the Patience Scale was not supported. The relationship of the total score of the Patience Scale to the scale scores on the SJAS shows significant negative correlations with all scales. The total score of the Patience Scale has strongest negative relationship with the SJAS impatience scale ($r = -.459$), and then with the hard driving/ competitive scale ($r = -.361$). Thus, the total Patience Scale score relates inversely to all components of the SJAS, most significantly with the factor of impatience. This provides further support for convergent validity of the measure.

Several significant relationships between the factor scores of the Patience Scale and the SJAS total score and SJAS subscales add to the convergent validity of the Patience Scale. There were significant negative correlations between the SJAS total and factors of postponement ($r = -.285$), even-tempered ($r = -.249$), composure ($r = -.405$), time abundance ($r = -.444$), and tolerance ($r = -.196$). There was no significant relationship between the limits of patience factor and SJAS total score. The subscale hard driving/ competitive of the SJAS had negative correlations with four factors of the Patience Scale: postponement ($r = -.164$), even-tempered ($r = -.154$), composure ($r = -$

.359), and with time abundance ($r = -.398$). There was no significant relationship between hard driving/ competitive scale of the SJAS and the limits of patience or the tolerance factor. There were four negative relationships of low significance between the SJAS impatience score and factors of the Patience Scale. Impatience related inversely to postponement ($r = -.285$), even-tempered ($r = -.218$), composure ($r = -.293$), time abundance ($r = -.309$), and tolerance ($r = -.459$) ($p < .01$ for all relationships). The only factor that did not have a relationship of significance with the impatience scores was limits of patience.

Factor scores of the Patience Scale related to the total score of the Boredom Proneness Scale significantly in mixed ways. One factor correlated significantly in a positive manner to the BPS total score: limits of patience ($r = .122$). Scores of significant negative relationship to BPS total score include postponement ($r = -.324$), even-tempered ($r = -.329$), time abundance ($r = -.116$), and tolerance ($r = -.223$). Only factor three, composure, was not significantly related to the BPS total score.

Evaluation of the relationships of both the Empathy Scale total score and the Empathy Scale high/ low score to the Patience Scale factor scores occurred. Factor three, composure, was the only correlational relationship of significance with either the Empathy Scale total score ($r = -.223$) or the Empathy Scale high/ low score ($r = -.306$).

Analysis of Test-Retest Data

Comparison of the test-retest data during the final administration occurred to assess reliability of the measure. Test retest reliability was evaluated in a subsample of 39 individuals (13 male, 26 female) who were re-administered the patience measure and other measures four weeks after original testing. Overall, the Patience Scale

demonstrates high temporal stability ($r = .893$) with more stability exhibited by men ($r = .977$) than women ($r = .876$).

Chapter 5: Discussion

Discussion of Results

The current study developed a measure of patience that was reliable and valid through a process consisting of item selection, expert review, initial administration of the instrument, and factor analysis of these results. Following revision of the instrument, a second administration occurred, with subsequent factor analysis resulting in a six-factor measure of patience. The measure, labeled the Patience Scale, will be discussed within the framework of the sociotemporal model of patience proposed by Blount and Janicik (1999, 2000), followed by discussion of the results of the Patience Scale in relationship to the other measures used on the study. The importance of the gender differences found will be discussed, after which will be a discussion of the theoretical implications of the results. This study is not without its limitations, and these will be addressed. Finally, the discussion will conclude by addressing directions for future study.

The Patience Scale was developed to provide a means of measuring the tendency towards experiencing patience in a delay situation. From an initial item pool of 112 items, 28 items make up the Patience Scale. The scale produces a total patience score as well as six factors of patience. The Patience Scale demonstrated good internal stability, temporal stability, and divergent validity. Total scores on the Patience Scale are distributed in a normal fashion with the total score averaging 87, with a standard deviation of 15. The six factors of the Patience Scale are labeled postponement, even-tempered, composure, time abundance, tolerance, and limits of patience. No gender differences were found for the Patience Scale total score. However, men scored higher on the even-tempered and composure factors. The Patience Scale was negatively

correlated with the SJAS providing support for convergent validity. An expected positive correlation with the Empathy Scale was not found. Findings indicated a negative correlation between the Patience Scale and the Empathy Scale. In addition, there was expected to be no relation between the Patience Scale and the Boredom Proneness Scale, with findings indicating a negative relationship. Temporal stability of the measure was demonstrated over a four-week span with men showing greater stability.

The Patience Scale and the Sociotemporal Model of Patience

The six-factor model of the Patience Scale can be evaluated in comparison to the sociotemporal model of patience developed by Blount and Janicik (1999, 2000). The sociotemporal model identifies patience as the evaluative outcome of a process that begins with a goal blocking delay, is followed by causal attribution of the delay, which then influences the cognitive appraisal regarding the delay. This cognitive appraisal, of evaluating the delay as a threat or a challenge, mediates the effect of causal attribution on the evaluation of the delay. Further, the cognitive appraisal influences the emotional response to the delay (e.g. blame, anxiety, sympathy, compassion). Both the emotional response and the cognitive appraisal process directly influence the evaluation of the delay.

In the initial Blount and Janicik paper (1999), two types of delay are identified: delays of postponement and delays of tolerance. These two types of delays are captured by factors 1 (postponement) and 5 (tolerance) of the Patience Scale. Factor 1, postponement, describes delays in which a goal is blocked by extending the time to reach the goal. In comparison, factor 5, tolerance, describes goal blocking in which one must withstand an uncomfortable or unpleasant situation such as a child's crying. Thus, in

tolerance, the goal is blocked by a noxious stimulus rather than by an extension of time. Scores on these two factors of the Patience Scale when compared to the Patience Scale total score should be able to distinguish those who may be more globally patient than those who may positively respond to a particular type of delay. This distinction has practical implications. For example, in the case of older adults transitioning to nursing homes, it may be more important to identify those who score high on factor 1 rather than factor 5. Alternatively, it may be those older adults in nursing homes scoring high on factor 5 who are able to show more patience, to be more tolerant of those individuals who are more vocal and verbally disruptive. So too, in evaluation of parental skills, patience in response postponement delays (factor 1) may not be as important as patience in response to tolerance delays (factor 5) such as a child with colic.

Factors 2 (even-tempered), and 3 (composure), appear to be related to cognitive appraisal in the Blount and Janicik model of patience. In cognitive appraisal, according to Blount and Janicik (2000), the individual assigns meaning to the event, in this case delay, and interprets the event as a threat or a challenge. Threat appraisal results when the individual has insufficient cognitive or emotional resources to meet the demand whereas challenge appraisal occurs when there are sufficient levels of cognitive and/or emotional resources to manage the situation (Tomaka, Blascovich, Kibler, & Ernst, 1997). Factor 2 may identify those who are likely to interpret demand situations as challenging rather than as threats. This factor may represent the operationalization of an individual with high levels of cognitive and emotional resources. Thus, with high scores on factor 2, individuals identify themselves as having cognitive flexibility, responding with calmness, being low in stress, and as easy going. It follows that these individuals

would be more likely to have more positive outlooks on delay and a better ability to manage waiting (Blount & Janicik, 1999). In factor 3, composure, individuals scoring high may also be representative of those likely to interpret delays as a challenge rather than a threat. Whereas factor 2 may address more cognitive resources, the composure factor may tap the self-perception of emotional resources. Thus, individuals scoring high on factor 3 do not express anger or anxiety in the face of delay, and in fact, may not even perceive a situation as one of delay where one scoring low on factor 3 or low on total patience might.

Time abundance, factor 4, of the Patience Scale does not appear to be related to the categorical components of the sociotemporal model of patience developed by Blount and Janicik (2000). Rather, this factor is addressing the central role that time plays in the interpretation and experience of delays (Blount & Janicik, 1999). Those individuals scoring high on factor 4 may be seen as the opposing group to those high in time urgency. Patient individuals have time on their side. With an abundance of time, one is less likely to face delay, or may interpret delay in a less negative manner (Landy et al., 1991). Therefore, the temporal nature of the delay becomes less of a focus for those with time abundance. Those who are high on time abundance may reflect not simply those with a greater amount of time but also may represent individuals pressed for time who are able to utilize their time well. Conte, Mathieu, and Landy (1998) differentiated two groups of those with time urgency as either *crammers* or *organizers*. Organizers had a negative relationship with a measure of impatience/ irritability and had a positive relationship with time awareness. Francis-Smythe and Robertson (1998) found that individuals who were high on a measure of a sense of control of time, and who used time management

strategies had higher accuracy of estimating expected time durations. In the same study those who scored high on time management tended to underestimate the passage of time. As a result, these individuals thought time moved faster and therefore they had “extra” time. In essence, those who utilized time management had more time abundance. Differences between patient individuals and those time urgent individuals would be anticipated when placed in a delay situation. Although both groups may score high on the Patience Scale factor 4, in delay, or when rushed, the time urgent group would be expected to respond with impatience due to the failure of their organization, or management of time.

Factor 6, limits of patience, is different from the other factors in that it has no relationship to the Blount and Janicik Model. This factor consists of items generated by the author to explore the issue of the extremes of patience. In the introduction to this study, the question of the potential negative consequences of patience was asked. Just as research has shown there to be negative consequences associated with extremes of impatience (Barling & Charbonneau, 1992; Dembrowski & Czajkowski, 1989), it is reasonable to ask of negative consequences of extremes of patience. However, findings from the current study indicate that those who consider themselves to suffer as a result of being patience may not be those at the high end of the Patience Scale. The relationship between factor 6 and the total score on the Patience Scale is significant ($r = .203, p < .01$) but the lowest association of any factor with the total score. As the limits of patience is based on self report it would be of interest to see if it is those individuals who score high on this factor are those who exhibit greater levels of behavioral patience. It may be that those who think there are negative consequences of patience are those who do not value

patience. These individuals would therefore be expected to score below the high extremes on total patience. That there was a significant relationship between factor 6 and the total score on the Boredom Proneness Scale ($r = .122$) may indicate that boredom is a negative consequence of perceived extremes of patience. Future studies using the scale may benefit from the attempt to isolate constructs that are associated with factor 6. Potential constructs include impulsiveness or sensation seeking. Additional studies will increase the number of individuals at the extreme level of patience ($sd > 2$), which will allow statistically significant analysis of this group. In the current study, there were only four individuals at the high extreme of patience, which is insufficient to statistically review. This study allowed the potential for identifying those who see negative consequences of patience, but a greater understanding of the ramifications of scoring high on this factor are unclear at this juncture.

The Patience Scale does not address the areas of causal attribution and the emotional evaluations of sympathy, empathy, or compassion, which Blount and Janicik (2000) give importance to in their sociotemporal model of patience. Although Blount and Janicik describe the importance of causal attribution as an important component of their model, their research may indicate that it is less important than presented. The research studies in the 1999 and 2000 papers show that causal attribution is not consistent across the type of delay nor is there consistency within the type of delay. Blount and Janicik (2000) predicted that impatient individuals would be more likely to attribute responsibility for delay to others and patient individuals would report depersonalized attributions (i.e. fate/luck/God). Impatient individuals did attribute responsibility for delay to others more than patient individuals did. However, contradicting their

expectations, they found that impatient individuals were also more likely to attribute responsibility to themselves. A similar finding was reported by Wright (1988) where individuals high in impatience who were delayed blamed themselves for not anticipating the delay. No differences were found between impatient or patient groups on attribution directed towards outside parties or to fate/luck/life/God. This result was also contradictory to their intention that patient individuals would report greater depersonalized attributions (people not in the delay situation) than impatient respondents would. Thus, attribution may be a component of the process of evaluating delays with patience but attribution may not be an essential component. Recall that the results of the current study identified a factor of attribution (factor 8) but this factor failed to have any reliability resulting in removal of items from the measure. There appears to be a role for attribution in evaluation of patience. This role appears to be either an indirect rather than direct one or possibly a more complex relationship. Because responsibility and causality are contextual and dependent on the perception of involved agents (Blount, 1995; Shaver, 1985), it is possible that patience reflects an individual who has difficulties with assertiveness in situations of disagreement of causality. Patient individuals may not pursue blame as they feel less able to cope with interpersonal conflict and therefore they may lower the perceived intentionality of a delay. This would result in less blame and therefore, according to Blount and Janicik, more patience.

The current study also failed to identify a factor or factors that correspond to the emotional responses of sympathy, empathy, or compassion as described by Blount and Janicik (1999, 2000). Whereas the emotions of calmness and serenity are felt to be associated with postponement, those of sympathy and compassion are felt to be related to

tolerance (Blount & Janicik, 1999). The Patience Scale appears to be best described as a measure of one's propensity towards patience rather than as an evaluation of a particular state experience. Responding with compassion or with empathy/ sympathy is considered a situational determination (Duan & Hill, 1996) and thus becomes beyond the scope of the Patience Scale. This temporal component is a distinguishing feature between the Blount and Janicik model and the Patience Scale. Blount and Janicik focus on situational patience whereas the Patience Scale assesses a more stable characteristic.

Blount and Janicik (1999, 2000) stress the situational aspect of delay, the specifics of the goal, the value of the goal, as well as the factors of the delay situation, and such things as similarities between the delayed and the one responsible for the delay. In short, Blount and Janicik stress patience as a state response whereas the current study is interested in assessing patience as a trait, as a relatively stable disposition towards a certain pattern of responses. As Blount and Janicik speak of patience as a situational specific response primarily influenced by the context of the delay, they do not address the concept of an individual as more or less patient. Rather they would speak of individuals as responding with more or less patient behaviors in response to components of the delay and the environment. The total score on the Patience Scale therefore does not have any direct relationship to the Blount and Janicik research. Instead, the total score is best thought of as a measure of an individual's propensity towards responding in a patient manner to delay.

Blount and Janicik (1999) describe three main mechanisms for understanding patient behavior: a) self-regulation, b) temporal altruism, and c) frustration-aversion.

Self-regulation and frustration-aversion are felt to be most applicable in postponement situations whereas temporal altruism is more consistent with tolerance delay situations. Blount and Janicik (1999), discuss self-regulation as arising when the individual feels impatient yet acts in a patient manner. The Patience Scale is likely poor at capturing or gauging discrepancy between thought and behavior, as this discrepancy is a situational characteristic. Temporal altruism is discussed through its corresponding emotions of empathy, sympathy, and compassion. These emotional responses and their lack of reflection by the Patience Scale have been addressed earlier in this paper. Frustration-aversion is described by Blount and Janicik (1999) as the process whereby to avoid frustration or other negative feelings, individuals will cognitively reappraise their interpretation of a situation. This cognitive reappraisal process is that which seems to be highlighted by factor 3, even-tempered, where patient individuals endorse greater ability at cognitive flexibility. Whereas the factor scores on the Patience Scale capture theoretical components of the Blount and Janicik sociotemporal model of patience, the PS total score appears related to the concept of the Type B personality. Price (1988) predicts that the individual with Type B behavior pattern would appear relaxed, and would be other-directed in their speech and attention. She notes that the person with Type B pattern would feel calm, would experience a pleasant mood free of impatience, guilt, and hostility. In responding to the unexpected in the type B person, Price posits that the Type B individual would take a long-range perspective and be flexible. The total score of the Patience Scale captures some of these characteristics such as feeling calm and having flexibility in the face of delay. However, components such as being-other directed, and low hostility, are not directly addressed.

As the Patience Scale measures an individual's propensity to patience, it necessarily removes discussion of aspects of the delay, factors related to the context or environment of the delay, or the actors involved. Situational delay conditions that may influence a patient outcome include such things as knowing the duration of the delay, the availability of distractions during delay, or the stability of the delay (Weiner, 1990). So too, contextual factors such as occurring with hyperbolic discounting (Ainslie & Haslam, 1992) or those related to the specifics of the goal (Karniol & Ross, 1996) become moot when the focus is on stable traits across situations. The issue of the Patience Scale's lack of a factor related to attribution may be related to contextual factors. Shaver (1985) noted that determination of the causality and intentionality of an act, which are inherent processes in attribution, cannot be predicted. Another factor in attribution, the controllability of the delay (Taylor, 1994), is only determined at the time of delay. Thus, attribution appears to rely greatly on situational factors and may escape the reach of the Patience Scale.

Relationship of Patience Scale to Other Measures

Significant relations were found between many factors of the PS and the other measures used in this study. The patience scale and its factors had significant relationships with the SJAS and its factors, the BPS total score, as well as the Empathy Scale total score and those scoring high on the Empathy Scale. Further, there were significant results between the SJAS impatience scale and the Empathy Scale total score, as well as the SJAS impatience scale and the BPS total score. The SJAS hard-driving/competitive scale was significantly related to the BPS total score. Finally, the BPS total score was significantly related to those scoring high on the Empathy Scale.

Results show that the total score on the Patience Scale had significant negative correlations with the SJAS total score and its factors, the BPS total score, and those scoring high on Empathy Scale. There was no relationship between the PS total score and the total score of the Empathy Scale. The relationship of the PS total score with the SJAS shows that patience as measured by the PS is distinct from the opposite of TABP as captured by the SJAS. That is, this finding gives credence to the notion that patience is a complex construct that needs to be considered in its own right and not simply as the opposite of the Type A behavior pattern. The strong relationship ($r = -.489$) with the SJAS total score indicates there is a good deal of overlap in the constructs, as would be anticipated. The PS total score appears to be tapping into the impatience as measured by the SJAS given the strong negative relationship ($r = -.459$). A caution in interpreting too strongly is appropriate given that the SJAS impatience factor is focused on rapid eating and rapid talking. Thus, the relationship may be more appropriately viewed as a strong inverse relationship between the Patience Scale total score and time urgency manifestations. A moderate relationship between the PS total and the SJAS hard-driving/competitive factor further shows that the Patience Scale is addressing areas in a complex fashion, here with relationship to areas beyond time urgency. The relationship likely addresses the overlap in areas of emotional regulation, the calm rather than the agitated responses to delay. A small but significant inverse relationship was found between the PS total score and those scoring high in empathy. This can be seen as reflecting the absence of measurement of empathy in the Patience Scale. It may be that in patience, cognitive empathy is of greater importance than emotional empathy. The finding of any relationship with the Boredom Proneness Scale was unanticipated. Results

indicate that there may indeed be a relationship between boredom and patience previously overlooked. This relationship may relate to the role of goals in situations of boredom and patience. In situations of boredom perhaps, there may be the desire for a goal, but an inability to determine or choose a particular goal. Thus whereas the source of the emotion in patience is a goal that is delayed, in boredom perhaps, it is the delay of a goal that leads to the emotion. As a result, the finding of a negative relationship between patience and boredom may in fact provide support for convergent validity.

Discussion of important relationships between factors of the PS and total scores and/or factor scores of the other measures used will occur rather than review of each individual result. It is interesting that results indicate the SJAS impatience factor has the strongest relationships with the postponement ($r = -.359$) and tolerance ($r = -.459$) factors of the Patience Scale. Awareness of delay may be more salient than the characteristics of the interpretation of delay or appraisal of delay, although these too are significant. That the tolerance factor of the Patience Scale has its strongest significant result with the SJAS impatience factor and only a minimal relationship with the SJAS total score ($r = -.196$) shows that tolerance is a specific component of patience rather than the more global TABP. Tolerance is not related to such things as competitiveness or time press. This result provides support for patience as a more complex construct than is typically considered. In a similar fashion, postponement (factor 1) has a stronger relationship with SJAS impatience ($r = -.359$) than with SJAS hard-driving/competitive, ($r = -.164$) although both are significant. Both the tolerance factor and the postponement factor of the PS have significant, but low, relationships with the SJAS total score. This too, provides further support for the distinction between patience and the

TABP. The factors of the PS thought to be related to appraisal and time (factors 2-4) have significant negative relationships with the SJAS total score. Time abundance (factor 4) has the greatest relationship with the SJAS total score of all the PS factor scores and this represents the role of time urgency in TABP.

Each of the factors of the Patience Scale has a significant relationship to the total score of the Boredom Proneness Scale except for factor 3 (composure). Of interest is that factor 6 (limits of patience) has a positive relationship with the BPS albeit a small one ($r = .122$), all other relationships have negative relationships. Further, this is the only relationship of significance for the limits of patience factor. The positive relationship of factor 6 with the BPS total score may indicate that those who are prone to boredom are also likely to see negative consequences associated with being too patient. It may be that individuals who are more likely to be bored see this as a negative outcome of waiting too long for something to occur. Perhaps, in these situations, the delayed goal for which the patient person is waiting loses its clarity. Thus, the individual is waiting without a purpose and becomes bored as a result. In contrast, the significant negative relationships between the other factors of the PS and the BPS total score are interpreted as showing that individuals who are patient are less likely to become bored. This may be result of the clarity of the goal or that cognitive appraisal and interpretation may protect against boredom.

A significant result of moderate strength was also found between factor 3 of the PS (composure) and the Empathy Scale total score ($r = -.223$) as well as with those scoring high on the Empathy Scale ($r = -.306$). This indicates that those who have more composure may have less emotional empathy for others. In reviewing the factor, it is of

interest that those scoring high on this factor indicate the ability to control negative emotions. Composure may be related to emotional isolation; the individual with composure may guard against strong feelings of any kind and thus could be unable to take on the feelings of another. This hypothesis is in need of further exploration in subsequent research.

Although extending the discussion of results beyond the construct of patience, the significant results between the other measures used in the study are noteworthy. The SJAS total score has strong positive relationships with the two factors within it. Of interest is that these two factors show a mild relationship ($r = .262$) indicating that the measure is capturing relatively distinct entities. This finding provides support for the earlier discussion of the distinction of the relationships between the PS factor scores and the particular SJAS factor scores. Each is representative of a particular component of the Type A behavioral pattern. The SJAS impatience score has a low but statistically significant relationship with the Empathy Scale total score ($r = -.122$), and a stronger, but still relatively low relationship with the BPS ($r = .222$). As discussed earlier, the SJAS impatience factor is very much a time press factor. Thus, those who do things quickly (i.e. eat or talk) may not feel they can spare the time necessary to take on the emotions of another individual. So too, if things are typically done more rapidly, the opportunities for being bored may be greater, or the individual may be quicker to interpret a situation as boring. In comparison, the SJAS hard-driving/competitive factor has a significant inverse relationship to the BPS total score ($r = -.140$). The conclusion is that individuals scoring high on the hard-driving/competitive factor are more goal oriented, more achievement oriented and therefore less likely to be in situations where a goal is lacking.

In short, individuals high on the hard-driving/competitive factor always have something to do- that is the problem. A final significant relationship worthy of comment is the small inverse relationship between the BPS total score and those who score high on empathy ($r = -.121$). Similar to conclusions of the relationship of the composure factor of the PS to the BPS total score, it may be that individuals prone to boredom may have less interest in others and thus are less likely to take on the emotions of another. This raises again the question of the role of cognitive flexibility in both empathy and boredom. Perhaps those who have higher levels of cognitive flexibility are more able to be empathetic and conversely, those low in cognitive flexibility may be more prone to boredom. An evaluation of this hypothesis using neuropsychological instruments to measure cognitive flexibility would be interesting.

Gender Differences

There were gender differences found in the Patience Scale factors of even-tempered and composure, and in the test-retest, temporal stability, of the Patience Scale. For the other scales used, gender differences were found on the SJAS impatience scale, Boredom Proneness Scale, and the Empathy Scale. Discussion of gender differences identified in the current study is hindered by the inattention to this area in previous research on the various constructs. Frequently, gender differences were not addressed with less availability of statistical results of gender differences for the various measures in the published research.

Men scored significantly higher on the factor of even-tempered as well as the factor of composure. Further, men evidenced significantly higher stability on the Patience Scale over four-weeks than did women. Men may be more likely to interpret an

event with the cognitive appraisals of challenge rather than threat (factor 2). That is, men may see themselves as having a higher level of resources such as cognitive flexibility than do women. It is possible that men overestimate their abilities whereas women are more realistic. So too, with factor 3, men appear to evaluate their sense of emotional resources at higher levels than do women. Again, the determination of whether this is an accurate self-perception cannot be answered in the current study. To do so would require evaluation of reaction to a delay. It is of interest that although men reported greater self-perception of emotional resources, in general women scored higher on the Empathy Scale. The stability of total score on the Patience Scale for both genders was extremely high over a four-week interval ($r = .977$ men, $r = .876$ women). Although statistically significant, the practical significance of this result is rather small. Caution is also encouraged in interpretation of this finding given the relatively small sample size of the test-retest sample ($N = 40$) with only 13 males evaluated.

On the SJAS subscale of impatience, men scored significantly higher than did women. Research has concluded that hostility is an important component of TABP and that hostility is a significant risk for related health problems. Research has shown that adolescent boys identified as having TABP lose their temper more, express their anger more and act in more physically and verbally aggressive manners (Farber & Burge-Callaway, 1998). Further, Brody (1985) concludes that due to socialization, girls inhibit anger responses more than boys do. In adults, gender differences exist for hostility expression with women expressing less overt hostility than do men (Davidson & Hall, 1995). In what was an extremely surprising discovery, it was noted that not one of the TABP studies reviewed presented information as to gender differences. This may not be

as surprising as initially thought given that the original research on the Type A behavior did not include any women. The one study of impatience in TABP (Spence, Helmreich, and Pred (1987) that did speak to gender, separated groups gender prior to analyzing data with no comparison across groups. The current results indicate that gender differences do appear within the factor of impatience with further study of gender differences along this component as well as study of TABP in women in general is indicated.

The differences were also significant on the BPS total score where men scored higher than did women indicating that men, in general, are more prone to being bored than are women. In their study developing the BPS, Farmer and Sundberg (1986) found no differences across the sample of 233 students. Ahmed (1990) also found no gender differences using the BPS. Other studies reviewed that utilized the BPS did not report on gender differences. Given the differences in total score on the BPS by gender are slight (11.96 men vs. 10.93 women) the practical significance of this finding may be minimal. Replication of this finding is warranted before stronger interpretation occurs. This cautious approach is indicated given the opposing findings in previous research.

On the Empathy Scale, women more often were identified as scoring above the median of empathy for the sample higher than did men. Thus, the interpretation is that women reported more emotional empathy than did men. In their original study, Mehrabian and Epstein (1972) found a large and significant difference by gender with women far more emotionally empathic than men. In research reported by Duan and Hill (1996) results by gender were found indicating that a “feminine sex role orientation is more strongly related to empathic emotions than a masculine sex role orientation (p. 266). A note of caution in interpreting the current findings along a similar path is in

order. The current research did not attempt to measure sex role orientation. Here too, the reviewed research has not addressed gender differences in detail.

Theoretical Implications

Blount and Janicik (1999, 2000) have put forth the only model of patience. According to Blount and Janicik's sociotemporal model, patience is understood to have two primary delay triggers, postponement, and tolerance. Causal attribution, cognitive appraisal, and emotional responses affect the evaluation of the delay and the responses to the delay. The delays of tolerance are posited as distinct from those of postponement in their cognitive and behavioral consequences to the delay. Further, other factors of the delay situation and the delay itself will influence the quality of patient or impatient response. The type of delay, the individual's interpretations of the delay, as well as the role of emotion, all play a role in the patient or impatient response. The results of the present study provide support for components of the model. Results also focus attention on the dispositional characteristics of those with patience.

This study provides support for distinguishing two types of delay. Two factors of the Patience Scale (factors 1 and 5) correspond to the postponement and tolerance types of delay as described by Blount and Janicik (2000). This is an important distinction because it shows the complexity of responding to delay even in the type of delay one faces. In addition to the type of delay, the current study provided strong support for the cognitive appraisal and emotional processes in patience. Two factors (factors 2 and 3) are characterized as related to the interpretation of a situation with appraisal of challenge rather than threat. The emotional resources of the individual as a distinct factor of patience were also found. The role of time as a critical aspect in the evaluation of a delay

situation and responding to delay with patience or impatience was the final factor (factor 4) consistent with the Blount and Janicik (2000) sociotemporal model of patience. The abundance of time was associated with patience as would be predicted by Blount and Janicik (2000). The majority of factors of the Patience Scale therefore provide provisional support for the sociotemporal model of patience. This finding is not surprising given the design of the study and the reliance on the sociotemporal model for guidance in understanding the construct of patience.

There were components of the sociotemporal model that did not receive support in the present study. The role of causal attribution, responses of compassion (empathy/sympathy), and the factors of delay did not find significance in the present study. Causal attribution for delay is thought by Blount and Janicik (1999, 2000) to be a central component in the process of responding to a delay. The present study, although developing items that would potentially combine as a distinct factor of attribution, did not have a significantly reliable factor of attribution. A factor identifying emotional responses of compassion or alternatively, blame, was not found in the present study. Instead, the finding did support a factor of emotional stability but not corresponding to particular emotional responses. Further, the specific factors of delay such as availability of distractions, stability of the delay, or awareness of the length of delay, had no support in the present study. These findings have significance in the theoretical understanding of the construct of patience because they give rise to the distinction between dispositional and situational characteristics of patience. The present study identifies those characteristics of an individual that tend towards being patient. That is, the Patience Scale measures an individual's proneness to patience. In contrast, Blount and Janicik

(1999, 2000) are focused on the immediate attributes of the delay and thus, attend to the situational factors. A result of these differences is that Blount and Janicik see patience as having greater malleability, and that patience is determined more by the context of the delay. Rather than an either/ or between situational and dispositional patience, it is more likely that to fully understand patience requires taking an integration model with interaction between the contextual factors of a delay and the dispositional factors of the individual. Further studies combining the Patience Scale with delay situations and manipulation of the delay characteristics may allow for determination of which of these two areas has greater involvement in determining patience, or how these areas interact.

A final theoretical area that was identified in the present study is that of the self-identification of the limits of patience (factor 6). This area was discussed as a hypothetical area initially. The findings support the contention that there may be limits to patience and that having too much patience may be associated with negative consequences. Who indicates that they have consequences from being patient is unclear. As with the interaction and integration model of patience, further study using this factor as a dependant variable with manipulation of the delay situation will provide further clarification of the role of limits of patience.

Limitations of Study

This study does have limitations. These limitations include sampling, issues related to reliability of factors, and the measures used for determination of validity. The initial limitations relate to the sample. This sample is young, single, well educated, and predominantly Caucasian, which makes generalization difficult. It is possible that there are age differences or differences by ethnicity in patience. Further, relationship status

may also affect patience or may predict patience. However, due to the makeup of the sample for this study, this cannot be determined. Although the sample size of over 300 for each administration of the measure is sufficient for reliability standards, it is still a relatively low number. Increasing the sample size in future studies will continue to improve the reliability of the measure as well as increase the power of statistical analysis. Further, statistically viable analysis of sub-groups such as those at the extremes of patience would be available with a much larger sample size. Across the various factor analysis procedures, the amount of variance explained by the factors was lower than what was desired. The final factors explained only 48 percent of the variance.

The reliability of the six factors of the measure is minimally sufficient with a range from .5226 to .7334. Further, the validity of the measure is not as strong as desired. The Patience Scale did show partial support for convergent validity but failed to sufficiently indicate divergent validity. The reason for the lower than desired levels of validity found for the Patience Scale likely stems in part from the use of too few measures. The use of the SJAS for convergent validity with the PS had success; the two measures were negatively associated as predicted. However, there was no relationship with the Empathy Scale as had been predicted. This may be a result of the use of a modified format of the Empathy Scale. As detailed, the scoring of the Empathy Scale was presented as true/false in this study whereas other studies have used a Likert scale format. Another factor may be the use of a scale of emotional empathy rather than measuring cognitive empathy such as with the Hogan (1969) Empathy Measure. In emotional empathy, an individual vicariously experiences another person's emotional state, whereas models of cognitive empathy focus on the role taking of another's

situation. In cognitive empathy rather than adopt the feelings of the other person, the empathic individual adopts the other's viewpoint (Chlopan et al., 1985). The use of the Boredom Proneness Scale as a measure of divergent validity may have been a poor choice based on the possible relationship hypothesized earlier.

Some may question the use of equamax rather than the more common varimax orthogonal rotational method. Although it has received limited use, the equamax has theoretical strength and its use was designed to provide it greater exposure and evidence of utility. A second statistical procedure that may be questioned is the forcing of six factors in the final analysis of this study. As discussed above, this procedure lowered the explained variance to 48%, which although acceptable for preliminary study of a measure, is still low.

Reliance only upon three measures for support of validity may have been mistaken. A greater number of measures evaluating convergent and divergent validity would have made for a stronger evaluation of validity. The validity of the Patience Scale would benefit from additional comparison to other measures, especially those thought to be unrelated to patience. Probably the most glaring limitation of this study is the lack of attention to predictive validity. The Patience Scale did not take the opportunity to be tested as a means of predicting who will react to a delay situation with patience and who will react with impatience. The utility of the measure is anticipated to be the ability to predict those individuals who will respond in a patient manner to postponement delays and tolerance delays and those individuals who will not. The next stage in the development of the Patience Scale is the examination of predictive validity.

Future Direction for Study

The Patience Scale shows initial signs of being a valid and reliable measure of the construct of patience. Future studies are anticipated that will allow for the strengthening of the reliability of the measure across demographic groups, as well as increase its convergent and divergent validity. Finally, studies to examine the predictive validity of the Patience Scale are discussed. The Patience Scale has been revised for future study (Appendix O) with questions presented in a different order. Reordering occurred to avoid bunching in one area of items within a particular factor.

As the original goal of this project was to evaluate if patience was a resilience factor and can predict those older adults who have an easier transition to nursing home care, the reliability of the patience scale on a sample of older adults is warranted. Of the 28 items of the scale, two items have potential difficulty in applicability for older adults. One item relates to driving, and although most older adults drive, this item may not be appropriate for all older adults. Individuals who are retired may misinterpret a second item “I work fast”. Another issue in relating the Patience Scale to older adults may be the level of independence of the older adult. Many of the items of the scale are implicitly oriented to those of full independence, thus the scale may be unreliable for those with varying levels of physical impairment and functional dependence. A study of the reliability and validity of the Patience Scale for older adults would benefit from use of indices measuring such things as self-report health status, functional independence, residence location, employment status, and driving status. A large sample of 300 or more across the age span of 65 years through 85 years would be sufficient.

To improve the reliability and validity of the Patience Scale, samples of groups not represented in the original samples are indicated. Thus, individuals who are of color, those who are not single in their identified relationship status, and those who are older than 25 years of age are targeted populations for future study. A study using a broader based community sample would add to the generalizability. In this study, use of additional measures for analysis of convergent and divergent validity is warranted. Measures such as the Jenkins Activity Scale (JAS) and the Boredom Proneness Scale (BPS) perhaps would be useful to evaluate convergent validity. Other measures to assess convergent validity could include the measure of locomotion and assessment by Kruglanski et al. (2000). Other measures worthy of evaluation include such things as a measure of sensation seeking such as the Sensation Seeking Scale (Zuckerman, 1979) to see the relationship of that construct with patience. To assess divergent validity subjects could complete measures though to be unrelated to patience such as measures of emotional states such as depression or anxiety (e.g. Beck measures), or measures of constructs such as attachment.

In addition to a study of the Patience Scale with a sample of older adults, and a second study with a broader based community sample, a third study is anticipated in which predictive validity is analyzed. In this third study, two active conditions as well as a control condition will be used. Conditions of postponement and tolerance will be manipulated in a controlled setting to allow for analysis of the predictive ability of the Patience Scale. In a postponement situation, subjects will initially complete the Patience Scale and other measures and then told they will have a delay before the next component of the study. It will be possible to manipulate characteristics of the delay such as

providing information as to the length of delay, the cause of delay, the actual length of the delay, provision of distractions, and the desirability of the goal to be obtained at the completion (i.e. class credit, different amounts of money or other benefits). A post-analysis of evaluation, attribution, cognitive appraisal, and emotion related to the delay will be obtained. By comparing the Patience Scale to the post-analysis measures, the predictive validity of the scale can be determined. A tolerance situation will be created whereby subjects complete the same measures as the postponement condition but are then exposed to conditions such as a lecture on a topic deemed uninteresting, a video of a graduation ceremony, or a recording of an infant crying. Again, manipulation of the characteristics of the delay situation will provide valuable information. Further, the type of the situation to be tolerated is of interest. For example, emotionally bland situations (graduation video, lecture on the demise of Latin as a spoken language) may be more tolerable than emotionally charged situations such as a child crying, a couple arguing, or a political argument with which one has high or low agreement.

References

- Ahmed, S. M. S. (1990). Psychometric properties of the Boredom Proneness Scale. *Perceptual and Motor Skills*, 71, 963-966.
- Ainslie, G. & Haslam, N. (1992). Hyperbolic Discounting. In, G. Loewenstein & J. Elster (eds.) *Choice Over Time*, pp. 57-92, New York: Sage.
- Ainslie, G. & Haslam, N. (1992). Self-Control. In, G. Loewenstein & J. Elster (eds.) *Choice Over Time*, pp. 177-209, New York: Sage.
- Al-Adwah, S. S. (2000). Patience. [On-line], Available at URL:
http://islaam.com/articles/adwah_patience.htm.
- Aquinas, Thomas, Saint (1916). *The "summa theologica" of Saint Thomas Aquinas*.
Translated by the fathers of the English Dominican Province. London: Oates and Washburn.
- Arbona, C. (2000). The development of academic achievement in school-aged children: Precursors to career development. In, S. D. Brown and D. W. Lent (Eds.) *Handbook of Counseling Psychology, Third Edition*. pp. 270-309. New York: Wiley.
- Bandalso, D. (1996). Confirmatory factor analysis. In Stevens J. *Applied Multivariate Statistics for the Social Sciences* 3rd Edition. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Barling, J. & Charbonneau, D. (1992). Disentangling the relationship between the achievement striving and impatience- irritability dimensions of type A behavior, performance and health. *Journal of Organizational Behavior*, 13, 369-377.

- Batson, C. D. (1987). Prosocial motivation: Is it ever truly altruistic? *Advances in Experimental Social Psychology*, 20, 65-121.
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, 40(2), 290-302.
- Baumeister, R. F. (1996). Self-regulation and ego threat: Motivated cognition, self deception and destructive goal setting. In P.M. Gollwitzer and J. A. Bargh, *The Psychology of Action*, p. 27-47. New York: Guilford.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, 7(1), 1-15.
- Bible, English. (1948). King James Version. Philadelphia: Westminster.
- Blount, S. (1995). When social outcomes aren't fair: The effect of causal attributions on preferences. *Organizational Behavior and Human Decision Processes*, 63(2), 131-144.
- Blount, S. & Janicik, G. A. (1999). Comparing social accounts of patience and impatience. Unpublished manuscript, University of Chicago.
- Blount, S. & Janicik, G. A. (2000). What makes us patient? The role of emotion in sociotemporal evaluation. Unpublished manuscript, University of Chicago.
- Blount, S. & Janicik, G. A. (2001). Can you spare a minute? Examining how people value time in work organizations. Unpublished manuscript, University of Chicago.
- Bortner, R. W. (1969). A short rating scale as a potential measure of pattern A behavior. *Journal of Chronic Diseases*, 22, 87-91.

