SUBSCALE VALIDATION OF THE DRINKING PATTERNS QUESTIONNAIRE

by

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ABSTRACT OF THE THESIS

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The current study evaluated the psychometric properties of the Drinking Patterns Questionnaire (DPQ; Zitter & McCrady, 1979), a self-report instrument designed to identify high-risk drinking situations. The DPQ consists of 189 items representing possible drinking antecedents from eight distinct categories: Work-Related, Financial, Physiological, Interpersonal, Marital, Parents, Children, and Emotional. While prior research has supported the construct validity of the Physiological, Interpersonal, Marital, and Emotional subscales (Zweig, 2005), no validation studies have been conducted on the remaining subscales. The primary aim of the current study was to evaluate the construct validity of the Work-Related, Financial, Parents, and Children subscales of the DPQ. This evaluation was conducted via analyses of convergence between DPQ subscales scores and scores on correlate measures of the same or similar construct. A secondary aim was to evaluate the internal consistency of all eight DPQ subscales. Participants were 134 adult residents of an inpatient substance abuse treatment center who scored ≥ 9 on the Alcohol Dependence Scale (a marker highly predictive of DSM-IV diagnosis of

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alcohol dependence; Chantarujikapong, Smith, & Fox, 1997). The mean age of participants was 40.0 (SD = 11.4), 48.5% were female, 94.8% were Caucasian, and 59.7% were employed. Five group administrations were conducted with approximately 30 residents participating on each occasion. Upon providing informed consent, participants completed a demographics questionnaire, the DPQ, and the four correlate measures corresponding to each DPQ subscale under evaluation. Results indicated that DPQ subscales evidenced adequate to strong internal consistency (i.e., coefficient alphas ranging from .691 to .921). Pearson's r correlations were then used to evaluate subscale convergent validity and significant correlations were found between scores on the Work-Related (n = 89, r = -.213, p < .05), Financial (n = 130, r = .423, p < .001), and Children (n = 62, r = -.510, p < .001) subscales and scores on their respective correlate measures. Findings for the validity of the Parents subscale were mixed. Overall, study results provide strong evidence of construct validity for the Financial and Children subscales and modest evidence for the Work-Related subscale, and indicate that all DPQ subscales exhibit solid internal consistency.

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Introduction

Alcohol Use Disorders (AUDs) often are characterized by chronic patterns of relapse. Even after receiving inpatient treatment, a substantial proportion of individuals with AUDs are likely to experience a lapse or relapse within 12 months (Swift, 1999). Closely tied to the phenomenon of relapse is the construct of high-risk drinking situations. Operationally defined, high-risk situations are those in which an individual experiences an increased likelihood of drinking alcohol (Annis & Davis, 1989). As a construct with applications not only to relapse prevention interventions but also to other facets of alcohol treatment, numerous assessment techniques have been developed to identify an individual's particular high-risk situations. The current paper will discuss the empirical and theoretical foundations of the construct of high-risk drinking situations; describe a self-report instrument designed to identify high-risk situations, the Drinking Patterns Questionnaire (DPQ); and report the results of an investigation of its psychometric properties.

Understanding High-Risk Drinking Situations

When an individual enters alcohol treatment, identification of her or his high-risk drinking situations may inform case conceptualization, guide personalized feedback, and aid in initial abstinence planning. While these are important and clinically useful applications of the construct, the alcohol treatment and alcohol assessment literatures suggest that the most robust application of this construct is within the domain of posttreatment relapse (Annis & Davis, 1989; Annis & Graham, 1995; Rose-Colley & Cinelli, 1992). Therefore, the current paper will discuss high-risk situations in relation to relapse and relapse prevention interventions. Even within this narrowed application of the construct, high-risk situations may be further categorized into those situations that have preceded or accompanied pre-treatment drinking episodes and those that have no association with prior drinking (e.g., coping with sudden job loss). Insofar as the primary functional utility of this construct within the domain of relapse is to *predict* dangerous post-treatment situations and to guide the development of skills to cope with them, the current paper will focus exclusively on situations tied to prior drinking. The intuitive connection between prior drinking antecedents and future high-risk situations has been supported by research indicating that participants who relapse after treatment tend to do so in situations identified as pre-treatment drinking situations (Miller, McCrady, Abrams, & Labouvie, 1994).

Empirical Research

Why do prior drinking antecedents represent future high-risk situations? To begin to answer this question, an understanding of what happens to individuals with AUDs when they are exposed to prior drinking antecedents is necessary. Investigation of this phenomenon primarily has been carried out using cue-reactivity paradigms, which expose participants to a variety of drinking antecedents and then measure the effects of this exposure on numerous indices. Antecedents broadly may take the form of people, places, events, or feelings that have preceded or accompanied past drinking (Marlatt, 1996); cuereactivity paradigms attempt to re-create antecedents within the laboratory in an ecologically valid way (reviewed in Glautier & Tiffany, 1995). Admittedly, cueexposure paradigms are an imperfect means of evaluating the impact of drinking antecedents; the alcohol cues presented during exposure, even those tailored to participants based on self-reports cannot perfectly mimic one's unique array of antecedents. Despite this limitation, cue-exposure paradigms represent a viable analogue and provide valuable insight into the impact drinking antecedents have on individuals with AUDs.

The effects of alcohol cue-exposure have been measured on cognitive, behavioral, affective, and physiological indices and a significant change in performance or selfreporting from pre- to post-cue exposure is indicative of cue-reactivity. On indices of physiological reactivity to alcohol cue-exposure, individuals with AUDs have been shown to exhibit greater increases in heart rate (Greeley, Swift, Prescot, & Heather, 1993), salivation (Pomerleau, Fertig, Baker, & Cooney, 1983), and skin conductance (Kaplan, 1985) than non-problem drinkers. Alcohol cues also elicit greater decreases in skin temperature and greater increases in sweat gland activity than do neutral cues (Carter & Tiffany, 1999). In addition to these autonomic responses, Cooney, Gillespie, Baker, and Kaplan (1987) found that individuals with AUDs, when compared to non-problem drinkers, evidenced greater increases in expectations of pleasant alcohol effects as well as greater decreases in expectations of arousal, expectations of behavioral impairment from drinking, and confidence about coping with future temptation. These cognitive reactions also were accompanied by affective changes; participants with AUDs in this study showed greater increases in feelings of guilt than did the normal controls (Cooney et al., 1987).

Although the cue-reactivity literature is replete with data indicating the strong physiological, cognitive and affective impact of exposure to alcohol cues on individuals with AUDs, Carter and Tiffany (1999) found that the most robust reaction in this population is an increase in self-reported urge to drink. A meta-analysis of 41 cue-

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reactivity studies, Carter and Tiffany's investigation showed that the effect sizes associated with increased urge or craving were significantly greater than those found with any other index of reactivity. Although not directly examined as a mediating variable, increases in self-reported urge may account for other evidence of an association between alcohol cue reactivity and subsequent alcohol consumption following treatment (Rohsenow, Monti, Rubonis, & Sirota, 1994). It should be noted here, however, that the construct of craving has been interpreted from a variety of perspectives (e.g., cognitive social learning, neurobiological, and genetic; reviewed in Drummond, Litten, Lowman, & Hunt, 2000), and that cue-elicited craving is merely one aspect of this phenomenon. Because this paper focuses on the impact that prior drinking antecedents have on subsequent behavior and the mechanisms linking them, the discussion of craving will be limited to the domain of cue-reactivity.

Even though cue-exposure paradigms are an inexact analogue to investigate the effects of prior drinking antecedents on individuals with AUDs, the data reviewed above nonetheless may inform our conceptualization of high-risk situations. In fact, evidence of such robust reactivity to largely non-individualized, generic alcohol cues suggests that exposure to one's particular and more salient prior drinking antecedents may evoke even greater reactivity, including cue-elicited craving. Although this conclusion is speculative, the cue-reactivity literature provides a basic foundation for understanding the connection between prior drinking antecedents and future high-risk situations.

Conceptual Foundations in Learning Theory

The most parsimonious explanation for the phenomenon of cue-reactivity is found in classical conditioning theory (Pavlov, 1927). Subsequent models of high-risk situations (e.g., alternative coping response model, Hilgard & Bower, 1966; social learning model, Bandura, 1969; self-efficacy model, Bandura, 1977; cognitive behavioral model, Rotgers, 1996; cue reactivity model, Drummond, 2000) represent either direct or indirect extensions of Pavlov's original model, thus a review of its tenets is warranted. Doing so will provide a theoretical explanation of how exposure to high-risk drinking situations is likely to lead to the behavioral response of drinking.

Classical conditioning theory is a broad model of learning and behavior that explains how a biologically insignificant stimulus is able to acquire the properties of a biologically significant stimulus (Pavlov, 1927). Whereas the latter, known as an unconditioned stimulus (UCS), is able to elicit an automatic behavioral reaction within an organism, a biologically insignificant, or neutral stimulus, has no such effect. In the case of Pavlov's initial research with dogs, exposure to food (i.e., the UCS) elicited the automatic behavioral reaction of salivation, or the unconditioned response (UCR; Pavlov, 1927). After repeatedly pairing the sound of a ringing tone (i.e., a neutral stimulus) with the presentation of food, Pavlov found that subsequent exposure to the sound alone was able to elicit salivation. Once this learned association has been acquired, the ringing bell is now considered a conditioned stimulus (CS) and the salivation it evokes is termed a conditioned response (CR).

When these basic principles of classical conditioning are applied to drinking behavior, high-risk situations represent previously neutral stimuli that have been repeatedly paired with alcohol consumption over time (Ludwig & Wikler, 1974). Through this repeated pairing, neutral situations become associated with the positive and negative reinforcement that alcohol consumption is known to provide (Higgins, Heil, & Lussier, 2004). As a result, high-risk situations subsequently are able to elicit a variety of conditioned responses, the most robust of which is an increase in craving or urge to drink (Carter & Tiffany, 1999). Feeling compelled to attenuate the aversive response of craving, a newly-abstinent individual with an AUD is at an increased risk for a lapse or relapse to alcohol use. It is this application of classical conditioning theory that serves to inform the current conceptualization of the construct of high-risk situations.

