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Craving as an Alcohol Use Disorder Symptom in DSM-5: An Empirical Examination in a Treatment-seeking Sample

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Abstract

Craving has been added as an Alcohol Use Disorder (AUD) symptom in DSM-5 but relatively few nosological studies have directly examined the empirical basis for doing so. The current study investigated the validity of craving as an AUD symptom in a sample of heavy drinking treatment-seeking individuals. Using a semi-structured clinical interview, treatment-seeking heavy drinkers ($N = 104$; 62% male) were assessed for symptoms of DSM-IV AUD. The extent to which individuals endorsed pathological levels of craving in comparison to other AUD symptoms was investigated as was the association between craving and several aspects of problematic alcohol involvement. Factor analysis was utilized to examine whether craving and other AUD symptoms comprised a unidimensional syndrome. Results indicated that craving was significantly positively correlated with AUD severity, quantitative indices of drinking, and adverse consequences of alcohol abuse. In terms of frequency of endorsement, craving was present in 47% of the sample and was the 8th most frequent of the twelve symptoms evaluated. When considered with the DSM-IV AUD criteria, craving aggregated with other symptoms to form a unidimensional syndrome. Extending previous findings from epidemiological samples, these data suggest that, in a clinical sample, many relevant aspects of craving aggregate to form a diagnostic criterion that functions similarly to other AUD symptoms and is related to diverse aspects of alcohol-related impairment.

Keywords

Alcohol; Addiction; Craving; Diagnosis; Nosology

One of the chief aims in revising the Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV-TR*; American Psychiatric Association, 2000) was improving the scientific basis for psychiatric diagnosis and classification. For Substance-Related Disorders in general and Alcohol Use Disorders (AUDs) in particular, three major revisions were recently adopted (*DSM-5*; American Psychiatric Association, 2013). First, Alcohol Abuse and Alcohol Dependence were combined into a single disorder rather than unique syndromes. In order to meet the diagnostic threshold in the newly created polythetic syndrome, an individual must endorse two or more symptoms (previously one symptom was required for an abuse

diagnosis and three were required for a dependence diagnosis). Primarily, this change was recommended given problems with the distinction between abuse and dependence including studies contradicting the assumption that abuse was a prodromal phase of dependence (e.g., Schuckit et al., 2001, 2008). The second change involved removing the legal problems symptom. This removal was suggested based on very low prevalence found in epidemiological studies (Saha, Chou, & Grant, 2006) and evidence that legal problems did not load onto a latent AUD factor like other criteria (e.g., Kahler & Strong, 2006). The third revision was the addition of a symptom involving cravings to use a substance. In support of this change, there is extensive indirect and modest direct empirical support.

The indirect support for including a symptom involving alcohol cravings includes a diversity of studies implicating craving as part of the phenomenology of AUDs. To begin, many treatment-seeking individuals report strong and persistent desires to use a substance (Bohn, Krahn, & Staehler, 1995; Oslin, Cary, Slaymaker, Collieran, & Blow, 2009). Additionally, craving is associated with severity of AUD (Chakravorty et al., 2010; MacKillop et al., 2010), relapse to drinking following treatment (Ramo & Brown, 2008; Roberts, Anton, Latham, & Moak, 1999; Zywiak, Connors, Maisto, & Westerberg, 1996), and *in vivo* alcohol consumption in laboratory studies (MacKillop & Lisan, 2005; O'Malley, Krishnan-Sarin, Farren, Sinha, & Kreek, 2002). Lastly, cravings are often a focus of empirically-supported clinical interventions (McCrady & Epstein, 2009; Monti, Kadden, Rohsenow, Cooney, & Abrams, 2002).

These findings all suggest that craving is significantly related to AUDs, but only a small number of studies have directly examined the validity of craving as a diagnostic criterion. Changing craving from a putative determinant of AUDs to a defining feature will substantially affect the research enterprise and establishing a strong empirical basis for this nosological change is critical. Three studies to date have directly examined craving as an AUD symptom in moderate to large epidemiological datasets. In each case, craving fit well within a latent unidimensional continuum (Casey, Adamson, Shevlin, & McKinney, 2012; Keyes, Krueger, Grant, & Hasin, 2011; Mewton, Slade, McBride, Grove, & Teesson, 2011). These studies found that craving fell within the moderate to severe end of the continuum in terms of symptom frequency. In addition, the effect on prevalence has also been examined in epidemiological samples and the addition of craving is estimated to be modest (Peer et al., 2013; Agrawal, Heath, & Lynskey, 2011). In the only study to date that examined craving in a clinical sample of individuals using alcohol and/or other drugs, mixed results were found (Hasin, Fenton, Beseler, Park, & Wall, 2012). In that study, craving fit well within a unidimensional latent syndrome but was not shown to provide additional information when considering the ability to discriminate individuals along a latent severity spectrum. These findings are largely consistent with the small number of studies on craving as a symptom for other Substance Use Disorders (Shmulewitz et al., 2011; Shmulewitz et al., 2013).