- Brody, L. R. (1985). Gender differences in emotional development: A review of theories and research. *Journal of Personality*, 53, 102-149.
- Burnam, M. A., Pennebaker, J. W., & Glass, D. C. (1975). Time consciousness, achievement striving, and the Type A coronary prone behavior pattern. *Journal of Abnormal Psychology*, 84, 76-79.
- Carver, C. S. & Scheier, M. F. (1998). *On the Self-Regulation of Behavior*. New York: Cambridge.
- Chlopan, B. E., McCain, M. L., Carbonell, J. L., & Hagen, R. L. (1985). Empathy: Review of available measures. *Journal of Personality and Social Psychology*, 48(3), 635-653.
- Clark, K. B. (1980). Empathy: A neglected topic in psychological research. *American Psychologist*, 35(2), 187-190.
- Coke, J. S., Batson, C. D., & McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology*, 36(7), 752-766.
- Conte, J. M., Mathieu, J. E., & Landy, F. J. (1998). The nomological and predictive validity of time urgency. *Journal of Organizational Behavior*, 19(1), 1-13.
- Dalai Lama, Jinpa, G. T., & Jinpa, T. (1997). *Healing Anger: The Power of Patience from a Buddhist Perspective*. New York: Snow Lion.
- Davidson, K. & Hall, P. (1995). What does potential for hostility mean? Gender differences in the expression of hostility. *Journal of Behavioral Medicine*, 18(3), 233-247.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a

- multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126.
- Davis, C. & Cowles, M. (1985). Type A behavior assessment: A critical comment. *Canadian Psychology*, 26, 39-42.
- Dembrowski, T. M. & Czajkowski, S. M. (1989). Historical and current developments in coronary-prone behavior. In, A. W. Siegman & T. M. Dembrowski (Eds.) *In Search of Coronary-Prone Behavior: Beyond Type A*. Hillsdale, NJ: Lawrence Erlbaum.
- DeVellis, R. F. (1991). *Scale Development: Theory and Applications*. Applied Social Research Methods Series, Volume 26. Newbury Park, CA; Sage.
- Dickman, S. J. (2000). Impulsivity, arousal, and attention. *Personality and Individual Differences*, 28, 563-581.
- Duan, C., & Hill, C. E. (1996). The current state of empathy research. *Journal of Counseling Psychology*, 43(3), 261-274.
- Edmonds, E. M., Cahoon, D., & Bridges, B. A. (1981). The estimation of time as a function of positive, neutral, or negative expectancies. *Bulletin of Psychosocial Society*, 17, 259-260.
- Evans, C. D. H., Searles, Y., & Dolan, B. M. (1998). Two new tools for the assessment of multi-impulsivity: the "MIS" and the "Cam". *European Eating Disorders Review*, 6, 48-57.
- Farber, E. W., & Burge-Callaway, K. (1998). Differences in anger, hostility, and interpersonal aggressiveness in Type A and Type B adolescents. *Journal of Clinical Psychology*, 54(7), 945-952.

- Farmer, R., & Sundberg, N. D. (1986). Boredom proneness- the development and correlates of a new scale. *Journal of Personality Research*, 50(1), 4-17.
- Fisher, I. (1930). *The Theory of Interest*. New York: Macmillan.
- Fraisse, P. (1984). Perception and estimation of time. *Annual Review of Psychology*, 35, 1-36.
- Francis-Smythe, J. A., & Robertson, I. T. (1999). Time-related individual differences. *Time and Society*, 8(2), 272-292.
- Francis-Smythe, J. A., & Robertson, I. T. (1999). On the relationship between time management and time estimation. *British Journal of Psychology*, 90, 333-347.
- Friedman, M., & Rosenman, R. H. (1977). The Key Cause- Type A Behavior Pattern. In A. Monal & R. S. Lazarus (Eds.) *Stress and Coping: An Anthology*. New York: Columbia University Press.
- Funder, D. C., Block, J. H., & Block, J. (1983). Delay of gratification: Some longitudinal personality correlates. *Journal of Personality and Social Psychology*, 44(6), 1198-1213.
- Glass, D. C. (1977). *Behavior patterns, stress, and coronary disease*. Lawrence Erlbaum: Hillsdale, N.J.
- Gollwitzer, P. M. (1996). The volitional benefits of planning. In, P.M. Gollwitzer and J. A. Bargh, *The Psychology of Action*, p. 287-312. New York: Guilford.
- Gordon, A., Wilkinson, R., McGown, A., & Jovanoska, S. (1997). The psychometric properties of the Boredom Proneness Scale: An examination of its validity. *Psychological Studies*, 42 (2 & 3), 85-97.
- Gorsuch, R. L. (1974). *Factor analysis*. W. B. Saunders: Philadelphia.

- Hagihara, A., Tarumi, K., Miller, A. S., & Morimoto, K. (1997). Type A and Type B behaviors, work stressors, and social support at work. *Preventive Medicine*, 26, 486-494.
- Harmstead, J. R., & Lester, D. (2000). Dimensions of impulsiveness. *Psychological Reports*, 87, 701-702.
- Haynes, S. G., Levine, S., Scotch, N., Feinlab, M. & Kannel, W. B. (1978). The relationship of psychosocial factors to coronary heart disease in the Framingham study: I. Methods and risk factors. *American Journal of Epidemiology*, 107, 362-383.
- Helmreich, R. L., Spence, J. T., & Pred, R. S. (1988). Making it without losing it: Type A, achievement motivation, and scientific attainment revisited. *Personality and Social Psychology Bulletin*, 14(3), 495-504.
- Hogan, R. (1969). Development of an empathy scale. *Journal of Consulting and Clinical Psychology*, 33(3), 307-316.
- Howton, M. F., Lindoerfer, J. S., & Marriott, R. G. (1998). Time urgency and imagery in the type A behavior pattern. *Perceptual and Motor Skills*, 86, 1323-1334.
- Jackson, D. N., & Gray, A. (1989). *Survey of Work Styles manual*. Port Huron, MI: Sigma Assessment Systems.
- Janisse, M. P., Yerama, C., Yeh, E., Moser, C. G., & Dyck, D. G. (1991). Type A behavior and the processing of causal attributions of success and failure. In, D. G. Forgas, T. Sosnowski, & K. Wrzesniewski (eds.) *Anxiety: Recent Developments in Cognitive, Psychophysiological, & Health Research*, pp. 247-259. Washington D.C.: Hemisphere Publishing.

- Jenkins, C. D., Rosenman, R. H., & Friedman, M. (1967). Development of an objective psychological test for the determination of the coronary-prone patterns in employed men. *Journal of Chronic Disease*, 20, 371-379.
- Jenkins, C. D., Zyzanski, S. J., & Rosenman, R. H. (1971). Progress towards validation of a computer-scored test for the Type A coronary-prone behavior pattern. *Psychosomatic Medicine*, 33, 193-202.
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology: Vol. 2*, 219-266. New York: Academic Press.
- Kahneman, D. & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review*, 93(2), 136-153.
- Karniol, R. & Ross, M. (1996). The motivational impact of temporal focus: thinking about the future and the past. *Annual Review of Psychology*, 47, 593-620.
- Kim, J. O., & Mueller, C. W. (1978). *Introduction to Factor Analysis: What it is and how to do it*. Sage University paper series on Quantitative Applications in the Social Sciences, series no. 07-013. Beverly Hills and London: Sage Publications.
- Krantz, D. S., Glass, D. C., & Snyder, M. L. (1974). Helplessness, stress level, and the coronary prone behavior pattern. *Journal of Experimental Social Behavior*, 10, 284-300.
- Kruglanski, A. W. (1996). Goals as knowledge structures. In, P. W. Gollwitzer & J. A. Bargh (eds.), *The Psychology of Action: Linking Cognition and Motivation to Behavior*, p. 599-618. New York: Guilford Press.
- Kruglanski, A. W. & Webster, D. M. (1996). Motivated closing of the mind: "Seizing"

- and “Freezing”. *Psychological Review*, 103(2), 263-283.
- Landy, F. J., Rastegary, H., Thayer, J., & Colvin, C. (1991). Time Urgency: The construct and its measurement. *Journal of Applied Psychology*, 76(5), 644-657.
- Lauer, R. H. (1981). *Temporal Man: The Meaning and Uses of Social Time*. New York: Praeger.
- Leppin, A., & Schwarzer, R. (1996). Attributions of Type A individuals in an experimental academic stress situation. In, D. G. Forgays, T. Sosnowski, & K. Wrzesniewski (eds.) *Anxiety: Recent Developments in Cognitive, Psychophysiological, & Health Research*, pp. 261-273. Washington D.C.: Hemisphere Publishing.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40, 525-543.
- Miller, D. T. (2001). Disrespect and the experience of injustice. *Annual Review of Psychology*, 52, 527-553.
- Miller, T. Q., Smith T. W., Turner, C. W., Guijarro, M. L., & Hallet, A. J. (1996). A meta-analytic review of research on hostility and physical health. *Psychological Bulletin*, 119(2), 322-348.
- Mischel, W. (1974). Process in delay of gratification. In, D. Berkowitz (ed.) *Advances in Experimental Social Psychology*, Vol. 7, pp. 249-292.
- Mischel, W. (1996). From good intentions to willpower. In, P. W. Gollwitzer & J. A. Bargh (eds.), *The Psychology of Action: Linking Cognition and Motivation to Behavior*. pp. 197-218. New York: Guilford Press.
- Mischel, W. & Baker, N. (1975). Cognitive appraisals and transformations in delay

- behavior. *Journal of Personality and Social Psychology*, 31(2), 254-261.
- Mischel, W., Shoda, Y., & Peake, P. K. (1988). The nature of adolescent competencies predicted by preschool delay of gratification. *Journal of Personality and Social Psychology*, 54, 687-696.
- Mueller, E. T. (1990). *Daydreaming in Humans and Machines: A Computer Model of the Stream of Thought*. Norwood, NJ: Ablex.
- Nakano, K., Mochizuku, K., & Sato, M. (1996). Self-Control and the Type A behavior pattern. 169-174.
- Perlow, L. A. (1999). The time famine: Towards a sociology of work time. *Administrative Science Quarterly*, 44, 57-81.
- Prelec, D. & Loewenstein, G. (1991). Decision making over time and under uncertainty: A common approach. *Management Science*, 37, 770-776.
- Price, V. A. (1989). Research and clinical issues in treating Type A behavior. In, A. W. Siegman & T. M. Dembrowski (Eds.) *In Search of Coronary-Prone Behavior: Beyond Type A*. Hillsdale, NJ: Lawrence Erlbaum.
- Price, V. A. (1988). Research and clinical issues in treating Type A behavior. In, K. B. Houston & C. R. Snyder (Eds.), *Type A behavior pattern: Research, theory, and intervention*. Wiley series on health psychology/behavioral medicine. (pp. 275-311). New York, NY: John Wiley & Sons.
- Price, V. A., Friedman, M., Ghandour, G., & Fleischmann, N. (1995). Relation between insecurity and Type A behavior. *American Heart Journal*, 129(3), 488-491.
- Rummel, R. J. (1970). *Applied Factor Analysis*. Evanston, IL: Northwestern University Press.

- Ryan, R. M., Sheldon, K. M., Kasser, T., & Deci, E. L. (1996). All goals are not created equally: An organismic perspective on the nature of goals and their regulation. In, P. W. Gollwitzer & J. A. Bargh (eds.), *The Psychology of Action: Linking Cognition and Motivation to Behavior*, p. 7-26. New York: Guilford Press.
- Saunders, D. R. (1962). Transvarimax: Some properties of the ratiomax and equamax criteria for blind orthogonal rotation. Paper delivered at the American Psychological Association meeting, 1962.
- Schriber, J. B., & Gutek, B. A. (1987). Some time dimensions of work: Measurement of an underlying aspect of organizational culture. *Journal of Applied Psychology*, 72(4), 642-650.
- Schwarz, N. & Bohner, G. (1996). Feelings and their motivational implications: Moods and the action sequence. In, P.M. Gollwitzer and J. A. Bargh, *The Psychology of Action*, pp. 119-145. New York: Guilford.
- Shaver, K. G. (1985). *The Attribution of Blame: Causality, Responsibility, and Blameworthiness*. New York: Guilford.
- Spence, J. T., Helmreich, R. L., & Pred, R. S. (1987). Impatience versus achievement strivings in the Type A pattern: Differential effects on students' health and academic achievement. *Journal of Applied Psychology*, 72(4), 522-528.
- Spence, J. T., Pred, R. S., & Helmreich, R. L. (1989). Achievement strivings, scholastic aptitude, and academic performance: A follow-up to "Impatience versus achievement strivings in the Type A pattern". *Journal of Applied Psychology*, 74(1), 174-176.
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. Lawrence

- Erlbaum Associates: Mahwah, New Jersey.
- Taylor, S. (1994). Waiting for service: The relationship between delays and evaluations of service. *Journal of Marketing*, 58, 56-69.
- Tesser, A., Martin, L. L., & Cornell, D. P. (1996). On the substitutability of self protective mechanisms. In P.M. Gollwitzer and J. A. Bargh, *The Psychology of Action*, pp. 48-68. New York: Guilford.
- Tett, R. P., Bobocal, R., Hafer, C., Lees, M. C., Smith, C. A., & Jackson, D. N. (1992). The dimensionality of Type A Behavior within a stressful work simulation. *Journal of Personality*, 60(3), 533-551.
- Tinsley, H. E. A., & Tinsley, D. J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology*, 34(4), 414-424.
- Tomaka, J., Blascovich, J., Kibler, J., & Ernst, J. M. (1997). Cognitive and physiological antecedents of threat and challenge appraisal. *Journal of Personality and Social Psychology*, 73, 63-72.
- Vodanovich, S. J., & Kass, J. A. (1990). A factor analytic study of the Boredom Proneness Scale. *Journal of Personality Assessment*, 55, 115-123.
- Webster's Third New International Dictionary (1981). Springfield, MA: Merriam Webster.
- Webster, C. D. & Jackson, M. A. (1997). A clinical perspective on impulsivity. In C. D. Webster & M. A. Jackson (Eds.) *Impulsivity: Theory, Assessment and Treatment*. New York: Guilford.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychology Review*, 92, 548-573.

- Weiner, B. (1990). A cognitive (attribution) – emotion – action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology*, 39(2), 186-200.
- Wenzlaff, R. M. & Wegner, D. M. (2000). Thought suppression. *Annual Review of Psychology*, 51, 59-91.
- Wishnie, H. (1977). *The Impulsive Personality: Understanding People with Destructive Character Disorders*. New York: Plenum Press.
- Wispe, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology*, 50(2), 314-321.
- Wright, L. (1988). The Type A behavior pattern and coronary artery disease. *American Psychologist*, 43, 2-14.
- Wright, L., McCurdy, S., & Rogoll, G. (1992). The TUPA scale: A self-report measure for the Type A subcomponent of time urgency and perpetual activation. *Psychological Assessment*, 4(3), 352-356.
- Wright, L., Nielsen, B. A., Abbanato, K. R., Jackson, T., Lancaster, C., & Son, J. (1995). The relationship of various measures of time urgency to indices of physical health. *Journal of Clinical Psychology*, 51(5), 610-614.
- Wrzesniewski, K. (1992). Emotional responses to illness involving high or low risk of life in Type A patients. In, D. G. Forgays, T. Sosnowski, & K. Wrzesniewski (eds.) *Anxiety: Recent Developments in Cognitive, Psychophysiological, & Health Research*, pp. 201-210. Washington D.C.: Hemisphere Publishing.
- Yarnold, P. R. (1987). Norms for the Glass model of the short Student Jenkins Activity

- Survey. *Social and Behavioral Sciences Documents*, 16(2), 60-65.
- Yarnold, P. R., Mueser, K. T., Grau, B. W., & Grimm, L. G. (1987). The reliability of the Student version of the Jenkins Activity Survey. *Journal of Behavioral Medicine*, 9, 401-414.
- Zuckerman, M. (1979). *Beyond the Optimal Level of Arousal*. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Zwick, W. R. & Velicer, W. F. (1986). Comparison of five rules for determining the number of components to retain. *Psychological Bulletin*, 99(3), 432-442.
- Zyzanski, S. J., & Jenkins, C. D. (1970). Basic dimensions within the coronary-prone behavior pattern. *Journal of Chronic Diseases*, 22, 781-795.

Appendices

Appendix A: Information Form

Appendix B: Demographic Form and Item Pool

Appendix C: Expert Review Letter and Form

Appendix D: Transcript of e-mailed reviewer response

Appendix E: Internal/ Peer Review Letter and Form

Appendix F: Pilot Study Script

Appendix G: Pilot Measure

Appendix H: Final Administration Script

Appendix I. Dudley Patience Scale

Appendix J: Boredom Proneness Scale

Appendix K: Student Version of the Jenkins Activity Scale

Appendix L: Empathy Scale

Appendix M: Tables

Appendix N: Figures

Appendix O: The Patience Scale

Appendix A: Information Form

INFORMATION FORM

Dear Student,

You are being invited to participate in this research study, which has been explained to you by Kenneth C. Dudley. This research is being conducted to fulfill the requirements for a doctoral dissertation in Counseling Psychology in the Department of Counseling, Rehabilitation Counseling, and Counseling Psychology at West Virginia University.

The purpose of this study is to learn more about the differences between patience and impatience.

This study involves the completion of a few general informational questions and a questionnaire. The questionnaire asks you to read a statement and circle your response to that statement. The total time of participation is approximately thirty minutes. Approximately three hundred subjects are expected to participate in this study. If you decide to participate you do not have to answer all the questions.

There are no known or expected risks from participating in this study.

You do not have to participate in this study.

This study is not expected to be of direct benefit to you, but the knowledge gained may be of benefit to others.

For more information about this research, you can contact Kenneth C. Dudley at 304/293-2081 or his supervisor, Dr. Roy Tunick at 304/293-3807. For information regarding your rights as a research subject, you may contact the executive Secretary of the Institutional Review Board at 304/293-7073.

Booklet No.

Appendix B: Demographic Page and Item Pool

Please circle the appropriate response

Gender: M F	Age: 18-20	Marital Status:	Single
	21-23		Married
	24-26		Widowed
	27-29		Divorced
	30-32		
	33-35		
	36+		

Ethnicity: African-American _____
 Asian _____
 Caucasian _____
 Hispanic _____
 Native American _____
 Other: Please Specify _____

TEST DIRECTIONS

You will be answering the questions in the following measure using the following scale:

Please Answer Questions Using the Scale:

	1	2	3	4	5	6
Strongly	Strongly	Disagree		Mildly	Mildly	Agree
Disagree			Disagree	Agree		Agree

Each of the items in the following questionnaire contains these six choices to the right of the item.

Please indicate your answer by circling the number that corresponds to the answer that best describes your response to the question. Do not leave any items blank.

It is important that you respond with only one choice to each question. I am interested in how you respond to the question, not how others think or feel or how one is supposed to think or feel. There is no right or wrong answer on this kind of test. Be frank and give your honest response.

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
1. I get upset while waiting	1	2	3	4	5	6
2. I tend not to interrupt people	1	2	3	4	5	6
3. I am often in a hurry	1	2	3	4	5	6
4. I am not easily irritated	1	2	3	4	5	6
5. I do not like it when things are ambiguous	1	2	3	4	5	6
6. People who know me say I talk to fast	1	2	3	4	5	6
7. I have self-control of my emotions	1	2	3	4	5	6
8. I would rather stand in a line for one hour than I would listen to a boring speaker for an hour	1	2	3	4	5	6
9. I always have something to do in case I have to wait	1	2	3	4	5	6
10. I am quick to anger	1	2	3	4	5	6
11. I believe in fate	1	2	3	4	5	6
12. I get upset if I have things left to do at the end of the day	1	2	3	4	5	6
13. Unexpected delays are worse than delays you know about	1	2	3	4	5	6
14. I frequently feel like hurrying others	1	2	3	4	5	6
15. I maintain self-control of my behavior	1	2	3	4	5	6
16. Whatever will be will be	1	2	3	4	5	6
17. I can always find something to do when I have to wait	1	2	3	4	5	6
18. I anticipate a green light by looking at the yellow light for the opposite traffic	1	2	3	4	5	6
19. I have too much to do and not enough time to do it in	1	2	3	4	5	6
20. You can be overly patient	1	2	3	4	5	6
21. I have often been wronged when things have not turned out my way	1	2	3	4	5	6
22. If I want something I get it	1	2	3	4	5	6

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
23. People who wait for things get taken advantage of	1	2	3	4	5	6
24. I have trouble finding time to get my hair cut	1	2	3	4	5	6
25. I tend to feel a lot of guilt	1	2	3	4	5	6
26. I give 110% no matter what the situation	1	2	3	4	5	6
27. I think before I act	1	2	3	4	5	6
28. I believe in the concept of zero tolerance	1	2	3	4	5	6
29. I will do things while waiting instead of just sitting or standing around	1	2	3	4	5	6
30. In general, I am able to act according to my beliefs about how I should act	1	2	3	4	5	6
31. Most people are responsible for the situations they are in	1	2	3	4	5	6
32. I am impatient while waiting	1	2	3	4	5	6
33. I cannot tolerate children who cry for a long time	1	2	3	4	5	6
34. I tend to be accepting of trivial mistakes that other people make	1	2	3	4	5	6
35. People who know me say I am usually in a good mood	1	2	3	4	5	6
36. I get angry with drivers who sit at a red light in the right-hand lane when I am behind them and want to turn right on a red light.	1	2	3	4	5	6
37. I am absent-minded	1	2	3	4	5	6
38. I am self-indulgent	1	2	3	4	5	6
39. I am often rushed for time	1	2	3	4	5	6
40. I like to think about things	1	2	3	4	5	6
41. I get angry when I see someone being ill-treated	1	2	3	4	5	6
42. I tend to focus on my failures more than my successes	1	2	3	4	5	6
43. I am too tolerant of other people	1	2	3	4	5	6
44. I often lose track of what people are saying if they go on for too long	1	2	3	4	5	6

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree		Mildly Disagree	Mildly Agree	Agree	Strongly Agree
45. I try to have compassion for people when they are having a rough time, even if it means I have to wait	1	2	3	4	5	6
46. I tend to focus on the long-range goals	1	2	3	4	5	6
47. I relate to everyone in the same way	1	2	3	4	5	6
48. When I arrive early for a class/ meeting/ appointment, I get impatient waiting for the meeting to start	1	2	3	4	5	6
49. I often try to control things that are beyond my control	1	2	3	4	5	6
50. Most people do they best that they can in situations	1	2	3	4	5	6
51. If I am delayed, it is usually not my fault	1	2	3	4	5	6
52. People who know me would say that I take a long-range perspective	1	2	3	4	5	6
53. I can easily identify the good things in a situation	1	2	3	4	5	6
54. When I have to wait it is often someone else's fault	1	2	3	4	5	6
55. When someone makes me wait I am more likely to be empathetic and understanding than to be angry	1	2	3	4	5	6
56. It is hard for me to see how some things upset people so much	1	2	3	4	5	6
57. I become impatient with people who operate at a slower pace	1	2	3	4	5	6
58. I tend to plan ahead	1	2	3	4	5	6
59. I am a very optimistic person	1	2	3	4	5	6
60. Sometimes you just have to wait	1	2	3	4	5	6
61. When I am tired I am able to stay calm when I am experiencing stress	1	2	3	4	5	6
62. People often interfere with my goals	1	2	3	4	5	6
63. I am interested in others	1	2	3	4	5	6
64. I consider myself as easy going	1	2	3	4	5	6
65. When I am feeling stress I typically become more frustrated with others	1	2	3	4	5	6
66. I work fast	1	2	3	4	5	6

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
67. I do not like to wait to get a table at a restaurant	1	2	3	4	5	6
68. I am able to make decisions without being influenced by other peoples feelings	1	2	3	4	5	6
69. People will try to take advantage of you	1	2	3	4	5	6
70. I always know about what time of day it is	1	2	3	4	5	6
71. It is hard for me to resist temptation	1	2	3	4	5	6
72. I am impatient	1	2	3	4	5	6
73. I like to finish one thing before moving on	1	2	3	4	5	6
74. I wait too long to act	1	2	3	4	5	6
75. I am aware of the impression I make on others	1	2	3	4	5	6
76. I get things accomplished without undue stress	1	2	3	4	5	6
77. I live a calm, predictable life	1	2	3	4	5	6
78. I get anxious when things don't stay on schedule	1	2	3	4	5	6
79. Delaying action leads to problems	1	2	3	4	5	6
80. I may be inclined to interrupt people if they are not responding in the way they should be	1	2	3	4	5	6
81. The people around me have a great influence on my moods	1	2	3	4	5	6
82. Sometimes I do things even though I shouldn't	1	2	3	4	5	6
83. Delays are no big deal	1	2	3	4	5	6
84. I don't mind if others are late, they usually have a good reason	1	2	3	4	5	6
85. I am able to head off problems early on before they get too big	1	2	3	4	5	6
86. I consider the well-being of others	1	2	3	4	5	6
87. People who know me would say that I tend to do most things in a hurry	1	2	3	4	5	6
88. I tend to be in the "here-and-now" rather than looking at the "big picture"	1	2	3	4	5	6
89. If people make you wait they deserve it if you get mad or frustrated	1	2	3	4	5	6

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
90. I can adapt to things being postponed	1	2	3	4	5	6
91. You can be too tolerant	1	2	3	4	5	6
92. I don't like to wait in line	1	2	3	4	5	6
93. When I am angry, I have a hard time not thinking what is upsetting me	1	2	3	4	5	6
94. I am flexible	1	2	3	4	5	6
95. I get agitated when I have to wait for things	1	2	3	4	5	6
96. I often hurry to get to places even when there is plenty of time	1	2	3	4	5	6
97. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong"	1	2	3	4	5	6
98. Waiting is easier if you know how long the wait will be	1	2	3	4	5	6
99. During one class, meeting, or appointment I am already thinking about the next one	1	2	3	4	5	6
100. I don't mind leaving one project when there are a lot of loose ends for another project	1	2	3	4	5	6
101. People who know me would describe me as serene	1	2	3	4	5	6
102. I don't mind traffic jams	1	2	3	4	5	6
103. I tend to be at ease	1	2	3	4	5	6
104. By the time I speak out it is too late	1	2	3	4	5	6
105. I am a good team member	1	2	3	4	5	6
106. I will listen to a friend talk about something important even when I need to be somewhere else	1	2	3	4	5	6
107. I get bored when I wait	1	2	3	4	5	6
108. You cannot be too patient	1	2	3	4	5	6
109. When I listen to someone talking, and this person is taking to long to come to the point, I feel like hurrying him or her along	1	2	3	4	5	6
110. I think too much about what is right in situations	1	2	3	4	5	6
111. I am patient	1	2	3	4	5	6
112. It is my own fault if I am delayed	1	2	3	4	5	6

Appendix C: Expert Review Letter and Form

Expert Review Form

Dear

Thank you for offering to review the initial item pool I have selected for development of a measure of patience. This measure development is being developed as part of the requirements for my dissertation. Please complete the specific questions on the enclosed form and return to me in the enclosed envelope. If you have questions or require further clarification, please do not hesitate to contact me at (304) 293-4918 or by e-mail at kdudley@wvu.edu. Please return the materials to me within 10 days.

Sincerely,

Kenneth C. Dudley

EXPERT REVIEW FORM

REVIEWER:

DATE OF REVIEW:

Please review the attached booklet and answer the following questions. Please explain your responses in the space provided below each question. If you require additional space, you may add pages or respond on the back of this paper.

QUESTIONS

1. Does the item pool fit the construct of patience?
2. Are there any areas of the construct of patience given too much emphasis?
3. Are there areas of the construct of patience under emphasized?

Appendix D: Transcript of e-mailed reviewer response

Hi Kenneth,

Sorry for the delay in responding to your request. I hope you can still use some of this feedback.

I think you've put a great deal of thought into the items for your measure of patience. XXXX and I think of patience as cognitive, emotional and attributional response to being delayed. I think some of the items you created capture some of these dimensions. However, some of them do not. When you get my response in the mail, you'll see that the defining characteristic of the items that I didn't like were missing the notion of being delayed. I think when you take away the temporal component (i.e. delayed, being rushed for time, etc ...), some of your items could be about anything. For example, in #4, you state "I am not easily irritated." People could interpret this as "I have a high tolerance for pain." My shoes irritate me ... but that doesn't mean I'm impatient with my shoes!). Anyway, you see my point. Many items fell into this category. Another common problem with some of the items was that they tapped into other existing measures which may be correlated with "patience," but not necessarily the same thing as patience. For example, in item #59, you state, "I am a very optimistic person." Optimism does not equal patience. In fact, there's a whole literature on optimism with various measures that exist, etc.

Let me go through the ones where I didn't see a good fit and provide a short explanation (some of the explanations may be the same. In these cases, I'll simply provide an abbreviated answer referring to an earlier response.

#4 No connection to time/delay/temporal focus

#5 Seems more like "Need for Closure" (see Kruglanski)

#7 Self-control not equal to patience (it is a much broader construct. They may be correlated, but you'd have to make a really good argument why self-control is a component of patience.

#8 Both of these seem to be "bad" options for an impatient person!

#10 Broad emotional category

#11 Vague

#12 Connection to time?

#15 Self-control problem.

#21 to #23 Connection to time?

#25 Broad emotion.

#26 patience not equal to effort

#28 Connection to time?

#30, 31, 35 Connection to time.

#37 ?

#38 I can see the connection to impulsiveness But seems to tap into deeper clinical psychological issues.

#40 to #42 Connection to time.

#43 On the fence with this one ... don't really see the connection to time.

#47, 50, 53, 56 Connection to time.

#59 Optimism problem

#63 Connection to time

#68, 69 don't see any connection here

#71 Again, I vaguely see the connection to impulsiveness. You may want to read Barratt and Patton for some additional ideas. I don't like this one.

#73 Sequential thinker? Need for closure again? Perhaps a stretch to say it fits into patience.

#75, 76 good items if you somehow connect to temporal perspective ...

#81, 82 no connection here.

#85, 86 same as above.

#88 perhaps a change in wording would help with this one. I can see how this might fit ...

#91 needs a connection to time/delay/etc.

#93 broad emotion

#99 maybe Could go either way on this one

#100 need for closure or something related here?

#104 no connection here

#105, 110 same as above

I hope this information can be of some help. I think it's great that you are tackling this.

It's a worthwhile undertaking, and a challenging endeavor (as far as making the theoretical and empirical argument that patience is a viable construct that can be measured precisely). Please keep me up to date on your findings, etc.

Good luck!

XXXX

NYU Stern School of Business

Appendix E: Peer Review Form

Internal/ Peer Review Form

Dear

Thank you for offering to review the initial item pool I have selected for development of a measure of patience. This measure development is being developed as part of the requirements for my dissertation. Please review the enclosed materials and respond to the questions from the point of view of one completing this measure. Please complete the specific questions on the enclosed form and return to me in the enclosed envelope. If you have questions or require further clarification, please do not hesitate to contact me at (304) 293-4918 or by e-mail at kdudley@wvu.edu. Please return the materials to me within 10 days.

Sincerely,

Kenneth C. Dudley

INTERNAL PEER REVIEW FORM

REVIEWER:

DATE OF REVIEW:

Please review the attached booklet and answer the following questions. Please explain your responses in the space provided below each question. If you require additional space, you may add pages or respond on the back of this paper.

QUESTIONS

1. Were there specific questions that were difficult to understand? Please identify each question and provide a separate explanation for each.
2. Was the material presented in a manner that was easy to follow? Please explain your response.
3. Were there any specific difficulties you had with any aspect of the materials? Please explain your response.
4. Were you able to complete the packet without becoming fatigued? Please explain your response.
5. Was the material presented in a manner that was visually easy to follow? If there was any part that was visually distracting, please identify. Please explain your response.
6. Other comments:

Appendix F: Initial Measure

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
1. I get upset while waiting.						1 2 3 4 5 6
2. I tend not to interrupt people.						1 2 3 4 5 6
3. I am often in a hurry.						1 2 3 4 5 6
4. I am not easily irritated.						1 2 3 4 5 6
5. I do not like it when things are ambiguous.						1 2 3 4 5 6
6. People who know me say I talk too fast.						1 2 3 4 5 6
7. I have self-control of my emotions.						1 2 3 4 5 6
8. I would rather stand in a line for one hour than I would listen to a boring speaker for an hour.						1 2 3 4 5 6
9. I always have something to do in case I have to wait.						1 2 3 4 5 6
10. I am quick to anger.						1 2 3 4 5 6
11. I believe in fate.						1 2 3 4 5 6
12. I get upset if I have things left to do at the end of the day.						1 2 3 4 5 6
13. Unexpected delays are worse than delays you know about.						1 2 3 4 5 6
14. I frequently feel like hurrying others.						1 2 3 4 5 6
15. I maintain self-control of my behavior.						1 2 3 4 5 6
16. I believe that whatever will be will be.						1 2 3 4 5 6
17. I can always find something to do when I have to wait.						1 2 3 4 5 6
18. I anticipate a green light by looking at the yellow light for the opposite traffic.						1 2 3 4 5 6
19. I have too much to do and not enough time to do it in.						1 2 3 4 5 6
20. You can be overly patient.						1 2 3 4 5 6
21. If I want something I get it.						1 2 3 4 5 6
22. People who wait for things get taken advantage of.						1 2 3 4 5 6

23. I have trouble finding time to get my hair cut.	1	2	3	4	5	6
Please Answer Questions Using the Scale: <div style="display: flex; justify-content: space-around; text-align: center;"> <div>1 Strongly Disagree</div> <div>2 Disagree</div> <div>3 Mildly Disagree</div> <div>4 Mildly Agree</div> <div>5 Agree</div> <div>6 Strongly Agree</div> </div>						
24. I tend to run late.	1	2	3	4	5	6
25. I think before I act.	1	2	3	4	5	6
26. I believe in the concept of zero tolerance.	1	2	3	4	5	6
27. I will do things while waiting instead of just sitting or standing around.	1	2	3	4	5	6
28. In general, I am able to act according to my beliefs about how I should act.	1	2	3	4	5	6
29. I am impatient while waiting.	1	2	3	4	5	6
30. I cannot tolerate children who cry for a long time.	1	2	3	4	5	6
31. I tend to be accepting of trivial mistakes that other people make.	1	2	3	4	5	6
32. I get angry with drivers who sit at a red light in the right-hand lane when I am behind them and want to turn right on a red light.	1	2	3	4	5	6
33. I am absent-minded.	1	2	3	4	5	6
34. I am self-indulgent.	1	2	3	4	5	6
35. I am often rushed for time.	1	2	3	4	5	6
36. I like to think about things.	1	2	3	4	5	6
37. I am too tolerant of other people.	1	2	3	4	5	6
38. I often lose track of what people are saying if they go on for too long.	1	2	3	4	5	6
39. I try to have compassion for people when they are having a rough time, even if it means I have to wait.	1	2	3	4	5	6
40. I tend to focus on the long-range goals.	1	2	3	4	5	6
41. When I arrive early for a class/ meeting/ appointment, I get impatient waiting for the meeting to start.	1	2	3	4	5	6
42. I often try to control things that are beyond my control.	1	2	3	4	5	6
43. Most people do the best that they can in situations.	1	2	3	4	5	6
44. If I am delayed, it is usually not my fault.	1	2	3	4	5	6

45. People who know me would say that I take a long-range perspective.	1	2	3	4	5	6
Please Answer Questions Using the Scale: <div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div> <div> <div>Strongly Disagree</div> <div>Disagree</div> <div>Mildly Disagree</div> <div>Mildly Agree</div> <div>Agree</div> <div>Strongly Agree</div> </div>						
46. I can easily identify the good things in a situation.	1	2	3	4	5	6
47. When I have to wait it is often someone else's fault.	1	2	3	4	5	6
48. When someone makes me wait I am more likely to be empathetic and understanding than to be angry.	1	2	3	4	5	6
49. It is hard for me to see how some things upset people so much.	1	2	3	4	5	6
50. I become impatient with people who operate at a slower pace.	1	2	3	4	5	6
51. I tend to plan ahead.	1	2	3	4	5	6
52. Sometimes you just have to wait.	1	2	3	4	5	6
53. When I am tired I am able to stay calm when I am experiencing stress.	1	2	3	4	5	6
54. People often interfere with my goals.	1	2	3	4	5	6
55. I consider myself as easy going .	1	2	3	4	5	6
56. When I am feeling stress I typically become more frustrated with others.	1	2	3	4	5	6
57. I work fast.	1	2	3	4	5	6
58. I do not like to wait to get a table at a restaurant.	1	2	3	4	5	6
59. I always know about what time of day it is.	1	2	3	4	5	6
60. It is hard for me to resist temptation.	1	2	3	4	5	6
61. I am impatient.	1	2	3	4	5	6
62. I like to finish one thing before moving on.	1	2	3	4	5	6
63. I wait too long to act.	1	2	3	4	5	6
64. I am aware of the impression I make on others.	1	2	3	4	5	6
65. I get things accomplished without undue stress.	1	2	3	4	5	6
66. I live a calm, predictable life.	1	2	3	4	5	6
67. I get anxious when things don't stay on schedule.	1	2	3	4	5	6

90. People who know me would describe me as serene.	1	2	3	4	5	6
91. I don't mind long lines.	1	2	3	4	5	6
Please Answer Questions Using the Scale: <div style="display: flex; justify-content: space-between; padding: 0 10px;"> 1 Strongly Disagree 2 Disagree 3 Mildly Disagree 4 Agree 5 Mildly Agree 6 Agree Strongly </div>						
92. I tend to be at ease.	1	2	3	4	5	6
93. By the time I speak out it is too late.	1	2	3	4	5	6
94. I am a good team member.	1	2	3	4	5	6
95. I will listen to a friend talk about something important even when I need to be somewhere else.	1	2	3	4	5	6
96. I get bored when I wait.	1	2	3	4	5	6
97. You cannot be too patient.	1	2	3	4	5	6
98. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	1	2	3	4	5	6
99. I think too much about what is right in situations.	1	2	3	4	5	6
100. I am patient.	1	2	3	4	5	6
101. I am a very punctual person.	1	2	3	4	5	6
102. It is my own fault if I am delayed.	1	2	3	4	5	6

Appendix G: Initial Study Script

PILOT STUDY INFORMATION FORM/ SCRIPT

DISSERTATION: KENNETH C. DUDLEY

Counseling, Rehabilitation Counseling, and Counseling Psychology

Script will be read to students at beginning of data collection episode

You are being invited to participate in this research study, which has been explained to you by Kenneth C. Dudley. This research is being conducted to fulfill the requirements for a doctoral dissertation in Counseling Psychology in the Department of Counseling, Rehabilitation Counseling, and Counseling Psychology at West Virginia University.