Treatment Implications

Relapse prevention interventions, an essential component of current treatments for AUDs, are based on the hypothesis that the risk of relapse greatly increases when an abstinent individual encounters high-risk situations for which coping skills have not been developed (Rose-Colley & Cinelli, 1992). Two basic forms of relapse prevention have been most widely used, cue exposure treatment (CET; Drummond, Cooper, & Glautier, 1990) and coping skills training (CST; Monti, Kadden, Rohsenow, Cooney, & Abrams, 2002). CET typically is used as one aspect of a multifaceted treatment regimen, and consists of three main components: training in the identification of high-risk situations; imaginal and in-vivo exposure to alcohol-related stimuli; and development and practicing of coping skills during exposure (Rohsenow et al., 2001). Use of CET in addition to standard treatment is empirically supported; individuals with AUDs in one study who received CET, when compared to those who received standard treatment alone, had fewer heavy drinking days, reported lower levels of craving in high-risk situations, developed a greater number of coping skills, and evidenced superior avoidance of high-risk situations in general (Rohsenow et al., 2001). CST, on the other hand, does not include cue exposure and relies exclusively on the development of anticipatory and reactive coping

skills to be utilized in post-treatment high-risk situations. Also shown to be efficacious, CST has been found to be associated with decreased severity of relapse (McKay et al., 1997) and with delayed emergence of treatment effects (Carroll et al., 1994) in cocaine-dependent individuals.

An important first step in relapse prevention interventions is the identification of an individual's particular high-risk situations. While this step may be taken via openended questions from the therapist to the client, a more directive approach using a comprehensive list of potential high-risk situations may decrease the likelihood of omitting less easily-recalled triggers. This process would be greatly facilitated by the use of a psychometric instrument designed specifically for the identification of high-risk situations.

Assessment Instruments

Although assessment techniques have been developed to identify high-risk situations using semi-structured interview (Taxonomy of Relapse Precipitants; Marlatt & Gordon, 1985) and role-play (Alcohol-Specific Role-Play Test; Monti, Rohsenow, Abrams, & Zwick, 1993) formats, the current paper will review only those measures that use the same format as the DPQ, paper-and-pencil self-report. Three measures meeting this criterion have been developed, including the Reasons for Drinking Questionnaire (RFDQ; Zywiak, Connors, Maisto, & Westerberg, 1996), the Drinking Context Scale (DCS; O'Hare, 1997), and the Inventory of Drinking Situations (IDS; Annis, Graham, & Davis, 1987). The Reasons for Drinking Questionnaire (RFDQ; Zywiak et al., 1996) is a 16-item self-report measure that was designed to identify relapse risk and potential relapse precipitants within three broad domains: negative emotions, social pressure, and craving. Although it has been shown to have adequate predictive validity (Zywiak et al., 1996), the small number of items on the RFDQ restricts its ability to tap the full range of an individual's high-risk situations, thus severely limiting its clinical utility. The second instrument, the Drinking Context Scale (DCS; O'Hare, 1997), measures the self-reported likelihood of drinking in three contexts: convivial circumstances, intimate circumstances, and coping with negative emotion. With only 23 items in the original version (O'Hare, 1997) and 9 items in the short-form (O'Hare, 1998), the size of the DCS raises concerns of comprehensiveness similar to those with the RFDQ. In addition, the DCS was designed specifically for use with college students and its psychometric properties have only been investigated with this population (O'Hare, 1997; O'Hare, 1998; O'Hare, 2001). As a result, the DCS may not be appropriate for use in other populations.

A larger and more widely disseminated instrument is the Inventory of Drinking Situations (IDS; Annis et al, 1987). The IDS is a 100-item self-report measure that assesses the frequency of past-year drinking in eight types of situations proposed by Marlatt (1978): unpleasant emotions, physical discomfort, pleasant emotions, testing personal control, urges or temptations to drink, conflict with others, social pressure to drink, and pleasant times with others. The IDS has enjoyed widespread empirical support; prior psychometric evaluation has indicated that the measure has strong internal consistency, test-retest reliability, and construct validity (Annis et al., 1987), and that its factor structure is stable (Cannon, Leeka, Patterson, & Baker, 1990; Isenhart, 1991). A 42-item short form of the IDS also has been developed (IDS-42; Isenhart, 1991) that has evidenced sound psychometric properties as well (Isenhart, 1991; Isenhart, 1993). development have the potential to weaken its clinical utility. Specifically, the IDS is an empirically-derived scale; that is, its items were selected specifically to tap particular theoretical constructs and its refinement is primarily statistically-driven. While this development and refinement process creates a highly reliable and internally consistent scale, it also runs the risk of omitting situations that do not contribute to overall psychometric structure but are nonetheless clinically-relevant. In other words, the IDS performs well statistically yet may be of limited use in identifying real-world high-risk situations and guiding relapse prevention interventions.

The Drinking Patterns Questionnaire (DPQ)

The measure examined in the current study, the Drinking Patterns Questionnaire (DPQ; Zitter & McCrady, 1979), is a clinical tool that may be used to identify prior drinking antecedents, to monitor stability of drinking situations over time, and to predict potential relapse precipitants (Miller et al., 1994). A paper-and-pencil self-report instrument, the DPQ consists of 189 items representing possible drinking antecedents from nine high-risk categories: Environmental, Work-Related, Financial, Physiological, Interpersonal, Marital, Parents, Children, and Emotional. Respondents indicate whether they have drank in each situation within the past six months, how influential the situation was to their drinking, and how important each of the cue categories is to their drinking in general.

In addition to assessing a large and comprehensive array of drinking antecedents and identifying the subjective importance of both individual situations and broader cue categories, an advantage of the DPQ is the clinical derivation of its items. In sharp contrast to empirically-derived measures such as the IDS, the DPQ consists of items that originally were selected from the self-reported drinking antecedents of actual inpatients with AUDs (Zitter & McCrady, 1979). Not only were its items clinically-derived, but subsequent modification and refinement of the DPQ has relied on expert clinical judgment to ensure that useful items were not removed (Zweig, 2005). By maintaining such a close proximity to AUD populations and the clinicians who work with them, the development and refinement processes used for this measure have yielded an instrument well-suited for the identification of clinically-salient high-risk situations.

Prior psychometric evaluation has indicated that the DPQ exhibits strong predictive validity (Miller et al., 1994). This was established by data indicating a significant association between situations identified as pre-treatment "problem areas" on the DPQ and actual relapse precipitants among individuals who relapsed after treatment (Miller et al., 1994). In addition to being useful for forecasting post-treatment high-risk situations based on the identification of pre-treatment drinking antecedents, the DPQ also is sensitive to gender differences. Largely consistent with other evidence indicating the gender-specificity of drinking situations (e.g., Corrigan, 1980; Miller & Cervantes, 1997), Sell, McCrady, and Epstein (2003) found that females not only endorsed different antecedents, but also ranked the subjective importance of cue categories much differently than males (e.g., females ranked the interpersonal, parental, and emotional cue categories higher than males). The similarity between these gender-specific drinking patterns and those found in other studies suggests that the DPQ tests generalizable constructs for drinking situations.

A more recent and thorough analysis of the DPQ was conducted by Zweig (2005). Using archival data from clinical populations and three randomized clinical trials, Zweig

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(2005) carried out an investigation of the DPQ in two phases. The first phase both shortened the overall length of the instrument and redefined which items contribute to each of the subscale scores. After being considered for their potential clinical utility, items were removed from the measure if they evidenced low endorsement rate (i.e., those items endorsed by less than 10% of respondents) or high inter-item correlations (i.e., those items that were correlated with one another at a Pearson r-value of .50 or greater). A total of 39 items were removed, yielding a shortened version of the DPQ containing 189 items. Among these 189 are items that, despite being retained for their clinical utility, do not contribute to the psychometric stability of their respective subscales. Therefore, only a subset of these 189 items was chosen to contribute to subscale scores for the eight cue categories that assess a single cue construct (i.e., the ninth subscale, Environmental, consists of items representing multiple and overlapping constructs and is, therefore, not scored as a distinct subscale). Determination of items that contribute to subscale scores was guided by analyses of internal consistency (i.e., items found to contribute to the internal consistency of a subscale via item-total correlations were retained) and exploratory factor analysis (i.e., items found to load on a particular factor at .40 or above were retained). While the revised DPQ contains a total of 189 items, it is the 106 items that met these criteria that are recommended by Zweig (2005) for use in calculating subscale scores to ensure a valid and reliable assessment of each cue category.

In the second phase of her investigation, Zwieg (2005) carried out an evaluation of the shortened 189-item version of the DPQ. In addition to providing preliminary normative data, results from this phase also indicated that the majority of the revised subscales of the DPQ evidenced strong internal consistency (i.e., six of the eight subscales had coefficient alphas greater than .70). Furthermore, Zweig (2005) showed that the revised DPQ retained its sensitivity to gender differences in item endorsement patterns as well as in cue category rankings. The validity of the cue category ranking section found at the end of the measure was also supported by data indicating a significant association between the rank of each category and its corresponding subscale score.

Despite these promising indications of the revised DPQ's psychometric strength, methodological limitations of Zweig's (2005) investigation prohibited a comprehensive analysis of its validity. Specifically, the use of archival data limited her ability to test the convergent validity for all DPQ subscales. An important step in the construct validation of any psychometric instrument, providing evidence of convergent validity indicates that a subscale indeed measures what it purports to measure (Cohen & Swerdlik, 2002). Convergent validity typically is established by data indicating a significant relationship between performance on a particular subscale and performance on another measure of the same or similar construct. Zweig (2005) set out to provide such data by conducting Pearson correlation analyses between selected validity indicators, or correlate measures, and their corresponding DPQ subscales. However, due to the fact that this investigation exclusively utilized archival data, Zweig (2005) was limited to using as validity indicators only those measures that were administered in the original studies. As a result, convergent validity was established for only the Physiological, Interpersonal, Marital, and Emotional subscales, leaving the construct validity of the remaining subscales unknown.

Current Study

Prior to conducting more advanced analyses of the factor structure of the DPQ (e.g., a confirmatory factor analysis), it is necessary to first establish the basic construct validity of each of its subscales (Cohen & Swerdlik, 2002). The current study aimed to carry out this crucial step in the validation process by examining the convergent validity of the Work-Related, Financial, Parents, and Children subscales. Given that the analyses conducted in the current study were exploratory in nature, no formal hypotheses regarding the relationship between these subscales and their correlate measures were made. However, convergent validity was considered to be established if performance on each subscale was significantly correlated with performance on its correlate measure in the following manner: lower scores on the Abridged Job in General Scale (AJIG; Russell et al., 2004) were correlated significantly with the endorsement of more items in the work-related subscale; higher scores on the Anxiety subscale of the Money Attitude Scale (MAS; Yamauchi & Templer, 1982) were correlated significantly with the endorsement of more items in the financial subscale; lower scores on the Parent Adult-child Relationship Questionnaire (PACQ; Peisah, Brodaty, Luscombe, Kruk, & Anstey, 1999) were correlated significantly with the endorsement of more items in the parent subscale; and lower scores on the conflict resolution subscale of the Parent-child Interaction Questionnaire (PACHIQ-R; Lange, Evers, Jansen, & Dolan, 2002) were correlated significantly with the endorsement of more items in the children subscale.

