### Measures

# Trait Scales

**Barratt Impulsiveness Scale-10-R (BIS-10-R).** The BIS-10-R (Patton *et al.* 1995) is a 30-item measure designed to assess an affect-free construct of impulsivity. It measures individuals' ability to control their thoughts and behaviors and is comprised of the following three subscales: attentional (a lack of focus on ongoing tasks), motor (acting without thinking), and nonplanning (a lack of planning and thinking carefully) impulsivity.

# Behavioral Inhibition System/Behavioral Activation System (BIS/BAS). The BIS/BAS

(Carver & White, 1994) contains 20 items measuring approach and avoidance motivation and is comprised of the following four subscales: behavioral inhibition system (sensitivity to negative events), drive (persistent pursuit of goals), fun-seeking (desire for new rewards), and reward responsiveness (positive responses to reward).

#### Multidimensional Personality Questionnaire-Brief Form (MPQ-BF). The MPQ-BF (Patrick,

Curtin, & Tellegen, 2002) contains 155 items measuring broad aspects of temperament and is comprised of the following four factors: positive emotionality (conducive to joy, and to active and rewarding engagement with social and work environments), negative emotionality (proneness to experience anxiety, anger, and related emotional and behavioral negative engagement), constraint (ability to inhibit and restrain impulse expression, unconventional behavior, and risk-taking, with low constraint indicting the proneness to act on impulses), and absorption (openness to a wide array of absorbing and self-involving sensory and imaginative experiences). Based on study hypotheses, lower order facets from three of the factors were included in the present study (i.e., positive emotionality [well-being, social potency, achievement, social closeness], negative emotionality [stress reaction, aggression, alienation], and constraint [control, harm avoidance, traditionalism]).

**NEO Personality Inventory-Revised (NEO-PI-R).** The NEO-PI-R (Costa & McCrae, 1992) contains 240 items measuring the following five domains of personality: neuroticism (proneness toward psychological distress), extraversion (tendency to be talkative, assertive, and energetic), openness (propensity to actively seek out and appreciate experiences for their own sake), agreeableness (tendency to be good natured and feel compassion for others), and conscientiousness (tendency to be orderly, responsible, and dependable). Based on study hypotheses, the six facets from each of three domains are included in the present study (i.e., neuroticism [angry hostility, anxiety, depression, impulsiveness, self-consciousness, and vulnerability], extraversion [activity, assertiveness, excitement-seeking, gregariousness, positive emotions, and warmth], and conscientiousness [achievement striving, competence, deliberation, dutifulness, order, and self-discipline]).

Schedule for Nonadaptive and Adaptive Personality Edition (SNAP). The SNAP (Clark,

1993) is a factor analytically derived measure of personality pathology and contains 390 items that emphasize the extreme ends of personality traits. The SNAP assesses 15 trait dimensions in three broad domains (i.e., negative affectivity [NA], positive affectivity [PA], and disinhibition). Negative temperament is the core scale of the NA domain, with the following other traits included: mistrust, manipulativeness, aggression, self-harm, eccentric perceptions, and dependency. Positive temperament is the core scale of the PA domain, with the following other traits included: exhibitionism, entitlement, and detachment (the latter of which assesses the opposite end of the higher-order dimension). Disinhibition is the core scale of the disinhibition domain, with the following other traits included: impulsivity, propriety, and workaholism (the latter two assess the opposite end). Data is available for 930 participants, as this measure was introduced late in the study.

**Zuckerman Sensation Seeking Scale (SSS).** The SSS (Zuckerman *et al.* 1964) contains 40 items measuring one's willingness to take risks and seek out novel and intense experiences, and is comprised of the following four subscales: thrill and adventure seeking (desire to participate in high-stimulus activities such as sky diving), experience seeking (desire for unique sensory experiences and a non-conforming lifestyle), boredom susceptibility (general aversion to repetition and routine), and disinhibition (desire for uninhibited social and sexual experiences).

#### Temperament scales of the Temperament and Character Inventory (TCI). The TCI

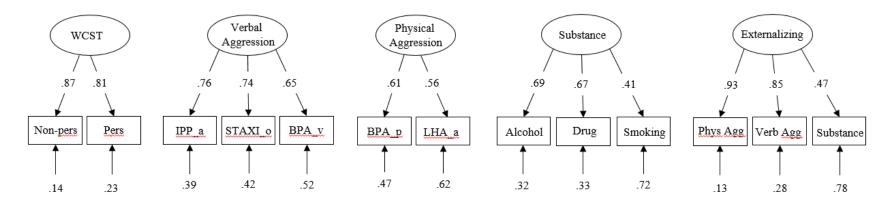
(Cloninger *et al.* 1991) contains 240 items measuring broad aspects of temperament and is comprised of the following four subscales: novelty seeking (tendency to experience intense excitement in the presence of novel stimuli), harm avoidance (proneness to excessive worrying and pessimism), reward dependence (tendency to respond markedly to social signals of reward), and persistence (tendency to persevere in spite of fatigue or frustration). Based on study hypotheses, the novelty seeking subscale is included in the present study, along with the four facets that define it, including exploratory excitability (versus stoic rigidity), extravagance (versus reserve), disorderliness (versus regimentation), and impulsiveness (versus reflection). Table 1

# Correlations among Study Variables

Variables	DvC/C	N/NE	E/PE	Stroop	IGT	DD	WCST
DvC/C							
N/NE	.17						
E/PE	.11	22					
Stroop	.02	02	04				
IGT	06	.02	07	.03			
DD	.14	.11	.01	06	24		
WCST	01	.05	.06	13	18	.23	

Note. All values of r > |.08| were significant at p < 0.05. DvC/C = Disinhibition vs. Constraint/Conscientiousness; E/PE = Extraversion/Positive Emotionality; N/NE = Neuroticism/Negative Emotionality; Stroop = Stroop interference; IGT = Iowa Gambling Task; DD = Delay Discounting Task; WCST = Wisconsin Card Sorting Task. The following variables were controlled for in these analyses: sex, age, race, and education.

#### Figure 1. Factor Loadings for Latent Factors



Note. WCST = Wisconsin Card Sorting Task; Non-pers = non-perseverative errors; Pers = perseverative errors; IPP\_a = aggression subscale of the Inventory of Interpersonal Problems (Pilkonis *et al.* 1996); STAXI\_o = anger out subscale of the State-Trait Anger Expression Inventory (Spielberger, 1988); BPA\_v = verbal aggression subscale of the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992); BPA\_p = physical aggression subscale of the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992); LHA\_a = aggression subscale of the Life History of Aggression interview (Coccaro *et al.* 1997; Manuck *et al.* 1998); Alcohol = lifetime alcohol dependence; Drug = lifetime drug dependence; Smoking = cumulative number of months smoking; Phys Agg = physical aggression; Verb Agg = verbal aggression. Observed variables were conditioned on the following covariates: sex, age, race, and education. All factors were allowed to freely correlate (not depicted here). Covariates and other observed variables in the model are not depicted—see Table 3 for correlations among observed and latent factors.

BIC = 56795.63; Adj-BIC = 56322.33; AIC = 56025.86.

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