The purpose of this study is to learn more about how people and how they respond to different situations such as delays and waiting.

This study involves the completion of a few general informational questions and a questionnaire. The questionnaire asks you to read a statement and circle your response to that statement. The total time of participation is approximately thirty minutes. Approximately six hundred subjects are expected to participate in this study. If you decide to participate you do not have to answer all the questions.

There are no known or expected risks from participating in this study.

You do not have to participate in this study.

This study is not expected to be of direct benefit to you, but the knowledge gained may be of benefit to others.

For more information about this research, you can contact Kenneth C. Dudley at 304/293-2081 or his supervisor, Dr. Roy Tunick at 304/293-3807. For information regarding your rights as a research subject, you may contact the executive Secretary of the Institutional Review Board at 304/293-7073.

Appendix H: Final Administration Script

Final Administration Script

DISSERTATION: KENNETH C. DUDLEY

Counseling, Rehabilitation Counseling, and Counseling Psychology

Script will be read to students at beginning of data collection episode

You are being invited to participate in this research study, which has been explained to you by Kenneth C. Dudley. This research is being conducted to fulfill the requirements for a doctoral dissertation in Counseling Psychology in the Department of Counseling, Rehabilitation Counseling, and Counseling Psychology at West Virginia University.

The purpose of this study is to learn more about how people and how they respond to different situations such as delays and waiting.

This study involves the completion of a few general informational questions and three questionnaires. Questionnaires asks you to read statements and circle your response to that statement. The total time of participation is approximately thirty minutes. Approximately six hundred subjects are expected to participate in this study. If you decide to participate you do not have to answer all the questions.

There are no known or expected risks from participating in this study.

You do not have to participate in this study.

This study is not expected to be of direct benefit to you, but the knowledge gained may be of benefit to others.

For more information about this research, you can contact Kenneth C. Dudley at 304/293-2081 or his supervisor, Dr. Roy Tunick at 304/293-3807. For information regarding your rights as a research subject, you may contact the executive Secretary of the Institutional Review Board at 304/293-7073.

Appendix I: Patience Scale

Please Answer Questions Using the Scale:						
1	2	3	4	5	6	
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree	
1. I believe that good things come to those who wait						1 2 3 4 5 6
2. I get upset while waiting.						1 2 3 4 5 6
3. I am not easily irritated.						1 2 3 4 5 6
4. I get upset if I have things left to do at the end of the day.						1 2 3 4 5 6
5. I am usually to blame for being late.						1 2 3 4 5 6
6. I frequently feel like hurrying others.						1 2 3 4 5 6
7. I anticipate a green light by looking at the yellow light for the opposite traffic.						1 2 3 4 5 6
8. I have too much to do and not enough time to do it in.						1 2 3 4 5 6
9. If someone or something is taking too long I am able to think about other things and not get upset.						1 2 3 4 5 6
10. You can be overly patient.						1 2 3 4 5 6
11. If I want something I get it.						1 2 3 4 5 6
12. I adapt if something comes up to postpone my plans.						1 2 3 4 5 6
13. I have trouble finding time to get my hair cut.						1 2 3 4 5 6
14. I cannot tolerate children who cry for a long time.						1 2 3 4 5 6
15. I am often rushed for time.						1 2 3 4 5 6
16. I am too tolerant of other people.						1 2 3 4 5 6
17. I do things without thinking.						1 2 3 4 5 6
18. I often lose track of what people are saying if they go on for too long.						1 2 3 4 5 6
19. I often try to control things that are beyond my control.						1 2 3 4 5 6
20. When I have to wait it is often someone else's fault.						1 2 3 4 5 6
21. I tend to plan ahead.						1 2 3 4 5 6
22. I consider myself as easy going.						1 2 3 4 5 6
23. I work fast.						1 2 3 4 5 6
24. I do not like to wait to get a table at a restaurant.						1 2 3 4 5 6
25. I always know about what time of day it is.						1 2 3 4 5 6

Please Answer Questions Using the Scale:						
1 Strongly Disagree	2 Disagree	3 Mildly Disagree	4 Mildly Agree	5 Agree	6 Strongly Agree	
26. I wait too long to act.						1 2 3 4 5 6
27. I get things accomplished without undue stress.						1 2 3 4 5 6
28. I live a calm, predictable life.						1 2 3 4 5 6
29. I get anxious when things don't stay on schedule.						1 2 3 4 5 6
30. I have enough time to do the things that are important to me.						1 2 3 4 5 6
31. You can be too tolerant.						1 2 3 4 5 6
32. I don't like to wait in line.						1 2 3 4 5 6
33. When I am angry, I have a hard time not thinking what is upsetting me.						1 2 3 4 5 6
34. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".						1 2 3 4 5 6
35. By the time I speak out it is too late.						1 2 3 4 5 6
36. I get bored when I wait.						1 2 3 4 5 6
37. I make quick decisions						1 2 3 4 5 6
38. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.						1 2 3 4 5 6
39. I am a very punctual person.						1 2 3 4 5 6
40. It is my own fault if I am delayed.						1 2 3 4 5 6

PLEASE CIRCLE THE APPROPRIATE RESPONSE

GENDER	M	F	AGE RANGE	18-20 21-23 24-26
MARITAL STATUS	SINGLE MARRIED WIDOWED DIVORCED OTHER			27-29 30-32 33-35 36+
ETHNICITY	AFRICAN-AMERICAN ASIAN CAUCASIAN HISPANIC NATIVE AMERICAN OTHER: PLEASE DESCRIBE			

Appendix J: Boredom Proneness Scale

BPS		BOOKLET NO. _____	
1	It is easy for me to concentrate on my activities.	T	F
2	Frequently when I am working I find myself worried about other things.	T	F
3	Time always seems to be passing slowly.	T	F
4	I often find myself at “loose ends”, not knowing what to do.	T	F
5	I am often trapped in situations where I have to do meaningless things.	T	F
6	Having to look at someone’s home movies or travel slides bores me tremendously.	T	F
7	I have projects in mind all the time, things to do.	T	F
8	I find it easy to entertain myself.	T	F
9	Many things I have to do are repetitive and monotonous.	T	F
10	It takes more stimulation to get me going than most people.	T	F
11	I get a kick out of most things I do.	T	F
12	I am seldom excited about my work.	T	F
13	In any situation I can usually find something to do or see to keep me interested.	T	F
14	Much of the time I just sit around doing nothing.	T	F
15	I am good at waiting patiently.	T	F
16	I often find myself with nothing to do- time on my hands.	T	F
17	In situations where I have to wait, such as a line or queue, I get very restless.	T	F
18	I often wake up with a new idea.	T	F
19	It would be very hard for me to find a job that is exciting enough.	T	F
20	I would like more challenging things to do in life.	T	F
21	I feel that I am working below my abilities most of the time.	T	F
22	Many people would say that I am a creative or imaginative person.	T	F
23	I have so many interests, I don’t have time to do everything.	T	F
24	Among my friends, I am the one who keeps doing something the longest.	T	F
25	Unless I am doing something exciting, even dangerous, I feel half-dead and dull.	T	F
26	It takes a lot of change and variety to keep me really happy.	T	F
27	It seems that the same things are on television or the movies all the time; it’s getting old.	T	F
28	When I was young, I was often in monotonous and tiresome situations.	T	F

Appendix K: Student Version of the Jenkins Activity Scale

In the questions which follow there are no “correct” or “incorrect” answers; the important thing is to answer each question AS IT IS TRUE FOR YOU. Your answers are considered strictly confidential- for research purposed only. In addition, your responses are valuable only if you complete each and every question, so be sure to complete every question.

1. Is your everyday life filled mostly by:
 - a. Problems needing solutions
 - b. Challenges needing to be met
 - c. A rather predictable routine of events
 - d. Not enough things to keep me interested or busy
2. When you are under pressure or stress, do you usually:
 - a. Do something about it immediately
 - b. Plan carefully before taking any action
3. Ordinarily, how rapidly do you eat?
 - a. I’m usually the first one finished
 - b. I eat a little faster than average
 - c. I eat at about the same speed as most people
 - d. I eat more slowly than most people
4. Has your spouse or some friend ever told you that you eat too fast?
 - a. Yes, often
 - b. Yes, once or twice
 - c. No, no one has told me this
5. When you listen to someone talking, and this person takes too long to come to the point, do you feel like hurrying them along?
 - a. Frequently
 - b. Occasionally
 - c. Almost never
6. How often do you actually “put words in his mouth” in order to speed things up?
 - a. Frequently
 - b. Occasionally
 - c. Almost never
7. If you tell your spouse or a friend that you will meet them somewhere at a definite time, how often do you arrive late?
 - a. Once in a while
 - b. Rarely
 - c. I am never late

8. Do most people consider you to be:
 - a. Definitely hard-driving and competitive
 - b. Probably hard driving and competitive
 - c. Probably more relaxed and easy going
 - d. Definitely more relaxed and easy going
9. Nowadays, do you consider yourself to be:
 - a. Definitely hard-driving and competitive
 - b. Probably hard driving and competitive
 - c. Probably more relaxed and easy going
 - d. Definitely more relaxed and easy going
10. How would your spouse (or closest friend) rate you?
 - a. Definitely hard-driving and competitive
 - b. Probably hard driving and competitive
 - c. Probably more relaxed and easy going
 - d. Definitely more relaxed and easy going
11. How would your spouse (or best friend) rate your general level of activity?
 - a. Too slow. Should be more active.
 - b. About average. Is busy most of the time.
 - c. Too active. Needs to slow down.
12. Would people who know you well agree that you have less energy than most people?
 - a. Definitely yes
 - b. Probably yes
 - c. Probably no
 - d. Definitely no
13. How was your “temper” when you were younger?
 - a. Fiery and hard to control
 - b. Strong, but controllable
 - c. I almost never get angry
14. How often are there deadlines in your courses?
 - a. Daily or more often
 - b. Weekly
 - c. Monthly
 - d. Never
15. Do you ever set deadlines or quotas for yourself in courses or other things?
 - a. No
 - b. Yes, but only occasionally
 - c. Yes, regularly

16. In school, do you ever keep two projects moving forward at the same time by shifting back and forth rapidly from one to the other?
 - a. No, never
 - b. Yes, but only in emergencies
 - c. Yes, regularly
17. Do you maintain a regular study schedule during vacations such as Thanksgiving, Christmas, and Easter?
 - a. Yes
 - b. No
 - c. Sometimes
18. How often do you bring your work home with you at night or study materials related to your courses?
 - a. Rarely or never
 - b. Once a week or less often
 - c. More than once a week
19. When you are in a group, do the other people tend to look to you to provide leadership?
 - a. Rarely
 - b. About as often as they look to others
 - c. More often than they look to others

In the two questions immediately following, please compare yourself with the average student at your university.

20. In sense of responsibility, I am:
 - a. Much more responsible
 - b. A little more responsible
 - c. A little less responsible
 - d. Much less responsible
21. I approach life in general
 - a. Much more seriously
 - b. A little more seriously
 - c. A little less seriously
 - d. Much less seriously

Appendix L: Empathy Scale

E.S.		BOOKLET NO. _____	
1	It makes me sad to see a lonely stranger in a group.	T	F
2	People make too much of the feelings and sensitivity of animals.	T	F
3	I often find public displays of affection annoying.	T	F
4	I am annoyed by unhappy people who are just sorry for themselves.	T	F
5	I become nervous if others around me seem to be nervous.	T	F
6	I find it silly for people to cry out of happiness.	T	F
7	I tend to get emotionally involved with a friend's problems.	T	F
8	Sometimes the words of a love song can move me deeply.	T	F
9	I tend to lose control when I am bringing bad news to people.	T	F
10	The people around me have a great influence on my moods.	T	F
11	Most foreigners I have met seem cool and unemotional.	T	F
12	I would rather be a social worker than work in a job training center.	T	F
13	I don't get upset just because a friend is acting upset.	T	F
14	I like to watch people open presents.	T	F
15	Lonely people are probably unfriendly.	T	F
16	Seeing people cry upsets me.	T	F
17	Some songs make me happy.	T	F
18	I really get involved with the feelings of the characters in a novel.	T	F
19	I get very angry when I see someone being ill-treated.	T	F
20	I am able to remain calm even though those around me worry.	T	F
21	When a friend starts to talk about his problems, I try to steer the conversation to something else.	T	F

22	Another's laughter is not catching for me.	T	F
23	Sometimes at the movies I am amused by the amount of crying and sniffing around me.	T	F
24	I am able to make decisions without being influenced by people's feelings.	T	F
25	I cannot continue to feel OK if people around me are depressed.	T	F
26	It is hard for me to see how some things upset people so much.	T	F
27	I am very upset when I see animals in pain.	T	F
28	Becoming involved in books or movies is a little silly.	T	F
29	It upsets me to see helpless old people.	T	F
30	I become more irritated than sympathetic when I see someone's tears.	T	F
31	I become very involved when I watch a movie.	T	F
32	I often find that I can remain cool in spite of the excitement around me.	T	F
33	Little children sometimes cry for no apparent reason.	T	F

Appendix M: Tables

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Table 1: Number of Items Endorsed for Rejection by Expert Reviewers

Table 1: Number of items identified for rejection by reviewer		
Reviewer	Number of Items	Percentage of total
Reviewer 1	16	12
Reviewer 2	44	33
Reviewer 3	28	21
Reviewer 4	1	1
Reviewer 5	43	33

Table 2: Inter-rater Agreement Among Reviewers Responses to the Keep/Reject Form

TABLE 2: INTER-RATER AGREEMENT AMONG REVIEWER RESPONSES TO KEEP/REJECT FORM		
Reviewers indicating rejection	Number of Questions	Percentage of responses
0	44	39.2
1	31	27.7
2	17	15.2
3	12	10.7
4	08	7.1
5	0	0.0

Table 3: Demographics of initial administration, final administration, and test-retest samples

		<u>Initial Administration</u>		<u>Final Administration</u>		<u>Test-Retest</u>	
		Number	Percentage	Number	Percentage	Number	Percentage
Gender							
	Male	94	27.9	133	44.2	13	33.3
	Female	243	72.1	168	55.8	26	66.7
Age Range							
	18-20	242	71.4	181	60.1	13	34.2
	21-23	81	23.9	48	15.9	5	13.2
	24-26	10	2.9	16	5.3	3	7.9
	27-29	1	0.3	11	3.7	4	10.5
	30-32	2	0.6	7	2.3	2	5.3
	33-35	1	0.3	3	1.0	1	2.6
	36+	2	0.6	35	11.6	10	36.3
Marital Status							
	Single	316	93.2	239	79.4	21	53.8
	Married	6	1.8	38	12.6	13	33.3
	Widowed	2	0.6	2	0.7	1	2.6
	Divorced	1	0.3	12	4.0	2	5.1
	Other	14	4.1	10	3.3	2	5.1
Ethnicity							
	African American	16	4.8	28	9.3	5	12.8
	Asian	9	2.7	5	1.7	0	0
	Caucasian	300	89.3	254	84.7	34	87.2
	Hispanic	4	1.2	6	2.0	0	0
	Native American	4	1.2	2	0.7	0	0
	Other	3	0.9	5	1.7	0	0

Table 4: T-Test: Initial administration sample compared to final administration

Test Value = 0

	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
					Lower	Upper
MALE	4.423	1	.142	36.050	-482.752	554.852
FEMALE	7.847	1	.081	63.950	-454.852	582.752
AGE1	11.637	1	.055	65.750	-293.911	425.411
AGE2	4.975	1	.126	19.900	-234.727	274.527
AGE3	3.417	1	.181	4.100	-72.288	80.488
AGE4	1.176	1	.448	2.000	-106.216	110.216
AGE5	1.706	1	.338	1.450	-52.658	55.558
AGE6	1.857	1	.314	.650	-21.630	22.930
AGE7	1.109	1	.467	6.100	-344.012	356.212
SINGLE	12.507	1	.051	86.300	-352.932	525.532
MARRIED	1.333	1	.410	7.200	-336.546	350.946
WIDOWED	13.000	1	.049	.650	-2.533	3.833
DIVORCED	1.162	1	.452	2.150	-115.615	119.915
MS OTHER	9.250	1	.069	3.700	-21.763	29.163
AFR-AM	3.133	1	.197	7.050	-136.178	150.278
ASIAN	4.400	1	.142	2.200	-29.628	34.028
CAUC	37.826	1	.017	87.000	-59.411	233.411
HISPANIC	4.000	1	.156	1.600	-23.863	27.063
NAT-AM	3.800	1	.164	.950	-14.964	16.864
ETH OTH	3.250	1	.190	1.300	-24.163	26.763

Bonferroni at .05 is .0025

Table 5: T-Test: Final administration compared to test-Retest sample

Bonferroni at .05 is .0025

Test Value = 0

	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
					Lower	Upper
MALE	7.110	1	.089	38.750	-308.179	385.679
FEMALE	11.239	1	.056	61.250	-285.679	408.179
AGE1	3.641	1	.171	47.150	-777.205	871.505
AGE2	10.778	1	.059	14.550	-71.387	100.487
AGE3	5.077	1	.124	6.600	-76.154	89.354
AGE4	2.088	1	.284	7.100	-209.333	223.533
AGE5	2.533	1	.239	3.800	-91.685	99.285
AGE6	2.250	1	.266	1.800	-49.125	52.725
AGE7	2.578	1	.236	18.950	-448.927	486.827
SINGLE	5.203	1	.121	66.600	-748.206	881.406
MARRIED	2.217	1	.270	22.950	-635.897	681.797
WIDOWED	1.737	1	.333	1.650	-58.824	62.124
DIVORCED	8.273	1	.077	4.550	-30.461	39.561
MS OTHER	4.667	1	.134	4.200	-53.091	61.491
AFR AM	5.769	1	.109	11.250	-112.881	135.381
ASIAN	1.000	1	.500	.850	-53.258	54.958
CAUC	81.667	1	.008	85.750	18.910	152.590
HISPANIC	1.000	1	.500	1.000	-62.657	64.657
NAT-AM	1.000	1	.500	.350	-21.930	22.630
ETH OTH	1.000	1	.500	.850	-53.258	54.958

Table 6 : Results from Factor Analyses of Initial Administration

Factor Analysis	Number of Items in Analysis	Components with Eigenvalues > 1	Total Variance Explained	Cronbach's Alpha level
1	102	30	66.4999	
2	72	21	63.215	0.8746
3	56	15	60.903	0.8694
4	50	13	59.775	0.8674
5	39	11	60.284	0.8058
6	33	9	56.201	0.7848

Table 7: Total Variance Explained and Eigenvalues for first rotation of initial administration data

Component	Initial Eigenvalues	% of Variance	Cumulative %	Rotation Sums of Squared Loadings	% of Variance	Cumulative %
	Total			Total		
1	14.131	13.854	13.854	2.734	2.681	2.681
2	6.306	6.182	20.036	2.645	2.593	5.274
3	4.537	4.449	24.484	2.583	2.532	7.807
4	3.412	3.345	27.829	2.485	2.437	10.243
5	2.781	2.726	30.556	2.467	2.418	12.662
6	2.373	2.327	32.882	2.467	2.418	15.080
7	2.200	2.157	35.039	2.456	2.408	17.488
8	2.068	2.027	37.066	2.449	2.401	19.889
9	1.945	1.907	38.973	2.430	2.383	22.271
10	1.829	1.794	40.766	2.405	2.358	24.629
11	1.784	1.749	42.515	2.388	2.341	26.970
12	1.687	1.654	44.169	2.359	2.313	29.283
13	1.679	1.646	45.815	2.319	2.274	31.557
14	1.547	1.517	47.332	2.315	2.269	33.827
15	1.499	1.470	48.802	2.297	2.252	36.079
16	1.453	1.425	50.227	2.290	2.245	38.324
17	1.428	1.400	51.626	2.277	2.232	40.556
18	1.375	1.348	52.974	2.246	2.202	42.758
19	1.321	1.295	54.269	2.246	2.202	44.961
20	1.286	1.261	55.531	2.236	2.192	47.153
21	1.245	1.220	56.751	2.069	2.028	49.181
22	1.240	1.216	57.967	2.033	1.993	51.174
23	1.159	1.136	59.103	2.031	1.992	53.166
24	1.145	1.122	60.226	2.030	1.990	55.156
25	1.139	1.117	61.343	2.028	1.988	57.145
26	1.090	1.069	62.411	1.990	1.951	59.096
27	1.080	1.059	63.470	1.956	1.918	61.014
28	1.059	1.038	64.508	1.889	1.852	62.865
29	1.027	1.006	65.515	1.878	1.841	64.707
30	1.003	.984	66.499	1.828	1.792	66.499
31	.976	.957	67.456			
32	.960	.941	68.396			
33	.933	.914	69.311			
34	.913	.895	70.206			
35	.891	.874	71.080			
36	.871	.854	71.934			
37	.856	.839	72.773			
38	.829	.813	73.586			
39	.819	.803	74.388			
40	.804	.788	75.177			
41	.786	.770	75.947			
42	.755	.740	76.687			
43	.752	.737	77.424			
44	.716	.702	78.126			
45	.700	.687	78.813			
46	.687	.673	79.486			
47	.682	.669	80.155			
48	.678	.665	80.819			

49	.668	.655	81.474
50	.640	.628	82.102
51	.634	.622	82.724
52	.620	.608	83.332
53	.596	.584	83.916
54	.576	.564	84.480
55	.561	.550	85.030
56	.558	.547	85.577
57	.549	.538	86.115
58	.534	.524	86.639
59	.518	.508	87.147
60	.513	.503	87.649
61	.491	.482	88.131
62	.482	.472	88.603
63	.464	.455	89.059
64	.459	.450	89.508
65	.453	.444	89.952
66	.451	.442	90.394
67	.431	.422	90.816
68	.426	.418	91.234
69	.413	.405	91.639
70	.399	.391	92.030
71	.393	.385	92.415
72	.378	.371	92.786
73	.373	.366	93.152
74	.363	.356	93.507
75	.350	.343	93.851
76	.344	.337	94.188
77	.334	.327	94.515
78	.316	.310	94.825
79	.313	.307	95.132
80	.303	.297	95.430
81	.298	.292	95.722
82	.289	.283	96.005
83	.277	.272	96.277
84	.275	.270	96.547
85	.265	.259	96.806
86	.249	.244	97.050
87	.237	.232	97.282
88	.232	.228	97.510
89	.226	.221	97.731
90	.221	.217	97.948
91	.215	.211	98.159
92	.207	.203	98.362
93	.203	.199	98.561
94	.195	.192	98.753
95	.185	.182	98.934
96	.184	.180	99.115
97	.174	.171	99.285
98	.174	.170	99.456
99	.159	.156	99.612
100	.149	.146	99.757
101	.135	.132	99.890
102	.113	.110	100.000

Extraction Method: Principal Component Analysis.

Table 8: Descriptive Statistics of first rotation of initial administration data

	Mean	Std. Deviation	Analysis N
VAR001	3.19	1.22	346
VAR002	4.04	1.30	346
VAR003	2.85	1.23	347
VAR004	3.50	1.35	347
VAR005	3.11	1.13	344
VAR006	3.96	1.68	346
VAR007	4.50	1.18	343
VAR008	3.37	1.68	346
VAR009	3.18	1.30	347
VAR010	4.17	1.36	346
VAR011	2.78	1.34	347
VAR012	3.36	1.25	346
VAR013	4.68	1.17	346
VAR014	3.41	1.36	347
VAR015	4.69	.94	347
VAR016	4.40	1.11	344
VAR017	3.94	1.11	346
VAR018	2.19	1.36	347
VAR019	2.54	1.33	347
VAR020	3.51	1.49	347
VAR021	2.97	1.14	347
VAR022	3.58	1.25	347
VAR023	4.00	1.52	347
VAR024	3.80	1.65	347
VAR025	4.27	1.18	346
VAR026	3.88	1.34	346
VAR027	4.08	1.11	346
VAR028	4.72	.86	346
VAR029	3.15	1.31	345
VAR030	3.35	1.54	347
VAR031	4.31	1.01	347
VAR032	2.97	1.41	344
VAR033	2.97	1.38	346
VAR034	3.76	1.21	344
VAR035	3.15	1.36	347
VAR036	5.04	.97	346
VAR037	3.69	1.19	347
VAR038	3.08	1.39	347
VAR039	4.86	1.04	346
VAR040	4.62	1.09	347
VAR041	4.01	1.37	347
VAR042	3.24	1.34	346
VAR043	4.19	1.06	347
VAR044	3.52	1.23	347
VAR045	4.11	1.04	344
VAR046	4.63	.96	347
VAR047	3.50	1.15	345
VAR048	3.54	1.12	346
VAR049	3.64	1.33	347
VAR050	3.25	1.20	346
VAR051	4.58	1.16	347

VAR052	4.83	.96	345
VAR053	3.43	1.39	345
VAR054	4.07	1.17	345
VAR055	4.61	1.16	347
VAR056	2.59	1.28	345
VAR057	2.77	1.19	347
VAR058	3.38	1.32	345
VAR059	2.32	1.19	347
VAR060	3.36	1.36	345
VAR061	3.35	1.39	347
VAR062	2.75	1.23	347
VAR063	3.23	1.17	346
VAR064	4.33	1.10	347
VAR065	3.55	1.19	346
VAR066	3.19	1.30	347
VAR067	3.09	1.24	347
VAR068	3.06	1.12	347
VAR069	3.63	1.20	347
VAR070	2.65	1.05	347
VAR071	2.52	1.00	347
VAR072	3.36	1.11	347
VAR073	3.38	1.12	346
VAR074	4.01	.90	344
VAR075	5.00	.83	344
VAR076	3.46	1.25	345
VAR077	3.70	1.28	347
VAR078	4.08	1.11	345
VAR079	4.13	1.01	347
VAR080	3.03	1.34	347
VAR081	2.78	1.19	345
VAR082	2.93	1.34	346
VAR083	4.46	.90	347
VAR084	3.24	1.05	346
VAR085	3.18	1.37	343
VAR086	3.22	1.21	344
VAR087	4.71	1.01	345
VAR088	3.07	1.19	346
VAR089	3.43	1.32	347
VAR090	3.57	1.07	343
VAR091	2.81	1.16	347
VAR092	4.09	1.10	347
VAR093	3.10	1.15	346
VAR094	4.83	.98	347
VAR095	5.00	.90	345
VAR096	2.82	1.20	347
VAR097	3.38	1.33	346
VAR098	2.95	1.26	346
VAR099	4.02	1.16	342
VAR100	3.89	1.26	346
VAR101	2.78	1.37	346
VAR102	3.99	1.20	346

Table 9: Total Variance Explained and Eigenvalues for second analysis of initial administration data

Component	Initial			Rotation Sums of		
	Eigenvalues	% of	Cumulative %	Squared Loadings	% of Variance	Cumulative %
	Total	Variance		Total		
1	11.218	15.580	15.580	2.720	3.777	3.777
2	4.236	5.883	21.463	2.710	3.764	7.541
3	3.234	4.492	25.955	2.673	3.713	11.254
4	2.726	3.786	29.741	2.592	3.599	14.853
5	2.123	2.948	32.690	2.356	3.272	18.126
6	2.009	2.791	35.480	2.215	3.077	21.203
7	1.772	2.461	37.942	2.202	3.058	24.261
8	1.734	2.409	40.350	2.180	3.027	27.289
9	1.611	2.237	42.588	2.171	3.015	30.303
10	1.486	2.064	44.652	2.165	3.007	33.311
11	1.424	1.978	46.630	2.134	2.964	36.274
12	1.380	1.917	48.547	2.084	2.895	39.170
13	1.310	1.819	50.366	2.059	2.860	42.030
14	1.296	1.800	52.165	2.017	2.802	44.832
15	1.263	1.754	53.920	1.986	2.758	47.590
16	1.234	1.714	55.634	1.981	2.751	50.341
17	1.154	1.603	57.237	1.978	2.747	53.088
18	1.129	1.568	58.805	1.898	2.636	55.724
19	1.093	1.519	60.324	1.818	2.525	58.249
20	1.059	1.471	61.795	1.812	2.517	60.766
21	1.022	1.420	63.215	1.763	2.449	63.215
22	.981	1.363	64.578			
23	.976	1.356	65.934			
24	.920	1.277	67.211			
25	.907	1.260	68.472			
26	.901	1.252	69.723			
27	.880	1.222	70.945			
28	.868	1.205	72.151			
29	.819	1.137	73.288			
30	.797	1.107	74.395			
31	.771	1.070	75.465			
32	.742	1.031	76.496			
33	.731	1.016	77.512			
34	.710	.986	78.497			
35	.693	.963	79.460			
36	.675	.938	80.398			
37	.642	.891	81.289			
38	.626	.869	82.158			
39	.621	.863	83.021			
40	.594	.825	83.845			
41	.581	.807	84.653			
42	.542	.753	85.406			
43	.531	.737	86.142			
44	.522	.724	86.867			
45	.517	.718	87.585			
46	.493	.685	88.270			
47	.484	.672	88.942			
48	.462	.642	89.585			
49	.453	.630	90.214			

50	.440	.611	90.825
51	.427	.593	91.418
52	.412	.573	91.991
53	.408	.567	92.558
54	.401	.557	93.115
55	.385	.534	93.649
56	.362	.503	94.152
57	.351	.487	94.639
58	.343	.476	95.115
59	.327	.454	95.568
60	.321	.446	96.014
61	.306	.425	96.439
62	.291	.403	96.843
63	.282	.391	97.234
64	.270	.375	97.609
65	.266	.370	97.979
66	.243	.337	98.316
67	.236	.327	98.643
68	.222	.308	98.952
69	.214	.298	99.249
70	.194	.269	99.519
71	.184	.256	99.775
72	.162	.225	100.000

Extraction Method: Principal Component Analysis.

Table 10: Total Variance Explained and Eigenvalues for third analysis of initial administration data

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.123	18.078	18.078	2.843	5.077	5.077
2	3.954	7.060	25.138	2.712	4.843	9.920
3	2.672	4.772	29.910	2.669	4.765	14.685
4	2.400	4.286	34.195	2.529	4.516	19.201
5	1.918	3.425	37.621	2.351	4.199	23.400
6	1.765	3.152	40.772	2.256	4.028	27.429
7	1.498	2.675	43.448	2.222	3.969	31.397
8	1.410	2.517	45.965	2.209	3.945	35.342
9	1.370	2.447	48.412	2.200	3.929	39.271
10	1.333	2.380	50.792	2.159	3.855	43.126
11	1.211	2.163	52.955	2.114	3.775	46.901
12	1.194	2.132	55.088	2.003	3.576	50.478
13	1.163	2.077	57.165	1.973	3.524	54.001
14	1.077	1.923	59.088	1.964	3.507	57.508
15	1.016	1.815	60.903	1.901	3.395	60.903
16	.971	1.734	62.636			
17	.954	1.703	64.340			
18	.925	1.651	65.990			
19	.864	1.544	67.534			
20	.823	1.470	69.004			
21	.800	1.429	70.433			
22	.778	1.389	71.822			
23	.760	1.358	73.180			
24	.759	1.355	74.535			
25	.732	1.307	75.842			
26	.703	1.256	77.098			
27	.682	1.217	78.315			
28	.654	1.168	79.483			
29	.645	1.151	80.634			
30	.626	1.119	81.752			
31	.606	1.083	82.835			
32	.599	1.069	83.904			
33	.550	.983	84.887			
34	.534	.953	85.840			
35	.519	.926	86.766			
36	.497	.887	87.653			
37	.494	.882	88.534			
38	.481	.859	89.393			
39	.465	.830	90.224			
40	.462	.825	91.049			
41	.428	.764	91.812			
42	.413	.737	92.550			
43	.404	.721	93.271			
44	.381	.680	93.950			
45	.370	.660	94.610			
46	.353	.631	95.242			

47	.350	.626	95.867
48	.340	.607	96.474
49	.301	.537	97.011
50	.282	.504	97.515
51	.269	.481	97.995
52	.265	.473	98.468
53	.237	.424	98.892
54	.219	.392	99.284
55	.203	.363	99.647
56	.197	.353	100.000

Extraction Method: Principal Component Analysis.

Table 11: Total Variance explained and Eigenvalues for fourth rotation of initial administration data

Component	Initial Eigenvalues		Cumulative %	Rotation Sums of Squared Loadings		Cumulative %
	Total	% of Variance		Total	% of Variance	
1	7.054	18.086	18.086	2.691	6.900	6.900
2	3.384	8.676	26.763	2.579	6.612	13.512
3	2.280	5.846	32.608	2.317	5.942	19.454
4	2.059	5.279	37.887	2.279	5.844	25.297
5	1.590	4.076	41.963	2.165	5.552	30.849
6	1.468	3.763	45.726	2.098	5.379	36.228
7	1.281	3.284	49.010	2.080	5.334	41.561
8	1.213	3.111	52.122	1.856	4.759	46.320
9	1.099	2.817	54.939	1.835	4.704	51.025
10	1.064	2.728	57.667	1.816	4.658	55.683
11	1.021	2.618	60.284	1.795	4.602	60.284
12	.924	2.369	62.653			
13	.895	2.295	64.948			
14	.848	2.174	67.122			
15	.826	2.117	69.239			
16	.798	2.047	71.286			
17	.783	2.006	73.292			
18	.741	1.900	75.192			
19	.679	1.741	76.933			
20	.649	1.664	78.597			
21	.646	1.657	80.254			
22	.612	1.568	81.822			
23	.584	1.496	83.319			
24	.576	1.476	84.795			
25	.533	1.367	86.162			
26	.523	1.341	87.503			
27	.491	1.260	88.763			
28	.477	1.222	89.985			
29	.454	1.163	91.149			
30	.442	1.133	92.282			
31	.421	1.080	93.362			
32	.410	1.052	94.414			
33	.376	.963	95.377			
34	.373	.956	96.333			
35	.341	.875	97.208			
36	.334	.857	98.065			
37	.279	.714	98.779			
38	.247	.633	99.411			
39	.230	.589	100.000			

Extraction Method: Principal Component Analysis.

Table 12: Total Variance explained and Eigenvalues for fifth rotation of initial administration

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.054	18.086	18.086	2.691	6.900	6.900
2	3.384	8.676	26.763	2.579	6.612	13.512
3	2.280	5.846	32.608	2.317	5.942	19.454
4	2.059	5.279	37.887	2.279	5.844	25.297
5	1.590	4.076	41.963	2.165	5.552	30.849
6	1.468	3.763	45.726	2.098	5.379	36.228
7	1.281	3.284	49.010	2.080	5.334	41.561
8	1.213	3.111	52.122	1.856	4.759	46.320
9	1.099	2.817	54.939	1.835	4.704	51.025
10	1.064	2.728	57.667	1.816	4.658	55.683
11	1.021	2.618	60.284	1.795	4.602	60.284
12	.924	2.369	62.653			
13	.895	2.295	64.948			
14	.848	2.174	67.122			
15	.826	2.117	69.239			
16	.798	2.047	71.286			
17	.783	2.006	73.292			
18	.741	1.900	75.192			
19	.679	1.741	76.933			
20	.649	1.664	78.597			
21	.646	1.657	80.254			
22	.612	1.568	81.822			
23	.584	1.496	83.319			
24	.576	1.476	84.795			
25	.533	1.367	86.162			
26	.523	1.341	87.503			
27	.491	1.260	88.763			
28	.477	1.222	89.985			
29	.454	1.163	91.149			
30	.442	1.133	92.282			
31	.421	1.080	93.362			
32	.410	1.052	94.414			
33	.376	.963	95.377			
34	.373	.956	96.333			
35	.341	.875	97.208			
36	.334	.857	98.065			
37	.279	.714	98.779			
38	.247	.633	99.411			
39	.230	.589	100.000			

Extraction Method: Principal Component Analysis.

Table 13: Total Variance explained and Eigenvalues for sixth rotation of initial administration

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.614	17.013	17.013	2.508	7.599	7.599
2	3.050	9.243	26.255	2.354	7.133	14.732
3	1.967	5.962	32.217	2.312	7.005	21.737
4	1.707	5.172	37.389	2.271	6.880	28.617
5	1.473	4.465	41.853	2.194	6.648	35.265
6	1.281	3.883	45.737	1.870	5.667	40.932
7	1.268	3.842	49.579	1.795	5.440	46.372
8	1.148	3.478	53.056	1.674	5.071	51.443
9	1.038	3.145	56.201	1.570	4.758	56.201
10	.980	2.971	59.173			
11	.945	2.863	62.035			
12	.922	2.795	64.830			
13	.865	2.622	67.452			
14	.817	2.476	69.928			
15	.771	2.337	72.265			
16	.736	2.232	74.496			
17	.713	2.161	76.657			
18	.657	1.990	78.648			
19	.636	1.928	80.576			
20	.630	1.910	82.486			
21	.620	1.878	84.364			
22	.597	1.810	86.174			
23	.545	1.650	87.824			
24	.517	1.566	89.390			
25	.507	1.536	90.926			
26	.460	1.395	92.320			
27	.456	1.383	93.704			
28	.438	1.328	95.031			
29	.407	1.234	96.265			
30	.358	1.085	97.351			
31	.318	.965	98.315			
32	.303	.919	99.234			
33	.253	.766	100.000			

Extraction Method: Principal Component Analysis.