The majority of the research examining the addition of a craving symptom has been conducted within the context of large epidemiological surveys to assess psychiatric disorders. Using this methodology, few questions are typically asked to assess each symptom. In fact, most of the studies evaluating craving and AUD nosology involved single-item assessments. These include items such as "In your entire life, did you ever want

a drink so badly that you couldn't think of anything else?" (Keyes et al., 2011) and "Did you ever want a drink so much that you could almost taste it?" (Bucholz et al., 1994). These inherently focus on very large time spans and highly subjective attributions. Single item measures of craving also have other limitations, such as an absence of internal reliability and restricted range of content domains (Sayette et al., 2000). This is in contrast to the numerous psychometrically validated assessment instruments that exist to measure craving for alcohol (Ray, Courtney, Bacio, & MacKillop, 2013; Kavanagh et al., 2013).

One such measure is the Penn Alcohol Craving Scale (PACS) which has been shown to be internally consistent, and for which studies have been conducted demonstrating content, construct, and criterion validity (Flannery, Volpicelli, & Pettinati, 1999; Allen & Wilson, 2003). The PACS assesses several aspects of craving such as its duration, frequency, and intensity and research has suggested it has predictive utility when considering alcohol relapse and alcohol consumption during treatment (Flannery et al., 1999; Flannery, Poole, Gallop, & Volpicelli, 2003). Using a psychometrically validated measure of tonic craving (i.e., generalized craving level over a clinically-relevant period of time) such as the PACS would be maximally informative when considering the validity of craving as an AUD symptom as little can be concluded with regard to the impact of this symptom (e.g., whether it is redundant with pre-existing symptoms) if it is measured incompletely or inaccurately.

In light of the relatively small literature and previous assessment limitations, the current study sought to examine the nosological validity of craving as an AUD symptom using the PACS in a sample of treatment-seeking individuals. Using a measure of craving for which the psychometric properties have been well documented, this study had two main goals. The first was to compare and contrast craving to other AUD symptoms in terms of endorsement and correlates. The second was to examine the latent structure of the integrated DSM-5 AUD syndrome with the newly added craving symptom. For exploratory purposes, we also examined sex differences in the latent symptom structure.

Method

Participants

Participants were adults ($N=104$) recruited from the community using advertisements for a treatment research study on a novel pharmacological treatment for AUDs (MacKillop et al., 2012). The parent study involved a telephone screen, an in-person screen, a toxicology/metabolic screening, and a physical exam; the data in the current manuscript pertain to only the in-person screening assessment of individuals seeking help in reducing or stopping their drinking. Eligibility criteria included self-reported motivation to change drinking, no current psychotropic medications or current comorbid Axis I psychopathology, completion of at least the ninth grade for adequate literacy, no history of severe alcohol withdrawal (i.e., hospitalization or hallucinations), and no history of epilepsy/seizures, renal problems, or hepatic problems. Participants were instructed to abstain from drinking alcohol immediately preceding their appointment and sobriety at the time of the assessment was verified via breath alcohol (Alco-Sensor® IV, Intoximeters Inc.). All study procedures were reviewed and approved by the Institutional Review Board. Information was collected via self-report measures and semi-structured interviews with trained clinicians. Participants were

compensated \$45 for their time (approximately three hours). Participant characteristics are in Table 1 including means and standard deviations of the below assessment measures.

Assessment

Demographics—Participants completed a standard assessment of descriptive information including race, ethnicity, age, gender, and other demographic variables.

