**Supplementary Materials**

*Validity and Reliability of Anhedonia/Amotivation Measures*

The SHAPS has been shown to have good content validity with few non-clinical individuals scoring above 2 and with the majority of clinical patients with reduced hedonic tone scoring above 2. The questionnaire has also shown good criterion validity via correlations with the following items of a comparative measure (MADRS): hedonic tone +0.36 (p < .02), suicidal preoccupation + 0.38 (p < .02), anxiety +0.34 (NS), depressed mood -0.04(NS), lassitude +0.08(NS), appetite +0.10 (NS), sleep +0.01 (NS), and pessimism +0.27 (NS). Additionally, the receiver operating characteristics were determined to be satisfactory that the scale had two different cut-off points against two levels of diminished hedonic tone: ‘perceptible’ and ‘clinically significant’. Internal consistency in a non-clinical population was rated as satisfactory with only 2 participants out of 30 switched from a normal to abnormal rating in a seven-day period (Snaith et al., 1995). The GCOS has been shown to have good internal consistency using with non-standardized Cronbach’s α values of .744 for autonomy, .694 for control, and .741 for impersonal. Additionally, test-retest reliability showed good stability for the three subscales over a 2-month period: .749 for autonomy, .711 for control, and .778 for impersonal. Scores on the GCOS have been shown to not be significantly correlated with unrelated scales such as the social desirability scale and significantly correlated with measures similar to those of the subscales such as the Rotter’s locus of control scale and the Type-A coronary-prone behavior pattern (Deci & Ryan, 1985).

***Table S1.* Comparison of BAS Subscale Scores Between Users and Non-Users**

BAS subscale scores from the BIS/BAS were compared between users and non-users via an independent samples t-test. The three subscales of BAS are: Drive (D), Fun-Seeking (FS), and Reward- Responsiveness (RR).

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| --- | --- | --- | --- | --- |
| **BAS Subscale** | **Users** | **Non-Users** | ***t, p*-value** | **Cohen’s *d*** |
| *Fun-Seeking* | 7.25±2.27 | 8.07±2.12 | 1.69, .095 | .374 |
| *Reward-Responsiveness* | 7.25±2.07 | 7.52±1.76 | 0.65, .520 | .143 |
| *Drive* | 7.70±2.30 | 8.45±2.55 | 1.40, .165 | .309 |

***Table S2.* BAS Subscale Scores and EEfRT Performance**

Pearson correlations were computed between the three BAS subscale scores and the percent of hard condition choices overall on the EEfRT. The three subscales of BAS are: Drive (D), Fun-Seeking (FS), and Reward- Responsiveness (RR).

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| --- | --- | --- | --- | --- |
|  | | **BAS\_FS** | **BAS\_RR** | **BAS\_D** |
| **Percent Hard Chosen Overall** | *Pearson Correlation* | -.200 | -.067 | -.164 |
| *Sig. (2-tailed)* | .071 | .551 | .140 |
| *N* | 82 | 82 | 82 |

***Table S3.* Alternative Multiple Linear Regression Approach**

As an alternative approach, percentage of trials for which the hard condition was chosen was used as the dependent variable with number of cannabis, tobacco, and alcohol use days out of the past 90 days as the predictors. The overall model was significant, but only cannabis use days was a significant predictor independently.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictor | **df** | **Mean Square** | ***F, p*-value** | ***R2*** |
| Overall Model | 3 | 0.141 | 4.12, .009\*\* | .140 |
| *Independent Variable Coefficients* | *Unstandardized coefficients* | | *Standardized coefficients* | *t*, *p*-value |
|  | B | Std. error | Beta |
| Number of Cannabis Use Days | 0.002 | 0.001 | 0.311 | 2.73, .008 |
| Number of Tobacco Use Days | 0.000 | 0.001 | 0.033 | .274, .785 |
| Number of Alcohol Use Days | 0.001 | 0.002 | 0.107 | .863, .391 |