Job satisfaction, financial anxiety, child-parent relationship satisfaction, and parent-child relationship satisfaction (i.e., the constructs assessed by the measures listed above) are constructs believed to represent categories of potential high-risk drinking situations. The DPQ purports to measure the relationship between these constructs and drinking behavior in the Work-Related, Financial, Parents, and Children subscales, respectively. It was anticipated that these subscales, if they do in fact measure what they purport to measure, would yield scores that correlated significantly with those of their corresponding measure. An example may help clarify this rationale. The Financial subscale of the DPQ attempts to identify high-risk drinking situations related to money and consists of various situations regarding financial concerns (e.g., "I sometimes drink when I worry about my finances"). Item endorsement on this subscale should theoretically be related to the amount of financial anxiety an individual experiences. Considering that the anxiety subscale of the Money Attitude Scale (MAS; Yamauchi & Templer, 1982) is a validated a measures financial anxiety, it should yield scores that co-vary with those on the DPQ's Financial subscale. A significant correlation would provide evidence that the financial subscale does, indeed, measure financial-related high-risk situations.

Prior to evaluating subscale convergent validity, however, a re-assessment of which items contribute to the stability of subscale scores was necessary. Although Zweig (2005) determined that a set of 106 items yielded the most reliable subscale scores, this particular constellation of items may be an artifact of the populations used in her investigation. Additional evaluation of items that contribute to subscale scores based on the performance of an unselected clinical population (i.e., the current sample) is warranted. Determination of which items contribute to subscale scores was guided by analyses of internal consistency; those items found via item-total correlations to improve subscale internal consistency were included in subscale scoring while those that reduced

internal consistency were not. Once the subscale structure of the DPQ was solidified through this process, analyses of internal consistency of individual subscales were conducted as well. Data indicating strong internal consistency in an unselected clinical population would serve to extend prior evidence of its reliability in other populations (Zweig, 2005) and would provide additional evidence of its psychometric strength.

In summary, two primary sets of statistical analyses were carried out: first, analyses of internal consistency and item-total correlations were conducted to identify which DPQ items would contribute to subscale scores; and second, correlations between DPQ subscale scores and scores on their respective correlate measures were used to investigate subscale convergent validity.

Method

Power Analysis

The first step in determining sample size for correlational studies is to derive an estimate of rho. Rho represents the magnitude of correlation between two variables in a population and statistical convention suggests that this value should, if possible, be estimated from Pearson r-values obtained in previous research (Karlin, 2002). Therefore, the expected rho-value for the current study was estimated from the correlations Zweig (2005) found between the Physiological, Interpersonal, Marital, and Emotional subscale scores and the scores of their respective correlate measures. Based on a mean correlation of r = .37 found in Zweig's (2005) investigation, rho was conservatively estimated for the current study at .30. With the desired level of power set at .80, this rho-value indicated that a sample size of 84 would enable the current study to reveal significant correlations among its variables were they to exist. Considering that some participants were not

expected to complete every DPQ subscale (e.g., a resident with no children would not complete the Children subscale), data were collected from more than 84 participants in an effort to reach the desired level of power for the convergent analyses of each subscale. *Participants*

Participants were 159 adult (i.e., age 18 or above) male and female residents of the Caron Foundation, an inpatient substance abuse treatment center located in Wernersville, PA. The Caron Foundation is a short-term, variable-length-of-stay residential facility that serves a heterogeneous population of substance abusing clients. Participants were recruited from within Caron via staff-generated word of mouth and were informed by staff that participation was completely voluntary. Upon completion of the research protocol, participants were compensated with a Rutgers University water bottle. While all Caron residents were eligible for participation, only those who fully completed the Alcohol Dependence Scale (ADS; Skinner & Allen, 1982) and who scored a 9 or above on this measure were included the statistical analyses. Prior research has shown that a score of 9 or above on the ADS is highly predictive of DSM-III-R and DSM-IV diagnoses of alcohol dependence (Chantarujikapong, Smith, & Fox, 1997; Ross, Gavin, & Skinner, 1990).

Measures

Abridged Job in General Scale (AJIG; Russell et al., 2004). The AJIG is a 7-item self-report questionnaire that assesses overall job satisfaction. Respondents indicate whether seven different words or phrases (e.g., "better than most") describe what their job is like most of the time by circling either "Yes," "No," or "I can't decide." Prior psychometric investigation of the AJIG has indicated that it evidences strong internal

consistency (coefficient alpha = .85) and that its scores are highly correlated with other measures of the same construct, suggesting that it is a valid measure of job satisfaction (Russell et al., 2004). Higher scores indicate greater job satisfaction. Performance on the AJIG was used in the current study to assess correlates of work-related drinking antecedents.

Alcohol Dependence Scale (ADS; Skinner & Allen, 1982). The ADS is a 25-item self-report measure that assesses severity of alcohol dependence. Respondents indicate whether they have experienced symptoms in the past 12 months that fall within several categories including alcohol withdrawal symptoms, impaired control of alcohol use, awareness of compulsion to drink alcohol, increased tolerance to alcohol, and salience of alcohol-seeking behavior. The ADS has evidenced strong concurrent validity with scores on the Michigan Alcohol Screening Test (MAST; Ross, Gavin, & Skinner, 1990), sensitivities and specificities comparable to diagnostic interviews (Chantarujikapong, Smith, & Fox, 1997; Ross et al. 1990) and strong internal consistency (Chantarujikapong et al., 1997). The ADS was used in the current study to assess the severity of participants' alcohol dependence.

Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders & Grant, 1992). The AUDIT is a 10-item self-report questionnaire that assesses drinking behavior and alcohol-related consequences and is used as a screen for potential alcohol abuse or dependence. Respondents indicate on 3- or 5-point Likert scales the frequency with which they engage in each behavior or experience each consequence. The AUDIT has indicated sensitivities and specificities comparable or superior to other alcohol abuse screening measures as well as strong internal consistency (median coefficient alpha of 18

studies was .83) and adequate to strong test-retest reliability (Pearson r's ranging from .64 to .92; Reinert & Allen, 2002). The AUDIT was used in the current study as a tool to describe alcohol-related symptoms and consequences experienced by participants.

Demographics Questionnaire. Demographic information was collected via a selfreport questionnaire designed by the author for the current study. Items constituting this questionnaire assess basic demographic characteristics including age, gender, race/ethnicity, education, household income, marital status, and employment status.

Drinking Patterns Questionnaire (DPQ; Zitter & McCrady, 1979). The DPQ is comprised of 189 items representing possible drinking antecedents from nine cue categories: Environmental, Work-Related, Financial, Physiological, Interpersonal, Marital, Parents, Children, and Emotional. Respondents indicate whether they have drank in each of the 189 situations in the preceding six months. The DPQ consists of three types of responses: whether or not participants have drank in each situation (dichotomous coding of individual items); how influential each situation was to their drinking (subjective ranking of individual items); and how participants ranked the influence of each of the nine cue categories on their drinking (subjective ranking of subscales). Prior psychometric evaluation of the original, 228-item version of the DPQ indicated that the nine cue categories were moderately correlated (Pearson r's ranging from .04 to .68; Zitter & McCrady, 1979), that there were gender-specific response patterns (Sell et al., 2003; Zitter & McCrady, 1979), and that responses were predictive of post-treatment relapse situations (Miller et al., 1994). Subsequent investigation of the shortened, 189-item version indicated that the majority of subscales evidenced high internal consistency (coefficient alpha's greater than .70) and that subscale scores were

associated with category ranking, suggesting that the latter assessment may be valid and clinically useful (Zweig, 2005).

Money Attitude Scale (MAS; Yamauchi & Templer, 1982). The MAS is a 29item self-report measure of attitudes toward money and consists of statements representing common behaviors and feelings associated with money. Respondents indicate on a 7-point Likert scale the frequency of each behavior or feeling. Performance on the 6-item Anxiety subscale of the MAS was used in the current study to assess correlates of financial drinking antecedents. Higher scores on the Anxiety subscale indicate greater levels of financial anxiety. The Anxiety subscale of the MAS has shown adequate internal consistency (coefficient alpha = .69), strong test-retest reliability (Pearson's r = .88), and convergent validity with measures of a similar construct (Yamauchi & Templer, 1982).

Parent Adult-Child Relationship Questionnaire (PACQ; Peisah et al., 1999). The PACQ is a 26-item self-report questionnaire that measures the relationship between adults and their parents as perceived by the adult child. Items are rated on a 4-point Likert scale and are divided among five subscales, two pertaining to the mother and three to the father: Mother (regard and responsibility) and Father (regard, responsibility, and control). Higher scores on the PACQ indicate greater quality in the relationship between an adult child and her or his parents. Prior investigation of the psychometric properties of the PACQ has indicated that its subscales evidence high concurrent validity (correlation with ratings of independent clinical assessments yielded Pearson r's ranging from .71 to .90), strong internal consistency (coefficient alpha's ranging from .74 to .87), and high test-retest reliability (Pearson r's ranging from .77 to .93) (Peisah et al., 1999).

Performance on the PACQ was used to assess correlates of parent-related drinking antecedents. Although the parent subscale of the DPQ may be completed based on one's relationship with a parent or in-law, the PACQ only assesses the child-parent relationship. Therefore, only those participants who completed the parent subscale of the DPQ based on their relationship with a parent were included in these analyses.

Parent-Child Interaction Questionnaire – Revised (PACHIQ-R: Lange et al., 2002). The PACHIQ-R measures the quality of parenting relationships as perceived by the parent and consists of 21 items referring to interpersonal behavior exhibited and feelings experienced by a parent in relation to her or his child. A 5-point Likert scale is used to measure how frequently each behavior and feeling occurs. Scores from the twelve items of the Conflict Resolution subscale of the PACHIQ-R were used in the current study to assess correlates of children-related drinking antecedents. The other subscale of the PACHIQ-R, Acceptance, taps a construct that is conceptually less closely related to potential drinking antecedents and was, therefore, excluded. Higher scores on the Conflict Resolution subscale indicate greater levels of a parent's ability to resolve conflicts with her or his child. Prior investigation of the psychometric properties of the PACHIQ-R has indicated that the Conflict Resolution subscale has strong internal consistency for both mothers (coefficient alpha = .90) and fathers (coefficient alpha = .93) (Lange et al., 2002).

Short Index of Problems (SIP; Miller, Tonigan, & Longabaugh, 1995). The SIP is a 15-item self-report questionnaire that assesses adverse consequences of alcohol use. Adverse consequences are divided into five subscales: physical, social, intrapersonal, impulse, and interpersonal. The first part of each item queries whether a particular event or experience has ever occurred and the second part queries the frequency of its occurrence in the past three months using a 4-point Likert scale. The SIP subscales have been shown to be moderately correlated with those of its full-length predecessor, the Drinker Inventory of Consequences (Pearson r's ranging from.38 to .76), to have moderate internal consistency (coefficient alpha's ranging from .56 to .64) and to show moderate test-retest reliability (Pearson r's ranging from .46 to .72) (Feinn, Tennen, & Kranzler, 2003). The SIP was used in the current study to assess participants' experiences with adverse alcohol-related consequences.