Table 14: Factor labels and Factor Loadings for initial administration

Factor	Factor Loadings
Factor 1: Postponement	
1. I get upset while waiting.	.705
10. I am quick to anger	.626
81. I don't like to wait in line.	.624
58. I do not like to wait to get a table at a restaurant.	.596
Factor 2: Punctuality	
24. I tend to run late.	.860
101. I am a very punctual person.	-.794
35. I am often rushed for time.	.552 **
Factor 3: Time Urgency	
19. I have too much to do and not enough time to do it in.	.619
23. I have trouble finding time to get my hair cut.	.582
18. I anticipate a green light by looking at the yellow light for the opposite traffic.	.570 *
86. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".	.529
Factor 4: Flexibility	
12. I get upset if I have things left to do at the end of the day.	.651
42. I often try to control things that are beyond my control.	.617
51. I tend to plan ahead.	-.591 *
67. I get anxious when things don't stay on schedule.	.508 *
14. I frequently feel like hurrying others.	.447 **
57. I work fast.	.340 **
Factor 5: Capacity for Tolerance	
98. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.731

38. I often lose track of what people are saying if they go on for too long.	.652
30. I cannot tolerate children who cry for a long time.	.575 *
82. When I am angry, I have a hard time not thinking what is upsetting me.	.449 *
96. I get bored when I wait.	.423 **
Factor 6: Self-regulation	
65. I get things accomplished without undue stress.	.655
55. I consider myself as easy going .	.628 *
66. I live a calm, predictable life.	.511 *
Factor 7: Self Awareness of Extreme	
93. By the time I speak out it is too late.	.750
63. I wait too long to act.	.656
21. If I want something I get it.	.548
Factor 8: Comfort with ambiguity	
59. I always know about what time of day it is	.690
5. I do not like it when things are ambiguous	.610
47. When I have to wait it is often someone else's fault.	.400 *
Factor 9: Limits of Tolerance	
20. You can be overly patient.	.804
80. You can be too tolerant.	.776

Table 15: Total Variance explained and Eigenvalues for initial rotation of final administration

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.504	13.761	13.761	2.556	6.390	6.390
2	2.950	7.374	21.135	2.433	6.082	12.473
3	2.452	6.129	27.264	2.291	5.728	18.201
4	2.104	5.260	32.525	2.112	5.280	23.480
5	1.882	4.704	37.229	2.070	5.174	28.654
6	1.641	4.102	41.331	2.007	5.019	33.673
7	1.446	3.614	44.946	1.930	4.824	38.497
8	1.306	3.265	48.211	1.901	4.751	43.248
9	1.186	2.965	51.176	1.712	4.279	47.527
10	1.123	2.808	53.984	1.668	4.170	51.697
11	1.038	2.594	56.579	1.586	3.966	55.662
12	1.013	2.532	59.111	1.379	3.448	59.111
13	.955	2.387	61.498			
14	.921	2.302	63.800			
15	.889	2.223	66.023			
16	.858	2.145	68.168			
17	.798	1.996	70.164			
18	.771	1.929	72.093			
19	.740	1.849	73.942			
20	.727	1.816	75.758			
21	.700	1.750	77.508			
22	.686	1.714	79.222			
23	.640	1.601	80.823			
24	.626	1.566	82.388			
25	.603	1.508	83.897			
26	.588	1.471	85.367			
27	.571	1.427	86.795			
28	.557	1.392	88.187			
29	.503	1.257	89.444			
30	.492	1.229	90.673			
31	.476	1.189	91.862			
32	.442	1.106	92.968			
33	.425	1.062	94.029			
34	.404	1.009	95.039			
35	.391	.978	96.017			
36	.359	.898	96.914			
37	.344	.860	97.774			
38	.332	.830	98.604			
39	.297	.742	99.346			
40	.262	.654	100.000			

Extraction Method: Principal Component Analysis.

Table 16: Total Variance Explained and Eigenvalues for second analysis of final administration

Component	Initial Eigenvalues		Cumulative %	Rotation Sums of Squared Loadings		Cumulative %
	Total	% of Variance		Total	% of Variance	
1	5.358	15.760	15.760	2.544	7.482	7.482
2	2.498	7.346	23.106	2.366	6.959	14.441
3	2.041	6.002	29.108	2.195	6.455	20.896
4	1.754	5.160	34.267	2.186	6.431	27.327
5	1.582	4.652	38.920	2.004	5.894	33.220
6	1.454	4.276	43.196	1.707	5.020	38.241
7	1.299	3.820	47.015	1.647	4.845	43.086
8	1.198	3.523	50.538	1.587	4.668	47.754
9	1.082	3.181	53.720	1.559	4.584	52.338
10	1.029	3.026	56.746	1.499	4.408	56.746
11	.998	2.936	59.682			
12	.929	2.732	62.414			
13	.902	2.653	65.068			
14	.868	2.554	67.621			
15	.801	2.356	69.978			
16	.771	2.267	72.245			
17	.737	2.168	74.413			
18	.725	2.133	76.546			
19	.704	2.072	78.618			
20	.683	2.010	80.628			
21	.646	1.900	82.528			
22	.625	1.837	84.366			
23	.594	1.747	86.113			
24	.586	1.723	87.836			
25	.524	1.540	89.376			
26	.483	1.420	90.796			
27	.465	1.367	92.163			
28	.448	1.319	93.481			
29	.424	1.247	94.729			
30	.405	1.190	95.919			
31	.386	1.136	97.055			
32	.374	1.100	98.154			
33	.329	.968	99.122			
34	.298	.878	100.000			

Extraction Method: Principal Component Analysis.

Table 17: Factor labels and Factor Loadings from second factor analysis of Patience Scale

FACTORS	Factor Loading
FACTOR 1: Postponement	
37. I make quick decisions	.654
32. I don't like to wait in line.	.640 *
24. I do not like to wait to get a table at a restaurant.	.595
36. I get bored when I wait.	.583
2. I get upset while waiting.	.562 *
FACTOR 2: Even-tempered	
9. If someone or something is taking too long I am able to think about other things and not get upset.	.635
22. I consider myself as easy going.	.613
3. I am not easily irritated.	.601
27. I get things accomplished without undue stress.	.598
FACTOR 3: Composed	
8. I have too much to do and not enough time to do it in.	.600 *
29. I get anxious when things don't stay on schedule.	.522 **
33. When I am angry, I have a hard time not thinking what is upsetting me.	.512
34. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".	.439 *
19. I often try to control things that are beyond my control.	.425 *
11. If I want something I get it.	.399 **
FACTOR 4: Time Urgency	
13. I have trouble finding time to get my hair cut.	.703
28. I live a calm, predictable life.	.582 *
15. I am often rushed for time.	.559 *
30. I have enough time to do the things that are important to me.	.457 *
23. I work fast.	.327 **
* Complex items loading on one other factor; ** Complex items loading on two other factors	

FACTOR 5: Tolerance	
38. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.666
18. I often lose track of what people are saying if they go on for too long.	.656
14. I cannot tolerate children who cry for a long time.	.602
7. I anticipate a green light by looking at the yellow light for the opposite traffic.	.413 *
6. I frequently feel like hurrying others.	.359 ***
FACTOR 6: Limits of patience	
26. I wait too long to act.	.679
31. You can be too tolerant.	.631
16. I am too tolerant of other people.	.579 *
FACTOR 7: Action focused	
1. I believe that good things come to those who wait	-.583
17. I do things without thinking.	-.512 *
25. I always know about what time of day it is.	.425 *
4. I get upset if I have things left to do at the end of the day.	.429 *
FACTOR 8: Attribution of responsibility	
20. When I have to wait it is often someone else's fault.	.687
40. It is my own fault if I am delayed.	.643 *
Rotation converged in 22 iterations. Item cutoff at .30	
* Complex items loading on one other factor; ** Complex items loading on two other factors, *** Complex items loading on three other factors	

Table 18: Reliability Scores (Cronbach's alpha α) for Final Administration Factors

Factor	1	2	3	4	5	6	7	8
Postponement				Time		Limits of Capacity for	Attribution of	
Even-tempered			Composure	Abundance	Tolerance	Patience	Uncertainty	Responsibility
	0.7334	0.6288	0.6007	0.5834	0.5409	0.5226	0.0384	0.3648

Table 19: Total Variance Explained and Eigenvalues for second analysis of final administration

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.947	17.668	17.668	2.698	9.635	9.635
2	2.403	8.581	26.249	2.493	8.905	18.540
3	1.974	7.050	33.298	2.248	8.030	26.570
4	1.607	5.739	39.037	2.198	7.851	34.421
5	1.365	4.875	43.912	2.098	7.491	41.912
6	1.223	4.369	48.282	1.783	6.369	48.282
7	1.055	3.769	52.051			
8	1.018	3.637	55.689			
9	.939	3.355	59.043			
10	.887	3.167	62.210			
11	.849	3.031	65.241			
12	.817	2.916	68.157			
13	.779	2.783	70.940			
14	.756	2.699	73.639			
15	.746	2.665	76.304			
16	.695	2.480	78.785			
17	.679	2.426	81.211			
18	.638	2.279	83.490			
19	.595	2.126	85.616			
20	.570	2.037	87.653			
21	.535	1.912	89.564			
22	.516	1.845	91.409			
23	.475	1.697	93.106			
24	.444	1.587	94.693			
25	.429	1.534	96.227			
26	.392	1.401	97.627			
27	.348	1.243	98.871			
28	.316	1.129	100.000			

Extraction Method: Principal Component Analysis.

Table 20: Factor labels and Factor Loadings for Patience Scale

FACTORS	Factor Loading
FACTOR 1: Postponement	
24. I do not like to wait to get a table at a restaurant.	.670
32. I don't like to wait in line.	.666 *
36. I get bored when I wait.	.615
37. I make quick decisions	.605
2. I get upset while waiting.	.575 *
FACTOR 2: Even-tempered	
22. I consider myself as easy going.	.635
9. If someone or something is taking too long I am able to think about other things and not get upset.	.630 *
3. I am not easily irritated.	.590
27. I get things accomplished without undue stress.	.582
FACTOR 3: Composure	
8. I have too much to do and not enough time to do it in.	.601 *
29. I get anxious when things don't stay on schedule.	.560
33. When I am angry, I have a hard time not thinking what is upsetting me.	.556
34. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong".	.441 *
19. I often try to control things that are beyond my control.	.429 *
11. If I want something I get it.	.410 **
FACTOR 4: Time Abundance	
13. I have trouble finding time to get my hair cut.	.742
15. I am often rushed for time.	.588 *
28. I live a calm, predictable life.	.494 *
30. I have enough time to do the things that are important to me.	.437 *
23. I work fast.	.420 *
Complex items loading on one other factor; ** Complex items loading on two other factors	

FACTOR 5: Tolerance	
38. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.	.690
18. I often lose track of what people are saying if they go on for too long.	.663
14. I cannot tolerate children who cry for a long time.	.559
7. I anticipate a green light by looking at the yellow light for the opposite traffic.	.516
6. I frequently feel like hurrying others.	.373 **
FACTOR 6: limits of patience	
26. I wait too long to act.	.699
31. You can be too tolerant.	.632
16. I am too tolerant of other people.	.571 *
Rotation converged in 11 iterations. Item cutoff at .30	
* Complex items loading on one other factor; ** Complex items loading on two other factors	

Table 21: Reliability Scores (Cronbach's alpha α) for Final Administration Factors

Factor	1	2	3	4	5	6
				Time		Limits of
Postponement		Even-tempered	Composure	Abundance	Tolerance	Patience
	0.7334	0.6288	0.6007	0.5834	0.5409	0.5226

Table 22: Descriptive Statistics for Scales and Factors

	N	Min	Max	Mean	Std Dev.	Skewness	Std Error	Kurtosis	Std Error
<u>Patience Scale</u>									
PS Total	308	40	142	86.89	15.2	-0.295	0.14	0.75	0.28
<u>SJAS</u>									
SJAS total	304	2	19	8.85	3.65	0.34	0.14	-0.48	0.28
SJASHDC	307	0	11	4.27	2.66	0.28	0.14	-0.71	0.28
SJASEAT	310	0	2	0.68	0.76	0.62	0.14	-1.03	0.28
SJASTALK	310	0	2	0.73	0.79	0.52	0.14	-1.23	0.28
BPS total	290	1	24	10.9	4.78	0.22	0.14	-0.46	0.29
ES total	298	5	38	20.5	5.22	-0.27	0.14	0.03	0.28
Valid N (listwise)	281								

Table 23: ANOVA of Gender X Patience Scale

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Observed Power
GENDER	DPSTOTAL	302.762	1	302.762	1.320	.252	.004	.208
	factor 1	73.504	1	73.504	3.492	.063	.012	.461
	factor 2	63.642	1	63.642	4.946	.027	.016	.601
	factor 3	236.273	1	236.273	11.019	.001	.036	.911
	factor 4	60.042	1	60.042	3.449	.064	.012	.457
	factor 5	21.883	1	21.883	.789	.375	.003	.144
	factor 6	1.375	1	1.375	.165	.685	.001	.069

Table 24: ANOVA of Gender X SJAS

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Observed Power
GENDER	SJAS total	4.194	1	4.194	.315	.575	.001	.023
	SJASHDC	3.865	1	3.865	.544	.461	.002	.033
	Hard driving/ competitive SJAS Impatience	12.304	1	12.304	8.209	.004	.027	.815

Table 25: ANOVA Gender X Boredom Proneness Scale total

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	229.252	1	229.252	10.361	.001
Within Groups	6151.020	278	22.126		
Total	6380.271	279			

Table 26: ANOVA Gender X Empathy scale high score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.842	1	9.842	45.495	.000
Within Groups	61.656	285	.216		
Total	71.498	286			

Table 27: Correlation table: Measures and factors

Correlations

	PS total	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	SJAS tot	SJAS IMP	SJAS HDC	ES total	ES high	BPSTOT
sjastot	-.489**	-.285**	-.249**	-.405**	-.444**	-.196**	-0.09	1					
SJASIMP	-.459**	-.359**	-.218**	-.293**	-.309**	-.459**	.023	.586**	1				
SJASHD C	-.361**	-.164**	-.154**	-.359**	-.398**	-0.05	-0.11	.896**	.262**	1			
Empathy Scale total	-0.01	0.07	-0.07	-.223**	-0.04	0.039	0.05	-0.1	-.122*	-0.07	1		
Empathy scale high score	-.122*	-0.05	-0.09	-.306**	-0.06	-0.02	0.044	-0.03	-.035	-0.02	.807**	1	
BPSTOT	-.291**	-.324**	-.329**	-0.1	-.116*	-.223**	.122*	-0.03	.222**	-.140*	-.151*	-.121*	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix N: Figures

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Figure 5: Scree Plot for third analysis of initial administration

Figure 6: Rotated component matrix for third analysis of initial administration data

Figure 7: Reliability analysis for third analysis of initial administration data

Figure 8: Scree plot for fourth analysis of initial administration

Figure 9: Reliability analysis for fourth analysis of initial administration

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Figure 12: Reliability analysis for fifth analysis of initial administration

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Figure 23: Distribution of Patience Scale total scores

Figure 24: Scree Plot for third analysis of final administration

Figure 25: Rotated component matrix for third analysis of final administration

Figure 26: Reliability Analysis for third analysis of final administration

Figure 1: Scree Plot for first analysis of initial administration data

Figure 2: Scree Plot for second analysis of initial administration data

Figure 3: Rotated component matrix for second analysis of initial administration data

Rotated Component Matrix																					
	Component																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
VAR10	-.762																				
VAR02	.744																				
VAR09	.542																				
VAR02		.577																			
VAR06		.545																			
VAR00		.477																			
VAR10		.456																			
VAR01		.420					.353							.307							
VAR08		.358									.314					.349					
VAR09		.339									.321										
VAR08			.678									.313									
VAR07			.608																		
VAR09			.470													.383					
VAR00			.470	.421																	
VAR09	-.329		.468																		
VAR09			.411				.313							.366							
VAR01				.700																	
VAR02				.645																	
VAR03	.394			.622																	
VAR06				.461							-.357										
VAR09					.735																
VAR03					.582																
VAR08					.436					.351											
VAR09					.354																
VAR06						.770															
VAR03		.385			.336	.454															
VAR09						.336															
VAR02						.331															
VAR00							.757														
VAR06		.302					.452														
VAR09							.408														
VAR06				.327			.403														
VAR10								.809													
VAR04	-.472							.618													
VAR04								.512													
VAR08									-.783												
VAR02									-.676												
VAR03									.572												
VAR04										.670											
VAR04		.316								.546											
VAR07						.350				-.400											
VAR06										.333											
VAR01											-.473										-.313
VAR01											.381										
VAR06											.379										
VAR01											.363										
VAR01												.721									
VAR03												.357									
VAR02							.332					-.353			.317						
VAR06													.746								
VAR09													.618			.311					
VAR02						.338							.373								
VAR09													.364								
VAR08													-.340								
VAR09														.775							
VAR03															.826						
VAR03	-.325														-.457						
VAR02															.332						
VAR06																.720		.319			.314
VAR09																.469					
VAR04											-.354					.409					
VAR08																	.790				
VAR06																	.678				.340
VAR04																	.311				
VAR00																		-.727			
VAR09														-.352				.536			
VAR00																			.690		
VAR09												.433							.481		
VAR00																			.347		
VAR01																				.795	
VAR08																				.336	
VAR06																					-.766

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

^aRotation converged in 93 iterations.

Figure 4: Reliability analysis for second analysis of initial administration data

Item-total Statistics for second analysis of initial administration data

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)				
		Mean	Std Dev	Cases
1.	VAR001	3.2040	1.2512	299.0
2.	VAR002	4.0000	1.3005	299.0
3.	VAR003	2.8796	1.2284	299.0
4.	VAR004	3.4883	1.3545	299.0
5.	VAR005	3.0836	1.1156	299.0
6.	VAR006	3.9498	1.6832	299.0
7.	VAR007	4.5050	1.1683	299.0
8.	VAR008	3.3913	1.6841	299.0
9.	VAR009	3.1973	1.2867	299.0
10.	VAR010	4.1605	1.3736	299.0
11.	VAR011	2.7625	1.3363	299.0
12.	VAR012	3.3244	1.2309	299.0
13.	VAR013	4.6856	1.1765	299.0
14.	VAR014	3.3946	1.3228	299.0
15.	VAR018	2.1973	1.3798	299.0
16.	VAR019	2.6020	1.3531	299.0
17.	VAR020	3.5452	1.4861	299.0
18.	VAR021	2.9632	1.1536	299.0
19.	VAR022	3.6355	1.2306	299.0
20.	VAR023	4.0100	1.5227	299.0
21.	VAR024	3.8161	1.6577	299.0
22.	VAR025	4.2843	1.1827	299.0
23.	VAR026	3.9164	1.3423	299.0
24.	VAR029	3.1438	1.2964	299.0
25.	VAR030	3.3144	1.5570	299.0
26.	VAR032	2.9532	1.4158	299.0
27.	VAR033	2.9632	1.3419	299.0
28.	VAR034	3.7759	1.1928	299.0
29.	VAR035	3.1338	1.3519	299.0
30.	VAR037	3.6823	1.1770	299.0
31.	VAR038	3.0635	1.3828	299.0
32.	VAR041	4.0201	1.3460	299.0
33.	VAR042	3.2140	1.3515	299.0
34.	VAR044	3.4649	1.2321	299.0
35.	VAR047	3.4849	1.1302	299.0
36.	VAR048	3.5753	1.1189	299.0
37.	VAR049	3.6622	1.3272	299.0
38.	VAR050	3.2609	1.2063	299.0
39.	VAR051	4.5686	1.1777	299.0
40.	VAR053	3.4415	1.3803	299.0
41.	VAR054	4.0201	1.1584	299.0
42.	VAR055	4.6388	1.1571	299.0
43.	VAR056	2.5385	1.2775	299.0
44.	VAR057	2.7559	1.1888	299.0
45.	VAR058	3.3612	1.3146	299.0

46.	VAR059	2.3043	1.1605	299.0
47.	VAR060	3.3512	1.3513	299.0
48.	VAR061	3.3244	1.3945	299.0
49.	VAR062	2.7090	1.2008	299.0
50.	VAR063	3.2375	1.1645	299.0
51.	VAR065	3.5385	1.1848	299.0
52.	VAR066	3.1739	1.2888	299.0
53.	VAR067	3.0569	1.2718	299.0
54.	VAR069	3.6120	1.1772	299.0
55.	VAR076	3.4649	1.2483	299.0
56.	VAR077	3.6990	1.2809	299.0
57.	VAR080	3.0468	1.3725	299.0
58.	VAR081	2.7860	1.2072	299.0
59.	VAR082	2.9164	1.3448	299.0
60.	VAR085	3.1940	1.3815	299.0
61.	VAR086	3.2475	1.2284	299.0
62.	VAR088	3.0635	1.2037	299.0
63.	VAR089	3.4281	1.3476	299.0
64.	VAR091	2.8060	1.1740	299.0
65.	VAR093	3.1371	1.1606	299.0
66.	VAR096	2.7993	1.1700	299.0
67.	VAR097	3.4013	1.3409	299.0
68.	VAR098	2.8930	1.2620	299.0
69.	VAR099	4.0167	1.1685	299.0
70.	VAR100	3.8763	1.2697	299.0
71.	VAR101	2.7826	1.3768	299.0
72.	VAR102	3.9666	1.2229	299.0

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR001	VAR002	VAR003	VAR004	VAR005
VAR001	1.0000				
VAR002	-.0536	1.0000			
VAR003	.3020	-.0882	1.0000		
VAR004	.2895	.1181	.2553	1.0000	
VAR005	.1031	-.1203	.1494	-.0338	1.0000
VAR006	.1339	.0629	.2097	.1168	.0952
VAR007	.0647	.0309	.0145	.2614	-.0196
VAR008	-.0046	.0306	.0748	.0969	.0736
VAR009	-.0376	.0060	-.1038	.0196	-.0115
VAR010	.4592	-.0169	.2680	.4591	.0547
VAR011	.0612	.0772	.0275	.0513	-.0249
VAR012	.2859	-.1111	.3255	.1281	.1121
VAR013	-.2184	.0877	-.2051	-.1160	-.1742
VAR014	.4236	.0000	.5043	.3322	.1276
VAR018	.1865	-.0112	.1942	.1655	.0786
VAR019	.2146	-.0992	.4112	.1265	.1755
VAR020	-.0167	-.1806	-.0669	-.1960	.0918
VAR021	.0680	-.0268	.1508	.0309	.0441
VAR022	.2381	.0315	.2528	.1414	.0736
VAR023	.2385	-.0339	.1729	.0741	.0311
VAR024	.0424	.1728	.1555	.0267	-.0624
VAR025	.1353	.0545	-.0179	.0995	-.0715
VAR026	.1501	-.1653	.0936	.1037	.2108
VAR029	.5714	-.0518	.3628	.3956	.1146

VAR030	.2460	-.0547	.0427	.1816	.0602
VAR032	.3445	-.0401	.2649	.1537	.0832
VAR033	.0245	.0058	-.0129	-.0418	-.0181
VAR034	.1139	.0368	-.0002	.0326	.0368
VAR035	.2576	.0019	.5028	.1585	.0838
VAR037	.0761	.1184	.0547	.1987	-.0998
VAR038	.2175	-.0653	.2258	.1608	.1423
VAR041	.3423	-.0460	.2613	.1547	.1352
VAR042	.1209	-.0248	.2541	.1664	.0526
VAR044	.1255	-.0586	.0282	.0505	.0546
VAR047	.1932	-.0639	.1220	.0289	.1806
VAR048	.2970	-.0438	.1604	.2436	.0097
VAR049	.0982	.1108	.1499	.2283	.0169
VAR050	.3937	.0107	.2840	.2545	.0560
VAR051	.0349	.0241	-.1659	-.0421	-.0337
VAR053	.1420	.0598	.1957	.2559	.0500
VAR054	.2264	-.1626	.1408	.0793	-.0013
VAR055	.2643	.0089	.3825	.3334	.1067
VAR056	.2397	.0162	.3195	.1734	.0672
VAR057	.2456	-.0608	.3589	.0722	.0433
VAR058	.3182	-.0157	.2909	.1663	.0548
VAR059	.1466	.0311	.1623	.1165	.1850
VAR060	.1520	.0401	.0619	.1297	-.0529
VAR061	.5600	.0796	.3755	.3689	.1011
VAR062	.0597	-.1633	.1809	-.0011	.1911
VAR063	.0012	.0044	.1022	.0603	.0363
VAR065	.1995	.0740	.2153	.2685	.0445
VAR066	.0612	.0941	.2676	.1896	.0155
VAR067	.3027	-.1298	.3416	.1864	.1929
VAR069	.2498	.1885	.1393	.0245	.0376
VAR076	.3344	-.0041	.5378	.1630	.0852
VAR077	.1034	.0201	-.0615	-.0717	-.0528
VAR080	-.0525	-.0263	-.0365	-.1333	.1158
VAR081	.4244	-.1047	.3627	.2181	.1504
VAR082	.0720	.0019	.1828	.1257	.1277
VAR085	.3731	-.0691	.3935	.1931	.1179
VAR086	.2509	.0126	.2978	.1974	.0461
VAR088	.1941	-.0836	.4387	.1270	.1909
VAR089	-.0400	.0613	.0515	-.0028	.0096
VAR091	.3149	.0264	.2048	.2476	.1072
VAR093	-.0263	.1001	.0563	.0405	-.0504
VAR096	.2756	-.1941	.2189	.1489	.1132
VAR097	.0370	.0289	.0885	.1098	.0313
VAR098	.2923	.0082	.2709	.2054	.1851
VAR099	-.0827	.0927	-.1529	.0118	-.1195
VAR100	.4384	.0427	.3433	.4723	.0121
VAR101	.0473	-.1556	.0301	-.0077	.1582
VAR102	.2347	-.1076	.0353	.1193	.0660

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Correlation Matrix

	VAR006	VAR007	VAR008	VAR009	VAR010
VAR006	1.0000				
VAR007	.0983	1.0000			
VAR008	-.0842	.0050	1.0000		
VAR009	-.0264	-.0174	.0061	1.0000	
VAR010	.1777	.2149	.0163	-.0635	1.0000
VAR011	.1409	-.0648	-.0346	-.0078	.0026
VAR012	.1326	.0537	.0648	-.2270	.1934
VAR013	-.0504	-.0623	-.1206	.0190	-.2241
VAR014	.2290	.1095	.0510	-.1110	.4230
VAR018	.0679	-.0370	.0331	-.0277	.1125
VAR019	.2225	.1679	-.0139	-.1802	.1717
VAR020	-.0239	.0535	-.0667	.0050	-.0364
VAR021	-.0027	-.0310	.0489	-.0358	.0440
VAR022	.0187	-.0372	-.0151	-.0053	.1856
VAR023	.1220	.1518	.0560	-.1072	.1452
VAR024	.1398	.1053	.0090	.0627	.0484
VAR025	.0679	.2625	-.0544	-.0061	.1474

VAR026	.0783	-.0136	.0309	-.0837	.1693
VAR029	.1694	.0804	.0679	.0131	.4807
VAR030	-.0080	.0176	-.0215	.1515	.2415
VAR032	.1398	.0367	.1104	-.0299	.2489
VAR033	-.0974	-.1486	.0895	-.0832	-.0878
VAR034	.1197	.1224	-.0247	.0879	.2023
VAR035	.2006	.1398	-.0069	-.0731	.1799
VAR037	-.0724	-.0001	.0595	-.0116	.2122
VAR038	.1268	.0756	.0123	.0476	.2472
VAR041	.1086	.0191	.0528	-.0023	.3177
VAR042	.2157	.1438	-.0060	-.1575	.2544
VAR044	.0145	-.0005	.0899	-.1787	.1560
VAR047	.0305	.0274	.0586	-.0799	.1853
VAR048	-.0737	.0568	.0600	.1004	.3393
VAR049	.0570	.0498	.1464	.0195	.1642
VAR050	.1817	.0395	.0239	.0035	.3270
VAR051	-.0905	.0589	-.0719	.1627	-.0006
VAR053	.0731	.1464	.0063	.0623	.2687
VAR054	.0315	.0545	.0407	-.1197	.1498
VAR055	.1251	.1428	-.0099	-.0692	.3491
VAR056	.0735	.0488	.0484	.0393	.2011
VAR057	.1817	-.1694	.0529	-.1307	.1741
VAR058	.0613	.0207	.0633	-.0304	.2391
VAR059	.0577	.0199	.1191	-.0741	.0198
VAR060	.0211	.1466	-.0016	.1028	.1919
VAR061	.1614	.0742	.0344	-.0358	.5070
VAR062	-.0620	-.0623	-.0381	-.1039	.0894
VAR063	.0369	-.0046	.0979	-.1366	.0831
VAR065	.1600	.1884	-.0286	.0357	.1962
VAR066	.1881	.1911	.0690	-.0734	.1301
VAR067	.1706	.0529	.0601	-.1299	.2579
VAR069	.1121	-.0157	-.0332	-.0955	.1964
VAR076	.3194	.0456	.0409	-.1179	.2264
VAR077	-.0584	.0122	.0766	.0891	.1134
VAR080	.0010	.0145	-.0094	.0651	-.0004
VAR081	.0888	-.0135	.1470	-.0980	.3264
VAR082	-.0078	.0376	-.0048	.0542	.1163
VAR085	.1095	.0036	.0307	-.0650	.2806
VAR086	.0758	.1418	-.0032	-.0331	.1673
VAR088	.0894	.0582	.0307	-.0493	.1278
VAR089	-.0645	-.0333	.0073	-.1360	.0171
VAR091	-.0474	.0399	.2116	.0832	.3044
VAR093	-.0016	-.1453	.2163	-.0744	.0303
VAR096	-.0034	.0670	.0979	.1401	.2205
VAR097	.0000	.0287	.0729	.0745	.1945
VAR098	.0417	.0482	.0419	.0647	.2209
VAR099	-.0525	-.1561	.0529	.1317	.0213
VAR100	.0740	.1260	.1043	-.0836	.5213
VAR101	-.0105	-.1422	-.0066	-.1140	.0008
VAR102	-.0236	.0635	.0667	.0490	.2050

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Correlation Matrix

	VAR011	VAR012	VAR013	VAR014	VAR018
VAR011	1.0000				
VAR012	.0347	1.0000			
VAR013	-.0178	-.3094	1.0000		
VAR014	.0209	.3560	-.3254	1.0000	
VAR018	-.0819	.1044	-.1477	.2624	1.0000
VAR019	-.0005	.2672	-.2454	.2661	.2111
VAR020	-.0647	-.0034	.0216	.0199	-.0706
VAR021	.0727	.0911	-.0976	.2185	.1247
VAR022	.1268	.0916	-.0586	.2680	.1828
VAR023	-.0351	.1719	-.1013	.2912	.1923
VAR024	.0090	-.0233	-.0883	.0041	.0130
VAR025	-.0676	.0286	.0813	.1383	-.0880
VAR026	.0357	.1424	-.1888	.1774	.0850
VAR029	.0391	.2714	-.3245	.4638	.2242

VAR030	-.1269	.1164	-.1107	.1986	.1350
VAR032	.0668	.2206	-.3332	.3468	.3363
VAR033	-.0161	.0946	-.0435	-.0542	.0438
VAR034	.0170	-.0075	.0309	.1583	.0066
VAR035	.0009	.2360	-.2288	.2950	.1369
VAR037	-.0161	.0505	-.0990	.1929	.0615
VAR038	-.0372	.1239	-.1053	.3091	.1710
VAR041	-.0365	.2148	-.2355	.3423	.1948
VAR042	.0450	.3031	-.1116	.2830	.0798
VAR044	.0408	.1680	-.0817	.1650	.1294
VAR047	.0410	.1760	-.1323	.2329	.1945
VAR048	-.0789	.0736	-.1324	.2837	.0914
VAR049	.0909	.0529	-.0317	.1297	-.0881
VAR050	.0760	.2841	-.2494	.4568	.2794
VAR051	-.0952	-.3337	.1512	-.2414	-.0961
VAR053	.0789	.0142	-.0734	.1358	-.0582
VAR054	-.0316	.1013	-.0372	.1810	.1340
VAR055	-.0426	.1297	-.0443	.3280	.0952
VAR056	.0457	.0870	-.1527	.3028	.0537
VAR057	.0901	.2355	-.2134	.3517	.2668
VAR058	-.1497	.1803	-.2019	.3307	.0716
VAR059	-.0030	.1515	-.1239	.1860	.1950
VAR060	-.0038	-.0122	.0380	.0761	.1373
VAR061	.0055	.1946	-.2424	.4525	.1271
VAR062	-.1059	.2684	-.1671	.1254	-.0523
VAR063	.0062	.0842	-.0653	.0914	-.0167
VAR065	-.0037	.1306	-.1093	.1980	.0764
VAR066	.0689	.0595	-.0280	.1210	.0882
VAR067	.0475	.3890	-.3132	.4474	.1772
VAR069	.1290	.1914	-.1441	.3012	.0803
VAR076	.0443	.2466	-.2475	.3844	.1920
VAR077	-.1086	-.1017	-.0207	-.0128	-.0555
VAR080	.0006	-.0468	-.0844	-.0287	.0465
VAR081	-.0711	.1914	-.3074	.4061	.1685
VAR082	-.0017	.1097	-.1651	.1903	-.0019
VAR085	-.0040	.2589	-.1791	.4115	.3002
VAR086	.0421	.1154	-.1085	.2598	.1849
VAR088	.1033	.3076	-.2062	.3130	.2450
VAR089	-.0645	.1163	.0471	-.0198	-.1665
VAR091	.0818	.1551	-.2873	.2763	.0879
VAR093	.1401	-.0031	-.0666	-.0332	.0522
VAR096	-.0198	.1502	-.2483	.2053	.1535
VAR097	-.0328	-.0283	-.0835	.1166	.0840
VAR098	.0923	.1391	-.1064	.4053	.1124
VAR099	.0305	-.2557	.0527	-.1823	-.0520
VAR100	-.0114	.2040	-.1879	.3888	.1500
VAR101	.1086	.1566	-.1252	.1541	.0545
VAR102	-.0172	.0384	-.0750	.0932	.0696

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Correlation Matrix

	VAR019	VAR020	VAR021	VAR022	VAR023
VAR019	1.0000				
VAR020	-.0002	1.0000			
VAR021	.1110	.0665	1.0000		
VAR022	.1685	.1200	.3309	1.0000	
VAR023	.3765	-.0276	.1091	.1094	1.0000
VAR024	.1752	-.0436	.0631	.0526	.1549
VAR025	.1129	-.0694	.0470	.0484	.1139
VAR026	.0758	.2433	.1302	.2090	.0070
VAR029	.2642	-.0530	.0754	.2412	.2407
VAR030	.0691	-.0149	.1129	.2001	.0892
VAR032	.1952	-.0867	.1366	.2637	.2088
VAR033	-.1911	.0034	.0685	-.0203	-.1821
VAR034	.1462	.1013	.1501	.1179	.2137
VAR035	.5942	-.0264	.0957	.1605	.3531
VAR037	-.1408	-.2460	.0828	-.0015	-.0656
VAR038	.2521	.0549	.0162	.1892	.1129
VAR041	.2310	-.0239	.0113	.1544	.1358

VAR042	.2596	.0119	.0438	.0935	.1653
VAR044	.0308	.0810	.0687	.1476	.1299
VAR047	.0937	.0638	.1784	.2265	.0830
VAR048	.0586	.0630	.0918	.1723	.0734
VAR049	.0351	-.0577	.0817	.0415	.0399
VAR050	.2221	-.0384	.1347	.3129	.1758
VAR051	-.0786	-.0857	-.0908	-.0394	-.0275
VAR053	.1770	-.1324	-.1246	.0970	.0170
VAR054	.1593	.1164	.0910	.2876	.0969
VAR055	.1522	-.1486	.0956	.1005	.1220
VAR056	.1593	-.1622	-.0002	.0805	.0490
VAR057	.1855	.0623	.2479	.2096	.1422
VAR058	.1433	.0466	.1172	.1211	.0937
VAR059	.0731	-.0771	.0736	-.0043	.0154
VAR060	.0675	-.0355	.1052	.2104	.0488
VAR061	.2483	-.0872	.0721	.2217	.1486
VAR062	.0090	.1362	.1085	.1664	-.0021
VAR063	-.0229	-.0285	.1014	-.0213	.0119
VAR065	.3016	-.2111	-.1229	-.0099	.1811
VAR066	.3881	-.1671	.0404	-.0445	.2402
VAR067	.2569	.0546	.2256	.2577	.2128
VAR069	.1597	-.0072	.2020	.2680	.0752
VAR076	.2827	-.0412	.1377	.2811	.1811
VAR077	.0410	.0759	.0265	.0707	.0136
VAR080	-.0441	.4004	.0986	.1135	-.0195
VAR081	.2045	.0372	.1365	.2206	.1600
VAR082	.0185	-.0141	.0196	.1275	-.0012
VAR085	.1635	.0644	.1561	.2529	.0932
VAR086	.2573	.0251	-.0172	.1620	.2086
VAR088	.2710	.0519	.1346	.2037	.1461
VAR089	-.0958	-.0549	-.0330	.0418	-.0871
VAR091	.1160	-.0507	.1062	.2273	.0480
VAR093	-.0549	-.1563	.1492	-.0377	-.0160
VAR096	.2207	.0515	.0691	.0865	.0897
VAR097	-.0115	.0313	.1137	.1561	-.0989
VAR098	.1361	.0563	.1609	.2276	.0634
VAR099	-.2229	-.1541	.0179	-.0284	-.1246
VAR100	.1490	-.2042	.0129	.1987	.0926
VAR101	-.0286	.1155	.0900	.0719	-.0390
VAR102	.0021	.0045	-.0151	.1190	.0615

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Correlation Matrix

	VAR024	VAR025	VAR026	VAR029	VAR030
VAR024	1.0000				
VAR025	.0764	1.0000			
VAR026	-.0763	-.0526	1.0000		
VAR029	.0795	.1155	.2557	1.0000	
VAR030	.0628	.0898	.1330	.3300	1.0000
VAR032	.1307	.0581	.1392	.4096	.1894
VAR033	-.3561	-.2556	-.0241	-.0124	-.1069
VAR034	.1250	.2308	.1559	.0600	.1519
VAR035	.4872	.0349	.0561	.3030	.0597
VAR037	-.1109	.0265	.0171	.1246	-.0149
VAR038	.1442	.1141	.1150	.3187	.3055
VAR041	.1054	.1039	.1254	.4099	.2708
VAR042	.1464	.1382	.0783	.2218	.0764
VAR044	-.4016	.0288	.1575	.0841	.1037
VAR047	-.2245	-.0156	.1971	.1721	.1247
VAR048	.0192	.0307	.1439	.3893	.1424
VAR049	-.0177	.0079	.0896	.0849	-.0459
VAR050	.0375	.0654	.1648	.4437	.2903
VAR051	.2531	.2040	-.1227	-.0230	.0523
VAR053	.1456	.1634	-.0869	.2401	.0570
VAR054	.0893	.0424	.2212	.1232	.2067
VAR055	.0020	.1121	.0604	.3300	-.0392
VAR056	.0469	.0449	.0459	.3077	.1322
VAR057	-.1625	.0209	.1911	.2471	.0597