Structured Clinical Interview for DSM-IV – Alcohol Use Disorders Module (SCID-AUD; First, Williams, Spitzer, & Gibbon, 1995)—The SCID is a semi-structured interview designed for the assessment and diagnosis of major Axis I disorders, including Alcohol Abuse and Dependence. The DSM-IV AUD symptoms were evaluated during clinical interviews conducted by Master's-level clinical psychology trainees or a licensed clinical social worker, all of whom completed training on the DSM-IV AUD diagnosis and the administration of the SCID. Scoring of each symptom was based on a trichotomous categorical model in which a symptom was coded as 1) absent; 2) subclinical; or 3) present. A trichotomous model was employed to help reduce the systematic loss of measurement information inherent in categorical classification and to provide the greatest resolutions in terms of overall AUD severity. Resulting overall diagnosis was determined by consensus review by the aforementioned interviewers and a licensed clinical psychologist. As stand-alone syndromes, abuse ($\alpha = .54$) and dependence ($\alpha = .57$) had low internal consistency, but when considered cumulatively the internal consistency was considerably higher ($\alpha = .69$).

Penn Alcohol Craving Scale (PACS; Flannery, Volpicelli, & Pettinati, 1999)—The PACS is a 5-item, unidimensional, self-report questionnaire assessing cravings for alcohol including frequency, intensity, and duration of cravings for alcohol and perceived ability to resist drinking given craving and availability of alcohol. Each response is scored from 0–6, with higher overall scores indicating greater levels of alcohol craving. The PACS was selected based on its ability to assess multiple content domains, its history of being psychometrically sound, and its relative ease of administration and interpretation.

In order to permit comparison of craving and other AUD symptoms which were evaluated categorically (i.e., absent, subclinical, present), cut points were determined using a rational strategy based on item content. Individuals who had average item scores below 3, reflecting nonexistent, “slight,” or “mild” craving, were categorized as symptom absent (i.e., PACS total <15); those with average item scores below 4 (e.g., “moderate urge”, “moderately difficult” to resist cravings) were deemed subclinical (i.e., PACS total = 15 – 20); those with average item scores above 4 (e.g., “strong urge”, “very difficult” to resist cravings) were categorized as symptom present (i.e., PACS total >20).

Timeline Followback (TLFB; Sobell, Maisto, Sobell, & Cooper, 1979)—The TLFB was used to obtain maximally accurate estimates of daily drinking using a calendar. Individuals' retrospective recall of alcohol intake during the preceding four weeks was used to calculate the average number of standard drinks consumed each week.

Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993)—The AUDIT is a 10-item screening tool to identify those who have an Alcohol Use Disorder via consumption that is hazardous and/or harmful to a person's health. Each response is given 0 to 4 points with higher overall scores indicating harmful and hazardous use.

Drinker Inventory of Consequences (DrInC; Miller, Tonigan, & Longabaugh, 1995)—The DrInC is a self-administered, 50-item questionnaire designed to measure Interpersonal, Physical, Social, Impulsive, and Intrapersonal consequences of alcohol misuse, during the past three months (DrInC-2R). Questions are scored from 0 (*Never*) to 3 (*Daily or almost daily*) based on the regularity of experiencing various negative consequences.

Data Analysis

Data were analyzed to compare the extent to which craving, when categorized in the same fashion as the pre-existing DSM-IV AUD symptoms (i.e., symptom absent, subclinical, or present), was associated with relevant aspects of alcohol misuse and endorsed to a similar extent. Spearman's rho was used to examine the associations between DSM symptoms and harmful/hazardous alcohol use (AUDIT score), weekly alcohol consumption (TLFB), and adverse consequences of alcohol misuse (DrInC score). These associations were examined with PACS as both a continuous variable and a trichotomized variable, to evaluate potential loss of information resulting from categorizing dimensional data, by generating the correlation confidence intervals and testing for differences between the two (Steiger, 1980). Since none of the relatively few empirical nosological studies conducted have assessed craving similarly to the present study, exploratory factor analysis (EFA) was used to examine the number of latent factors emerging. Specifically, principal axis factoring (PAF) was utilized with the optimal factor solution determined using observed scree plot discontinuity and the results of Velicer's minimum average partial (MAP) test. The MAP test partials out all possible interpretations of factor structure from the given variables and identifies the solution that corresponds to the smallest amount of unsystematic variance remaining (O'Connor, 2000). Items were considered to significantly load on a factor based on a loading of .30. For maximum comparability, the DSM-IV symptoms without the legal problems symptom were evaluated first followed by the same symptoms with inclusion of a craving symptom.