Procedure

Five group administrations were conducted between September 2006 and January 2007, with approximately 30 Caron residents participating on each occasion. On the day of a planned protocol administration, Caron residents were informed by staff that they had the opportunity to voluntarily participate in a research project. Interested residents were instructed by staff to gather in Caron's auditorium at a specified time. Once all interested participants had gathered in the auditorium, the principal investigator introduced the study and provided basic information regarding eligibility, stating, "This is a study about drinking triggers. If you participate you will fill out several questionnaires – some that deal with your alcohol use in general and another that is designed to identify the 'people, places and things' associated with your alcohol use. If you think that you have a problem with alcohol, you are eligible to participate." Those residents who did not believe that they had a problem with alcohol (i.e., those who were in treatment exclusively for their abuse of substances other than alcohol) were dismissed at that time. Informed consent forms were then distributed and residents were instructed to read the

form carefully and, if they understood its contents and agreed to its terms, to indicate their consent to participate by signing their initials. Prior to beginning the administration, participants were reminded that they were free to discontinue participation at any time and that doing so would not influence the treatment they received at Caron.

Having provided informed consent and had their questions addressed, participants were given a packet of questionnaires including, first, the Demographics Questionnaire and the DPQ, and then the ADS, AUDIT, AJIG, MAS, PACQ, PACHIQ-R, and SIP. The order of the questionnaires was counterbalanced after the DPQ, yielding seven versions of the questionnaire packet. Participants were told to carefully read the instructions for each questionnaire, asked to fill out all questionnaires as honestly as possible, and reminded that they could discontinue participation at any time. Considering that participants often have difficulty completing the rank-ordering section of the DPQ, specific instructions were provided indicating the correct way to fill out this section. In order to check for the correct completion of this section of the DPQ as well as that of the other measures in the packet, each participant's packet was reviewed upon completion. Participants were then debriefed regarding the nature of the study and given the opportunity to ask any questions they may have had. Lastly, participants were compensated with a Rutgers University water bottle and thanked for their participation.

Results

Participant Characteristics

Of the 159 residents who participated in the research protocol, 134 fully completed the Alcohol Dependence Scale and scored a 9 or above, thus meeting the inclusion criteria. Among the 25 participants excluded from the statistical analyses were five participants who did not complete the ADS and 20 participants who scored less than 9 on this measure. Independent samples t-tests and chi-square analyses indicated that the excluded participants did not significantly differ from their included counterparts on any demographic variables (i.e., age, gender, race/ethnicity, education, household income, marital status, or employment status). Independent samples t-tests, however, revealed that, as expected, these 25 participants did score significantly lower on the ADS (t (151) = -10.51, p < .001), AUDIT (t (152) = -7.49, p < .001) and SIP (t (151) = -9.68, p < .001) than those who were included. All results discussed hereafter are based solely on data obtained from the 134 participants who met inclusion criteria.

Slightly less than half of the sample was female (48.5%), 94.8% of participants were Caucasian, 41.7% were married, and 59.7% were employed. The mean age of the sample was 40.0 years (SD = 11.4) and on average participants were well educated and had high household incomes, as reflected by a mean education of 15.3 years (SD = 4.3) and a median income of \$80,000. Due to differences in these and other demographic variables, varying numbers of participants completed each DPQ subscale: Work-Related (n = 110), Financial (n = 133), Parents (n = 115), and Children (n = 68).

Mean scores on the ADS (M = 22.5, SD = 7.4), AUDIT (M = 25.9, SD = 6.9), and SIP (M = 30.4, SD = 8.4) fell within the range of clinical norms (Skinner & Allen, 1982; Babor et al., 1992; and Project MATCH Research Group, 1993, respectively), indicating that participants exhibit an expected degree of alcohol dependence severity and adverse alcohol-related consequences given their inpatient status.

Internal Consistency

The internal consistency of DPQ subscales was assessed using Cronbach alpha coefficients. Cronbach alpha is the statistical convention for measuring internal consistency, providing the degree of interrelatedness among a set of items that are purported to measure a single construct (Howitt & Cramer, 2000). In the current study, Cronbach alpha coefficients were used to assess the degree to which items in a particular subscale correlated with one another. As shown in Table 1, nearly all DPQ subscales evidenced high internal consistency, with coefficient alphas ranging from $\alpha = .691$ to $\alpha = .921$. Considering that the Physiological subscale contains an item completed by women only ("I sometimes drink before my menstrual period"), internal consistency was evaluated separately for men (with the menstrual item removed) and women (with the menstrual item included). Internal consistency remained similar across gender: men yielded a coefficient alpha of .688 and women yielded a coefficient alpha of .711.

Having examined the internal consistency of all eight DPQ subscales, item-total correlations then were used to determine which items would contribute to subscale scores of the four DPQ subscales under validation. These analyses were used to identify individual items that served to decrease the alpha coefficient and that if removed, would improve the internal consistency of the subscale. Item-total, or item-whole, correlations provide an index of the magnitude of association between scores on a particular item and a total, or summed, score (Howitt & Cramer, 2000). In the case of the DPQ, item-total correlations were used to provide an indication of how well individual items measure the category of high-risk situations that each subscale measures. Again, these analyses were used to identify which items would contribute to subscale scores, a prerequisite to examining convergent validity. Item-total analyses identified five items, one from each

of the Work-Related, Financial, and Children subscales and two from the Parents subscale, which decreased the overall alpha coefficient of their respective subscales (see Table 1). When these five items were removed from subsequent analyses of internal consistency, the alpha coefficient of each subscale increased (see Table 1). These five items were removed from subscale score calculations and were, therefore, not included in the subsequent analyses of convergent validity.

Although the current study did not conduct other analyses using subscale scores from the Physiological, Interpersonal, Marital, or Emotional subscales, item-total correlations were nonetheless used to identify items that, if removed, would improve their internal consistency. As shown in Table 1, two items from the Physiological subscale and two items from the Marital subscale were found to decrease internal consistency. Removal of the two items from the Physiological subscale raised its alpha level above .70, the accepted cut-off for adequate internal consistency (Howitt & Cramer, 2000). *DPQ Subscale Scores*

The response format for each DPQ item consists of three possible answers (i.e., "Did not drink in this situation," "Sometimes drank in this situation," and "Major drinking situation") and each item was coded 0, 1, and 2, respectively. A subscale score was calculated for each DPQ subscale by summing the coded scores of its items, excluding the five items described above that decreased internal consistency. Examination of subscale score distributions revealed that while the Work-Related subscale was normally distributed, the Financial, Parents, and Children subscales all were positively skewed (see Table 2). A distribution of scores was considered skewed if the 95% confidence interval (calculated by multiplying the standard error of skewness by

Table 1

DPQ Subscale	Pre-item removal Coefficient alpha	Item(s) Removed	Post-item removal Coefficient alpha
Work-Related $n = 110$.731	#75: "I sometimes drink after a job interview."	.732
Financial $n = 133$.846	#84: "I sometimes drink when I think that my spouse doesn't make enough money."	.847 e
Parents $n = 115$.888	#143: "I sometimes drink with my parents or in-laws."#152: "I sometimes drink when I think about things that my parents did to me when I was younger."	.898
Children $n = 68$.881	#169: "I sometimes drink when I want to see my children but can't do so."	.892
Physiological ^a n = 132	.691	#92: "I sometimes drink if I have trouble falling asleep."#96: "I sometimes drink before my menstrual period."	.734 y
Interpersonal ^a n = 134	.921		.921
Marital ^a n = 96	.919	#120: "I sometimes drink when m partner is drinking or offers me a drink."#135: "I sometimes drink when m partner and I have conflict on how deal with our child(ren)."	y .922 y y to
Emotional ^a n = 134	.918		.918

Internal Consistency of DPQ Subscales Pre- and Post-Item Removal

^aDPQ subscale not currently under examination.

1.96) surrounding the estimated skew value did not contain zero (Howitt & Cramer, 2000). The distributions of two subscales, Financial and Parents, were found to contain outliers. An outlier was defined according to statistical convention as a data point more than 1.5 interquartile ranges (IQRs) below the first quartile or above the third quartile (Howitt & Cramer, 2000). Three subscale scores for the Financial subscale and one for the Parents subscale were found to be more than 1.5 IQRs above the third quartile and were, therefore, removed from subsequent analyses. As shown in Table 2, removal of the single outlier from the Parents subscale sufficiently decreased its skewness such that its scores became normally distributed. The Financial subscale remained positively skewed despite removal of its outliers.

In order to address the positively skewed distributions for the Financial and Children subscales, data transformations were conducted. Data transformations are the application of a mathematical modification to the values of a variable (Osborne, 2002). The three most widely used transformations in behavioral statistics are square root, logarithmic, and inverse (listed here from weakest to most powerful). When choosing a transformation, Osborne (2002) recommends using the minimum amount of modification necessary to improve normality. Square root transformations (i.e., taking the square root of every value) were therefore applied first and were found to normalize the distributions of both the Financial and Children subscales (see Table 2).

Correlate Measure Scores

Upon coding and scoring the correlate measures in accordance with their manuals' instructions, examination of the total score distributions for the Money Attitude Scale (MAS) and Parent-Child Interaction Questionnaire (PACHIQ-R) revealed that

Table 2

Measure	Initial Skew	Outliers	Correction	Final Skew
Work-Related	.244 (.230)	0		.244 (.230)
AJIG	684 (.249) ^a	0	Square Root Transformation	050 (.249)
Financial	1.127 (.212) ^a	3	 1.) Removed outliers 2.) Sqrt Transformation 	.231 (.212)
MAS	191 (.209)	0		191 (.209)
Parents	.466 (.226) ^a	1	Outlier removed	.357 (.226)
PACQ	-1.038 (.269) ^a	2	Outliers removed	364 (.269)
Children	.658 (.297) ^a	0	Square Root Transformation	.108 (.297)
PACHIQ	086 (.293)	0		086 (.293)

Score Distributions for DPQ Subscales and Correlate Measures

Note. Each skewness value is followed by its standard error of skewness in parentheses.

^a Significantly skewed distribution of scores.

scores were normally distributed and did not contain any outliers. Although scores from the Abridged Job in General Scale (AJIG) also did not contain any outliers, the distribution was negatively skewed. As shown in Table 2, this was corrected using a square root transformation. The Parent-Adult Child Relationship Questionnaire (PACQ) is scored differently than the measures above and yields three separate sets of scores depending upon whether one or both of a respondent's parents are living: one for those participants with two parents, one for those with only a living mother, and one for those with only a living father. The distribution of PACQ scores for participants with both living parents was negatively skewed and contained two outliers while those for participants with only one parent were both normal. Removal of the two outliers from the PACQ among participants with both parents sufficiently reduced the skewness of its distribution to achieve normality (see Table 2).