VAR058	-.0002	.0870	.1066	.3337	.1952
VAR059	-.0877	-.0877	.0832	.0756	.0472
VAR060	.1383	.2334	-.0966	.1339	.2727
VAR061	.1478	.2023	.1490	.6702	.3114
VAR062	-.1163	-.1755	.1722	.1585	.0706
VAR063	-.1581	-.0638	.1222	.0484	-.1098
VAR065	.2266	.1850	-.0982	.2422	.0425
VAR066	.2192	.0929	-.0653	.1517	.0228
VAR067	-.1224	.0718	.2583	.3573	.0994
VAR069	.1078	.0915	.1004	.2258	.1162
VAR076	.1209	.1238	.1434	.3961	.0937
VAR077	.1761	.1364	.0048	.0827	.2176
VAR080	.0200	-.1157	.0732	-.0340	.0025
VAR081	-.0533	.0569	.1152	.4850	.2859
VAR082	-.0160	.0002	.0946	.1417	.0735
VAR085	-.1573	.0791	.1825	.3835	.1229
VAR086	.2284	.0992	.1082	.1799	.0855
VAR088	.0698	-.0363	.0677	.2328	.0788
VAR089	.0294	-.0956	-.0024	-.0085	-.0803
VAR091	.0178	.0761	.0493	.3932	.2666
VAR093	-.0008	-.1654	.0074	-.0065	-.1651
VAR096	.0518	.0147	.1816	.4306	.3110
VAR097	-.0739	-.0489	.0896	.1520	.0808
VAR098	.0178	.0744	.1393	.3356	.2785
VAR099	-.0660	.1252	-.0718	-.1035	.0137
VAR100	.0768	.1576	.1180	.5694	.2438
VAR101	-.6807	-.1082	.1826	.0608	-.0839
VAR102	-.2100	.1017	.0514	.1089	.0796

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Correlation Matrix

	VAR032	VAR033	VAR034	VAR035	VAR037
VAR032	1.0000				
VAR033	-.0398	1.0000			
VAR034	.0136	-.3364	1.0000		
VAR035	.2838	-.2562	.1685	1.0000	
VAR037	.0937	.2072	.0567	-.0871	1.0000
VAR038	.2192	-.2284	.1328	.2593	-.0968
VAR041	.3227	-.0925	.1303	.1756	.0295
VAR042	.2104	-.0808	.1214	.2634	.0408
VAR044	.1414	.1667	-.0134	-.1745	.0374
VAR047	.2575	.1468	.0709	-.0536	.0658
VAR048	.1992	.0857	.0290	.0843	.1418
VAR049	.0130	.0363	-.0565	.0645	.1029
VAR050	.3569	.0847	.1550	.2028	.0964
VAR051	-.0826	-.1417	-.0404	-.0037	.0073
VAR053	.0501	-.1108	.0664	.1822	.0288
VAR054	.2400	-.1312	.1247	.1783	-.0815
VAR055	.1719	.1103	.0676	.1554	.2900
VAR056	.2366	-.0804	-.0351	.1661	.0695
VAR057	.2603	.1647	.0867	.0935	.1099
VAR058	.2760	.0095	.0304	.1710	.0744
VAR059	.1394	.1430	.0519	.0381	.0588
VAR060	.1981	-.1631	.1094	.0367	-.0414
VAR061	.3748	-.1263	.1629	.2795	.1755
VAR062	.1084	.1912	-.0878	.0881	.0863
VAR063	.0678	.2053	-.0534	-.0693	.1654
VAR065	.0571	-.1458	.0548	.3299	.0052
VAR066	.1332	-.1224	.0560	.3525	.0189
VAR067	.2568	-.0263	.0726	.2063	.1063
VAR069	.1924	.0185	.1553	.1065	.0875
VAR076	.3218	-.0298	.0634	.3229	.0872
VAR077	.0237	-.2388	.0985	.0698	-.0659
VAR080	-.0351	.0137	.0433	-.0179	-.2837
VAR081	.3082	.0842	-.0008	.1965	.1527
VAR082	.0649	-.0705	.0071	.0357	.0446
VAR085	.3598	.0455	.0346	.0579	.0917
VAR086	.2151	-.1980	.0494	.3073	-.0940

VAR088	.2518	-.0754	-.0087	.2958	.0096
VAR089	-.0545	.1516	-.1217	-.0131	.1135
VAR091	.2691	.0381	.0024	.1052	.1811
VAR093	.0652	.2058	-.2226	-.0331	.1524
VAR096	.2171	-.0004	.0494	.1486	.0583
VAR097	-.0608	.0847	-.0254	-.0778	.0577
VAR098	.2883	-.0558	.0799	.2130	.0945
VAR099	-.0299	.0090	.0773	-.2563	.1820
VAR100	.3552	.0761	.0392	.1700	.2857
VAR101	.0378	.3426	-.0686	-.2782	-.0034
VAR102	.0960	.0647	-.0029	-.0643	.1301

Correlation Matrix

	VAR038	VAR041	VAR042	VAR044	VAR047
VAR038	1.0000				
VAR041	.3311	1.0000			
VAR042	.1669	.3407	1.0000		
VAR044	.0358	.1765	-.0176	1.0000	
VAR047	.0468	.2362	.0636	.4786	1.0000
VAR048	.2170	.2151	.1447	.0902	.1183
VAR049	-.0815	.1259	.0554	.1128	.0223
VAR050	.1711	.3750	.2703	.2274	.3081
VAR051	.0148	.0139	-.1695	-.1666	-.1801
VAR053	.1154	.1090	.1291	-.0461	.0021
VAR054	.1731	.1655	.1044	.1463	.1515
VAR055	.0500	.2287	.2642	.0264	.1164
VAR056	.2484	.2123	.1760	-.0082	.0695
VAR057	.0564	.2359	.1412	.3137	.2582
VAR058	.1775	.3411	.1452	.1177	.1279
VAR059	.0486	.1701	.0974	.1143	.1378
VAR060	.0904	.1603	.1829	.0266	.1760
VAR061	.3251	.4756	.2586	.0818	.1511
VAR062	.1446	.0950	.0881	.1620	.1018
VAR063	-.1157	.0141	.0060	.1380	.1825
VAR065	.1183	.1952	.2778	-.0686	-.0052
VAR066	.0917	.1063	.1462	-.0659	.0225
VAR067	.2613	.3522	.3306	.2914	.3076
VAR069	.1884	.2781	.2000	.0831	.1671
VAR076	.1967	.2860	.1536	.1841	.2131
VAR077	.1018	.0288	-.1429	-.0939	-.0333
VAR080	.0939	.0776	-.0470	.0665	.1065
VAR081	.2092	.3496	.1269	.2002	.2485
VAR082	.1093	.2364	.1705	.0013	.1813
VAR085	.2219	.3119	.1700	.2800	.2727
VAR086	.2001	.1309	.1459	.0922	.0945
VAR088	.2597	.2022	.2928	.1588	.1943
VAR089	-.0939	-.0751	-.0726	.0030	-.0618
VAR091	.1564	.3698	.1087	.1948	.1799
VAR093	-.2250	-.0770	-.0787	.0398	.0131
VAR096	.2215	.3094	.0591	.0626	.1677
VAR097	-.0645	.1443	.0358	.0857	.0594
VAR098	.4135	.2798	.1669	.0494	.1330
VAR099	-.1585	-.0279	-.1128	.0226	.0878
VAR100	.1650	.3667	.2384	.1377	.2056
VAR101	-.1284	-.0266	-.0092	.4356	.2146
VAR102	.0072	.1207	-.0769	.4179	.3492

Correlation Matrix

	VAR048	VAR049	VAR050	VAR051	VAR053
VAR048	1.0000				
VAR049	.1471	1.0000			
VAR050	.2241	.0301	1.0000		
VAR051	.0336	-.0184	-.2134	1.0000	

VAR053	.0805	.0780	.1543	.0185	1.0000
VAR054	.0713	.0066	.1643	.0113	-.0874
VAR055	.2777	.2044	.2000	-.0212	.2283
VAR056	.0901	-.0012	.2178	-.0637	.2625
VAR057	.1488	.1921	.3441	-.2792	-.0302
VAR058	.2644	.1625	.3065	-.0876	.0006
VAR059	.0637	-.0899	.1948	-.1982	.0290
VAR060	.0679	.0551	.1783	.1166	.1127
VAR061	.3445	.2117	.5041	.0181	.2357
VAR062	.1075	.0645	.0896	-.1674	-.0822
VAR063	.1318	.1628	.0155	-.1453	.0097
VAR065	.0769	.0414	.1197	.1117	.3015
VAR066	.0374	.1953	.0527	.0651	.2208
VAR067	.1255	.1963	.4168	-.2322	.1003
VAR069	.0324	.0254	.3149	-.0897	.0748
VAR076	.1346	.0708	.3314	-.0389	.1609
VAR077	.0369	.0032	.0445	.3163	.0261
VAR080	-.0657	-.0650	-.0196	-.0186	-.0109
VAR081	.2554	.1830	.4072	-.1006	.1536
VAR082	.1414	.0875	.0859	-.0758	.1320
VAR085	.2966	.0816	.3300	-.1196	-.0063
VAR086	.1451	.0021	.2031	.0787	.1392
VAR088	.0899	.0954	.2312	-.2528	.0739
VAR089	.1433	.0417	.0054	-.0016	.0334
VAR091	.3713	.2055	.4007	-.0971	.1814
VAR093	.0450	.1413	-.0640	-.0891	-.0128
VAR096	.1756	.0902	.2583	-.0095	.2150
VAR097	.1923	.1537	.1280	.0293	.1451
VAR098	.2339	.0104	.3050	-.1463	.1679
VAR099	.0260	.0058	-.0293	.2003	.0100
VAR100	.3904	.2320	.4593	.0337	.2993
VAR101	.0422	.0754	.1131	-.3623	-.0959
VAR102	.1637	.1047	.1629	.1041	.0167

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Correlation Matrix

	VAR054	VAR055	VAR056	VAR057	VAR058
VAR054	1.0000				
VAR055	-.0321	1.0000			
VAR056	.1491	.2364	1.0000		
VAR057	.1473	.1747	.1509	1.0000	
VAR058	.1693	.2603	.1655	.2864	1.0000
VAR059	-.0395	.0871	.0724	.2219	.1235
VAR060	.0877	-.0002	.0942	.0535	.0663
VAR061	.1019	.3037	.3254	.2686	.3917
VAR062	.0380	.1077	.0303	.1522	.1242
VAR063	-.2001	.1635	-.0592	.1317	.0600
VAR065	-.0690	.2500	.1980	-.0731	.0686
VAR066	-.0226	.2403	.1671	.0409	.0004
VAR067	.1336	.2580	.2227	.3776	.2867
VAR069	.0992	.1308	.1795	.2150	.1190
VAR076	.1908	.2723	.2528	.4905	.3349
VAR077	.1760	-.0895	-.0114	-.0683	.1007
VAR080	.0184	-.1710	-.0929	.0255	-.0038
VAR081	.1159	.2231	.2404	.2370	.4760
VAR082	-.0205	.1272	.1748	.0502	.1007
VAR085	.2093	.2938	.1136	.4335	.3770
VAR086	.3125	.0985	.1522	.1265	.0837
VAR088	.2325	.2020	.2526	.2477	.2124
VAR089	-.0915	.0091	-.0408	-.0456	.0242
VAR091	.0275	.1780	.1840	.2136	.4043
VAR093	-.1468	.0070	.0360	.0949	.0620
VAR096	.1045	.0900	.2185	.1287	.1804
VAR097	.0142	.1500	.1457	.0869	.0526
VAR098	.1759	.2262	.2794	.1659	.2459
VAR099	-.1440	-.0476	-.0578	.0126	-.0083
VAR100	.0177	.4514	.2502	.1778	.2420
VAR101	-.0520	.0664	.0210	.3406	.0639

VAR102	.0621	.0815	.0717	.1282	.0764
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Correlation Matrix

	VAR059	VAR060	VAR061	VAR062	VAR063
VAR059	1.0000				
VAR060	.0964	1.0000			
VAR061	.1088	.2955	1.0000		
VAR062	.0903	-.0402	.1127	1.0000	
VAR063	.0382	-.1726	.0640	.0808	1.0000
VAR065	.0366	.0848	.2087	-.1725	.0019
VAR066	-.0131	.1671	.1608	-.0453	.0797
VAR067	.1360	.0215	.3680	.2438	.0928
VAR069	.0843	.0669	.2527	-.0065	-.0085
VAR076	.1823	.1058	.3892	.0905	.0300
VAR077	-.0849	.2435	.0924	-.0920	-.0824
VAR080	-.0322	.0219	-.0904	.0897	-.0658
VAR081	.1568	.1388	.5317	.2439	.1150
VAR082	.1518	.0347	.1326	.0368	.0084
VAR085	.2310	.1306	.3504	.1535	.1048
VAR086	.0506	.1314	.1880	-.0238	-.1632
VAR088	.1975	.0894	.2156	.1707	-.0563
VAR089	.0730	-.0957	.0223	.3323	.0932
VAR091	.1297	.1679	.5079	.1288	.1271
VAR093	.0486	-.0629	-.0193	-.0507	.3731
VAR096	.1217	.1848	.3732	.1542	.0031
VAR097	.0744	.0257	.0683	.0228	.0591
VAR098	.0865	.0615	.3192	.0591	.0196
VAR099	-.0755	.1854	-.0342	-.1663	.1401
VAR100	.1031	.2230	.6368	.1106	.1084
VAR101	.2096	-.1176	-.0663	.1971	.1453
VAR102	.1443	.1209	.1303	-.0249	.0645

Correlation Matrix

	VAR065	VAR066	VAR067	VAR069	VAR076
VAR065	1.0000				
VAR066	.3648	1.0000			
VAR067	.1310	-.0101	1.0000		
VAR069	.0901	-.0416	.2524	1.0000	
VAR076	.1773	.1832	.3278	.1962	1.0000
VAR077	-.0167	.0928	-.1007	.0024	.0941
VAR080	-.0898	-.1279	.0100	.1504	-.0206
VAR081	.0832	.0628	.3773	.1397	.3580
VAR082	.1947	-.0148	.1715	.0218	.1432
VAR085	.0918	.0884	.3432	.1744	.4846
VAR086	.2033	.2334	.0876	.1130	.2639
VAR088	.1453	.1854	.3483	.1927	.2773
VAR089	-.0503	-.0276	-.0632	-.0536	.0229
VAR091	.1091	.0512	.2816	.1615	.3044
VAR093	-.0758	.0850	-.0349	-.0174	.0114
VAR096	.1508	.0989	.2039	.0846	.2203
VAR097	.0600	.0061	.0928	.0543	.0105
VAR098	.0813	.0259	.2756	.2814	.3129
VAR099	-.0502	.0070	-.1519	-.0367	-.0652
VAR100	.2920	.2490	.2413	.2349	.3349
VAR101	-.1687	-.2056	.2735	.0016	.0746
VAR102	.0866	-.0112	.1523	.0772	.1509

Correlation Matrix

	VAR077	VAR080	VAR081	VAR082	VAR085
VAR077	1.0000				
VAR080	-.0034	1.0000			
VAR081	.0341	.0587	1.0000		
VAR082	-.0828	.0439	.1605	1.0000	
VAR085	.0805	-.0048	.2745	.0611	1.0000
VAR086	.1136	.0070	.1037	.0593	.2287
VAR088	-.0768	.0855	.2126	.0448	.3275
VAR089	-.1331	-.0345	.0276	-.0561	-.0069
VAR091	.0793	.0119	.5436	.1725	.2405
VAR093	-.0128	-.0335	.1001	.0181	-.0669
VAR096	.0491	.0811	.4708	.1748	.2152
VAR097	.0237	.1721	.1237	.1080	.0194
VAR098	.0236	-.0087	.3373	.2300	.2583
VAR099	.0818	-.0214	.0358	.0329	-.1434
VAR100	.0038	-.1469	.4052	.1472	.2873
VAR101	-.1704	.0658	.0910	.0119	.2851
VAR102	.0385	-.0311	.1588	.0350	.0754

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Correlation Matrix

	VAR086	VAR088	VAR089	VAR091	VAR093
VAR086	1.0000				
VAR088	.3161	1.0000			
VAR089	-.0439	-.0830	1.0000		
VAR091	.0450	.1037	.1502	1.0000	
VAR093	-.1510	.0106	.0396	.2412	1.0000
VAR096	.1584	.2473	-.0411	.3404	.0080
VAR097	-.0320	.0777	-.0248	.1391	.1392
VAR098	.1405	.1923	-.0637	.2396	-.0381
VAR099	-.2180	-.2584	-.0429	.1222	.2062
VAR100	.1789	.1567	.1311	.4071	.0070
VAR101	-.1308	.0752	.0105	.0340	.0292
VAR102	.0681	.0584	.0637	.1614	.0032

Correlation Matrix

	VAR096	VAR097	VAR098	VAR099	VAR100
VAR096	1.0000				
VAR097	.1007	1.0000			
VAR098	.2604	-.0082	1.0000		
VAR099	-.0466	.0300	-.1171	1.0000	
VAR100	.3288	.1869	.2535	.0421	1.0000
VAR101	.0187	.1292	.0561	-.0687	-.0922
VAR102	.0023	.0983	.1238	.1202	.2070

Correlation Matrix

	VAR101	VAR102
VAR101	1.0000	
VAR102	.1491	1.0000

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR001	240.6622	835.5130	.5740	.5538	.8694
VAR002	239.8662	878.9485	-.0265	.3545	.8767
VAR003	240.9866	837.6106	.5553	.6549	.8697
VAR004	240.3779	843.8064	.4188	.5026	.8712
VAR005	240.7826	865.2915	.1838	.3077	.8740
VAR006	239.9164	854.5064	.2160	.3686	.8742
VAR007	239.3612	867.6812	.1388	.3572	.8746
VAR008	240.4749	865.3844	.1047	.2414	.8759
VAR009	240.6689	882.5779	-.0737	.3908	.8773
VAR010	239.7057	832.3628	.5595	.5513	.8693
VAR011	241.1037	874.4288	.0302	.3159	.8761
VAR012	240.5418	851.7994	.3519	.4415	.8721
VAR013	239.1806	904.1082	-.3801	.4516	.8802
VAR014	240.4716	828.0890	.6405	.6164	.8684
VAR018	241.6689	853.7726	.2843	.4155	.8729
VAR019	241.2642	846.3628	.3862	.5877	.8716
VAR020	240.3211	879.9301	-.0401	.4380	.8775
VAR021	240.9030	861.2758	.2362	.3662	.8735
VAR022	240.2308	847.8627	.4078	.4640	.8715
VAR023	239.8562	851.8954	.2743	.3856	.8731
VAR024	240.0502	868.8599	.0715	.6947	.8764
VAR025	239.5819	866.6669	.1513	.3737	.8744
VAR026	239.9498	857.0814	.2509	.3865	.8734
VAR029	240.7224	827.0468	.6689	.6828	.8681
VAR030	240.5518	847.7918	.3130	.4378	.8726
VAR032	240.9130	836.2810	.4923	.4887	.8701
VAR033	240.9030	882.8530	-.0759	.5357	.8775
VAR034	240.0903	865.2703	.1697	.4248	.8742
VAR035	240.7324	846.7000	.3822	.6770	.8717
VAR037	240.1839	867.4191	.1413	.4235	.8746
VAR038	240.8027	847.3401	.3646	.4970	.8719
VAR041	239.8462	835.5669	.5297	.4932	.8697
VAR042	240.6522	848.8451	.3546	.4537	.8720
VAR044	240.4013	858.9525	.2510	.5634	.8733
VAR047	240.3813	853.6461	.3585	.4888	.8722
VAR048	240.2910	851.3345	.3984	.4503	.8718
VAR049	240.2040	859.8072	.2188	.4139	.8738
VAR050	240.6054	836.1457	.5877	.5748	.8694
VAR051	239.2977	886.5386	-.1330	.5246	.8776
VAR053	240.4247	856.2049	.2537	.3663	.8733
VAR054	239.8462	861.3118	.2345	.4357	.8735
VAR055	239.2274	848.9078	.4205	.5053	.8714
VAR056	241.3278	850.8117	.3510	.3810	.8721
VAR057	241.1104	847.2864	.4320	.5552	.8713
VAR058	240.5050	843.5327	.4366	.4454	.8710
VAR059	241.5619	862.0188	.2236	.3733	.8736
VAR060	240.5151	856.4989	.2563	.4438	.8733
VAR061	240.5418	822.8263	.6728	.7406	.8677
VAR062	241.1572	865.4752	.1654	.4576	.8743
VAR063	240.6288	870.7913	.0939	.3650	.8751
VAR065	240.3278	857.9056	.2779	.4628	.8730
VAR066	240.6923	857.6567	.2554	.4752	.8733
VAR067	240.8094	838.3427	.5246	.5508	.8700
VAR069	240.2542	853.6466	.3426	.4096	.8723
VAR076	240.4013	836.3350	.5638	.6125	.8696
VAR077	240.1672	872.7370	.0558	.4018	.8757
VAR080	240.8194	876.3767	.0042	.3906	.8766
VAR081	241.0803	836.9130	.5759	.6366	.8695
VAR082	240.9498	860.1149	.2114	.3204	.8739
VAR085	240.6722	835.8452	.5113	.5914	.8699
VAR086	240.6187	853.9615	.3222	.4021	.8725
VAR088	240.8027	848.1187	.4141	.5122	.8714
VAR089	240.4381	879.3074	-.0316	.3790	.8769

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR091	241.0602	841.8487	.5192	.6253	.8703
VAR093	240.7291	875.9566	.0189	.4793	.8759
VAR096	241.0669	848.2707	.4249	.4951	.8714
VAR097	240.4649	862.5986	.1803	.3415	.8743
VAR098	240.9732	843.7442	.4537	.5106	.8709
VAR099	239.8495	883.6115	-.0918	.4327	.8771
VAR100	239.9900	832.5670	.6062	.7032	.8690
VAR101	241.0836	873.1507	.0437	.6943	.8761
VAR102	239.8997	860.8221	.2269	.4485	.8736

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RELIABILITY ANALYSIS - SCALE (ALPHA)

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	3636.4257	298	12.2028		
Within People	38392.8333	21229	1.8085		
Between Measures	6004.9781	71	84.5772	55.2517	.0000
Residual	32387.8553	21158	1.5308		
Total	42029.2590	21527	1.9524		
Grand Mean	3.3870				

Intraclass Correlation Coefficient

Two-Way Mixed Effect Model (Consistency Definition):

People Effect Random, Measure Effect Fixed

Single Measure Intraclass Correlation = .0883*

95.00% C.I.: Lower = .0748 Upper = .1049

F = 7.9717 DF = (298, 21158) Sig. = .0000 (Test Value = .0000)

Average Measure Intraclass Correlation = .8746**

95.00% C.I.: Lower = .8535 Upper = .8940

F = 7.9717 DF = (298, 21158) Sig. = .0000 (Test Value = .0000)

*: Notice that the same estimator is used whether the interaction effect is present or not.

**: This estimate is computed if the interaction effect is absent, otherwise ICC is not estimable.

Reliability Coefficients 72 items

Alpha = .8746 Standardized item alpha = .8764

Figure 5: Scree Plot for third analysis of initial administration

Figure 6: Rotated component matrix for third analysis of initial administration data

Rotated Component Matrix															
	Component														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VAR02	.631														
VAR06	.555														
VAR00	.518														
VAR08	.511														
VAR10	.482							.329							
VAR09	.430					.300				.313					
VAR05	.356						.336								
VAR08		.668													
VAR07		.658													
VAR00		.516		.331						.328					
VAR05		.501													
VAR05		.498					.313								
VAR02			.802												
VAR10			-.771												
VAR03			-.362												
VAR01				.691											
VAR02				.607											
VAR06				.589											
VAR03			.471	.556	.315										
VAR08				.374											
VAR01					.644										
VAR01					-.551										
VAR05			.387		-.468										
VAR06					.407										
VAR01		.310			.384										
VAR09						.342									
VAR03						.727									
VAR08						.610									
VAR02						.505									
VAR02							.710								
VAR02							.609								
VAR06							.468								
VAR03									.304						
VAR00								.704							
VAR00								.605							
VAR01	.387							.496							
VAR05		.411						.414							
VAR04										.691					
VAR04										.590					
VAR05															
VAR05						.301				.766					
VAR06				.317						.546					
VAR10									.364	.385					
VAR04			-.550								.831				
VAR04											.577				
VAR08											.497				
VAR02												-.777			
VAR03												-.723			
VAR09												.535			
VAR06													.717		
VAR09													.701		
VAR06													.401	.304	
VAR07														.679	
VAR03	.407					.376								.604	
VAR05														.423	
VAR01				.328											.651
VAR02															.579
														.352	-.545

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 57 iterations.

Figure 7: Reliability analysis for third analysis of initial administration data

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)				
		Mean	Std Dev	Cases
1.	VAR001	3.1857	1.2451	307.0
2.	VAR003	2.8730	1.2208	307.0
3.	VAR004	3.4984	1.3585	307.0
4.	VAR007	4.5147	1.1669	307.0
5.	VAR010	4.1792	1.3734	307.0
6.	VAR012	3.3160	1.2239	307.0
7.	VAR013	4.6808	1.1698	307.0
8.	VAR014	3.4137	1.3388	307.0
9.	VAR018	2.2052	1.3792	307.0
10.	VAR019	2.5896	1.3410	307.0
11.	VAR020	3.5505	1.4929	307.0
12.	VAR021	2.9674	1.1542	307.0
13.	VAR022	3.6482	1.2287	307.0
14.	VAR023	4.0228	1.5155	307.0
15.	VAR024	3.8241	1.6494	307.0
16.	VAR025	4.2932	1.1849	307.0
17.	VAR029	3.1368	1.2938	307.0
18.	VAR030	3.3257	1.5545	307.0
19.	VAR032	2.9642	1.4126	307.0
20.	VAR033	2.9642	1.3535	307.0
21.	VAR035	3.1466	1.3509	307.0
22.	VAR037	3.6678	1.1801	307.0
23.	VAR038	3.0749	1.3830	307.0
24.	VAR041	4.0358	1.3463	307.0
25.	VAR042	3.2085	1.3463	307.0
26.	VAR044	3.4853	1.2297	307.0
27.	VAR047	3.4853	1.1328	307.0
28.	VAR050	3.2704	1.1999	307.0
29.	VAR051	4.5635	1.1681	307.0
30.	VAR053	3.4169	1.3893	307.0
31.	VAR055	4.6221	1.1578	307.0
32.	VAR056	2.5309	1.2712	307.0
33.	VAR057	2.7524	1.1815	307.0
34.	VAR058	3.3713	1.3132	307.0
35.	VAR059	2.2997	1.1638	307.0
36.	VAR060	3.3355	1.3533	307.0
37.	VAR061	3.3322	1.3934	307.0
38.	VAR063	3.2378	1.1711	307.0
39.	VAR065	3.5244	1.1834	307.0
40.	VAR066	3.1694	1.2900	307.0
41.	VAR067	3.0586	1.2615	307.0
42.	VAR069	3.6156	1.1697	307.0
43.	VAR076	3.4691	1.2504	307.0
44.	VAR077	3.7134	1.2793	307.0
45.	VAR080	3.0391	1.3690	307.0
46.	VAR081	2.7850	1.1961	307.0
47.	VAR082	2.9283	1.3533	307.0
48.	VAR085	3.1889	1.3708	307.0
49.	VAR086	3.2541	1.2237	307.0
50.	VAR093	3.1368	1.1579	307.0
51.	VAR096	2.7883	1.1677	307.0
52.	VAR098	2.9153	1.2652	307.0
53.	VAR099	4.0293	1.1670	307.0
54.	VAR100	3.8762	1.2619	307.0
55.	VAR101	2.7752	1.3690	307.0
56.	VAR102	3.9772	1.2192	307.0

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR001	VAR003	VAR004	VAR007	VAR010
VAR001	1.0000				
VAR003	.3080	1.0000			
VAR004	.2813	.2472	1.0000		
VAR007	.0600	.0185	.2561	1.0000	
VAR010	.4525	.2651	.4564	.2094	1.0000
VAR012	.2895	.3266	.1212	.0597	.1879
VAR013	-.2194	-.2116	-.1134	-.0732	-.2267
VAR014	.4007	.4921	.3373	.1122	.4039
VAR018	.1756	.1902	.1633	-.0415	.1030
VAR019	.2219	.4152	.1216	.1605	.1696
VAR020	-.0270	-.0781	-.1905	.0619	-.0387
VAR021	.0724	.1594	.0229	-.0239	.0532
VAR022	.2329	.2446	.1347	-.0397	.2001
VAR023	.2263	.1729	.0738	.1541	.1393
VAR024	.0478	.1593	.0232	.0998	.0630
VAR025	.1247	-.0307	.1160	.2545	.1484
VAR029	.5745	.3710	.3906	.0809	.4754
VAR030	.2388	.0374	.1829	.0100	.2405
VAR032	.3364	.2608	.1388	.0410	.2543
VAR033	.0350	-.0008	-.0347	-.1559	-.0704
VAR035	.2558	.4988	.1524	.1303	.1954
VAR037	.0888	.0613	.1790	-.0154	.2083
VAR038	.2025	.2128	.1697	.0894	.2355
VAR041	.3391	.2672	.1546	.0215	.3288
VAR042	.1250	.2548	.1521	.1291	.2537
VAR044	.1053	.0173	.0562	.0053	.1515
VAR047	.1908	.1203	.0228	.0107	.1813
VAR050	.3841	.2845	.2499	.0357	.3215
VAR051	.0402	-.1605	-.0355	.0646	.0021
VAR053	.1497	.1893	.2532	.1333	.2519
VAR055	.2664	.3706	.3217	.1372	.3346
VAR056	.2452	.3216	.1642	.0487	.1980
VAR057	.2490	.3633	.0629	-.1680	.1704
VAR058	.3095	.2884	.1451	.0284	.2384
VAR059	.1442	.1672	.0913	.0160	.0072
VAR060	.1568	.0714	.1025	.1407	.1785
VAR061	.5558	.3803	.3663	.0834	.5050
VAR063	.0122	.1058	.0650	-.0061	.0994
VAR065	.2109	.2227	.2617	.1707	.1974
VAR066	.0678	.2669	.1922	.1764	.1396
VAR067	.2968	.3316	.1869	.0505	.2542
VAR069	.2399	.1305	.0222	-.0222	.1895
VAR076	.3322	.5315	.1678	.0423	.2287
VAR077	.0848	-.0736	-.0680	.0028	.1056
VAR080	-.0484	-.0342	-.1458	.0099	-.0020
VAR081	.4218	.3639	.2069	-.0071	.3179
VAR082	.0603	.1685	.1333	.0421	.1089
VAR085	.3757	.3952	.1932	.0085	.2805
VAR086	.2413	.2886	.2047	.1484	.1673
VAR093	-.0222	.0563	.0417	-.1490	.0400
VAR096	.2811	.2195	.1430	.0658	.2173
VAR098	.2673	.2554	.2091	.0518	.2100
VAR099	-.0915	-.1602	.0237	-.1455	.0273
VAR100	.4306	.3355	.4745	.1277	.5088
VAR101	.0399	.0220	-.0063	-.1401	-.0150
VAR102	.2181	.0244	.1292	.0611	.1996

Correlation Matrix

	VAR012	VAR013	VAR014	VAR018	VAR019
VAR012	1.0000				
VAR013	-.3105	1.0000			
VAR014	.3428	-.3140	1.0000		
VAR018	.0912	-.1436	.2689	1.0000	
VAR019	.2664	-.2442	.2569	.2065	1.0000
VAR020	-.0025	.0242	.0034	-.0852	-.0108
VAR021	.0883	-.1118	.1991	.1253	.1138
VAR022	.0850	-.0602	.2397	.1719	.1640
VAR023	.1635	-.1010	.2981	.1947	.3712
VAR024	-.0209	-.0953	-.0039	.0102	.1771
VAR025	.0238	.0819	.1314	-.0829	.1006
VAR029	.2739	-.3273	.4577	.2205	.2698
VAR030	.1158	-.1080	.2004	.1410	.0643
VAR032	.2145	-.3352	.3137	.3208	.1906
VAR033	.0897	-.0403	-.0351	.0460	-.1738
VAR035	.2289	-.2309	.2790	.1311	.5889
VAR037	.0548	-.0960	.1762	.0621	-.1278
VAR038	.1231	-.1023	.3097	.1650	.2369
VAR041	.2113	-.2417	.3381	.1879	.2326
VAR042	.3010	-.1091	.2675	.0737	.2629
VAR044	.1562	-.0760	.1714	.1299	.0201
VAR047	.1742	-.1268	.2313	.1996	.0950
VAR050	.2732	-.2480	.4591	.2902	.2215
VAR051	-.3238	.1416	-.2415	-.1004	-.0772
VAR053	.0261	-.0626	.1336	-.0619	.1763
VAR055	.1376	-.0435	.2951	.0835	.1482
VAR056	.0977	-.1516	.2968	.0439	.1628
VAR057	.2373	-.2158	.3459	.2679	.1894
VAR058	.1789	-.2098	.3027	.0679	.1388
VAR059	.1467	-.1239	.1824	.2059	.0770
VAR060	-.0109	.0307	.0584	.1398	.0743
VAR061	.1931	-.2515	.4446	.1294	.2481
VAR063	.0842	-.0780	.0684	-.0182	-.0188
VAR065	.1312	-.1100	.1885	.0760	.3090
VAR066	.0488	-.0312	.1031	.0888	.3879
VAR067	.3859	-.3018	.4384	.1677	.2519
VAR069	.1833	-.1401	.2876	.0896	.1533
VAR076	.2424	-.2525	.3737	.1998	.2789
VAR077	-.1131	-.0089	-.0030	-.0406	.0322
VAR080	-.0406	-.0779	-.0356	.0321	-.0393
VAR081	.1939	-.3108	.3945	.1695	.2036
VAR082	.1064	-.1487	.2058	-.0044	.0108
VAR085	.2584	-.1864	.3918	.2940	.1650
VAR086	.1077	-.1075	.2488	.1762	.2490
VAR093	-.0075	-.0714	-.0493	.0519	-.0521
VAR096	.1567	-.2530	.1816	.1468	.2198
VAR098	.1271	-.0956	.4182	.1205	.1239
VAR099	-.2582	.0524	-.1814	-.0565	-.2283
VAR100	.1989	-.1862	.3805	.1536	.1437
VAR101	.1498	-.1143	.1525	.0591	-.0326
VAR102	.0289	-.0693	.0959	.0728	-.0057

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Correlation Matrix

	VAR020	VAR021	VAR022	VAR023	VAR024
VAR020	1.0000				
VAR021	.0560	1.0000			
VAR022	.1202	.3329	1.0000		
VAR023	-.0258	.1088	.1008	1.0000	
VAR024	-.0508	.0759	.0645	.1493	1.0000
VAR025	-.0564	.0381	.0509	.1036	.0716
VAR029	-.0730	.0818	.2318	.2334	.0848
VAR030	-.0254	.1061	.1971	.0801	.0670

VAR032	-.0743	.1496	.2751	.2049	.1389
VAR033	-.0258	.0683	-.0155	-.1748	-.3351
VAR035	-.0337	.1079	.1729	.3479	.4956
VAR037	-.2613	.0856	.0025	-.0762	-.0973
VAR038	.0686	.0036	.1771	.1114	.1276
VAR041	-.0342	.0260	.1598	.1405	.1191
VAR042	.0045	.0464	.0958	.1626	.1549
VAR044	.0943	.0595	.1437	.1396	-.4009
VAR047	.0425	.1721	.2193	.0773	-.2095
VAR050	-.0542	.1385	.3041	.1817	.0406
VAR051	-.0792	-.0833	-.0390	-.0313	.2518
VAR053	-.1362	-.1403	.0824	.0001	.1348
VAR055	-.1364	.0886	.0969	.1018	.0010
VAR056	-.1666	-.0038	.0760	.0429	.0494
VAR057	.0423	.2505	.2032	.1382	-.1532
VAR058	.0504	.1331	.1298	.0926	.0106
VAR059	-.0934	.0827	-.0106	.0202	-.0831
VAR060	-.0464	.1200	.2048	.0472	.1407
VAR061	-.1008	.0860	.2193	.1450	.1521
VAR063	-.0340	.1194	-.0053	.0006	-.1356
VAR065	-.2250	-.1119	-.0098	.1737	.2332
VAR066	-.1691	.0542	-.0324	.2337	.2245
VAR067	.0574	.2078	.2537	.2061	-.1254
VAR069	-.0076	.1989	.2649	.0713	.1071
VAR076	-.0582	.1465	.2758	.1702	.1289
VAR077	.0778	.0158	.0687	.0202	.1665
VAR080	.3940	.0918	.1131	-.0178	.0219
VAR081	.0299	.1417	.2152	.1559	-.0507
VAR082	-.0079	-.0057	.1165	.0008	-.0306
VAR085	.0592	.1650	.2511	.0876	-.1500
VAR086	.0395	-.0173	.1618	.2083	.2181
VAR093	-.1515	.1598	-.0258	-.0185	.0109
VAR096	.0465	.0773	.0869	.0748	.0587
VAR098	.0576	.1413	.2141	.0743	.0054
VAR099	-.1275	.0153	-.0201	-.1186	-.0686
VAR100	-.1996	.0107	.1910	.0869	.0696
VAR101	.1199	.0760	.0597	-.0369	-.6847
VAR102	.0177	-.0214	.1146	.0675	-.2116

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Correlation Matrix

	VAR025	VAR029	VAR030	VAR032	VAR033
VAR025	1.0000				
VAR029	.1038	1.0000			
VAR030	.1006	.3255	1.0000		
VAR032	.0532	.3943	.1780	1.0000	
VAR033	-.2624	.0084	-.1001	-.0451	1.0000
VAR035	.0282	.3007	.0612	.2905	-.2313
VAR037	.0138	.1347	-.0049	.0889	.2196
VAR038	.1262	.3047	.2987	.2071	-.2377
VAR041	.0917	.4118	.2646	.3237	-.0692
VAR042	.1234	.2200	.0768	.2101	-.0658
VAR044	.0366	.0670	.1000	.1399	.1499
VAR047	-.0163	.1731	.1419	.2437	.1542
VAR050	.0590	.4413	.2908	.3470	.0945
VAR051	.2061	-.0187	.0498	-.0788	-.1463
VAR053	.1637	.2427	.0670	.0276	-.0998
VAR055	.1215	.3204	-.0313	.1655	.0893
VAR056	.0330	.3133	.1321	.2272	-.0649
VAR057	.0100	.2552	.0654	.2531	.1722
VAR058	.0789	.3220	.1887	.2891	-.0017
VAR059	-.1042	.0790	.0470	.1358	.1438
VAR060	.2075	.1361	.2586	.2012	-.1558
VAR061	.1942	.6726	.3059	.3680	-.1098
VAR063	-.0504	.0561	-.0983	.0783	.1971
VAR065	.1720	.2518	.0454	.0523	-.1208
VAR066	.0936	.1525	.0180	.1378	-.1088
VAR067	.0737	.3495	.1002	.2469	-.0217