Convergent Validity

Two-tailed Pearson's r correlations were conducted between each subscale score and the score of its corresponding correlate measure. Significant correlations were found between scores on the Work-Related subscale of the DPQ and those on the AJIG (n = 89, r = -.213, p < .05), between scores on the Financial subscale and those on the MAS (n =130, r = .423, p < .001), and between scores on the Children subscale and those on the PACHIQ-R (n = 62, r = -.510, p < .001). Greater item endorsement on the Work-Related, Financial, and Children subscales was associated with lower job satisfaction, higher degrees of financial anxiety, and lower child relationship satisfaction, respectively. These results provide strong evidence of the convergent validity of the Financial and Children subscales; however, the more modest correlation found for the Work-Related subscale must be interpreted with caution.

Three different groups of participants completed the Work-Related subscale: those who have been employed in the past 6 months (n = 73), those who have done volunteer work in the past 6 months (n = 32), and those who have looked for work in the past 6 months (n = 29). Separate analyses of convergent validity were conducted for each of these groups. While a significant correlation was found between scores on the Work-Related subscale and those on the AJIG among those employed in the past 6 months (r = -.220, p < .05), this association was not maintained among those who have done volunteer work (r = -.103, p > .05) or among those who have looked for work (r = -.096, p > .05).

As shown in Table 3, a significant correlation was found between scores on the Parents subscale of the DPQ and those on the PACQ among those with only a living mother (n = 23, r = -.537, p < .01). In this group of participants, greater item endorsement on the Parents subscale was associated with lower parental relationship satisfaction with one's mother. However, this relationship was not maintained among those participants with both parents and those with only a living father. A significant correlation was not found between scores on the Parents subscale and those on the PACQ for those with both parents (n = 75, r = -.151, p = .195) or for those with only a living father (n = 9, r = .472, p = .200). Given the inconclusive nature of these results, the construct validity of the Parents subscale of the DPQ remains unclear.

Table 3

DPQ subscale/ Correlate measure	п	r	р
Work-Related Subscale/ Abridged Job in General Scale (AJIG)	89	213	.045
Financial Subscale/ Money Attitude Scale (MAS)	130	.423	.000
Parents Subscale/ Parent Adult-Child Relationship Questionnaire (PACQ)			
Both Parents	75	151	.195
Mother only	23	537	.008
Father only	9	.472	.200
Children Subscale/ Parent-Child Interaction Questionnaire (PACHIQ-R)	62	510	.000

Pearson's r Correlations Between DPQ Subscale Scores and Scores of their Corresponding Correlate Measures
Discussion

The current study sought to investigate the internal consistency and convergent validity of the Work-Related, Financial, Parents, and Children subscales of the Drinking Patterns Questionnaire. This study also set out to determine if the internal consistency of DPQ subscales could be improved by selectively deleting items. Results indicated that all eight DPQ subscales evidenced high internal consistency, with six subscales yielding coefficient alphas greater than .80. Among the four subscales being validated, item-total correlation analyses identified five items to be removed from subscale score calculations. Removal of these items improved the already strong internal consistency of the four subscales. Convergent validity analyses indicated that scores on the Work-Related, Financial, and Children subscales were significantly associated with scores on their correlate measures, thus providing evidence of construct validity. However, definitive evidence was not garnered for the Parents subscale; significant findings were limited to those participants with only a living mother.

Although the intended scope of the current study was limited to the investigation of the four previously unvalidated subscales, internal consistency analyses were expanded to include all eight subscales of the DPQ. Prior evaluation of internal consistency relied on data from disparate, restricted samples (Zweig, 2005) and the current study provided a valuable opportunity to re-examine internal consistency using a single, unselected clinical population. Statistical convention suggests that coefficient alphas greater than .70 represent adequate internal consistency (Howitt & Cramer, 2000). Not only did every DPQ subscale exceed this cut-off, but the majority of subscales yielded coefficient alphas greater than .80. These results build upon prior evidence of strong internal consistency (Zweig, 2005) and suggest that DPQ subscales reliably measure their respective domains of drinking antecedents.

Correlational analyses of convergence were used to evaluate the construct validity of the Work-Related, Financial, Parents, and Children subscales. Providing evidence of convergence between scores on a subscale and those on another measure of the same or similar construct is one means of establishing the construct validity of that subscale (Cohen & Swerdlik, 2002). The significant correlations found between scores on the Work-Related, Financial, and Children subscales and those on their corresponding correlate measures suggest that these subscales appear to measure what they purport to measure: work-related, financial, and children-related drinking antecedents. While the correlation found for the Work-Related subscale is statistically significant, the magnitude of association is modest and should be considered as preliminary evidence of convergent validity. These analyses of convergent validity extend prior research investigating the construct validity of DPQ subscales (Zweig, 2005). Taken together, results from the current study and those found by Zweig provide evidence of the construct validity of seven of the eight DPQ subscales measuring singular constructs, including the Physiological, Interpersonal, Marital, Emotional, Work-Related, Financial, and Children subscales.

The remaining subscale, Parents, yielded mixed results in the current study. Although a significant correlation was found between scores on the Parents subscale and those on the PACQ among those participants with only a living mother, this relationship was not found among participants with only a father or with two living parents. These curious results may be attributed to the potential susceptibility of the PACQ to the influence of a confounding variable. It is possible that performance on the PACQ may be influenced by relationship variables other than satisfaction alone, such as degree of parental involvement and frequency of contact. For example, reporting that the statement "My father is my best friend" is "Not true at all" may indeed reflect low relationship satisfaction, but it also may reflect a substantial geographic distance between parent and child or an overall low frequency of contact. Naturally, it is possible to have both high parental relationship satisfaction and low frequency of contact (for some adults, high relationship satisfaction may be causally linked to low frequency of contact). Were this the case, the positive association between scores on the PACQ and those on the Parents subscale of the DPQ among participants with only a living father may be readily interpreted: greater parental involvement and higher frequency of contact ought to be associated with greater endorsement of parent-related drinking antecedents. On the other hand, the predicted negative association found among participants with only a living mother may suggest that the PACQ does indeed tap relationship satisfaction between mothers and their children. Were the PACQ to measure parental involvement among father-child relationships and to measure relationship satisfaction among mother-child relationships, the interaction of these two constructs would obscure the association between item endorsement on this measure and that on the Parents subscale. This interpretation would account for the *negative* association among mother-only participants, the positive association among father-only participants, and the relative lack of association among participants with both. Of course, without a direct measure of these additional relationship variables within the PACQ this conclusion remains speculative and the construct validity of the Parents subscale remains unclear.

Limitations

A primary limitation of the current study is the homogeneity of the sample. Nearly 90% of study participants identified themselves as Caucasian, with only seven participants endorsing another race/ethnicity. Participants were also highly educated and on average completed nearly four years of college. When compared to US census data, median household income in the current sample was almost two times greater than that of the general population (United States Census Bureau, 2006). The homogeneity of the patient population at Caron is likely due to the high cost of the treatment program (approximately \$22,500 for 28 days) and to their restricted acceptance of third-party payment. While these demographic data suggest the use of caution when generalizing the results of the current study to other populations, advantageous characteristics of the study sample should be noted as well. Unlike the prior evaluation of the DPQ (Zweig, 2005), data collection for the current study was not interrupted by time or place (i.e., it is not susceptible to potential cohort effects) and the sample was not subjected to the rigid exclusion criteria necessary to maintain interval validity in clinical trials (e.g., participants were included in the current study despite comorbid substance use and not being in a committed heterosexual relationship). These advantages should be weighed against the drawbacks mentioned above associated with this study sample.

Another limitation of the current study involves shortcomings associated with the correlate measure chosen to evaluate the convergent validity of the Parents subscale, the PACQ. It is possible that the PACQ may have been susceptible to the influence of a confounding variable. Although the PACQ has been shown to be a psychometrically sound measure of parental relationship satisfaction (Peisah et al., 1999), performance on

this measure may have inadvertently been influenced by level of parental involvement and frequency of contact as well. To the degree that the PACQ is a measure of multiple relationship constructs, its utility as a correlate measure in evaluating the construct validity of the Parents subscale substantially decreases.

Future Directions

Additional research is needed to clarify the construct validity of the Parents subscale of the DPQ. Methodologically, subsequent evaluation may use the same correlational analyses of convergent validity conducted in the current study. However, selection of a more representative, heterogeneous population and use of a correlate measures other than the PACQ is recommended. In choosing a measure of parental relationship satisfaction, care should be taken to ensure that the instrument is adequately sensitive and assesses a single construct.

Once the convergent validity of the Parents subscale has been investigated, a full confirmatory factor analysis of the DPQ is warranted. The largest and perhaps most important step in any psychometric validation process (Cohen & Swerdlik, 2002), conducting a factor analysis would uncover the latent structure of DPQ items and determine whether the existing subscales appropriately categorize high-risk situations. To ensure adequate statistical power a sample larger than that used in the current study would be necessary (i.e., the ratio of participants to items should be at least 5:1 if not 10:1; Gaudagnoli & Velicer, 1988). Use of a large, representative sample of treatment seeking individuals with AUDs would also allow for the establishment of normative scores and the examination of demographic variables known to influence high-risk situations, such as gender, marital status, and employment status.

If the factor structure of the DPQ is confirmed, the next step in its psychometric evaluation program should include further analysis of predictive validity. While Miller et al. (1994) linked relapse situations to previously identified "problem areas," a more targeted inquiry evaluating the predictive validity of particular levels of analysis (e.g., individual item endorsement, subscale scores, cue-category rankings) would pinpoint which part of the DPQ has the greatest functional utility. This line of research would also be complemented by analyses investigating what impact, if any, the DPQ has on treatment efficiency and overall treatment outcome.

Conclusion

The DPQ holds considerable promise as a clinical tool to aid in the identification of drinking antecedents. Building upon prior evidence of its strong psychometric properties (Miller et al., 1994; Sell et al., 2003; Zitter & McCrady, 1979; Zweig, 2005), the current study showed that the DPQ is a reliable (i.e., internally consistent) measure of drinking antecedents and that the Work-Related, Financial, and Children subscales exhibit promising construct validity. Although additional research is needed, the DPQ continues to have direct clinical applications. Important in various stages of alcohol treatment, a clear understanding of a client's unique set of antecedents is particularly useful in predicting post-treatment high-risk situations and in developing specific skills to cope with them. A comprehensive array of clinically-derived items, strong psychometric properties, and proximate clinical utility make the DPQ a potentially valuable asset in treating individuals with AUDs.

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Appendix A: Informed Consent Form

You are invited to participate in a research study that is being conducted by David Menges, who is a graduate student in the Psychology Department at Rutgers University. The purpose of this research is to learn more about a paper-and-pencil questionnaire called the Drinking Patterns Questionnaire.

About 170 subjects will participate in this study. If you choose to participate, you will be asked to fill out several questionnaires that will take you about one hour to complete.

This research is anonymous. Anonymous means that I will record no information about you that could identify you. This means that I will not record your name, address, phone number, date of birth, etc.

There are no foreseeable risks to participation in this study. It is not anticipated that you will receive any benefit from participating other than receiving a Rutgers University water bottle.

Participation in this study is voluntary. You may choose not to participate, and **you may** withdraw at any time during the study procedures without any penalty to you. This means that the treatment and services you receive from Caron will not be affected by your participation. In addition, you may choose not to answer any questions with which you are not comfortable.

If you have any questions about the study procedures, you may contact David Menges at Center of Alcohol Studies 607 Allison Rd. Piscataway, NJ, 08854 Tel: (607) 857-7415; email: dmenges@eden.rutgers.edu

If you have any questions about your rights as a research subject, you may contact the Sponsored Programs Administrator at Rutgers University at: Rutgers University Institutional Review Board for the Protection of Human Subjects Office of Research and Sponsored Programs 3 Rutgers Plaza New Brunswick, NJ 08901-8559 Tel: 732-932-0150 ext. 2104; email: humansubjects@orsp.rutgers.edu

You will be given a copy of this consent form for your records upon request. Sign your initials below if you agree to participate in this research study:

Subject	Date
Principal Investigator	Date
Witness	Date

Appendix B: Demographics Questionnaire

Instructions: Please provide some basic information about yourself by answering the following questions.

Age: _____

Gender (circle): M F

Number of years of education completed: _____

Race/ethnicity:

Employment status:

Appendix C: Drinking Patterns Questionnaire

We have found that each person has a unique or different pattern of drinking alcohol. People drink more at certain times of the day, in particular moods, with certain people, in specific places, and so forth. It is very common for people to drink more under various stresses, before or after difficult interactions, and when they are experiencing particular feelings. It may sometimes seem that there are no circumstances that relate to your drinking, that is, "I just drink." However, after some thought, every person can identify at least some important factors.

This questionnaire will help you to think about different aspects of your life and how each might relate to your drinking. You will find instructions at the beginning of each section. Please give each item careful consideration. You will benefit most from this questionnaire if you are honest and open with your responses.

For each item, mark with an "X" whether or not you drank in this situation in the <u>PAST 6</u> <u>MONTHS.</u>

Use the following options to answer each of the questions:

- Mark "X" under **Did not drink** if you did not drink in this situation in the past six months.
- Mark "X" under **Sometimes drank** if you did drink in this situation in the past six months.
- Mark "X" under **Major drinking**, if you drank often in this situation in the past six months.

Section 1: Environmental Factors Related to Drinking

Various locations, times, people, activities and events are associated with every person's drinking. The items in this section will help you to think about these factors. Read each item carefully as some are divided into more than one part.

Location

Put an "X" in one box next to each of the following items to indicate the frequency with which you drank in each of the following locations during the <u>PAST 6 MONTHS</u>. If the location does not apply to you, answer "Did not drink in this location."

	Drinking Locations:	Did not drink in this location	Sometimes drank in this location	Major drinking location
1.	Home			
2.	Bar			
3.	Club			
4.	Private Club			
5.	Automobile			
6.	Outdoors			

		Did not drink in this location	Sometimes drank in this location	Major drinking location
7.	Church or temple			
8.	Work			
9.	Restaurant			
10.	Other's home			

Time

Put an "X" in one box next to each of the following items to indicate the frequency with which you drank at each of the following times during the <u>PAST 6 MONTHS</u>. If the time does not apply to you, answer "Did not drink at this time."

	Drinking Times:	Did not drink at this time	Sometimes drank at this time	Major drinking time
11.	During the morning			
12.	Lunchtime			
13.	Afternoon			
14.	After work (if employed)			
15.	During supper			
16.	During the evening			
17.	At bedtime			
18.	During the night			

After you have answered each of the above questions, go back and put a circle around the number of the time during which you drank <u>most</u> often during the <u>past 6 months</u>.

Companions

Put an "X" in one box next to each of the following items to indicate the frequency with which you drank with each of the following people during the <u>PAST 6 MONTHS</u>. If a particular person does not apply to you, answer "Did not drink with this person."

Drinking Companions:		Did not drink with this person	Sometimes drank with this person	Major drinking companion
19.	Spouse/Partner			
20.	Relative			
21.	Child			
22.	Male friend (s)			
23.	Female friend (s)			
24.	Male & Female friend (s)			
25.	Alone			

		Did not drink with this person	Sometimes drank with this person	Major drinking companion
26.	Strangers			
27.	Business acquaintances			

Activities

Put an "X" in one box next to each of the following items to indicate the frequency with which you drank during each of the following activities during the <u>PAST 6 MONTHS</u>. If a particular activity does not apply to you, answer "Did not drink during this activity."

	Drinking Activities:	Did not drink during this activity	Sometimes drank during this activity	Major drinking activity
28.	Cooking	v		
29.	Chores			
30.	Shopping			
31.	Smoking			
32.	Watching television			
33.	Eating			
34.	Reading			
35.	Resting			
36.	Doing crafts or hobby			
37.	Talking			
38.	Playing pool			
39.	Playing games			
	(cards, pinball, etc.)			
40.	Gambling (horses, dogs)			
41.	Entertaining			
42.	Listening to entertainment			
43.	Attending a meeting			
44.	Partying			
45.	Driving			
46.	Playing sports			
47.	Attending sporting event			
48.	Sunbathing			
49.	Cooking out			
50.	Walking or hiking			
51.	Recreational activities			
	(Fishing, swimming,			
	etc.)			
52.	In sexual activities			
53.	Fighting (arguing)			

Urges

Put an "X" in one box next to each of the following items that best describes your Drinking or Urges to drink during the <u>PAST 6 MONTHS</u>. If a particular situation does not apply to you, answer "Did not drink in this situation."

	Drinking Urges:	Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
54.	I sometimes drink when I see or hear			
	an advertisement for alcohol (TV			
	commercial, magazine ad, oniooard)			
55.	I sometimes drink when passing a			
	particular bar or restaurant			
56.	I sometimes drink when I see			
	someone else drinking			
57.	I sometimes drink when I hear			
	people talking about drinking			
58.	I seem to drink more on particular			
	days of the week			
59.	I seem to drink more during certain			
	times of the month			
60.	I seem to drink more at certain times			
	of the year (Holidays, vacations, etc.)			
61.	I sometimes like to have a drink with			
	certain foods, snacks, or meals			
62.	When I drink at home, I usually drink			
	only in certain parts of the house			
63.	I sometimes drink more frequently in			
	certain types of weather (hot day, cold			
	day, etc.)			

After you have answered each of the above questions, go back and put a circle around the number of the situation during which you drank <u>most</u> often during the <u>past 6 months</u>.

Section 2: Work-Related

Put an "X" in one box next to each of the following items to indicate <u>YES</u> or <u>NO</u>, whether each of the following 3 items applied to you in the <u>PAST 6 MONTHS</u>.

		YES	NO
Α	I have been employed at some time in the PAST 6 MONTHS		
В	I have done volunteer work in the PAST 6 MONTHS		
С	I have looked for work in the PAST 6 MONTHS.		

If you did <u>not</u> answer "Yes" to A, B or C above, skip the entire Work section (# 64-76).

If you <u>did</u> answer "Yes" to either item A, B or C, please complete the entire Work section.

It is not unusual at times for people to drink because of work-related events or difficulties. This can happen in both paying jobs and volunteer work. The stress of looking for a job may also relate to drinking. Put an "X" in the box next to each of the following items that best describes your drinking in the <u>PAST 6 MONTHS</u>.

		Did not drink	Sometimes	Major drinking
		situation	situation	situation
64.	I sometimes drink before I go to work			
65.	I sometimes drink on the job			
66.	I sometimes drink during work breaks			
67.	I sometimes go drinking with friends straight from work before stopping home			
68.	I sometimes drink after work to help relieve some of the pressure from the job			
69.	I sometimes drink with business associates at meetings, conventions, cocktail parties, etc			
70.	I sometimes drink when I have problems with my co-workers or boss			
71.	I sometimes drink when I get nervous at work			
72.	I sometimes drink when I feel that I'm not getting anywhere in my job or career			
73.	I sometimes drink when I am happy with the way work is going			

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
74.	I sometimes drink more on payday after cashing my check			
75.	I sometimes drink after a job interview			
76.	I sometimes drink when I feel that finding a new job is hopeless			

Section 3: Financial

Often, people drink as a response to financial difficulties. For each of the following items put an "X" in the box that best describes your drinking in the <u>PAST 6 MONTHS</u>. If a particular situation does not apply to you, put an "X" under "Did not drink in this situation."

		Did not drink in this	Sometimes drank in this	Major drinking
		situation	situation	situation
77.	I sometimes drink when I attempt to			
	pay my bills and I get frustrated			
78.	I sometimes drink when I worry			
	about my finances			
79.	I sometimes drink when I feel bad or			
	guilty about not being a good provider			
80.	I sometimes drink when I can't buy			
	something that a family member			
	requests			
81.	I sometimes drink when I can't afford			
	something that I want very much			
82.	I sometimes drink when a family member			
	makes a purchase that I know we can't			
	afford			
83.	I sometimes drink after I spend too much			
	money			
84.	I sometimes drink when I think that my			
	spouse doesn't make enough money			
85.	I sometimes feel like drinking because of			
	arguments over how to spend money			
86.	I sometimes drink when I get angry over			
	who controls the money			

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
87.	I sometimes am more tempted to drink			
	when my finances are going well and/or I			
	have caught up with all of my bills			
88.	I am sometimes more tempted to drink			
	when I have a lot of money in my pocket			

Section 4: Physiological

Put an "X" in one box next to each of the following items that best describes your drinking behavior during the <u>PAST 6 MONTHS.</u> If a particular situation does not apply to you, put an "X" in the box that indicates "Did not drink in this situation."

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
89.	I sometimes feel shaky and drink to stop it			
90.	I sometimes drink when I feel tired or fatigued			
91.	I sometimes drink when I get restless			
92.	I sometimes drink when I'm experiencing physical pain (back pain, headache, etc.)			
93.	I sometimes take a drink if I have trouble falling asleep			
94.	I sometimes wake up during the night and take a drink to get back to sleep			
95.	I sometimes drink alcohol when I am thirsty			
96.	I sometimes drink before my menstrual period			

After you have answered each of the above questions, go back and put a circle around the number of the situation during which you drank <u>most often during the past 6 months</u>.