VAR069	.1004	.2141	.1248	.1894	.0078
VAR076	.1319	.3985	.1094	.3111	-.0248
VAR077	.1419	.0652	.2197	.0196	-.2362
VAR080	-.1300	-.0362	-.0060	-.0297	.0202
VAR081	.0515	.4836	.2838	.3049	.0800
VAR082	.0050	.1344	.0733	.0482	-.0621
VAR085	.0805	.3852	.1198	.3579	.0424
VAR086	.1062	.1699	.0732	.2151	-.2017
VAR093	-.1532	-.0082	-.1592	.0749	.1950
VAR096	.0214	.4281	.3118	.2153	-.0090
VAR098	.0777	.3185	.2750	.2708	-.0533
VAR099	.1379	-.1152	.0073	-.0212	-.0076
VAR100	.1686	.5608	.2439	.3422	.0663
VAR101	-.1003	.0506	-.0853	.0279	.3201
VAR102	.1155	.0931	.0798	.0925	.0490

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Correlation Matrix

	VAR035	VAR037	VAR038	VAR041	VAR042
VAR035	1.0000				
VAR037	-.0760	1.0000			
VAR038	.2355	-.1149	1.0000		
VAR041	.1930	.0322	.3110	1.0000	
VAR042	.2724	.0540	.1443	.3438	1.0000
VAR044	-.1728	.0146	.0477	.1711	-.0238
VAR047	-.0424	.0844	.0309	.2350	.0770
VAR050	.2053	.0983	.1611	.3763	.2684
VAR051	-.0049	.0035	.0183	.0141	-.1705
VAR053	.1624	.0429	.1164	.0916	.1246
VAR055	.1421	.2881	.0524	.2079	.2562
VAR056	.1639	.0809	.2394	.2123	.1795
VAR057	.0965	.1236	.0454	.2377	.1455
VAR058	.1774	.0736	.1664	.3400	.1465
VAR059	.0385	.0727	.0327	.1662	.1018
VAR060	.0392	-.0241	.0703	.1566	.1857
VAR061	.2779	.1747	.3177	.4762	.2469
VAR063	-.0510	.1685	-.1220	.0257	.0099
VAR065	.3340	.0246	.0957	.2015	.2860
VAR066	.3570	.0221	.0753	.1132	.1471
VAR067	.1982	.1031	.2635	.3413	.3237
VAR069	.1040	.0871	.1835	.2661	.1963
VAR076	.3209	.0949	.1875	.2851	.1494
VAR077	.0660	-.0720	.1027	.0212	-.1417
VAR080	-.0119	-.2691	.0813	.0790	-.0328
VAR081	.1915	.1553	.2053	.3437	.1233
VAR082	.0201	.0321	.1268	.2202	.1535
VAR085	.0591	.0915	.2166	.3097	.1645
VAR086	.2957	-.1111	.2089	.1254	.1304
VAR093	-.0191	.1506	-.2309	-.0681	-.0708
VAR096	.1461	.0674	.2122	.3000	.0593
VAR098	.1985	.0752	.4183	.2685	.1524
VAR099	-.2515	.1542	-.1411	-.0298	-.1204
VAR100	.1564	.2729	.1739	.3508	.2211
VAR101	-.2896	-.0120	-.1154	-.0435	-.0188
VAR102	-.0654	.1083	.0165	.1140	-.0807

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Correlation Matrix

	VAR044	VAR047	VAR050	VAR051	VAR053
VAR044	1.0000				
VAR047	.4591	1.0000			
VAR050	.2253	.3119	1.0000		
VAR051	-.1683	-.1827	-.2163	1.0000	
VAR053	-.0595	.0122	.1419	.0199	1.0000
VAR055	.0145	.1154	.1820	-.0112	.2405

VAR056	-.0190	.0746	.2120	-.0635	.2702
VAR057	.2967	.2659	.3470	-.2774	-.0245
VAR058	.1147	.1245	.3011	-.0836	-.0189
VAR059	.1036	.1471	.2039	-.2016	.0215
VAR060	.0118	.1748	.1794	.1136	.1009
VAR061	.0715	.1439	.5012	.0231	.2253
VAR063	.1216	.1812	.0146	-.1293	.0051
VAR065	-.0834	.0094	.1231	.1118	.2999
VAR066	-.0705	.0196	.0548	.0687	.2030
VAR067	.2892	.3002	.4062	-.2332	.1091
VAR069	.0847	.1733	.3141	-.0897	.0708
VAR076	.1703	.2217	.3334	-.0317	.1598
VAR077	-.0754	-.0255	.0507	.3009	.0178
VAR080	.0625	.1057	-.0244	-.0240	-.0103
VAR081	.1912	.2461	.4049	-.0978	.1505
VAR082	.0131	.1677	.0804	-.0819	.1411
VAR085	.2672	.2627	.3245	-.1096	-.0072
VAR086	.1002	.0711	.1934	.0824	.1259
VAR093	.0358	.0165	-.0620	-.0813	-.0234
VAR096	.0468	.1693	.2486	.0015	.2178
VAR098	.0685	.1268	.3058	-.1534	.1577
VAR099	.0379	.0683	-.0360	.2012	-.0035
VAR100	.1357	.1953	.4517	.0386	.2979
VAR101	.4339	.2033	.1087	-.3599	-.0880
VAR102	.4259	.3369	.1606	.1031	.0076

Correlation Matrix

	VAR055	VAR056	VAR057	VAR058	VAR059
VAR055	1.0000				
VAR056	.2345	1.0000			
VAR057	.1703	.1574	1.0000		
VAR058	.2538	.1595	.2848	1.0000	
VAR059	.0770	.0732	.2324	.1301	1.0000
VAR060	-.0002	.0937	.0644	.0786	.1185
VAR061	.2908	.3226	.2724	.3860	.1097
VAR063	.1701	-.0609	.1324	.0699	.0315
VAR065	.2453	.2010	-.0611	.0635	.0421
VAR066	.2312	.1542	.0383	.0013	-.0165
VAR067	.2546	.2251	.3694	.2729	.1238
VAR069	.1337	.1685	.2123	.1209	.0873
VAR076	.2718	.2458	.4903	.3294	.1816
VAR077	-.0954	-.0227	-.0730	.0947	-.0804
VAR080	-.1700	-.0814	.0262	-.0008	-.0279
VAR081	.2220	.2408	.2420	.4754	.1638
VAR082	.1161	.1761	.0420	.0794	.1340
VAR085	.2943	.1110	.4305	.3748	.2245
VAR086	.0934	.1399	.1115	.0794	.0336
VAR093	.0119	.0260	.0917	.0696	.0447
VAR096	.1074	.2169	.1324	.1836	.1190
VAR098	.2034	.2678	.1564	.2295	.0817
VAR099	-.0474	-.0700	-.0042	-.0071	-.0931
VAR100	.4488	.2408	.1723	.2310	.0943
VAR101	.0679	.0143	.3292	.0538	.2045
VAR102	.0772	.0563	.1140	.0706	.1292

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Correlation Matrix

	VAR060	VAR061	VAR063	VAR065	VAR066
VAR060	1.0000				
VAR061	.2925	1.0000			
VAR063	-.1619	.0756	1.0000		
VAR065	.0918	.2091	.0158	1.0000	
VAR066	.1676	.1631	.0987	.3698	1.0000
VAR067	.0095	.3570	.0812	.1238	-.0182

VAR069	.0673	.2430	-.0022	.0871	-.0390
VAR076	.1056	.3942	.0530	.1844	.1876
VAR077	.2294	.0774	-.0918	-.0256	.0869
VAR080	.0264	-.0993	-.0751	-.0853	-.1314
VAR081	.1456	.5312	.1159	.0822	.0576
VAR082	.0114	.1253	-.0181	.1725	-.0342
VAR085	.1331	.3554	.1185	.0959	.0964
VAR086	.1181	.1861	-.1586	.1875	.2335
VAR093	-.0565	-.0181	.3856	-.0645	.1026
VAR096	.1878	.3708	.0250	.1563	.1020
VAR098	.0434	.3071	-.0040	.0625	.0108
VAR099	.1655	-.0382	.1384	-.0632	.0119
VAR100	.2119	.6312	.1106	.2821	.2458
VAR101	-.1179	-.0738	.1272	-.1751	-.2078
VAR102	.1037	.1180	.0610	.0763	-.0079

Correlation Matrix

VAR067	1.0000				
VAR069	.2457	1.0000			
VAR076	.3140	.2019	1.0000		
VAR077	-.0969	.0135	.0884	1.0000	
VAR080	.0138	.1400	-.0375	-.0066	1.0000
VAR081	.3701	.1393	.3582	.0279	.0550
VAR082	.1843	.0135	.1242	-.0723	.0438
VAR085	.3337	.1718	.4858	.0683	-.0127
VAR086	.0877	.1073	.2508	.1114	-.0001
VAR093	-.0435	-.0093	.0232	-.0132	-.0384
VAR096	.1948	.0886	.2316	.0358	.0727
VAR098	.2775	.2761	.2958	.0415	-.0132
VAR099	-.1477	-.0348	-.0699	.0866	-.0273
VAR100	.2386	.2356	.3372	.0043	-.1599
VAR101	.2726	.0051	.0656	-.1582	.0605
VAR102	.1496	.0832	.1464	.0524	-.0386

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Correlation Matrix

	VAR081	VAR082	VAR085	VAR086	VAR093
VAR081	1.0000				
VAR082	.1520	1.0000			
VAR085	.2760	.0478	1.0000		
VAR086	.0977	.0643	.2285	1.0000	
VAR093	.0968	-.0062	-.0575	-.1469	1.0000
VAR096	.4703	.1517	.2231	.1498	.0191
VAR098	.3270	.2484	.2410	.1427	-.0523
VAR099	.0279	.0365	-.1403	-.1952	.2074
VAR100	.4023	.1479	.2894	.1834	.0072
VAR101	.0881	.0213	.2769	-.1238	.0215
VAR102	.1490	.0366	.0710	.0762	.0092

Correlation Matrix

	VAR096	VAR098	VAR099	VAR100	VAR101
VAR096	1.0000				
VAR098	.2334	1.0000			
VAR099	-.0506	-.1068	1.0000		
VAR100	.3281	.2513	.0469	1.0000	
VAR101	.0131	.0644	-.0634	-.0843	1.0000
VAR102	-.0034	.1322	.1337	.2084	.1536

Correlation Matrix

VAR102

VAR102 1.0000

N of Cases = 307.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	189.2345	637.1474	25.2418	56

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR001	186.0489	599.9617	.5842	.5238	.8631
VAR003	186.3616	602.4342	.5544	.6193	.8636
VAR004	185.7362	608.2537	.4036	.4544	.8657
VAR007	184.7199	627.5749	.1404	.3300	.8696
VAR010	185.0554	598.0525	.5539	.5055	.8631
VAR012	185.9186	614.6633	.3458	.3911	.8667
VAR013	184.5537	658.5747	-.3797	.3960	.8766
VAR014	185.8208	594.5397	.6252	.5893	.8621
VAR018	187.0293	614.3488	.3056	.3350	.8673
VAR019	186.6450	608.5108	.4057	.5476	.8657
VAR020	185.6840	640.2103	-.0700	.3839	.8739
VAR021	186.2671	622.8827	.2245	.3346	.8684
VAR022	185.5863	612.4394	.3814	.3728	.8662
VAR023	185.2117	613.0498	.2905	.3398	.8676
VAR024	185.4104	628.8310	.0676	.6776	.8721
VAR025	184.9414	625.0946	.1797	.3331	.8691
VAR029	186.0977	593.4610	.6665	.6415	.8616
VAR030	185.9088	610.1877	.3196	.3745	.8671
VAR032	186.2704	600.9234	.4942	.4471	.8641
VAR033	186.2704	640.6227	-.0775	.4161	.8734
VAR035	186.0879	609.4073	.3886	.6529	.8659
VAR037	185.5668	627.9195	.1325	.3555	.8697
VAR038	186.1596	610.8666	.3565	.4282	.8664
VAR041	185.1987	600.2251	.5322	.4607	.8636
VAR042	186.0261	611.6725	.3553	.4081	.8665
VAR044	185.7492	621.4761	.2309	.5240	.8684
VAR047	185.7492	615.7506	.3578	.4387	.8666
VAR050	185.9642	601.2765	.5851	.5314	.8632
VAR051	184.6710	642.5483	-.1142	.4561	.8731
VAR053	185.8176	618.0450	.2486	.3274	.8682
VAR055	184.6124	612.1074	.4137	.4531	.8658
VAR056	186.7036	613.5295	.3494	.3207	.8666
VAR057	186.4821	611.1328	.4214	.5175	.8656
VAR058	185.8632	607.6871	.4284	.4063	.8653
VAR059	186.9349	623.7539	.2071	.2708	.8687
VAR060	185.8990	617.1499	.2702	.4081	.8679
VAR061	185.9023	589.8728	.6698	.7064	.8611
VAR063	185.9967	630.5457	.0889	.3312	.8703
VAR065	185.7101	617.8013	.3050	.4223	.8673
VAR066	186.0651	618.9827	.2571	.4274	.8680
VAR067	186.1759	604.0866	.5075	.5023	.8642
VAR069	185.6189	615.9556	.3414	.3260	.8668
VAR076	185.7655	600.5919	.5709	.5442	.8633
VAR077	185.5212	631.8713	.0566	.3221	.8711
VAR080	186.1954	636.9421	-.0242	.3380	.8726
VAR081	186.4495	602.1110	.5725	.5684	.8634
VAR082	186.3062	622.1020	.1957	.2696	.8691
VAR085	186.0456	600.6907	.5146	.5681	.8638

VAR086	185.9805	616.3133	.3183	.3475	.8671
R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR093	186.0977	636.1081	-.0052	.3775	.8716
VAR096	186.4463	611.6335	.4181	.4250	.8657
VAR098	186.3192	607.9239	.4428	.4443	.8652
VAR099	185.2052	641.4839	-.0964	.3734	.8728
VAR100	185.3583	598.2960	.6035	.6465	.8627
VAR101	186.4593	634.3733	.0130	.6651	.8720
VAR102	185.2573	622.2310	.2208	.3940	.8685

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	3481.5556	306	11.3776		
Within People	30269.5179	16885	1.7927		
Between Measures	5256.1875	55	95.5670	64.3014	.0000
Residual	25013.3304	16830	1.4862		
Total	33751.0735	17191	1.9633		
Grand Mean	3.3792				

Intraclass Correlation Coefficient

Two-Way Mixed Effect Model (Consistency Definition):

People Effect Random, Measure Effect Fixed

Single Measure Intraclass Correlation = .1062*
 95.00% C.I.: Lower = .0904 Upper = .1256
 F = 7.6553 DF = (306, 16830) Sig. = .0000 (Test Value = .0000)
 Average Measure Intraclass Correlation = .8694**
 95.00% C.I.: Lower = .8476 Upper = .8894
 F = 7.6553 DF = (306, 16830) Sig. = .0000 (Test Value = .0000)

*: Notice that the same estimator is used whether the interaction effect
 is present or not.

**: This estimate is computed if the interaction effect is absent,
 otherwise ICC is not estimable.

Reliability Coefficients 56 items

Alpha = .8694 Standardized item alpha = .8695

Figure 8: Scree plot for fourth analysis of initial administration

Figure 9: Reliability analysis for fourth analysis of initial administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)				
		Mean	Std Dev	Cases
1.	VAR001	3.1961	1.2327	311.0
2.	VAR003	2.8650	1.2212	311.0
3.	VAR004	3.5048	1.3628	311.0
4.	VAR012	3.3248	1.2263	311.0
5.	VAR013	4.6720	1.1758	311.0
6.	VAR014	3.4148	1.3289	311.0
7.	VAR018	2.1897	1.3747	311.0
8.	VAR019	2.5884	1.3336	311.0
9.	VAR020	3.5305	1.4913	311.0
10.	VAR021	2.9807	1.1499	311.0
11.	VAR023	3.9968	1.5208	311.0
12.	VAR024	3.8264	1.6389	311.0
13.	VAR029	3.1415	1.2899	311.0
14.	VAR030	3.3408	1.5553	311.0
15.	VAR035	3.1479	1.3455	311.0
16.	VAR037	3.6785	1.1665	311.0
17.	VAR038	3.0740	1.3788	311.0
18.	VAR041	4.0450	1.3505	311.0
19.	VAR042	3.2283	1.3426	311.0
20.	VAR044	3.4855	1.2256	311.0
21.	VAR047	3.5016	1.1356	311.0
22.	VAR051	4.5627	1.1730	311.0
23.	VAR055	4.6302	1.1563	311.0
24.	VAR057	2.7556	1.1797	311.0
25.	VAR058	3.3859	1.3170	311.0
26.	VAR059	2.3248	1.1725	311.0
27.	VAR063	3.2540	1.1680	311.0
28.	VAR065	3.5531	1.1789	311.0
29.	VAR066	3.1865	1.2866	311.0
30.	VAR067	3.0514	1.2562	311.0
31.	VAR080	3.0450	1.3624	311.0
32.	VAR081	2.7878	1.1968	311.0
33.	VAR082	2.9196	1.3356	311.0
34.	VAR086	3.2379	1.2187	311.0
35.	VAR093	3.1350	1.1533	311.0
36.	VAR096	2.8071	1.1728	311.0
37.	VAR098	2.9228	1.2574	311.0
38.	VAR101	2.7814	1.3644	311.0
39.	VAR102	3.9646	1.2190	311.0
40.	VAR005	3.0772	1.1074	311.0
41.	VAR007	4.5145	1.1608	311.0
42.	VAR022	3.6399	1.2439	311.0
43.	VAR032	2.9807	1.4164	311.0
44.	VAR053	3.4244	1.3889	311.0
45.	VAR056	2.5434	1.2664	311.0
46.	VAR061	3.3408	1.3980	311.0
47.	VAR069	3.6238	1.1681	311.0
48.	VAR076	3.4662	1.2436	311.0
49.	VAR085	3.2090	1.3765	311.0
50.	VAR100	3.8714	1.2711	311.0

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)					
Correlation Matrix					
	VAR001	VAR003	VAR004	VAR012	VAR013
VAR001	1.0000				
VAR003	.2984	1.0000			
VAR004	.2904	.2446	1.0000		
VAR012	.2864	.3245	.1371	1.0000	

VAR013	-.2181	-.2129	-.1218	-.3174	1.0000
VAR014	.4149	.4918	.3382	.3446	-.3194
VAR018	.1760	.1998	.1536	.0915	-.1430
VAR019	.2121	.4055	.1253	.2575	-.2283
VAR020	-.0182	-.0792	-.1989	-.0151	.0352
VAR021	.0664	.1406	.0371	.0868	-.1121
VAR023	.2292	.1821	.0739	.1631	-.0998
VAR024	.0345	.1559	.0264	-.0296	-.0815
VAR029	.5668	.3705	.3942	.2706	-.3288
VAR030	.2426	.0362	.1879	.1194	-.1186
VAR035	.2450	.4932	.1615	.2230	-.2160
VAR037	.0754	.0487	.1937	.0462	-.0818
VAR038	.2192	.2263	.1741	.1384	-.1203
VAR041	.3338	.2599	.1717	.2132	-.2487
VAR042	.1190	.2491	.1678	.3036	-.1159
VAR044	.1225	.0138	.0594	.1630	-.0839
VAR047	.1899	.1072	.0401	.1722	-.1325
VAR051	.0327	-.1517	-.0370	-.3181	.1483
VAR055	.2661	.3597	.3297	.1350	-.0420
VAR057	.2460	.3487	.0710	.2267	-.2138
VAR058	.3049	.2852	.1679	.1918	-.2159
VAR059	.1410	.1456	.0949	.1351	-.1237
VAR063	.0056	.0942	.0712	.0773	-.0848
VAR065	.2026	.2066	.2854	.1364	-.1131
VAR066	.0603	.2563	.2074	.0494	-.0255
VAR067	.3039	.3368	.1902	.3912	-.3030
VAR080	-.0533	-.0390	-.1495	-.0474	-.0753
VAR081	.4197	.3622	.2222	.2032	-.3110
VAR082	.0743	.1812	.1234	.1125	-.1606
VAR086	.2458	.2991	.1974	.1100	-.1030
VAR093	-.0278	.0473	.0427	-.0151	-.0648
VAR096	.2717	.2137	.1620	.1648	-.2566
VAR098	.2866	.2579	.2073	.1355	-.1110
VAR101	.0543	.0229	-.0012	.1640	-.1313
VAR102	.2279	.0206	.1195	.0185	-.0621
VAR005	.0999	.1342	-.0344	.1098	-.1539
VAR007	.0645	.0264	.2554	.0681	-.0816
VAR022	.2292	.2354	.1266	.0706	-.0634
VAR032	.3348	.2559	.1521	.2191	-.3428
VAR053	.1528	.1918	.2512	.0306	-.0765
VAR056	.2435	.3083	.1807	.0999	-.1507
VAR061	.5489	.3690	.3750	.1874	-.2458

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR001	VAR003	VAR004	VAR012	VAR013
VAR069	.2441	.1339	.0346	.1937	-.1465
VAR076	.3295	.5238	.1709	.2367	-.2481
VAR085	.3712	.3891	.1929	.2635	-.1987
VAR100	.4300	.3504	.4641	.2069	-.1924

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR014	VAR018	VAR019	VAR020	VAR021
VAR014	1.0000				
VAR018	.2623	1.0000			
VAR019	.2586	.2117	1.0000		
VAR020	-.0072	-.0854	.0015	1.0000	
VAR021	.2121	.1227	.1042	.0699	1.0000
VAR023	.2911	.1993	.3763	-.0206	.1125
VAR024	.0006	.0175	.1738	-.0427	.0547

VAR029	.4643	.2268	.2609	-.0744	.0693
VAR030	.2076	.1341	.0554	-.0337	.1083
VAR035	.2885	.1348	.5842	-.0232	.0873
VAR037	.1945	.0643	-.1351	-.2428	.0675
VAR038	.3089	.1577	.2412	.0452	.0151
VAR041	.3472	.1900	.2235	-.0327	.0276
VAR042	.2867	.0708	.2490	.0038	.0342
VAR044	.1691	.1175	.0259	.0898	.0868
VAR047	.2486	.1910	.0814	.0481	.1730
VAR051	-.2413	-.0964	-.0762	-.0827	-.1019
VAR055	.3059	.0788	.1437	-.1291	.0868
VAR057	.3550	.2674	.1799	.0574	.2533
VAR058	.3193	.0646	.1311	.0465	.1242
VAR059	.2031	.1898	.0589	-.0804	.0788
VAR063	.0836	-.0181	-.0341	-.0276	.1141
VAR065	.2155	.0684	.2930	-.2188	-.1230
VAR066	.1244	.0839	.3833	-.1576	.0395
VAR067	.4355	.1662	.2553	.0508	.2128
VAR080	-.0353	.0333	-.0448	.3931	.0870
VAR081	.4024	.1677	.1998	.0289	.1377
VAR082	.1915	-.0040	.0212	-.0303	.0095
VAR086	.2396	.1790	.2609	.0350	-.0174
VAR093	-.0451	.0550	-.0539	-.1337	.1601
VAR096	.1964	.1448	.2089	.0384	.0642
VAR098	.4188	.1074	.1272	.0391	.1596
VAR101	.1551	.0480	-.0319	.1095	.0980
VAR102	.0887	.0695	.0049	.0281	-.0028
VAR005	.1207	.0709	.1723	.0962	.0290
VAR007	.1080	-.0411	.1602	.0468	-.0215
VAR022	.2370	.1759	.1593	.1312	.3357
VAR032	.3299	.3134	.1802	-.0746	.1463
VAR053	.1368	-.0626	.1660	-.1464	-.1383
VAR056	.3065	.0407	.1558	-.1617	-.0016
VAR061	.4532	.1291	.2433	-.0932	.0804
VAR069	.3003	.0808	.1488	-.0128	.1939
VAR076	.3764	.2028	.2736	-.0486	.1462
VAR085	.3968	.2858	.1489	.0448	.1574
VAR100	.3773	.1525	.1437	-.2140	-.0017

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR023	VAR024	VAR029	VAR030	VAR035
VAR023	1.0000				
VAR024	.1538	1.0000			
VAR029	.2370	.0803	1.0000		
VAR030	.0727	.0625	.3280	1.0000	
VAR035	.3549	.4944	.2946	.0591	1.0000
VAR037	-.0660	-.1052	.1268	-.0034	-.0806
VAR038	.1063	.1428	.3278	.3101	.2532
VAR041	.1493	.1070	.4130	.2691	.1827
VAR042	.1615	.1471	.2234	.0908	.2652
VAR044	.1341	-.3995	.0686	.1041	-.1669
VAR047	.0775	-.2217	.1694	.1549	-.0508
VAR051	-.0333	.2574	-.0208	.0448	.0043
VAR055	.1039	-.0016	.3185	-.0230	.1431
VAR057	.1470	-.1688	.2454	.0684	.0838
VAR058	.0989	.0072	.3267	.1986	.1770
VAR059	.0078	-.0948	.0740	.0647	.0226
VAR063	-.0014	-.1505	.0553	-.0851	-.0691
VAR065	.1701	.2202	.2496	.0622	.3224
VAR066	.2344	.2265	.1590	.0278	.3567
VAR067	.2095	-.1210	.3519	.1000	.2073
VAR080	-.0233	.0165	-.0403	-.0057	-.0212
VAR081	.1645	-.0534	.4813	.2851	.1938
VAR082	-.0081	-.0152	.1545	.0753	.0318
VAR086	.2128	.2340	.1796	.0660	.3109

VAR093	-.0089	.0005	-.0172	-.1624	-.0295
VAR096	.0738	.0547	.4318	.3191	.1408
VAR098	.0589	.0170	.3369	.2890	.2089
VAR101	-.0423	-.6849	.0580	-.0742	-.2898
VAR102	.0713	-.2049	.0935	.0744	-.0578
VAR005	.0231	-.0637	.0985	.0633	.0789
VAR007	.1490	.1031	.0870	.0133	.1349
VAR022	.1102	.0547	.2309	.1920	.1572
VAR032	.2036	.1334	.4023	.1919	.2825
VAR053	-.0055	.1303	.2473	.0777	.1579
VAR056	.0461	.0378	.3043	.1366	.1590
VAR061	.1507	.1498	.6708	.3084	.2767
VAR069	.0701	.1107	.2217	.1365	.1115
VAR076	.1782	.1174	.3871	.1060	.3134
VAR085	.0727	-.1569	.3830	.1309	.0460
VAR100	.0849	.0868	.5738	.2474	.1715

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR037	VAR038	VAR041	VAR042	VAR044
VAR037	1.0000				
VAR038	-.0895	1.0000			
VAR041	.0256	.3343	1.0000		
VAR042	.0450	.1756	.3466	1.0000	
VAR044	.0306	.0321	.1836	-.0127	1.0000
VAR047	.0783	.0545	.2398	.0833	.4757
VAR051	.0030	.0221	-.0018	-.1699	-.1772
VAR055	.2918	.0678	.2111	.2603	.0247
VAR057	.1138	.0568	.2378	.1392	.3166
VAR058	.0705	.1956	.3493	.1543	.1234
VAR059	.0624	.0509	.1619	.1023	.1211
VAR063	.1525	-.0978	.0295	.0102	.1366
VAR065	.0124	.1335	.2052	.2888	-.0614
VAR066	.0229	.1031	.1214	.1489	-.0637
VAR067	.1126	.2604	.3447	.3296	.2854
VAR080	-.2791	.0824	.0708	-.0374	.0641
VAR081	.1543	.2207	.3472	.1266	.1980
VAR082	.0538	.1154	.2381	.1758	-.0096
VAR086	-.0958	.1988	.1307	.1343	.0822
VAR093	.1403	-.2295	-.0702	-.0846	.0493
VAR096	.0606	.2442	.3069	.0690	.0519
VAR098	.0996	.4145	.2889	.1805	.0579
VAR101	-.0058	-.1217	-.0244	-.0079	.4360
VAR102	.1258	-.0023	.1205	-.0778	.4218
VAR005	-.0931	.1336	.1141	.0575	.0555
VAR007	-.0108	.0910	.0263	.1397	-.0016
VAR022	-.0023	.1755	.1691	.0900	.1489
VAR032	.0860	.2320	.3377	.2195	.1466
VAR053	.0407	.1267	.0964	.1364	-.0589
VAR056	.0772	.2540	.2120	.1810	-.0001
VAR061	.1782	.3383	.4805	.2523	.0782
VAR069	.0932	.1976	.2725	.2072	.0852
VAR076	.0859	.1905	.2775	.1408	.1833
VAR085	.0761	.2281	.3038	.1678	.2666
VAR100	.2831	.1840	.3548	.2365	.1106

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR047	VAR051	VAR055	VAR057	VAR058
VAR047	1.0000				
VAR051	-.1932	1.0000			

VAR055	.1245	-.0150	1.0000		
VAR057	.2700	-.2919	.1724	1.0000	
VAR058	.1312	-.0825	.2592	.2789	1.0000
VAR059	.1607	-.2084	.0841	.2348	.1191
VAR063	.1857	-.1423	.1701	.1318	.0661
VAR065	.0186	.1055	.2523	-.0672	.0720
VAR066	.0241	.0692	.2395	.0344	.0069
VAR067	.3030	-.2277	.2574	.3720	.2824
VAR080	.1000	-.0260	-.1737	.0209	-.0097
VAR081	.2471	-.0962	.2252	.2396	.4819
VAR082	.1777	-.0802	.1206	.0489	.0965
VAR086	.0673	.0911	.0947	.1124	.0853
VAR093	.0121	-.0921	.0085	.0955	.0569
VAR096	.1698	.0018	.1114	.1197	.1966
VAR098	.1537	-.1542	.2177	.1721	.2479
VAR101	.2209	-.3663	.0733	.3455	.0615
VAR102	.3438	.0907	.0845	.1331	.0688
VAR005	.1846	-.0286	.1156	.0367	.0459
VAR007	.0141	.0686	.1374	-.1694	.0406
VAR022	.2196	-.0619	.0955	.2146	.1205
VAR032	.2547	-.0866	.1729	.2559	.2963
VAR053	.0221	.0173	.2407	-.0231	-.0087
VAR056	.0813	-.0697	.2390	.1561	.1679
VAR061	.1500	.0164	.2977	.2697	.3926
VAR069	.1841	-.0828	.1427	.2140	.1324
VAR076	.2176	-.0389	.2683	.4891	.3231
VAR085	.2608	-.1070	.2858	.4169	.3682
VAR100	.1946	.0552	.4460	.1640	.2436

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR059	VAR063	VAR065	VAR066	VAR067
VAR059	1.0000				
VAR063	.0432	1.0000			
VAR065	.0447	.0124	1.0000		
VAR066	-.0210	.0950	.3699	1.0000	
VAR067	.1200	.0812	.1332	-.0119	1.0000
VAR080	-.0233	-.0741	-.0919	-.1355	.0100
VAR081	.1504	.1079	.0857	.0593	.3785
VAR082	.1486	.0049	.2004	-.0100	.1736
VAR086	.0225	-.1582	.1910	.2411	.0868
VAR093	.0366	.3768	-.0812	.0895	-.0404
VAR096	.1114	.0241	.1637	.1116	.1994
VAR098	.1133	.0266	.1007	.0348	.2680
VAR101	.2139	.1443	-.1572	-.2101	.2701
VAR102	.1412	.0720	.0832	.0022	.1423
VAR005	.1794	.0272	.0487	.0125	.1896
VAR007	.0191	-.0015	.1827	.1839	.0504
VAR022	-.0036	.0077	-.0177	-.0325	.2452
VAR032	.1398	.0888	.0624	.1418	.2489
VAR053	.0359	.0168	.3093	.2065	.1076
VAR056	.0763	-.0653	.2064	.1593	.2318
VAR061	.1113	.0772	.2160	.1798	.3574
VAR069	.0895	.0017	.1000	-.0347	.2507
VAR076	.1746	.0448	.1734	.1794	.3191
VAR085	.2256	.1234	.0975	.0854	.3296
VAR100	.0887	.1155	.2930	.2554	.2365

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

VAR080	VAR081	VAR082	VAR086	VAR093
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VAR080	1.0000				
VAR081	.0454	1.0000			
VAR082	.0516	.1568	1.0000		
VAR086	-.0006	.1033	.0554	1.0000	
VAR093	-.0408	.0909	.0008	-.1423	1.0000
VAR096	.0660	.4694	.1775	.1564	.0026
VAR098	-.0055	.3321	.2364	.1236	-.0484
VAR101	.0643	.0940	.0116	-.1413	.0291
VAR102	-.0359	.1474	.0181	.0687	.0264
VAR005	.1174	.1414	.1176	.0365	-.0486
VAR007	.0098	-.0001	.0372	.1458	-.1509
VAR022	.1124	.2042	.1243	.1589	-.0132
VAR032	-.0313	.3059	.0674	.2120	.0668
VAR053	-.0084	.1514	.1437	.1193	-.0278
VAR056	-.0890	.2466	.1804	.1417	.0225
VAR061	-.1046	.5292	.1391	.1927	-.0226
VAR069	.1364	.1481	.0157	.1039	-.0172
VAR076	-.0429	.3571	.1256	.2544	.0257
VAR085	-.0085	.2679	.0618	.2183	-.0686
VAR100	-.1568	.4040	.1497	.1843	-.0035

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR096	VAR098	VAR101	VAR102	VAR005
VAR096	1.0000				
VAR098	.2589	1.0000			
VAR101	.0219	.0597	1.0000		
VAR102	-.0070	.1182	.1466	1.0000	
VAR005	.1108	.1780	.1585	.0713	1.0000
VAR007	.0779	.0494	-.1385	.0471	-.0310
VAR022	.0783	.2173	.0675	.1320	.0530
VAR032	.2269	.2926	.0362	.0949	.0688
VAR053	.2247	.1684	-.0785	-.0006	.0562
VAR056	.2163	.2837	.0316	.0626	.0666
VAR061	.3767	.3251	-.0673	.1264	.0788
VAR069	.0999	.2832	.0029	.0767	.0450
VAR076	.2167	.2995	.0774	.1556	.0792
VAR085	.2249	.2553	.2837	.0582	.1079
VAR100	.3447	.2461	-.1000	.1844	.0071

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR007	VAR022	VAR032	VAR053	VAR056
VAR007	1.0000				
VAR022	-.0455	1.0000			
VAR032	.0492	.2780	1.0000		
VAR053	.1362	.0813	.0419	1.0000	
VAR056	.0506	.0693	.2325	.2683	1.0000
VAR061	.0844	.2211	.3780	.2243	.3214
VAR069	-.0138	.2506	.1945	.0808	.1801
VAR076	.0411	.2736	.3055	.1559	.2421
VAR085	.0193	.2363	.3561	.0091	.1086
VAR100	.1346	.1767	.3462	.3033	.2399

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR061	VAR069	VAR076	VAR085	VAR100
VAR061	1.0000				
VAR069	.2506	1.0000			

VAR076	.3833	.2033	1.0000		
VAR085	.3417	.1734	.4743	1.0000	
VAR100	.6311	.2411	.3299	.2920	1.0000

N of Cases = 311.0

Statistics for	Mean	Variance	Std Dev	N of
Scale	166.7299	551.8817	23.4922	Variables 50

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR001	163.5338	518.5335	.5670	.5017	.8609
VAR003	163.8650	518.5043	.5733	.5925	.8609
VAR004	163.2251	525.2137	.3972	.4071	.8636
VAR012	163.4051	529.6869	.3666	.3749	.8643
VAR013	162.0579	572.9128	-.3982	.3705	.8759
VAR014	163.3151	511.3133	.6456	.5656	.8592
VAR018	164.5402	530.7331	.3041	.3050	.8653
VAR019	164.1415	524.1993	.4242	.5303	.8632
VAR020	163.1994	553.6505	-.0569	.3637	.8724
VAR021	163.7492	539.1175	.2143	.3196	.8667
VAR023	162.7331	528.3189	.3039	.3329	.8654
VAR024	162.9035	544.5132	.0612	.6660	.8708
VAR029	163.5884	511.6559	.6608	.6329	.8591
VAR030	163.3891	528.0901	.2990	.3433	.8656
VAR035	163.5820	524.4441	.4159	.6374	.8633
VAR037	163.0514	544.7135	.1067	.3325	.8683
VAR038	163.6559	524.8974	.3970	.4037	.8636
VAR041	162.6849	517.0423	.5376	.4558	.8611
VAR042	163.5016	527.5089	.3660	.3609	.8642
VAR044	163.2444	537.3401	.2295	.5164	.8665
VAR047	163.2283	531.9832	.3552	.4251	.8645
VAR051	162.1672	559.0042	-.1532	.3953	.8723
VAR055	162.0997	527.9868	.4245	.4395	.8635
VAR057	163.9743	527.9219	.4163	.5095	.8635
VAR058	163.3441	524.1877	.4305	.4024	.8631
VAR059	164.4051	538.4934	.2208	.2402	.8666
VAR063	163.4759	545.4051	.0937	.2919	.8685
VAR065	163.1768	533.0299	.3208	.4163	.8650
VAR066	163.5434	534.6102	.2625	.4077	.8660
VAR067	163.6785	519.8060	.5324	.4770	.8615
VAR080	163.6849	551.2875	-.0197	.3248	.8711
VAR081	163.9421	519.5321	.5667	.5593	.8611
VAR082	163.8103	536.2574	.2237	.2557	.8667
VAR086	163.4920	531.9798	.3276	.3211	.8649
VAR093	163.5949	551.8031	-.0231	.3427	.8702
VAR096	163.9228	527.5489	.4261	.4198	.8634
VAR098	163.8071	522.8917	.4766	.4411	.8624
VAR101	163.9486	547.9780	.0320	.6644	.8702
VAR102	162.7653	539.2060	.1977	.3761	.8670
VAR005	163.6527	541.1242	.1850	.2036	.8671
VAR007	162.2154	543.2147	.1353	.2556	.8679
VAR022	163.0900	529.5790	.3625	.3488	.8643

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR032	163.7492	517.5756	.5012	.4405	.8616
VAR053	163.3055	534.2645	.2443	.3049	.8664
VAR056	164.1865	529.1522	.3626	.3168	.8643
VAR061	163.3891	508.9223	.6501	.6660	.8588
VAR069	163.1061	531.9984	.3437	.3213	.8647
VAR076	163.2637	518.2399	.5669	.5231	.8609
VAR085	163.5209	518.3020	.5055	.5422	.8616
VAR100	162.8585	517.3799	.5687	.6287	.8608

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	3421.6662	310	11.0376		
Within People	26820.4200	15239	1.7600		
Between Measures	4594.1441	49	93.7580	64.0766	.0000
Residual	22226.2759	15190	1.4632		
Total	30242.0862	15549	1.9450		
Grand Mean	3.3346				

Intraclass Correlation Coefficient

Two-Way Mixed Effect Model (Consistency Definition):

People Effect Random, Measure Effect Fixed

Single Measure Intraclass Correlation = .1157*

95.00% C.I.: Lower = .0987 Upper = .1365

F = 7.5434 DF = (310, 15190) Sig. = .0000 (Test Value = .0000)

Average Measure Intraclass Correlation = .8674**

95.00% C.I.: Lower = .8455 Upper = .8876

F = 7.5434 DF = (310, 15190) Sig. = .0000 (Test Value = .0000)

*: Notice that the same estimator is used whether the interaction effect is present or not.