Section 5: Interpersonal

People drink in social situations, that is, with other people, for many reasons. Put an "X" in one box next to each of the following items that best describes your drinking in the <u>PAST 6 MONTHS</u>. If a particular situation does not apply to you, put an "X" under "Did not drink in this situation."

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
97.	It is sometimes difficult for me not to drink			
	when people around me are drinking			
98.	I sometimes find it hard to resist if someone			
	buys me a drink or offers to do so			
99.	I sometimes drink to be part of the			
	group			
100.	I sometimes drink as a way to meet people or			
	be with others			
101.	I sometimes drink to feel more comfortable			
100	with others			
102.	I sometimes think that I don't relate well to			
100	others and drinking helps me do so			
103.	I sometimes feel that I'm not as good as other			
104	people and drinking helps me feel better			
104.	I sometimes find that I drink after I become			
105	angry at someone			
105.	I sometimes drink after feeling hurt by			
100	someone			
106.	a sometimes drink when I want to nurt or get hack at someone			
107	I sometimes drink when I am anory at myself			
107.	for not speaking my mind to			
	someone			
108	I sometimes drink to help me express my			
100.	feelings towards someone (anger love			
	etc.)			
109	I sometimes drink when I feel lonely			
107.	r sometimes and when r reer fonery			
110.	I sometimes drink because I think it's the			
	only way to have fun			
111.	I sometimes drink when I'm bored and have			
	nothing to do			
112.	I sometimes drink when I think that nobody			
	cares about me			

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
113.	I sometimes drink when I want someone to			
	pay allention to me			
114.	I sometimes drink when I feel that people			
	have put too much responsibility on me			
115.	I sometimes drink when I think about past			
	relationships			

Section 6: Marital/Relationship

Put an "X" is the "YES" or "NO" box to indicate whether you have been married or involved in a romantic relationship in the past 6 months:

	YES	NO
I have been married or involved in a romantic		
relationship in the past 6 months		

If you answered "NO" to this question, skip the entire Marital/Relationship section If you answered "YES" to this question, please complete the entire Marital/Relationship section.

Although sometimes hard to discuss, it is quite common for relationship issues to be related to drinking. Put an "X" in the box after each of the following items that best describes your drinking in the <u>PAST 6 MONTHS</u>. If a particular situation does not apply to you, put an "X" under "Did not drink in this situation."

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
116.	I sometimes drink when I anticipate an			
	argument with my partner			
117.	I sometimes drink after having an			
	argument with my partner			
118.	I sometimes drink after my partner nags			
	me about something			
119.	I sometimes drink after my partner			
	criticizes me			

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
120.	I sometimes drink when my partner is drinking or offers me a drink			
121.	I sometimes drink to help me express my feelings toward my partner			
122.	I sometimes drink when my partner and I are celebrating something			
123.	I sometimes drink after my partner and I disagree about sexual relations.			
124.	I sometimes drink or get an urge to drink when I want to avoid sexual relations with my partner			
125.	I sometimes drink when I'm concerned about my sexual adequacy			
126.	I sometimes drink when I want to enjoy sexual relations more			
127.	I sometimes drink after physical violence occurs in the family or when I have concerns about it			
128.	I sometimes drink when I think my partner or family doesn't care about me			
129.	I sometimes drink when I feel that my partner doesn't understand my needs or desires			
130.	I sometimes drink when my partner doesn't spend enough time with me			
131.	I sometimes drink when I feel "trapped" in my relationship			
132.	I sometimes drink when I'm frustrated that my partner and I can't resolve a conflict			
133.	I sometimes drink after my partner embarrasses me in public			
134.	I sometimes drink at times when I am jealous			
135.	I sometimes drink when my partner and I have conflict on how to deal with our child(ren)			
136.	I sometimes drink when I am not happy with my role in the family			

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
137.	I sometimes drink when it seems that my partner is not treating my like an adult			
138.	I sometimes drink when I think my partner is too involved with my affairs			
139.	I sometimes drink when I feel that my partner doesn't meet his responsibilities			
140.	I sometimes drink when I feel that I don't meet my responsibilities			
141.	I sometimes drink to "get back" at my partner			
142.	I sometimes drink more when my partner tries to stop my drinking			

Section 7: Parents

Put an "X" in the "YES" or "NO" box to indicate whether at least one of your parents and/or in-laws are still living:

		YES	NO
Α	My parents are still living		
В	My in-laws are still living		

If you answered "No" to both A & B, skip the entire Parents section (#s 143-154). If you answered "Yes" to either A or B, please complete the entire Parents section.

Put an "X" in one box that best describes your drinking in the <u>PAST 6 MONTHS</u>. If a particular situation does not apply to you, put an "X" under "Did not drink in this situation."

		Did not drink in this situation	Sometimes drank in this situation	Major drinking situation
143.	I sometimes drink with my parents			
	or in-laws			
144.	I sometimes drink after spending			
	time with my parents or in-laws			
145.	I sometimes drink to help me			
	express my feelings towards my			
	parents or in-laws			
146.	I sometimes drink when I'm upset			
	with my parents or in-laws			
147.	I sometimes drink when I feel that			
	my parents or in-laws don't			
	respect me as an adult			
148.	I sometimes drink when I feel			
	guilty about something related to			
	my parents or in-laws			
149.	I sometimes drink when I hurt or			
	embarrass my parents or in-laws			
150.	I sometimes drink when I feel that			
	my parents or in-laws are too			
	demanding or interfering			
151.	I sometimes drink after my parents			
	or in-laws and I disagree about			
	something			
152.	I sometimes drink when I think			
	about things that my parents did			
	to me when I was younger			
153.	I sometimes drink when I see that my			
	parents or in-laws are getting older			
154.	I sometimes drink when I think about			
	the death of one or both of my parents			
	or in-laws			

Section 8: Children

If you have children, interactions with your children can lead you to certain feelings or moods related to your drinking. Put an "X" under the "yes" or "no" box to indicate whether you have any children.

YES	NO

If you do <u>not</u> have any children, skip the remainder of this section (#s 155-171).

Please complete this section even if children from your present or previous marriage are not currently living with you. Put an "X" after each of the following items for the <u>PAST 6</u> <u>MONTHS</u>. If a particular situation does not apply to you, put an "X" under "Did not drink in this situation."

		Did not drink in this	Sometimes drank in this	Major drinking situation
		situation	situation	
155.	I sometimes drink after interacting with			
	my children			
156.	I sometimes drink when my spouse and I			
	have a disagreement about our children			
157.	I sometimes drink to help me express my			
	feelings toward my children			
158.	I sometimes drink when I'm annoyed with			
	my children			
159.	I sometimes drink when I feel that my			
	children don't respect me			
160.	I sometimes drink when I feel that my			
	children are ashamed of me			
161.	I sometimes drink after my children get in			
	trouble at school or with legal authorities			
162.	I sometimes drink after my children do not			
	follow my orders or wishes			
163.	I sometimes drink when I feel that my			
	children are too much responsibility			
164.	I sometimes drink when I feel that I cannot			
	control my children			
165.	I sometimes drink when I feel guilty about			
	something related to my children			
166.	I sometimes drink when I can't give my			
	children something they want			
167.	I sometimes drink after punishing my			
	children too harshly or losing my temper			
168.	I sometimes drink after my children			
	manipulate my spouse/partner into doing			
	something with which I'm not pleased			
169.	I sometimes drink when I want to see my			
	children but I can't do so			
170.	I sometimes drink when my children talk			
	back to me			
171.	I sometimes drink when I feel that my			
	children don't need me any longer			

Section 9: Emotional

People often drink when they are experiencing some type of emotion, either negative or positive. Put an "X" next to each emotion on the following list to describe the emotions you have or haven't experienced before drinking in the <u>PAST 6 MONTHS</u>. If a particular emotion does not apply to you, put an "X" under "Did not drink with this emotion."

		Did not drink with this emotion	Sometimes drank with this emotion	Major drinking- related emotion
172.	Angry			
173.	Sad			
174.	Depressed			
175.	Hurt			
176.	Spiteful			
177.	Lonely			
178.	Hopeless			
179.	Frustrated			
180.	Guilty			
181.	Fearful			
182.	Nervous			
183	Restless			
184	Insecure			
185	Fatigued			
186	Нарру			
187	Relaxed			
188	Self-confident			
189.	Loving			

After you have answered each of the above questions, go back and put a circle around the number of the feeling with which you drank <u>most</u> often during the <u>past 6 months</u>.

Review:

You have now finished the sections of the questionnaire dealing with events, people, and feelings that come before your drinking or urges to drink. We would like you to look back over the questionnaire and think about the relative importance of each of these sections as they apply to your drinking, that is, how important each section is compared to the other sections.

The different sections of the questionnaire that you have just completed are listed below. Think about the section that is most important, out of all 9 sections, in relation to your drinking or urges to drink. Put an "X" under "1" next to that section. Then think about the section that is second most important to your drinking, and put an "X" under "2" next to that section. Then think about the section that is third most important to your drinking, and put an "X" under "3" next to that section. Continue to do that until you have ranked each of the nine sections listed below. Each number should be used only once. The sections marked "8" and "9" should be least important related to your drinking, compared to the other sections.

Most ImportantLeast Important							rtant			
		1	2	3	4	5	6	7	8	9
Section 1	Environmental (p. 1-4)									
Section 2	Work (p. 4-5)									
Section 3	Financial (p. 6)									
Section 4	Physiological (p. 7)									
Section 5	Interpersonal (p. 7-8)									
Section 6	Marital (p. 8-10)									
Section 7	Parents (p. 10-11)									
Section 8	Children (p. 11-12)									
Section 9	Emotional (p. 12-13)									

Appendix D: Alcohol Dependence Scale (ADS; Skinner & Allen, 1982)

Instructions:

- 1.) Carefully read each question and the possible answers provided. Answer each question by circling ONE chose that is most true for you
- 2.) The word "drinking" in a question refers to "drinking of alcoholics beverages."
- 3.) Take as much time as you need. Work carefully, and try to finish as soon as possible. Please answer ALL questions.

These questions refer to the past 12 months.

- 1.) How much did you drink the last time you drank?
 - a. Enough to get high or less
 - b. Enough to get drunk
 - c. Enough to pass out
- 2.) Do you often have hangovers on Sunday or Monday mornings?
 - a. No
 - b. Yes
- 3.) Have you had the "shakes" when sobering up (hands tremble, shake inside)?
 - a. No
 - b. Sometimes
 - c. Often
- 4.) Do you get physically sick (e.g., vomit, stomach cramps) as a result of drinking?
 - a. No
 - b. Sometimes
 - c. Almost every time I drink
- 5.) Have you had the "DTs" (delirium tremens) that is, see, felt, or heard things not really there; felt very anxious, restless, and over-excited?
 - a. No
 - b. Sometimes
 - c. Several times
- 6.) When you drink, do you stumble about, stagger, and weave?
 - a. No
 - b. Sometimes
 - c. Often
- 7.) As a result of drinking, have you felt overly hot and sweaty (feverish)?
 - a. No
 - b. Once
 - c. Several times
- 8.) As a result of drinking, have you seen things that were not really there?
 - a. No
 - b. Once
 - c. Several times

- 9.) Do you panic because you fear you may not have a drink when you need it?
 - a. No
 - b. Yes
- 10.) Have you had blackouts ("loss of memory" without passing out) as a result of drinking?
 - a. No, never
 - b. Sometimes
 - c. Often
 - d. Almost every time I drink
- 11.) Do you carry a bottle with you or keep one close at hand?
 - a. No
 - b. Some of the time
 - c. Most of the time
- 12.) After a period of abstinence (not drinking), do you end up drinking heavily again?
 - a. No
 - b. Sometimes
 - c. Almost every time I drink
- 13.) In the past 12 months, have you passed as a result of drinking?
 - a. No
 - b. Once
 - c. More than once
- 14.) Have you had a convulsion (fit) following a period of drinking?
 - a. No
 - b. Yes
 - c. Several times
 - Do you drink throughout the day?
 - a. No

15.)

- b. Yes
- 16.) After drinking heavily, has your thinking been fuzzy or unclear?
 - a. No
 - b. Yes, but only for a few hours
 - c. Yes, for one or two days
 - d. Yes, for many days
- 17.) As a result of drinking, have you felt your heart beating rapidly?
 - a. No
 - b. Yes
 - c. Several times
 - Do you almost constantly think about drinking and alcohol?
 - a. No

18.)

- b. Yes
- 19.) As a result of drinking, have you heard "things" that were not really there? a. No
 - b. Yes
 - c. Several times

- 20.) Have you had weird and frightening sensations when drinking?
 - a. No
 - b. Once or twice
 - c. Often
- 21.) As a result of drinking, have you "felt things" crawling on you that were not really there (e.g., bugs, spiders)?
 - a. No
 - b. Yes
 - c. Several times
 - With respect to blackouts (loss of memory):
 - a. Have never had a blackout
 - b. Have had blackouts that last less than an hour
 - c. Have had blackouts that last for several hours
 - d. Have had blackouts that last a day or more
- 23.) Have you tried to cut down on your drinking and failed?
 - a. No

22.)

- b. Once
- c. Several times
- 24.) Do you gulp drinks (drink quickly)?
 - a. No
 - b. Yes
- 25.) After taking one or two drinks, can you usually stop?
 - a. Yes
 - b. No

Appendix E: Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders & Grant, 1992)

Instructions: Please circle the answer that best applies to you for each question.

1. How often do you have a drink containing alcohol?

	Never	Monthly Or less		2-4 times a month	2-3 times a week	4 or more times a week			
2.	. How many drinks containing alcohol do you have on a typical day when you are drinking?								
	1 or 2	3 or 4	5 or 6	7 to 9	10 or r	nore			
3.	How often do	you have six or	more o	drinks on one o	ccasion?				
	Never	Monthly Or less		2-4 times a month	2-3 times a week	Daily or almost daily			
4.	How often dur drinking once	ring the last yea you started?	r have	you found that	you were not a	ble to stop			
	Never	Monthly Or less		2-4 times a month	2-3 times a week	Daily or almost daily			
5.	5. How often during the last year have you failed to do what is normally expected from you because of drinking?								
	Never	Monthly Or less		2-4 times a month	2-3 times a week	Daily or almost daily			
6.	How often dur yourself going	ring the last yea gafter a heavy s	r have	you needed a fi	rst drink in the	morning to get			
	Never	Monthly Or less		2-4 times a month	2-3 times a week	Daily or almost daily			
7.	How often in t drinking?	the last year hav	ve you l	had a feeling of	f remorse or gu	ilt after			
	Never	Monthly Or less		2-4 times a month	2-3 times a week	Daily or almost daily			

8. How often during the last year have you been unable to remember what happened the night before because of your drinking?

	Never	Monthly	2-4 times	2-3 times	Daily or					
		Or less	a month	a week	almost daily					
9.	9. Have you or someone else been injured because of your drinking?									
	No	Yes, but not in the past year Yes, during			ne past year					
10.	10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?									

No Yes, but not in the past year Yes, during the past year

Instructions: If you have not been employed at any time in the past 6 months, please skip to the next page. If you have been employed in the past 6 months, think about what your job is like most of the time. For each of the following words or phrases, please indicate if it is an accurate description of your job. If you are unsure whether an item describes your job, please circle a "3" for "not sure."

	YES	NO	?
Good	1	2	3
Better than most	1	2	3
Disagreeable	1	2	3
Makes me content	1	2	3
Excellent	1	2	3
Enjoyable	1	2	3
Poor	1	2	3

Appendix G: Money Attitude Scale – Anxiety Subscale (MAS; Yamauchi & Templer, 1982)

INSTRUCTIONS: The statements in this questionnaire represent common behaviors associated with money. Read each statement and then circle the number below each statement to indicate the extent you to which engage in the behavior.

I hesitate to spend money, even on necessities:

1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always

I worry a lot when I think about money:

1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always

I spend money to make myself feel better:

1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always
I show s	igns of nervousne	ess when I do	on't have enough	money:		
1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always
I worry	that I will not be	financially se	ecure:			
1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always
I am bot	hered when I hav	e to pass up	a sale:			

1	2	3	4	5	6	7
Never	Very seldom	Seldom	Sometimes	Often	Very often	Always

Appendix H: Parent Adult-Child Relationship Questionnaire (PACQ; Peisah et al., 1999)

Instructions: The statements below describe feelings people often have toward their mother and father. For each statement, indicate how true the statement is for you by circling the corresponding number. If neither of your parents are still alive, please skip to the next page.

Circle 1 if the statement is **VERY TRUE** Circle 2 if the statement is **MOSTLY TRUE** Circle 3 if the statement is **SOMEWHAT TRUE** Circle 4 if the statement is **NOT TRUE AT ALL**

Mother

1.) I look forward to seeing my mother	2	3	4
2.) I am glad to be able to repay my mother for all the love			
and care she gave me as a child	2	3	4
3.) I respect my mother's opinion	2	3	4
4.) My mother is my best friend	2	3	4
5.) My mother shows her appreciation of me 1	2	3	4
6.) I feel like I parent my mother 1	2	3	4
7.) My mother relies on me too much 1	2	3	4
8.) I feel that I have to protect my mother	2	3	4
9.) My mother thinks I'm good in a crisis so she calls on			
me all the time	2	3	4
10.) I am the only one my mother can rely on	2	3	4
11.) My mother's difficulty making decisions has been			
a burden on me	2	3	4
12.) I feel that I should take care of my mother because			
she has suffered so much in her life	2	3	4
13.) I feel responsible for my mother's happiness 1	2	3	4

Father

14.) I respect my father's opinion 1	2	3	4
15.) I look forward to seeing my father 1	2	3	4
16.) I know I can rely on my father to help me if I need him 1	2	3	4
17.) I don't mind putting myself out for my father	2	3	4
18.) Something will happen to my father if I don't take care of him1	2	3	4
19.) I feel responsible for my father's happiness 1	2	3	4
20.) If I don't see my father for a week I feel guilty	2	3	4
21.) My father thinks I'm good in a crisis so he calls on me all the time 1	2	3	4
22.) If I don't do things my father's way he will nag me1	2	3	4
23.) I feel that my father tries to manipulate me1	2	3	4
24.) My father tries to dominate me	2	3	4
25.) I feel that my father makes too many demands on me 1	2	3	4
26.) I don't discuss much with my father because I'm afraid of			
being criticized 1	2	3	4

Appendix I: Parent-Child Interaction Questionnaire – Revised (PACHIQ-R: Lange et al., 2002)

Instructions: The statements below describe how parents often interact with their child and how they feel about their child. If you do not have a child, you may skip these questions. If you have more than one child, you may think about your relationship with any or all of them when filling out this questionnaire. Please indicate how often the behaviors or feelings described in each statement occur by circling the corresponding number.

Circle 1 if it **NEVER** occurs Circle 2 if it **HARDLY EVER** occurs Circle 3 if it **SOMETIMES** occurs Circle 4 if it **AMOST ALWAYS** occurs Circle 5 if it **ALWAYS** occurs

1.) I show my appreciation clearly when my child does something				
for me 1	2	3	4	5
2.) There are many conflicts between my child and me that we				
cannot solve1	2	3	4	5
3.) I am often dissatisfied with my child 1	2	3	4	5
4.) I don't feel like listening to what my child has been doing 1	2	3	4	5
5.) When I spend the whole day with my child, he/she starts to				
get on my nerves 1	2	3	4	5
6.) When my child does not feel like cleaning up his/her room,				
he/she does not have to1	2	3	4	5
7.) It seems like my child thinks that he/she is the boss in the house1	2	3	4	5
8.) I don't accept criticism from my child1	2	3	4	5
9.) My child really trusts me 1	2	3	4	5
10.) My child breaks our house rules almost everyday 1	2	3	4	5
11.) If my child doesn't do what I say, I usually just let it go 1	2	3	4	5
12.) I decide which friends my child can see 1	2	3	4	5
Appendix J: Short Index of Problems (SIP; Miller, Tonigan, & Longabaugh, 1995)

Instructions: Here are a number of events that drinkers sometimes experience. Read each one carefully and indicated how often each one has happened to you **DURING THE PAST THREE MONTHS**.

Circle 0 if NEVER Circle 1 if ONCE OR A FEW TIMES Circle 2 if ONCE OR TWICE A WEEK Circle 3 if DAILY OR ALMOST DAILY

1. I have been unhappy because of my drinking	0	1	2	3
2. Because of my drinking, I have not eaten properly	0	1	2	3
3. I have failed to do what is expected of me because				
of my drinking (0	1	2	3
4. I have felt guilty or ashamed because of my drinking 0	0	1	2	3
5. I have taken foolish risks when I have been drinking	0	1	2	3
6. When drinking, I have done impulsive things that I				
regretted later	0	1	2	3
7. My physical health has been harmed by my drinking 0	0	1	2	3
8. I have had money problems because of my drinking	0	1	2	3
9. My physical appearance has been harmed by my drinking (0	1	2	3
10. My family has been hurt by my drinking	0	1	2	3
11. A friendship or close relationship has been damaged				
by my drinking	0	1	2	3
12. My drinking has gotten in the way of my growth as a person	0	1	2	3
13. My drinking has damaged my social life, popularity,				
or reputation	0	1	2	3
14. I have had an accident while drinking or intoxicated	0	1	2	3