**: This estimate is computed if the interaction effect is absent, otherwise ICC is not estimable.

Reliability Coefficients 50 items

Alpha = .8674 Standardized item alpha = .8675

Figure 10: Rotated component matrix for fourth analysis of initial administration

Rotated Component Matrix													
	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
VAR089	.656											.343	
VAR076	.606												
VAR058	.527			.376									
VAR054	.491						.444						
VAR003	.489	.399						.324					
VAR057	.478				.304								
VAR019		.731											
VAR039		.675											
VAR023		.618											
VAR066		.546											
VAR086		.358											
VAR007			.580										
VAR013			-.525										
VAR029			.511	.396									
VAR067	.353		.463	.382									
VAR030				.688									
VAR096				.587				.330					
VAR038				.496									
VAR087	.343		.382	.491									
VAR107					.734	.302							
VAR051					-.677								
VAR024					-.618	-.411							
VAR067					.405				.361				
VAR102						.751							
VAR044					.320	.747							
VAR047						.611							
VAR007							.652						
VAR004							.643						
VAR010			.477				.517						
VAR100			.305				.404						
VAR053								.711					
VAR056								.580					
VAR082								.460					
VAR065							.323	.403					
VAR042									.725				
VAR047				.373					.512				
VAR012			.349		.364				.474				
VAR022										.678			
VAR027										.622			.344
VAR069									.435	.465			
VAR098				.424						.453			
VAR014									.301	.328			
VAR080											-.776		
VAR020											-.706		
VAR037											.569		
VAR018												.704	
VAR059												.653	
VAR032			.300									.376	
VAR093													.730
VAR063													.700

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 29 iterations.

Figure 11: Scree Plot for fifth analysis of initial administration

Figure 12: Reliability analysis for fifth analysis of initial administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	VAR001	3.1927	1.2296	327.0
2.	VAR003	2.8593	1.2304	327.0
3.	VAR004	3.5229	1.3539	327.0
4.	VAR012	3.3364	1.2347	327.0
5.	VAR013	4.6758	1.1744	327.0
6.	VAR014	3.4128	1.3353	327.0
7.	VAR018	2.2110	1.3751	327.0
8.	VAR019	2.5810	1.3357	327.0
9.	VAR020	3.5566	1.4869	327.0
10.	VAR021	2.9847	1.1524	327.0
11.	VAR023	4.0245	1.4983	327.0
12.	VAR024	3.8410	1.6390	327.0
13.	VAR029	3.1223	1.2931	327.0
14.	VAR030	3.3456	1.5487	327.0
15.	VAR035	3.1560	1.3556	327.0
16.	VAR037	3.6667	1.1784	327.0
17.	VAR038	3.0826	1.3910	327.0
18.	VAR041	4.0275	1.3598	327.0
19.	VAR042	3.2416	1.3383	327.0
20.	VAR044	3.4862	1.2206	327.0
21.	VAR047	3.4832	1.1400	327.0
22.	VAR051	4.5688	1.1567	327.0
23.	VAR055	4.5933	1.1735	327.0
24.	VAR057	2.7645	1.1812	327.0
25.	VAR058	3.3670	1.3059	327.0
26.	VAR059	2.3272	1.1723	327.0
27.	VAR063	3.2355	1.1603	327.0
28.	VAR065	3.5443	1.1789	327.0
29.	VAR066	3.1682	1.2891	327.0
30.	VAR067	3.0673	1.2440	327.0
31.	VAR080	3.0459	1.3479	327.0
32.	VAR081	2.7737	1.1843	327.0
33.	VAR082	2.9480	1.3409	327.0
34.	VAR086	3.2294	1.2132	327.0
35.	VAR093	3.1223	1.1392	327.0
36.	VAR096	2.8104	1.1856	327.0
37.	VAR098	2.9419	1.2628	327.0
38.	VAR101	2.7829	1.3742	327.0
39.	VAR102	3.9664	1.2092	327.0

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR001	VAR003	VAR004	VAR012	VAR013
VAR001	1.0000				
VAR003	.3140	1.0000			
VAR004	.2931	.2395	1.0000		
VAR012	.3007	.3402	.1532	1.0000	
VAR013	-.2370	-.2354	-.1284	-.3350	1.0000
VAR014	.4091	.4817	.3502	.3565	-.3252
VAR018	.1900	.2116	.1712	.1026	-.1513
VAR019	.2286	.4213	.1266	.2680	-.2315
VAR020	-.0186	-.0962	-.1877	-.0238	.0386
VAR021	.0844	.1521	.0484	.1006	-.1238
VAR023	.2206	.1783	.0738	.1630	-.0879
VAR024	.0563	.1608	.0182	-.0159	-.0874
VAR029	.5736	.3810	.3926	.2796	-.3414
VAR030	.2517	.0642	.1974	.1219	-.1339
VAR035	.2653	.5061	.1510	.2288	-.2263
VAR037	.0868	.0585	.1692	.0372	-.0695
VAR038	.2095	.2165	.1920	.1320	-.1263
VAR041	.3307	.2608	.1638	.2082	-.2614
VAR042	.1319	.2573	.1705	.3201	-.1354
VAR044	.1029	.0007	.0703	.1456	-.0802
VAR047	.2004	.1164	.0544	.1849	-.1599
VAR051	.0262	-.1591	-.0417	-.3234	.1542
VAR055	.2352	.3023	.3023	.1095	-.0158
VAR057	.2594	.3697	.0734	.2501	-.2431
VAR058	.3054	.2919	.1618	.1972	-.2342
VAR059	.1519	.1554	.1025	.1462	-.1433
VAR063	.0111	.1092	.0600	.0816	-.0924
VAR065	.1983	.1946	.2612	.1162	-.0981
VAR066	.0588	.2451	.1867	.0376	-.0247
VAR067	.2903	.3329	.1958	.3866	-.3084
VAR080	-.0498	-.0386	-.1577	-.0425	-.0797
VAR081	.4134	.3549	.2194	.2074	-.3220
VAR082	.0489	.1573	.1282	.0958	-.1354
VAR086	.2294	.2724	.1994	.0855	-.0962
VAR093	-.0169	.0670	.0439	-.0010	-.0712
VAR096	.2840	.2298	.1766	.1715	-.2602
VAR098	.2621	.2257	.2170	.1149	-.0955
VAR101	.0430	.0218	.0167	.1571	-.1369
VAR102	.2210	.0154	.1270	.0199	-.0509

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Correlation Matrix

	VAR014	VAR018	VAR019	VAR020	VAR021
VAR014	1.0000				
VAR018	.2665	1.0000			
VAR019	.2641	.2186	1.0000		
VAR020	-.0110	-.0786	-.0181	1.0000	
VAR021	.1955	.1472	.1054	.0587	1.0000
VAR023	.2817	.1970	.3699	-.0144	.1050
VAR024	-.0035	.0068	.1839	-.0378	.0393
VAR029	.4610	.2408	.2606	-.0786	.0918
VAR030	.2111	.1443	.0613	-.0412	.1164
VAR035	.2812	.1452	.5936	-.0249	.0860
VAR037	.1735	.0682	-.1065	-.2439	.0730
VAR038	.3086	.1641	.2135	.0563	.0218
VAR041	.3316	.1757	.2141	-.0395	.0414
VAR042	.2839	.0839	.2558	-.0169	.0541
VAR044	.1738	.1123	.0162	.0921	.0794
VAR047	.2414	.1911	.0790	.0399	.1924
VAR051	-.2419	-.0969	-.0756	-.0830	-.0970
VAR055	.2758	.0381	.1180	-.1318	.0634
VAR057	.3477	.2724	.1900	.0469	.2655
VAR058	.3104	.0609	.1253	.0319	.1322
VAR059	.1917	.2082	.0604	-.0784	.1104
VAR063	.0836	-.0139	-.0213	-.0495	.1243
VAR065	.1842	.0557	.2816	-.2346	-.1067
VAR066	.1057	.0855	.3653	-.1690	.0616
VAR067	.4301	.1692	.2441	.0477	.2083
VAR080	-.0361	.0229	-.0506	.3882	.0775
VAR081	.3987	.1575	.1920	.0177	.1278
VAR082	.1714	-.0024	-.0019	-.0131	.0035
VAR086	.2330	.1732	.2393	.0344	-.0128
VAR093	-.0434	.0657	-.0348	-.1435	.1673
VAR096	.1852	.1657	.2073	.0252	.1079
VAR098	.4072	.1148	.1055	.0516	.1575
VAR101	.1560	.0503	-.0380	.1044	.0909
VAR102	.1036	.0781	.0140	.0412	-.0026

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR023	VAR024	VAR029	VAR030	VAR035
VAR023	1.0000				
VAR024	.1552	1.0000			
VAR029	.2169	.0801	1.0000		
VAR030	.0664	.0628	.3388	1.0000	
VAR035	.3440	.5027	.2971	.0721	1.0000
VAR037	-.0736	-.0847	.1376	.0011	-.0403
VAR038	.1065	.1148	.3218	.3199	.2176
VAR041	.1412	.0983	.4028	.2737	.1657
VAR042	.1607	.1476	.2257	.0913	.2598
VAR044	.1293	-.4074	.0477	.1023	-.1813

VAR047	.0595	-.2198	.1887	.1605	-.0529
VAR051	-.0346	.2469	-.0282	.0458	.0019
VAR055	.0790	-.0130	.2856	-.0372	.1036
VAR057	.1437	-.1462	.2559	.0815	.1092
VAR058	.0895	.0116	.3312	.2056	.1703
VAR059	.0007	-.0974	.0909	.0642	.0276
VAR063	-.0121	-.1432	.0748	-.0761	-.0527
VAR065	.1626	.2164	.2379	.0697	.3018
VAR066	.2266	.2014	.1551	.0323	.3255
VAR067	.2098	-.1181	.3438	.1073	.1957
VAR080	-.0173	.0297	-.0384	-.0179	-.0190
VAR081	.1518	-.0423	.4768	.2802	.1845
VAR082	-.0009	-.0387	.1311	.0781	.0078
VAR086	.2011	.2066	.1698	.0801	.2766
VAR093	-.0143	.0006	.0002	-.1562	-.0144
VAR096	.0717	.0476	.4414	.3348	.1387
VAR098	.0656	-.0045	.3162	.2895	.1737
VAR101	-.0451	-.6610	.0443	-.0699	-.2881
VAR102	.0767	-.2070	.0850	.0685	-.0529

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR037	VAR038	VAR041	VAR042	VAR044
VAR037	1.0000				
VAR038	-.1273	1.0000			
VAR041	-.0019	.3410	1.0000		
VAR042	.0376	.1606	.3486	1.0000	
VAR044	-.0043	.0576	.1915	-.0177	1.0000
VAR047	.0540	.0792	.2585	.0962	.4611
VAR051	.0158	.0165	.0037	-.1663	-.1682
VAR055	.2876	.0357	.1858	.2249	.0271
VAR057	.1043	.0623	.2409	.1583	.2924
VAR058	.0558	.1994	.3553	.1615	.1167
VAR059	.0526	.0549	.1618	.1196	.1157
VAR063	.1720	-.1147	.0289	.0225	.1138
VAR065	.0339	.1147	.2107	.2858	-.0694
VAR066	.0269	.1017	.1391	.1542	-.0599
VAR067	.0802	.2733	.3398	.3311	.2814
VAR080	-.2781	.0765	.0780	-.0300	.0535
VAR081	.1326	.2162	.3448	.1372	.1888
VAR082	.0298	.1405	.2161	.1472	.0061
VAR086	-.1030	.2141	.1393	.1188	.1026
VAR093	.1470	-.2309	-.0754	-.0718	.0343
VAR096	.0556	.2625	.3134	.0812	.0469
VAR098	.0715	.4306	.2796	.1608	.0781
VAR101	-.0467	-.0917	-.0181	-.0031	.4435
VAR102	.1213	.0035	.1050	-.0878	.4206

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR047	VAR051	VAR055	VAR057	VAR058
VAR047	1.0000				
VAR051	-.1928	1.0000			
VAR055	.1084	-.0076	1.0000		
VAR057	.2829	-.2923	.1188	1.0000	
VAR058	.1505	-.0899	.2318	.2948	1.0000
VAR059	.1866	-.2123	.0547	.2530	.1297
VAR063	.1804	-.1390	.1629	.1391	.0764
VAR065	.0137	.1232	.2514	-.0707	.0731
VAR066	.0301	.0796	.2177	.0382	.0215
VAR067	.3036	-.2292	.2100	.3782	.2887
VAR080	.0973	-.0325	-.1802	.0319	.0009
VAR081	.2562	-.1050	.2095	.2446	.4882
VAR082	.1670	-.0738	.1093	.0329	.0757
VAR086	.0682	.0991	.0937	.0956	.0881
VAR093	.0228	-.1018	.0052	.1035	.0605
VAR096	.1951	.0028	.0745	.1411	.2075
VAR098	.1431	-.1369	.1869	.1533	.2343
VAR101	.2277	-.3678	.0611	.3331	.0702
VAR102	.3167	.0883	.0833	.1169	.0525

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR059	VAR063	VAR065	VAR066	VAR067
VAR059	1.0000				
VAR063	.0492	1.0000			
VAR065	.0305	.0204	1.0000		
VAR066	-.0203	.1026	.3836	1.0000	
VAR067	.1258	.0804	.1151	-.0109	1.0000
VAR080	-.0154	-.0717	-.0949	-.1333	.0164
VAR081	.1573	.1126	.0775	.0511	.3810
VAR082	.1319	-.0217	.1810	-.0198	.1713
VAR086	.0096	-.1562	.1913	.2518	.0893
VAR093	.0549	.3819	-.0840	.0820	-.0383
VAR096	.1331	.0303	.1706	.1273	.2042
VAR098	.0937	.0115	.0955	.0512	.2719
VAR101	.2290	.1245	-.1749	-.2183	.2741
VAR102	.1247	.0603	.0667	.0017	.1300

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR080	VAR081	VAR082	VAR086	VAR093
VAR080	1.0000				
VAR081	.0565	1.0000			
VAR082	.0353	.1316	1.0000		
VAR086	-.0158	.0960	.0583	1.0000	
VAR093	-.0436	.0956	-.0099	-.1513	1.0000
VAR096	.0554	.4478	.1713	.1604	.0127
VAR098	-.0164	.3050	.2464	.1549	-.0675
VAR101	.0634	.1092	.0155	-.1301	.0347
VAR102	-.0461	.1253	.0216	.0785	.0186

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR096	VAR098	VAR101	VAR102
VAR096	1.0000			
VAR098	.2631	1.0000		
VAR101	.0217	.0528	1.0000	
VAR102	-.0109	.1333	.1341	1.0000

—
N of Cases = 327.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	129.0673	300.7071	17.3409	39

—

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR001	125.8746	277.1591	.5383	.4674	.7932
VAR003	126.2080	276.4474	.5559	.5307	.7926
VAR004	125.5443	281.7519	.3767	.3139	.7981
VAR012	125.7309	283.5961	.3748	.3576	.7985
VAR013	124.3914	316.4659	-.4102	.3317	.8218
VAR014	125.6544	271.5275	.6226	.5360	.7893
VAR018	126.8563	284.0192	.3193	.2274	.8002
VAR019	126.4862	279.8825	.4260	.4974	.7964
VAR020	125.5107	301.2138	-.0527	.3103	.8142
VAR021	126.0826	290.0576	.2375	.2147	.8029
VAR023	125.0428	282.3417	.3202	.2870	.8001
VAR024	125.2263	296.5499	.0261	.6204	.8125
VAR029	125.9450	272.7332	.6158	.5609	.7900
VAR030	125.7217	282.9131	.2955	.3219	.8011
VAR035	125.9113	280.1792	.4119	.6172	.7969
VAR037	125.4006	296.5599	.0680	.3149	.8080
VAR038	125.9847	281.2912	.3747	.3946	.7981
VAR041	125.0398	275.4003	.5198	.4307	.7929
VAR042	125.8257	282.6658	.3611	.3333	.7987
VAR044	125.5810	289.9006	.2241	.5042	.8034
VAR047	125.5841	285.6977	.3558	.3852	.7994
VAR051	124.4985	306.7538	-.1823	.3598	.8151
VAR055	124.4740	286.1949	.3308	.3470	.8001
VAR057	126.3028	282.7148	.4178	.4175	.7973
VAR058	125.7003	280.5541	.4217	.3501	.7967
VAR059	126.7401	290.4261	.2229	.2021	.8034
VAR063	125.8318	295.5943	.0944	.2623	.8072
VAR065	125.5229	287.6061	.2929	.3851	.8012
VAR066	125.8991	288.1462	.2490	.3613	.8026
VAR067	126.0000	277.4847	.5230	.4529	.7936
VAR080	126.0214	299.9658	-.0230	.2671	.8120
VAR081	126.2936	277.7908	.5449	.5012	.7933
VAR082	126.1193	290.0992	.1929	.2115	.8046
VAR086	125.8379	286.8233	.3021	.2965	.8009
VAR093	125.9450	299.7393	-.0084	.3091	.8100
VAR096	126.2569	282.3939	.4243	.3977	.7971
VAR098	126.1254	280.7787	.4332	.3899	.7965
VAR101	126.2844	297.7502	.0225	.6194	.8106
VAR102	125.1009	291.6186	.1847	.3363	.8046

—

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	2513.6031	326	7.7104		
Within People	22451.4359	12426	1.8068		
Between Measures	3897.2959	38	102.5604	68.4763	.0000
Residual	18554.1400	12388	1.4978		
Total	24965.0390	12752	1.9577		
Grand Mean	3.3094				

Intraclass Correlation Coefficient

Two-Way Mixed Effect Model (Consistency Definition):

People Effect Random, Measure Effect Fixed

Single Measure Intraclass Correlation = .0961*

95.00% C.I.: Lower = .0809 Upper
= .1147

F = 5.1480 DF = (326, 12388) Sig. = .0000 (Test
Value = .0000)

Average Measure Intraclass Correlation = .8058**

95.00% C.I.: Lower = .7743 Upper
= .8347

F = 5.1480 DF = (326, 12388) Sig. = .0000 (Test
Value = .0000)

*: Notice that the same estimator is used whether the
interaction effect is present or not.

**: This estimate is computed if the interaction effect is
absent, otherwise ICC is not estimable.

Reliability Coefficients 39 items

Alpha = .8058 Standardized item alpha = .8070

Figure 13: Rotated component matrix for fifth analysis of initial administration**Rotated Component Matrix**

	Component										
	1	2	3	4	5	6	7	8	9	10	11
VAR08	.664										
VAR02	.639										
VAR00	.592										
VAR09	.583				.303						.319
VAR05	.517		.340								
VAR10	.473					.382					
VAR01		.730									
VAR06		.611									.338
VAR03		.611		.345							
VAR02		.553									
VAR08		.454								-.313	
VAR00		.400				.395					
VAR04			.659								.369
VAR01			.632								
VAR06			.538								
VAR10				-.815							
VAR02				.766							
VAR05			-.331	.577							
VAR09					.692	.333					
VAR03					.653						
VAR03	.390				.582						
VAR05						.687					
VAR03		-.313				.453		-.434			
VAR01			.384		.335	.453					
VAR00						.411		-.311			
VAR10							.736				
VAR04				-.392			.720				
VAR04							.614				
VAR02								.770			
VAR08								.739			
VAR05									.726		
VAR01									.655		
VAR05			.373						.405		
VAR09										.722	
VAR06										.688	
VAR02					.403					.514	
VAR08											.643
VAR06		.334									.565
VAR04	.337		.345								.399

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 26 iterations.

Figure 14: Scree Plot for sixth analysis of initial administration

Figure 15: Reliability analysis for sixth analysis of initial administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	VAR001	3.1902	1.2206	326.0
2.	VAR012	3.3221	1.2294	326.0
3.	VAR014	3.3896	1.3307	326.0
4.	VAR018	2.1994	1.3745	326.0
5.	VAR019	2.5859	1.3372	326.0
6.	VAR020	3.5337	1.4834	326.0
7.	VAR021	2.9908	1.1462	326.0
8.	VAR023	4.0215	1.5078	326.0
9.	VAR024	3.8344	1.6409	326.0
10.	VAR030	3.3374	1.5501	326.0
11.	VAR035	3.1564	1.3531	326.0
12.	VAR038	3.0583	1.3721	326.0
13.	VAR042	3.2331	1.3339	326.0
14.	VAR047	3.4755	1.1304	326.0
15.	VAR051	4.5644	1.1690	326.0
16.	VAR055	4.6135	1.1547	326.0
17.	VAR057	2.7515	1.1647	326.0
18.	VAR058	3.3712	1.3104	326.0
19.	VAR059	2.3282	1.1607	326.0
20.	VAR063	3.2454	1.1614	326.0
21.	VAR065	3.5613	1.1692	326.0
22.	VAR066	3.1871	1.2837	326.0
23.	VAR067	3.0521	1.2380	326.0
24.	VAR080	3.0460	1.3500	326.0
25.	VAR081	2.7699	1.1894	326.0
26.	VAR082	2.9387	1.3322	326.0
27.	VAR086	3.2301	1.2124	326.0
28.	VAR093	3.1258	1.1393	326.0
29.	VAR096	2.8190	1.1849	326.0
30.	VAR098	2.9294	1.2495	326.0
31.	VAR101	2.7761	1.3572	326.0
32.	VAR005	3.0767	1.0970	326.0
33.	VAR010	4.1871	1.3673	326.0

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR001	VAR012	VAR014	VAR018	VAR019
VAR001	1.0000				
VAR012	.2892	1.0000			
VAR014	.4221	.3575	1.0000		
VAR018	.1901	.1039	.2753	1.0000	
VAR019	.2200	.2704	.2708	.2158	1.0000
VAR020	-.0138	-.0136	-.0137	-.0780	-.0030
VAR021	.0716	.0938	.2081	.1457	.0959
VAR023	.2218	.1573	.2795	.1939	.3631
VAR024	.0419	-.0269	.0085	.0133	.1748
VAR030	.2489	.1123	.2076	.1460	.0572
VAR035	.2521	.2230	.2907	.1453	.5903
VAR038	.2175	.1165	.2959	.1586	.2144
VAR042	.1182	.3124	.2988	.0870	.2475
VAR047	.1863	.1684	.2447	.1883	.0716
VAR051	.0302	-.3303	-.2367	-.0875	-.0823
VAR055	.2554	.1313	.2825	.0506	.1272
VAR057	.2433	.2323	.3584	.2713	.1827
VAR058	.2943	.1796	.3138	.0562	.1108
VAR059	.1382	.1370	.2018	.1999	.0502
VAR063	.0060	.0910	.0932	-.0076	-.0176
VAR065	.1966	.1264	.1992	.0642	.2830
VAR066	.0558	.0455	.1175	.0834	.3661

VAR067	.2907	.3791	.4265	.1656	.2454
VAR080	-.0595	-.0553	-.0340	.0216	-.0593
VAR081	.4075	.1960	.4028	.1580	.1818
VAR082	.0602	.0910	.1524	-.0067	.0012
VAR086	.2427	.1008	.2322	.1755	.2506
VAR093	-.0239	.0017	-.0344	.0625	-.0384
VAR096	.2706	.1521	.1853	.1601	.1914
VAR098	.2832	.1250	.4015	.1175	.1206
VAR101	.0444	.1485	.1507	.0356	-.0479
VAR005	.0994	.1003	.1059	.0715	.1602
VAR010	.4561	.2002	.4164	.1012	.1620

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR020	VAR021	VAR023	VAR024	VAR030
VAR020	1.0000				
VAR021	.0680	1.0000			
VAR023	-.0216	.1069	1.0000		
VAR024	-.0344	.0286	.1681	1.0000	
VAR030	-.0398	.1161	.0719	.0692	1.0000
VAR035	-.0157	.0743	.3482	.4981	.0730
VAR038	.0391	.0316	.1035	.1259	.3162
VAR042	-.0087	.0417	.1627	.1400	.0898
VAR047	.0445	.1839	.0536	-.2394	.1505
VAR051	-.0909	-.0949	-.0313	.2398	.0440
VAR055	-.1235	.0717	.0878	-.0047	-.0301
VAR057	.0503	.2564	.1380	-.1697	.0704
VAR058	.0276	.1231	.1003	.0101	.2078
VAR059	-.0717	.0971	-.0058	-.1119	.0580
VAR063	-.0316	.1173	-.0188	-.1611	-.0803
VAR065	-.2194	-.1178	.1694	.2122	.0751
VAR066	-.1689	.0555	.2316	.1959	.0408
VAR067	.0384	.2128	.2054	-.1215	.1014
VAR080	.3857	.0719	-.0096	.0271	-.0163
VAR081	.0175	.1226	.1606	-.0369	.2826
VAR082	-.0270	.0178	.0037	-.0173	.0786
VAR086	.0273	-.0029	.2060	.2218	.0912
VAR093	-.1291	.1588	-.0231	-.0086	-.1617
VAR096	.0306	.0962	.0831	.0478	.3349
VAR098	.0353	.1779	.0629	.0063	.2951
VAR101	.0978	.0936	-.0488	-.6592	-.0751
VAR005	.1052	.0299	.0064	-.0716	.0607
VAR010	-.0236	.0502	.1398	.0701	.2372

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR035	VAR038	VAR042	VAR047	VAR051
VAR035	1.0000				
VAR038	.2221	1.0000			
VAR042	.2491	.1674	1.0000		
VAR047	-.0709	.0713	.0813	1.0000	
VAR051	-.0074	.0331	-.1616	-.1874	1.0000
VAR055	.1196	.0589	.2405	.1318	-.0225
VAR057	.0892	.0534	.1424	.2653	-.2854
VAR058	.1615	.2070	.1493	.1339	-.0850
VAR059	.0123	.0517	.1054	.1738	-.2050
VAR063	-.0597	-.1017	.0166	.1874	-.1477
VAR065	.3041	.1407	.2848	.0163	.1097
VAR066	.3267	.1231	.1487	.0339	.0709

VAR067	.1935	.2608	.3317	.2988	-.2224
VAR080	-.0259	.0816	-.0384	.0864	-.0302
VAR081	.1811	.2194	.1328	.2441	-.1011
VAR082	.0224	.1198	.1587	.1686	-.0725
VAR086	.2950	.2157	.1304	.0793	.0861
VAR093	-.0228	-.2330	-.0781	.0203	-.0974
VAR096	.1309	.2677	.0657	.1747	.0029
VAR098	.1904	.4278	.1779	.1589	-.1391
VAR101	-.2942	-.1152	-.0034	.2240	-.3506
VAR005	.0686	.1279	.0508	.1814	-.0195
VAR010	.1987	.2336	.2476	.1812	-.0143

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR055	VAR057	VAR058	VAR059	VAR063
VAR055	1.0000				
VAR057	.1503	1.0000			
VAR058	.2497	.2763	1.0000		
VAR059	.0766	.2380	.1139	1.0000	
VAR063	.1513	.1476	.0613	.0542	1.0000
VAR065	.2410	-.0690	.0704	.0316	.0047
VAR066	.2192	.0394	.0226	-.0228	.0929
VAR067	.2337	.3739	.2858	.1229	.0917
VAR080	-.1741	.0171	.0025	-.0254	-.0818
VAR081	.2218	.2318	.4893	.1462	.1011
VAR082	.1206	.0338	.0942	.1384	-.0161
VAR086	.0923	.1082	.1010	.0205	-.1560
VAR093	.0067	.1025	.0449	.0455	.3882
VAR096	.0904	.1167	.2098	.1127	.0145
VAR098	.1922	.1719	.2472	.1136	.0247
VAR101	.0840	.3326	.0746	.2187	.1365
VAR005	.1134	.0342	.0251	.1783	.0359
VAR010	.3383	.1626	.2393	.0097	.0814

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR065	VAR066	VAR067	VAR080	VAR081
VAR065	1.0000				
VAR066	.3788	1.0000			
VAR067	.1306	-.0023	1.0000		
VAR080	-.0983	-.1346	.0133	1.0000	
VAR081	.0777	.0525	.3780	.0584	1.0000
VAR082	.2039	.0013	.1624	.0478	.1425
VAR086	.2016	.2550	.0904	-.0084	.1072
VAR093	-.0901	.0764	-.0352	-.0518	.0850
VAR096	.1691	.1356	.2015	.0572	.4485
VAR098	.1136	.0601	.2709	-.0108	.3141
VAR101	-.1629	-.2108	.2688	.0695	.1109
VAR005	.0503	.0029	.1806	.1015	.1220
VAR010	.1843	.1132	.2451	-.0080	.3274

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

VAR082	VAR086	VAR093	VAR096	VAR098
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VAR082	1.0000				
VAR086	.0602	1.0000			
VAR093	-.0111	-.1480	1.0000		
VAR096	.1898	.1833	-.0082	1.0000	
VAR098	.2340	.1428	-.0543	.2844	1.0000
VAR101	.0026	-.1294	.0242	.0187	.0523
VAR005	.1106	.0283	-.0373	.0936	.1723
VAR010	.0975	.1558	.0362	.2033	.2023

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	VAR101	VAR005	VAR010
VAR101	1.0000		
VAR005	.1459	1.0000	
VAR010	.0094	.0376	1.0000

N of Cases = 326.0

Statistics for	Mean	Variance	Std Dev	N of
Scale	106.9018	229.2580	15.1413	Variables
				33

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
VAR001	103.7117	209.7566	.5094	.4224	.7700
VAR012	103.5798	214.4844	.3683	.3235	.7759
VAR014	103.5123	204.1522	.6136	.4977	.7642
VAR018	104.7025	215.2743	.2998	.2167	.7786
VAR019	104.3160	210.2229	.4448	.4832	.7721
VAR020	103.3681	227.5810	-.0117	.2496	.7938
VAR021	103.9110	219.7121	.2423	.2011	.7811
VAR023	102.8804	212.6595	.3258	.2319	.7774
VAR024	103.0675	223.5277	.0619	.5835	.7917
VAR030	103.5644	214.0681	.2819	.3025	.7797
VAR035	103.7454	210.3257	.4357	.5706	.7724
VAR038	103.8436	212.0955	.3823	.3665	.7748
VAR042	103.6687	213.3730	.3620	.2888	.7759
VAR047	103.4264	217.5807	.3118	.2714	.7784
VAR051	102.3374	234.9566	-.1971	.3213	.7976
VAR055	102.2883	217.0058	.3210	.3086	.7780
VAR057	104.1503	215.0758	.3754	.3666	.7759
VAR058	103.5307	212.2744	.3998	.3230	.7742
VAR059	104.5736	221.0515	.1987	.1902	.7827
VAR063	103.6564	225.4139	.0716	.2560	.7876
VAR065	103.3405	217.8376	.2913	.3625	.7792
VAR066	103.7147	218.3707	.2435	.3507	.7811
VAR067	103.8497	209.5004	.5085	.4398	.7699
VAR080	103.8558	226.7576	.0167	.2335	.7912
VAR081	104.1319	209.6841	.5272	.4807	.7695
VAR082	103.9632	219.6848	.1975	.1717	.7832
VAR086	103.6718	216.6519	.3120	.2430	.7783
VAR093	103.7761	228.9928	-.0300	.3009	.7912
VAR096	104.0828	213.4608	.4157	.3348	.7741
VAR098	103.9724	211.7500	.4385	.3782	.7728
VAR101	104.1258	227.6549	-.0058	.5627	.7922
VAR005	103.8252	221.1909	.2104	.1608	.7822
VAR010	102.7147	209.6507	.4480	.3704	.7717

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	2257.8442	325	6.9472		
Within People	18611.3333	10432	1.7841		
Between Measures	3065.6683	32	95.8021	64.0913	.0000
Residual	15545.6650	10400	1.4948		
Total	20869.1775	10757	1.9401		
Grand Mean	3.2394				

Intraclass Correlation Coefficient

Two-Way Mixed Effect Model (Consistency Definition):

People Effect Random, Measure Effect Fixed

Single Measure Intraclass Correlation = .0995*

95.00% C.I.: Lower = .0833 Upper = .1192

F = 4.6477 DF = (325, 10400) Sig. = .0000 (Test Value = .0000)

Average Measure Intraclass Correlation = .7848**

95.00% C.I.: Lower = .7499 Upper = .8171

F = 4.6477 DF = (325, 10400) Sig. = .0000 (Test Value = .0000)

*: Notice that the same estimator is used whether the interaction effect is present or not.

**: This estimate is computed if the interaction effect is absent, otherwise ICC is not estimable.

Reliability Coefficients 33 items

Alpha = .7848 Standardized item alpha = .7883

Figure 16: Rotated component matrix for sixth analysis of initial administration**Rotated Component Matrix**

	Component								
	1	2	3	4	5	6	7	8	9
VAR001	.705								
VAR010	.626								
VAR081	.624								
VAR058	.596								
VAR024		.860							
VAR101		-.794							
VAR035		.552	.475	.340					
VAR019			.619						
VAR023			.582						
VAR018			.570					.323	
VAR080			.529						
VAR012				.651					
VAR042				.617					
VAR051		.323		-.585					
VAR067	.303			.508					
VAR014	.394			.447	.316				
VAR057		-.314	.330	.340					
VAR098					.731				
VAR038					.652				
VAR030	.337				.575				
VAR082					.449	.352			
VAR090	.304				.423			.398	
VAR065						.655			
VAR055	.329					.628			
VAR060			.479			.511			
VAR093							.750		
VAR063							.656		
VAR021							.548		
VAR059								.690	
VAR005								.610	
VAR047		-.321						.400	
VAR020									.804
VAR080									.776

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Figure 17: Scree Plot for first analysis of final administration

Figure 18: Rotated component matrix for first analysis of final administration

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
DPS02	.727											
DPS03	.634											
DPS00	.617											
DPS03	.601											
DPS02		.637										
DPS01		.622										
DP022		.620										
DPS00	.351	.515										
DPS00		.485								.361		
DPS01			.724									
DPS01			.616			.338						
DPS00			.511			.452				.326		
DPS02		.482	.493									
DPS03			.477									
DPS02	.306		.364									
DPS00				.583		.305						
DPS01				.574							.391	
DPS01				.557	-.305							
DPS03				.553							.335	
DPS03	.409			.502								
DPS01				.464		.437						
DPS03					.753							
DPS02					.712							
DPS01					.404	.340						
DPS03			.344		-.382					.300		
DPS00						.667						
DPS02		.314				.457		.313				
DPS00							.780					
DPS04							.750					
DPS02							.408				.405	.319
DPS02								-.697				
DPS02	.320							.649				
DPS03							-.477	-.569				
DPS00				.322				.359				-.301
DPS01									-.736			
DPS03									.733			
DPS01			-.336		.334	-.332			.397	.369		
DPS03										.786		
DPS01											.787	
DPS00												.748

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

^aRotation converged in 19 iterations.

Figure 19: Reliability analysis for first analysis of final administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	DPS001	4.4950	1.2838	303.0
2.	DPS002	3.2970	1.3826	303.0
3.	DPS003	3.6205	1.4798	303.0
4.	DPS004	3.0561	1.4259	303.0
5.	DPS005	3.0363	1.6444	303.0
6.	DPS006	3.3663	1.5141	303.0
7.	DPS007	2.2970	1.4320	303.0
8.	DPS008	2.5083	1.3369	303.0
9.	DPS009	3.8449	1.2656	303.0
10.	DPS010	3.5842	1.5713	303.0
11.	DPS011	3.0429	1.2924	303.0
12.	DPS012	4.2838	1.1063	303.0
13.	DPS013	3.5578	1.6120	303.0
14.	DPS014	3.4620	1.5540	303.0
15.	DPS015	2.9175	1.2930	303.0
16.	DPS016	3.8020	1.3955	303.0
17.	DPS017	3.5215	1.4621	303.0
18.	DPS018	2.9670	1.3638	303.0
19.	DPS019	3.0363	1.4266	303.0
20.	DPS020	3.2706	1.2657	303.0
21.	DPS021	4.3399	1.2501	303.0
22.	DP022	4.6667	1.2306	303.0
23.	DPS023	2.7393	1.1543	303.0
24.	DPS024	3.2178	1.3417	303.0
25.	DPS025	2.5215	1.2862	303.0
26.	DPS026	3.2739	1.2505	303.0
27.	DPS027	3.5677	1.2157	303.0
28.	DPS028	3.2211	1.3497	303.0
29.	DPS029	3.2178	1.2655	303.0
30.	DPS030	3.7921	1.4094	303.0
31.	DPS031	4.0165	1.4083	303.0
32.	DPS032	2.8350	1.2966	303.0
33.	DPS033	3.0231	1.4882	303.0
34.	DPS034	3.0000	1.2607	303.0
35.	DPS035	3.2970	1.2465	303.0
36.	DPS036	3.0099	1.3235	303.0
37.	DPS037	3.1650	1.2258	303.0
38.	DPS038	2.8845	1.2541	303.0
39.	DPS039	4.1782	1.3101	303.0
40.	DPS040	3.6601	1.3666	303.0

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS001	DPS002	DPS003	DPS004	DPS005
DPS001	1.0000				
DPS002	.0176	1.0000			
DPS003	.0923	.2883	1.0000		
DPS004	-.1002	.2451	.0446	1.0000	
DPS005	-.0227	-.1111	.0519	-.0884	1.0000
DPS006	.0665	.3164	.1273	.1883	-.0705
DPS007	.0152	.2396	.0440	.2497	-.0777
DPS008	-.0699	.1957	.1079	.2768	-.1214
DPS009	.1065	.3046	.3150	.0874	.0520
DPS010	.0417	-.1731	-.2646	-.1048	-.1005
DPS011	.0909	.0503	-.0572	.1083	-.0319
DPS012	.0266	.0508	.3108	-.0374	.0344
DPS013	.1397	-.0003	.0224	.0079	.0136
DPS014	.0609	.0885	.1355	.1751	-.1880
DPS015	.0127	.2138	.1393	.2809	-.1574

DPS016	.0808	.0529	.1559	-.0959	-.0026
DPS017	.1178	.1131	.0581	-.0030	-.1126
DPS018	.0434	.1211	.0627	.1304	-.1309
DPS019	-.0370	.2766	.1414	.2448	-.1135
DPS020	.0885	.1185	.0197	.1145	.1591
DPS021	.0599	-.0375	.0449	-.1445	-.0302
DP022	.1216	.2063	.3976	.0352	-.0415
DPS023	-.0333	.1670	.0776	.1638	.0695
DPS024	.0237	.3774	.0835	.1719	-.0786
DPS025	-.0044	.2571	.0365	.1248	.0427
DPS026	.0431	.0466	.0904	.0341	.0499
DPS027	-.0258	.2126	.2563	.1420	-.1014
DPS028	.0494	.1741	.2494	.0400	-.1066
DPS029	-.0177	.2222	.2671	.2997	.0264
DPS030	.1065	.1015	.1891	.0701	-.0282
DPS031	.0761	.0094	.1270	-.0516	-.0146
DPS032	.1010	.4763	.1208	.2361	-.1230
DPS033	.0027	.1528	.2401	.0915	-.1735
DPS034	.1207	.2242	.1438	.1031	-.0767
DPS035	.1023	-.1762	-.0823	-.0690	.1595
DPS036	.0634	.4381	.2420	.1681	-.0458
DPS037	.1689	.1625	.0712	-.0015	.0019
DPS038	.1467	.3006	.1654	.0925	-.1120
DPS039	.0143	.0146	.0179	-.0497	-.4057
DPS040	.0434	.0291	.1063	-.0174	.4225

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS006	DPS007	DPS008	DPS009	DPS010
DPS006	1.0000				
DPS007	.2551	1.0000			
DPS008	.3069	.2686	1.0000		
DPS009	.1645	.0639	-.1020	1.0000	
DPS010	-.0958	-.1127	-.0756	-.2274	1.0000
DPS011	.1019	.1666	.1272	-.0607	-.0059
DPS012	.1255	-.1161	-.0240	.2728	-.1033
DPS013	.2118	-.0376	.2276	-.0532	-.0153
DPS014	.2853	.1762	.2341	.0904	.0206
DPS015	.3318	.1492	.5837	-.0766	.0059
DPS016	-.0314	-.0235	-.1695	.2357	-.1177
DPS017	.1737	.1504	.0740	.1029	.0356
DPS018	.2753	.1797	.1164	.1083	.0554
DPS019	.2974	.3302	.3601	.1113	-.0907
DPS020	.3058	.0743	.2042	.0842	-.0465
DPS021	-.1727	-.0492	-.2048	.1611	-.0256
DP022	.1368	-.0113	.0631	.3218	-.1130
DPS023	.1875	.1772	.2256	-.0096	-.0344
DPS024	.3078	.1644	.1319	.2150	-.0825
DPS025	.2416	.1475	.0899	.0458	-.0677
DPS026	.0255	.0265	.0155	.0667	-.0986
DPS027	.1385	.0911	.0990	.3221	-.0823
DPS028	.1595	.0653	.2476	.1016	-.0564
DPS029	.1863	.1305	.2573	.1204	-.0659
DPS030	.2220	-.0087	.2461	.1879	-.1797
DPS031	.0965	-.0353	-.0150	.1556	-.2932
DPS032	.2603	.2886	.2625	.1801	-.0549
DPS033	.1447	.0791	.2437	.1672	-.0256
DPS034	.1284	.0550	.3085	.0975	-.0067
DPS035	-.0122	.0098	-.1247	.0335	-.0720
DPS036	.2560	.2780	.1300	.2579	-.0585
DPS037	.1440	.2587	.0174	.0934	.0581
DPS038	.4008	.3548	.1694	.1952	-.0480
DPS039	-.1816	-.0371	-.0368	.0027	-.0781
DPS040	.1324	-.1462	-.0121	.0785	-.0815

— R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS011	DPS012	DPS013	DPS014	DPS015
DPS011	1.0000				
DPS012	-.1730	1.0000			
DPS013	-.0211	-.0389	1.0000		
DPS014	.0478	.1161	.0316	1.0000	
DPS015	.1309	-.0021	.3907	.2876	1.0000
DPS016	.0727	.0880	-.1627	-.0187	-.2476
DPS017	.0197	.0290	.0687	.0029	.0911
DPS018	.0196	.1335	.0355	.2306	.1355
DPS019	.1841	.0606	.1697	.1672	.3050
DPS020	.0394	.0608	.1497	.1736	.1715
DPS021	-.1238	.0377	-.0878	-.0385	-.2386
DP022	-.0618	.2716	.1324	.0704	.0867
DPS023	.1407	-.1052	.2350	.1209	.3006
DPS024	.1015	-.0083	.0692	.2787	.1936
DPS025	.1200	-.0252	.0860	.1358	.1155
DPS026	.1976	-.0779	.0439	.0335	-.0290
DPS027	-.0872	.3328	.0677	.0868	.1331
DPS028	-.0396	.2262	.2034	.1327	.2040
DPS029	.0975	.1165	.0993	.1069	.2336
DPS030	-.0623	.1781	.1838	.0773	.2358
DPS031	.0469	.1160	-.0084	.1039	-.0720
DPS032	.1406	.0351	.0299	.1793	.2170
DPS033	.0253	.1127	-.0220	.1557	.1920
DPS034	.0427	.0926	.2037	.0085	.3392
DPS035	.1585	-.0661	-.0778	.0246	-.1409
DPS036	.0598	.0478	.0129	.1942	.1940
DPS037	.1920	-.1274	.1125	.0954	.0462
DPS038	-.0255	.1693	.0664	.2721	.1840
DPS039	-.0867	-.0327	-.0300	-.0568	-.0343
DPS040	.0627	.0794	.1074	-.1098	-.0234

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS016	DPS017	DPS018	DPS019	DPS020
DPS016	1.0000				
DPS017	-.0855	1.0000			
DPS018	-.0556	.2744	1.0000		
DPS019	-.1178	.2338	.1844	1.0000	
DPS020	-.0914	.0971	.1414	.1578	1.0000
DPS021	.0634	.1020	.0454	-.0645	-.2027
DP022	.2121	.0436	.0230	.1597	-.0163
DPS023	-.0548	-.0134	.0513	.1324	.2366
DPS024	-.0494	.2052	.0818	.2571	.1855
DPS025	-.0271	-.0658	.0306	.0961	.1490
DPS026	.1773	-.1671	-.1287	.0779	-.0135
DPS027	.0392	-.0031	.1132	.1733	-.0722
DPS028	-.0259	.0454	.0957	.1557	-.0351
DPS029	-.0392	-.0151	.1251	.2304	.1946
DPS030	.0834	-.0340	.0223	.0960	.0187
DPS031	.3690	-.0315	-.0428	.0261	-.0062
DPS032	-.0639	.1730	.0830	.2968	.1847
DPS033	.1345	.1664	.1325	.2164	.0547
DPS034	-.1525	.1976	.1348	.2412	.1868
DPS035	.2795	-.2361	-.1461	-.0955	-.1120
DPS036	.0620	.1821	.2332	.2261	.1486
DPS037	.0385	.3084	.1419	.1632	.0629
DPS038	.0436	.1919	.3521	.2800	.1700
DPS039	-.0150	.0706	-.0504	-.0442	-.2069
DPS040	-.0111	-.1099	.0011	-.0514	.2218

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Correlation Matrix

	DPS021	DP022	DPS023	DPS024	DPS025
DPS021	1.0000				

DP022	.0524	1.0000			
DPS023	-.1403	.0225	1.0000		
DPS024	.0840	.0020	.2827	1.0000	
DPS025	-.2609	.0432	.2346	.1757	1.0000
DPS026	-.0492	.1564	.1827	-.0850	.0509
DPS027	.0752	.2398	.0162	.1371	.0134
DPS028	.0201	.2897	.1413	.0282	.0402
DPS029	-.2228	.1914	.1410	.1982	.2270
DPS030	.1060	.2196	.0989	.0538	.0344
DPS031	.0419	.1159	-.0462	.0016	-.0962
DPS032	-.1226	.1024	.2035	.4871	.2265
DPS033	-.0131	.1688	.1404	.1136	.0473
DPS034	-.1071	.1024	.1616	.1840	.0551
DPS035	.0094	.0022	.1069	-.0824	.0580
DPS036	.0700	.1301	.1317	.3624	.1409
DPS037	.0411	-.0161	.2318	.2700	.0797
DPS038	-.0087	.1445	.1049	.2157	.1894
DPS039	.2661	.0103	-.1553	.0080	-.2283
DPS040	-.0872	.0013	.1682	.0116	.0541

Correlation Matrix

	DPS026	DPS027	DPS028	DPS029	DPS030
DPS026	1.0000				
DPS027	.0477	1.0000			
DPS028	.1543	.2280	1.0000		
DPS029	-.0462	.2508	.1152	1.0000	
DPS030	.0831	.2585	.2488	.1035	1.0000
DPS031	.2682	.0951	.0991	-.0931	.1569
DPS032	.0157	.0512	.0815	.2823	.0029
DPS033	-.0141	.1684	.0584	.2241	.1412
DPS034	-.1512	.0994	.1712	.2926	.1435
DPS035	.4341	-.0745	.0848	-.1230	.0372
DPS036	.0164	.1467	.0266	.1984	.0757
DPS037	.0244	-.0431	.0199	.0088	.0295
DPS038	-.0938	.1452	.1560	.1745	.0894
DPS039	.0125	.0589	.0638	-.2352	.0524
DPS040	.1225	-.0748	.0517	.0832	.2176

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Correlation Matrix

	DPS031	DPS032	DPS033	DPS034	DPS035
DPS031	1.0000				
DPS032	-.0457	1.0000			
DPS033	-.0112	.2062	1.0000		
DPS034	-.0951	.3768	.2030	1.0000	
DPS035	.2311	-.0966	-.1001	-.2992	1.0000
DPS036	-.0640	.3984	.1630	.2183	-.1844
DPS037	-.0802	.2734	.0560	.1200	.0220
DPS038	.0217	.2489	.1966	.1131	-.1496
DPS039	.0558	-.0372	.0301	-.0341	-.0690
DPS040	.0167	.0262	-.0710	.0000	.1450

Correlation Matrix

	DPS036	DPS037	DPS038	DPS039	DPS040
DPS036	1.0000				
DPS037	.3072	1.0000			
DPS038	.2541	.1848	1.0000		
DPS039	.0486	-.0679	-.1265	1.0000	
DPS040	-.0036	.0692	.0041	-.2139	1.0000

N of Cases = 303.0

Statistics for Mean Variance Std Dev N of
Variables

Scale	134.5941	288.3943	16.9822	40	
R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)					
Item-total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
DPS001	130.0990	280.0696	.1554	.1977	.7627
DPS002	131.2970	265.3419	.4694	.4687	.7490
DPS003	130.9736	268.2245	.3709	.3962	.7531
DPS004	131.5380	274.3222	.2549	.2582	.7586
DPS005	131.5578	293.0819	-.1313	.4215	.7781
DPS006	131.2277	261.1764	.5093	.4305	.7461
DPS007	132.2970	271.6996	.3102	.3844	.7561
DPS008	132.0858	269.6549	.3861	.4985	.7530
DPS009	130.7492	272.1289	.3512	.3797	.7548
DPS010	131.0099	298.0694	-.2238	.2521	.7814
DPS011	131.5512	280.7648	.1376	.2273	.7634
DPS012	130.3102	280.6054	.1771	.3352	.7616
DPS013	131.0363	274.8762	.2043	.3330	.7612
DPS014	131.1320	269.5388	.3222	.3378	.7553
DPS015	131.6766	269.3586	.4091	.5529	.7523
DPS016	130.7921	284.8076	.0348	.3726	.7681
DPS017	131.0726	276.6305	.1979	.3149	.7612
DPS018	131.6271	274.1220	.2749	.2800	.7577
DPS019	131.5578	265.5190	.4483	.3539	.7497
DPS020	131.3234	275.7096	.2637	.2976	.7583
DPS021	130.2541	290.7332	-.0915	.3066	.7720
DP022	129.9274	273.6437	.3251	.3329	.7560
DPS023	131.8548	274.2305	.3356	.3444	.7559
DPS024	131.3762	268.3547	.4149	.4653	.7517
DPS025	132.0726	277.6570	.2119	.2547	.7604
DPS026	131.3201	281.7018	.1222	.3590	.7639
DPS027	131.0264	275.0059	.2954	.3346	.7572
DPS028	131.3729	272.3737	.3187	.3006	.7559
DPS029	131.3762	271.9308	.3561	.3708	.7546
DPS030	130.8020	272.0070	.3098	.3308	.7561
DPS031	130.5776	282.3640	.0855	.3239	.7660
DPS032	131.7591	266.9318	.4669	.5046	.7498
DPS033	131.5710	271.2458	.3047	.2612	.7562
DPS034	131.5941	273.3810	.3220	.3809	.7560
DPS035	131.2970	289.1830	-.0553	.4394	.7706
DPS036	131.5842	267.0119	.4539	.4036	.7502
DPS037	131.4290	275.0140	.2922	.3409	.7573
DPS038	131.7096	268.9882	.4335	.3998	.7515
DPS039	130.4158	293.2305	-.1460	.3619	.7747
DPS040	130.9340	281.8897	.1011	.3674	.7652
R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)					

Reliability Coefficients 40 items

Alpha = .7639 Standardized item alpha = .7692

Figure 20: Scree Plot for second analysis of final administration

Figure 21: Rotated component matrix for second analysis of final administration**Rotated Component Matrix^a**

	Component							
	1	2	3	4	5	6	7	8
DPS037	.654							
DPS032	.640		.354					
DPS024	.595							
DPS036	.583							
DPS002	.562	.395						
DPS009		.635						
DP022		.613						
DPS003		.601						
DPS027		.598						
DPS008			.600	.470				
DPS029		.324	.522					
DPS033			.512					
DPS004			.439				.429	
DPS034			.434			-.349		
DPS019	.312		.425					
DPS013				.703				
DPS028		.336		.582				
DPS015			.517	.559				
DPS030		.365		.457				
DPS038					.666			
DPS018					.656			
DPS014					.602			
DPS007	.388				.413			
DPS026						.679		
DPS031						.631		
DPS016				-.313		.579		
DPS011		-.345	.399			.421		
DPS001							-.583	
DPS017	.340						-.512	
DPS025	.303						.425	
DPS006	.307			.317	.359		.366	
DPS040								.687
DPS020					.314			.643
DPS023	.310			.327				.348

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 22 iterations.

Figure 22: Reliability analysis for second analysis of final administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)				
		Mean	Std Dev	Cases
1.	DPS001	4.5016	1.2828	305.0
2.	DPS002	3.2918	1.3801	305.0
3.	DPS003	3.6295	1.4792	305.0
4.	DPS004	3.0557	1.4212	305.0
5.	DPS006	3.3738	1.5168	305.0
6.	DPS007	2.3082	1.4430	305.0
7.	DPS008	2.5016	1.3356	305.0
8.	DPS009	3.8295	1.2762	305.0
9.	DPS011	3.0426	1.2983	305.0
10.	DPS013	3.5639	1.6090	305.0
11.	DPS014	3.4623	1.5621	305.0
12.	DPS015	2.9148	1.2899	305.0
13.	DPS016	3.8131	1.3982	305.0
14.	DPS017	3.5082	1.4670	305.0
15.	DPS018	2.9770	1.3703	305.0
16.	DPS019	3.0328	1.4277	305.0
17.	DPS020	3.2689	1.2721	305.0
18.	DP022	4.6656	1.2273	305.0
19.	DPS023	2.7410	1.1621	305.0
20.	DPS024	3.2197	1.3430	305.0
21.	DPS025	2.5213	1.2826	305.0
22.	DPS026	3.2787	1.2504	305.0
23.	DPS027	3.5574	1.2183	305.0
24.	DPS028	3.2131	1.3513	305.0
25.	DPS029	3.2098	1.2677	305.0
26.	DPS030	3.8033	1.4121	305.0
27.	DPS031	4.0262	1.4093	305.0
28.	DPS032	2.8393	1.2941	305.0
29.	DPS033	3.0131	1.4889	305.0
30.	DPS034	3.0033	1.2579	305.0
31.	DPS036	3.0098	1.3191	305.0
32.	DPS037	3.1672	1.2227	305.0
33.	DPS038	2.8852	1.2500	305.0
34.	DPS040	3.6754	1.3751	305.0

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)					
Correlation Matrix					
	DPS001	DPS002	DPS003	DPS004	DPS006
DPS001	1.0000				
DPS002	.0155	1.0000			
DPS003	.0965	.2836	1.0000		
DPS004	-.1002	.2449	.0443	1.0000	
DPS006	.0673	.3092	.1308	.1872	1.0000
DPS007	.0246	.2355	.0506	.2466	.2478
DPS008	-.0744	.1969	.1027	.2764	.3034
DPS009	.0966	.3085	.2993	.0869	.1503
DPS011	.0859	.0463	-.0568	.1075	.1105

DPS013	.1414	-.0032	.0259	.0078	.2153
DPS014	.0645	.0913	.1342	.1736	.2711
DPS015	.0120	.2154	.1368	.2807	.3257
DPS016	.0873	.0488	.1620	-.0957	-.0274
DPS017	.1106	.1182	.0492	-.0026	.1627
DPS018	.0515	.1184	.0688	.1290	.2700
DPS019	-.0360	.2789	.1382	.2439	.2860
DPS020	.0904	.1219	.0181	.1136	.2904
DP022	.1215	.2073	.3954	.0352	.1328
DPS023	-.0273	.1683	.0779	.1621	.1745
DPS024	.0217	.3717	.0842	.1711	.3132
DPS025	-.0035	.2576	.0363	.1248	.2377
DPS026	.0438	.0423	.0934	.0338	.0334
DPS027	-.0322	.2160	.2464	.1416	.1308
DPS028	.0425	.1747	.2420	.0400	.1584
DPS029	-.0204	.2262	.2591	.2984	.1746
DPS030	.1110	.0954	.1949	.0694	.2280
DPS031	.0800	.0045	.1325	-.0516	.1031
DPS032	.1042	.4739	.1235	.2356	.2586
DPS033	-.0035	.1550	.2322	.0914	.1406
DPS034	.1233	.2230	.1456	.1029	.1269
DPS036	.0632	.4375	.2413	.1681	.2546
DPS037	.1708	.1620	.0726	-.0016	.1418
DPS038	.1468	.2998	.1655	.0925	.3992
DPS040	.0516	.0223	.1153	-.0176	.1388

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS007	DPS008	DPS009	DPS011	DPS013
DPS007	1.0000				
DPS008	.2558	1.0000			
DPS009	.0518	-.0925	1.0000		
DPS011	.1492	.1299	-.0631	1.0000	
DPS013	-.0354	.2246	-.0604	-.0178	1.0000
DPS014	.1876	.2275	.0925	.0308	.0281
DPS015	.1485	.5825	-.0708	.1259	.3878
DPS016	-.0105	-.1751	.2180	.0678	-.1577
DPS017	.1402	.0793	.1185	.0162	.0621
DPS018	.1949	.1070	.0956	.0079	.0372
DPS019	.3320	.3571	.1168	.1714	.1652
DPS020	.0855	.1992	.0891	.0229	.1443
DP022	-.0085	.0625	.3205	-.0653	.1308
DPS023	.1910	.2175	-.0077	.1207	.2297
DPS024	.1534	.1328	.2062	.1116	.0719
DPS025	.1493	.0888	.0464	.1150	.0850
DPS026	.0233	.0145	.0567	.2034	.0475
DPS027	.0797	.1046	.3321	-.0858	.0623
DPS028	.0506	.2522	.1089	-.0314	.2002
DPS029	.1282	.2582	.1320	.0885	.0934
DPS030	-.0024	.2391	.1693	-.0582	.1880
DPS031	-.0299	-.0192	.1397	.0497	-.0036
DPS032	.2926	.2580	.1726	.1353	.0310
DPS033	.0670	.2481	.1760	.0286	-.0251
DPS034	.0611	.3045	.0926	.0382	.2039
DPS036	.2749	.1298	.2550	.0593	.0129
DPS037	.2615	.0149	.0900	.1861	.1124

DPS038	.3516	.1686	.1918	-.0254	.0666
DPS040	-.1301	-.0203	.0565	.0612	.1127

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS014	DPS015	DPS016	DPS017	DPS018
DPS014	1.0000				
DPS015	.2890	1.0000			
DPS016	-.0145	-.2478	1.0000		
DPS017	.0062	.0942	-.0947	1.0000	
DPS018	.2386	.1347	-.0434	.2627	1.0000
DPS019	.1761	.3070	-.1172	.2370	.1870
DPS020	.1872	.1744	-.0882	.1011	.1489
DP022	.0740	.0879	.2107	.0454	.0248
DPS023	.1368	.3012	-.0481	-.0113	.0644
DPS024	.2635	.1893	-.0499	.1986	.0742
DPS025	.1387	.1164	-.0262	-.0643	.0330
DPS026	.0248	-.0321	.1785	-.1725	-.1287
DPS027	.0854	.1350	.0285	.0085	.1023
DPS028	.1230	.2029	-.0346	.0514	.0826
DPS029	.1136	.2363	-.0446	-.0045	.1221
DPS030	.0727	.2310	.0913	-.0453	.0283
DPS031	.0991	-.0748	.3731	-.0415	-.0372
DPS032	.1817	.2164	-.0585	.1679	.0888
DPS033	.1501	.1924	.1244	.1731	.1211
DPS034	.0126	.3388	-.1474	.1934	.1394
DPS036	.1925	.1938	.0616	.1810	.2312
DPS037	.0989	.0466	.0414	.3046	.1456
DPS038	.2698	.1837	.0442	.1898	.3499
DPS040	-.1075	-.0268	.0026	-.1234	.0135

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS019	DPS020	DP022	DPS023	DPS024
DPS019	1.0000				
DPS020	.1672	1.0000			
DP022	.1621	-.0118	1.0000		
DPS023	.1419	.2498	.0267	1.0000	
DPS024	.2467	.1713	-.0012	.2663	1.0000
DPS025	.0984	.1517	.0442	.2365	.1720
DPS026	.0704	-.0224	.1531	.1721	-.0777
DPS027	.1748	-.0694	.2395	.0140	.1340
DPS028	.1515	-.0411	.2871	.1295	.0321
DPS029	.2361	.2015	.1932	.1464	.1892
DPS030	.0897	.0131	.2163	.0951	.0576
DPS031	.0208	-.0113	.1135	-.0481	.0056
DPS032	.2966	.1862	.1028	.2063	.4822
DPS033	.2149	.0520	.1680	.1331	.1137
DPS034	.2417	.1886	.1030	.1649	.1807
DPS036	.2251	.1474	.1300	.1304	.3609
DPS037	.1646	.0662	-.0152	.2343	.2660
DPS038	.2786	.1684	.1443	.1040	.2149
DPS040	-.0549	.2155	-.0002	.1675	.0138

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix					
	DPS025	DPS026	DPS027	DPS028	DPS029
DPS025	1.0000				
DPS026	.0486	1.0000			
DPS027	.0134	.0424	1.0000		
DPS028	.0382	.1536	.2333	1.0000	
DPS029	.2279	-.0536	.2563	.1159	1.0000
DPS030	.0332	.0889	.2456	.2410	.0930
DPS031	-.0968	.2721	.0853	.0938	-.1007
DPS032	.2270	.0156	.0465	.0761	.2793
DPS033	.0464	-.0161	.1755	.0656	.2268
DPS034	.0560	-.1512	.0954	.1660	.2904
DPS036	.1408	.0163	.1460	.0265	.1974
DPS037	.0806	.0232	-.0451	.0162	.0091
DPS038	.1893	-.0931	.1437	.1547	.1730
DPS040	.0534	.1274	-.0880	.0409	.0713

REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix					
	DPS030	DPS031	DPS032	DPS033	DPS034
DPS030	1.0000				
DPS031	.1646	1.0000			
DPS032	.0060	-.0428	1.0000		
DPS033	.1327	-.0174	.2008	1.0000	
DPS034	.1448	-.0928	.3782	.1984	1.0000
DPS036	.0752	-.0638	.3979	.1624	.2181
DPS037	.0305	-.0789	.2748	.0530	.1216
DPS038	.0897	.0223	.2489	.1952	.1132
DPS040	.2279	.0282	.0316	-.0815	.0044

REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix				
	DPS036	DPS037	DPS038	DPS040
DPS036	1.0000			
DPS037	.3069	1.0000		
DPS038	.2541	.1848	1.0000	
DPS040	-.0037	.0715	.0051	1.0000

REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 305.0

Statistics for	Mean	Variance	Std Dev	N of
Scale	111.9049	299.3955	17.3030	Variables 34

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
DPS001	107.4033	291.7283	.1374	.1734	.8161
DPS002	108.6131	274.7182	.4978	.4378	.8038
DPS003	108.2754	279.2594	.3631	.3237	.8085
DPS004	108.8492	283.4838	.2903	.2446	.8112
DPS006	108.5311	270.6841	.5292	.3925	.8019
DPS007	109.5967	281.0178	.3368	.3478	.8095
DPS008	109.4033	278.7678	.4225	.4868	.8066
DPS009	108.0754	284.0568	.3187	.3416	.8103
DPS011	108.8623	291.2376	.1461	.2121	.8159
DPS013	108.3410	285.0412	.2166	.3109	.8145
DPS014	108.4426	279.6817	.3306	.3075	.8098
DPS015	108.9902	278.4769	.4473	.5332	.8060
DPS016	108.0918	296.5705	.0181	.3314	.8207
DPS017	108.3967	287.3059	.1998	.2980	.8146
DPS018	108.9279	284.5211	.2811	.2590	.8115
DPS019	108.8721	275.0790	.4704	.3451	.8046
DPS020	108.6361	285.5875	.2835	.2707	.8114
DP022	107.2393	285.0313	.3103	.3253	.8106
DPS023	109.1639	284.4204	.3476	.3222	.8095
DPS024	108.6852	278.9730	.4150	.4187	.8069
DPS025	109.3836	287.0991	.2451	.2041	.8127
DPS026	108.6262	293.6625	.0973	.2782	.8173
DPS027	108.3475	286.5696	.2750	.2918	.8117
DPS028	108.6918	284.2205	.2930	.2550	.8111
DPS029	108.6951	281.3311	.3870	.3282	.8080
DPS030	108.1016	283.4140	.2942	.2921	.8111
DPS031	107.8787	293.5477	.0800	.2826	.8187
DPS032	109.0656	276.5088	.4929	.4863	.8044
DPS033	108.8918	281.6297	.3111	.2477	.8105
DPS034	108.9016	282.9311	.3517	.3536	.8092
DPS036	108.8951	277.6469	.4552	.3688	.8056
DPS037	108.7377	285.8915	.2904	.3234	.8112
DPS038	109.0197	279.0259	.4504	.3701	.8060
DPS040	108.2295	294.0393	.0735	.2673	.8187

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Reliability Coefficients 34 items

Alpha = .8152 Standardized item alpha = .8164

Figure 23: Distribution of Patience Scale total scores

Distribution of Total Scores

Patience Scale

DPSTOTAL

Normal curve shown

Kolmogorov-Smirnov Z = .920

Figure 24: Scree Plot for third analysis of final administration

Figure 25: Rotated component matrix for third analysis of final administration**Rotated Component Matrix^a**

	Component					
	1	2	3	4	5	6
DPS024	.670					
DPS032	.666		.370			
DPS036	.615					
DPS037	.605					
DPS002	.575	.346				
DP022		.635				
DPS009	.331	.630				
DPS003		.590				
DPS027		.582				
DPS008			.601	.460		
DPS029			.560			
DPS033			.556			
DPS034			.441			-.330
DPS019			.429		.331	
DPS013				.742		
DPS015			.492	.588		
DPS028		.362		.494		
DPS030		.398		.437		
DPS023	.378			.420		
DPS038					.690	
DPS018					.663	
DPS014					.559	
DPS007					.516	
DPS006	.333			.359	.373	
DPS026						.699
DPS031						.632
DPS016				-.335		.571
DPS011		-.379	.410			.438

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Figure 26: Reliability analysis for third analysis of final administration

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	DPS002	3.2922	1.3741	308.0
2.	DPS003	3.6266	1.4730	308.0
3.	DPS006	3.5032	2.7649	308.0
4.	DPS007	2.3052	1.4431	308.0
5.	DPS008	2.5065	1.3397	308.0
6.	DPS009	3.8344	1.2718	308.0
7.	DPS011	3.0422	1.2945	308.0
8.	DPS013	3.5682	1.6037	308.0
9.	DPS014	3.4578	1.5572	308.0
10.	DPS015	2.9188	1.2952	308.0
11.	DPS016	3.8084	1.3976	308.0
12.	DPS018	2.9805	1.3672	308.0
13.	DPS019	3.0422	1.4262	308.0
14.	DP022	4.6461	1.2484	308.0
15.	DPS023	2.7468	1.1700	308.0
16.	DPS024	3.2273	1.3459	308.0
17.	DPS026	3.2760	1.2524	308.0
18.	DPS027	3.5487	1.2164	308.0
19.	DPS028	3.2175	1.3463	308.0
20.	DPS029	3.2045	1.2635	308.0
21.	DPS030	3.8052	1.4076	308.0
22.	DPS031	4.0260	1.4047	308.0
23.	DPS032	2.8474	1.2962	308.0
24.	DPS033	3.0032	1.4872	308.0
25.	DPS034	3.0065	1.2556	308.0
26.	DPS036	3.0260	1.3285	308.0
27.	DPS037	3.1753	1.2221	308.0
28.	DPS038	2.8961	1.2591	308.0

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	DPS002	DPS003	DPS006	DPS007	DPS008
DPS002	1.0000				
DPS003	.2826	1.0000			
DPS006	.1592	.0503	1.0000		
DPS007	.2325	.0492	.1916	1.0000	
DPS008	.1989	.0978	.1851	.2517	1.0000
DPS009	.3074	.2990	.0868	.0489	-.0940
DPS011	.0480	-.0566	.0223	.1430	.1323
DPS013	-.0032	.0239	.1608	-.0315	.2265
DPS014	.0895	.1358	.1324	.1869	.2179
DPS015	.2165	.1309	.2197	.1492	.5888
DPS016	.0479	.1645	-.0786	-.0161	-.1811
DPS018	.1192	.0659	.1844	.1962	.1139
DPS019	.2779	.1347	.2218	.3324	.3587
DP022	.1991	.3938	-.0332	-.0086	.0394
DPS023	.1677	.0716	.1896	.1964	.2276

DPS024	.3673	.0807	.2685	.1604	.1329
DPS026	.0382	.0949	.0435	.0289	.0018
DPS027	.2136	.2474	.0493	.0824	.0967
DPS028	.1733	.2415	.1131	.0512	.2475
DPS029	.2262	.2582	.0889	.1300	.2580
DPS030	.0969	.1942	.0972	-.0075	.2408
DPS031	.0045	.1338	.0201	-.0345	-.0226
DPS032	.4713	.1185	.2214	.2949	.2641
DPS033	.1557	.2310	.0463	.0678	.2493
DPS034	.2236	.1422	.1088	.0636	.3098
DPS036	.4348	.2330	.2101	.2694	.1427
DPS037	.1614	.0691	.1492	.2632	.0212
DPS038	.3000	.1582	.2602	.3438	.1839

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R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS009	DPS011	DPS013	DPS014	DPS015
DPS009	1.0000				
DPS011	-.0630	1.0000			
DPS013	-.0607	-.0194	1.0000		
DPS014	.0927	.0292	.0259	1.0000	
DPS015	-.0734	.1264	.3892	.2785	1.0000
DPS016	.2185	.0693	-.1620	-.0105	-.2551
DPS018	.0937	.0078	.0407	.2337	.1426
DPS019	.1170	.1684	.1689	.1717	.3105
DP022	.3118	-.0653	.1187	.0836	.0628
DPS023	-.0108	.1168	.2349	.1282	.3131
DPS024	.2047	.1048	.0773	.2595	.1919
DPS026	.0574	.1957	.0466	.0302	-.0424
DPS027	.3284	-.0872	.0601	.0888	.1276
DPS028	.1105	-.0333	.2006	.1233	.1988
DPS029	.1286	.0883	.0936	.1128	.2371
DPS030	.1693	-.0545	.1863	.0705	.2307
DPS031	.1410	.0513	-.0066	.1003	-.0794
DPS032	.1704	.1320	.0371	.1751	.2254
DPS033	.1708	.0304	-.0254	.1484	.1946
DPS034	.0904	.0379	.2068	.0085	.3448
DPS036	.2532	.0600	.0190	.1816	.2057
DPS037	.0900	.1827	.1169	.0946	.0543
DPS038	.1886	-.0213	.0713	.2569	.1986

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS016	DPS018	DPS019	DP022	DPS023
DPS016	1.0000				
DPS018	-.0497	1.0000			
DPS019	-.1234	.1909	1.0000		
DP022	.2205	.0112	.1420	1.0000	
DPS023	-.0616	.0743	.1509	.0009	1.0000
DPS024	-.0582	.0785	.2529	-.0140	.2746

DPS026	.1792	-.1319	.0682	.1627	.1634
DPS027	.0314	.0985	.1687	.2484	.0087
DPS028	-.0349	.0819	.1530	.2785	.1281
DPS029	-.0460	.1230	.2338	.1906	.1475
DPS030	.0919	.0285	.0885	.2072	.0926
DPS031	.3758	-.0404	.0173	.1167	-.0554
DPS032	-.0683	.0957	.3030	.0792	.2193
DPS033	.1225	.1218	.2103	.1673	.1334
DPS034	-.1534	.1443	.2454	.0867	.1741
DPS036	.0501	.2370	.2332	.0939	.1447
DPS037	.0331	.1502	.1714	-.0318	.2430
DPS038	.0331	.3546	.2836	.1092	.1192

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REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS024	DPS026	DPS027	DPS028	DPS029
DPS024	1.0000				
DPS026	-.0721	1.0000			
DPS027	.1305	.0478	1.0000		
DPS028	.0355	.1555	.2312	1.0000	
DPS029	.1871	-.0543	.2574	.1135	1.0000
DPS030	.0527	.0823	.2414	.2390	.0921
DPS031	.0003	.2699	.0850	.0935	-.1021
DPS032	.4867	.0120	.0409	.0769	.2777
DPS033	.1087	-.0197	.1773	.0615	.2302
DPS034	.1842	-.1544	.0915	.1649	.2907
DPS036	.3629	.0055	.1323	.0278	.1928
DPS037	.2727	.0215	-.0496	.0183	.0083
DPS038	.2158	-.1057	.1309	.1517	.1711

REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS030	DPS031	DPS032	DPS033	DPS034
DPS030	1.0000				
DPS031	.1657	1.0000			
DPS032	.0051	-.0479	1.0000		
DPS033	.1326	-.0188	.1980	1.0000	
DPS034	.1445	-.0961	.3829	.1989	1.0000
DPS036	.0776	-.0667	.4052	.1566	.2245
DPS037	.0294	-.0824	.2822	.0499	.1266
DPS038	.0933	.0181	.2577	.1933	.1220

REL I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)
Correlation Matrix

	DPS036	DPS037	DPS038
DPS036	1.0000		
DPS037	.3142	1.0000	
DPS038	.2704	.1918	1.0000

N of Cases = 308.0

N of

Statistics for Mean Variance Std Dev Variables
 Scale 91.5390 241.9366 15.5543 28
 R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
DPS002	88.2468	220.4340	.4807	.4056	.7795
DPS003	87.9123	223.7024	.3646	.3009	.7845
DPS006	88.0357	209.2332	.3133	.1877	.7942
DPS007	89.2338	225.1895	.3386	.3030	.7858
DPS008	89.0325	223.1195	.4253	.4715	.7821
DPS009	87.7045	228.4629	.3084	.3213	.7873
DPS011	88.4968	235.5733	.1180	.1780	.7952
DPS013	87.9708	229.5073	.2029	.2805	.7928
DPS014	88.0812	224.5765	.3200	.2427	.7867
DPS015	88.6201	222.9008	.4488	.5265	.7813
DPS016	87.7305	239.0574	.0214	.3262	.7999
DPS018	88.5584	229.1464	.2638	.2176	.7892
DPS019	88.4968	219.7231	.4773	.3221	.7793
DP022	86.8929	229.6790	.2828	.3167	.7884
DPS023	88.7922	228.5495	.3397	.2592	.7863
DPS024	88.3117	223.4986	.4132	.4064	.7827
DPS026	88.2630	236.3573	.1042	.2636	.7955
DPS027	87.9903	229.4364	.2991	.2601	.7878
DPS028	88.3214	227.3524	.3146	.2366	.7870
DPS029	88.3344	226.6598	.3596	.2598	.7852
DPS030	87.7338	227.8703	.2844	.2131	.7883
DPS031	87.5130	236.2050	.0870	.2657	.7971
DPS032	88.6916	221.7319	.4799	.4809	.7800
DPS033	88.5357	225.7284	.3132	.2187	.7870
DPS034	88.5325	227.4354	.3413	.3307	.7860
DPS036	88.5130	222.0747	.4571	.3673	.7808
DPS037	88.3636	230.1931	.2764	.2699	.7887
DPS038	88.6429	223.8199	.4388	.3265	.7820

Reliability Coefficients 28 items

Alpha = .7933 Standardized item alpha = .8020

Appendix O: The Patience Scale

Please Answer Questions Using the Scale:					
1	2	3	4	5	6
Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1. I get upset while waiting.					
2. I frequently feel like hurrying others.					
3. I anticipate a green light by looking at the yellow light for the opposite traffic.					
4. I have too much to do and not enough time to do it in.					
5. If I want something I get it.					
6. If someone or something is taking too long I am able to think about other things and not get upset.					
7. I cannot tolerate children who cry for a long time.					
8. I am not easily irritated.					
9. I am often rushed for time.					
10. I am too tolerant of other people.					
11. I often lose track of what people are saying if they go on for too long.					
12. I consider myself as easy going.					
13. I have trouble finding time to get my hair cut.					
14. I work fast.					
15. When I am angry, I have a hard time not thinking what is upsetting me.					
16. I do not like to wait to get a table at a restaurant.					
17. I wait too long to act.					
18. I get things accomplished without undue stress.					
19. I get anxious when things don't stay on schedule.					
20. I have enough time to do the things that are important to me.					
21. You can be too tolerant.					
22. I don't like to wait in line.					
23. I often face unexpected changes, frequent interruptions, inconveniences, or "things going wrong"					
24. I get bored when I wait.					
25. I often try to control things that are beyond my control.					

26. I live a calm, predictable life.
27. I make quick decisions
28. When I listen to someone talking, and this person is taking too long to come to the point, I feel like hurrying him or her along.

Scoring: Items 1-5, 7, 9, 11, 13-16, 19, 22-25, and 27-28 are reversed scored.