Results

Means and standard deviations of baseline alcohol use characteristics are found in Table 1. Associations with alcohol misuse examined with PACS as a continuous variable and with PACS craving classified to reflect the categorical diagnostic system employed in the DSM revealed that there were not statistically significant differences between the magnitude of the coefficients ($ps = .34-.66$). Alcohol misuse correlates including DrInC, AUDIT, and TLFB scores were found to be significantly positively associated with the PACS-based craving symptom (Table 2). For all three measures, the magnitude of the association with the craving symptom was greater than it was for numerous other symptoms. The symptom

reflecting a persistent desire to quit drinking and/or to reduce one's drinking was found to have the weakest relationship across measures. The symptom most closely associated with alcohol misuse and impairment varied by measure and included recurrently spending a considerable amount of time seeking, using, or recovering from alcohol, experiencing alcohol-related withdrawal, and giving up important social or recreational activities in order to drink.

There was a wide range of endorsement of the various symptoms. With regard to craving, 47% of the sample met the identified cutoff score (i.e., PACS>20) reflecting experiencing frequent, strong, and/or lengthy cravings that made it difficult to resist drinking. This symptom ranked 8 of 12 in terms of frequency of endorsement. Consistent with previous research, legal problems was the least commonly endorsed symptom. The symptom most commonly endorsed involved a persistent desire to cut back on drinking without success.

For the ten retained DSM-IV symptoms, scree plot discontinuity clearly suggested a unidimensional factor structure. In addition, the MAP test also identified a unidimensional structure as most appropriate. The eigenvalue for the single extracted factor was 2.77, accounting for 27.72% of the variance. The factor loadings are shown in Table 3. The second factor analysis, which included the craving symptom, did not result in a substantially altered factor structure. The analysis, again, suggested a unidimensional factor structure based on scree plot discontinuity and the MAP test again identified a unidimensional structure. The eigenvalue for the single extracted factor was 3.58, accounting for 32.53% of the variance. Factor loadings suggested that craving fit well as part of a latent AUD syndrome. In both instances, the factor loadings were similar with the majority of symptoms loading onto a single factor in both instances. Despite this, two symptoms fell below the required threshold and did not significantly load onto the underlying factor: the symptom of continued use despite recurrent physical/psychological problems and the symptom reflecting a persistent desire to quit drinking/reduce one's drinking unsuccessfully.

Exploratory analyses were conducted to examine potential differences between men and women with regard to symptom factor loadings on the underlying AUD construct. The sex-specific analyses revealed similar factor loadings with the exception of the symptom assessing engaging in hazardous behavior while under the influence of alcohol. This symptom did not load onto the underlying AUD syndrome in the male-specific factor analysis of the ten retained DSM-IV symptoms nor when the new craving symptom was included.

Discussion

This study sought to compare the newly added DSM-5 AUD craving symptom, when measured more objectively and comprehensively via the PACS, to other AUD criteria including endorsement, correlates, and integration into a latent underlying AUD construct. Craving had a level of endorsement that was similar to other symptoms and it was significantly positively associated with greater quantitative alcohol consumption (i.e., average drinks per week), greater AUD severity based on the AUDIT, and more extensive alcohol-related consequences reported on the DrInC. When craving was considered

alongside DSM-IV AUD symptoms using factor analysis, the craving symptom substantially loaded onto the latent AUD factor created. The latent unidimensional syndrome created when a craving symptom was included was nearly identical to the structure observed when it was not included, and accounted for a greater proportion of variance of the underlying AUD construct.

As a feature of an AUD, craving functions in a way that is not unlike other AUD diagnostic criteria given similar factor loadings, levels of endorsement, and associations with variables thought to be part of the AUD phenomenology. Findings suggest that experiencing strong urges is related to consuming more alcohol. Similarly, urges to drink are associated with alcohol use that is harmful and hazardous, and that results in more drinking-related consequences such as feeling distressed and ashamed about drinking, negatively affected health and appearance, damaged relationships, and occupational difficulties. Thus, the craving symptom in DSM-5, when adequately assessed, reflects an aspect of the disorder that can be intrusive and bothersome in and of itself, and one that also may precede problematic alcohol use, lead to various negative repercussions, and contribute to overall more severe presentation of an AUD. Considering this criterion alongside others that appear to function similarly and with which craving aggregates to form a latent AUD syndrome, therefore, represents a more complete depiction of the syndrome.

These findings converge with and extend the findings from a number of previous investigations. First, the finding that craving is significantly associated with AUD severity, drinking, and alcohol-related impairment is consistent with a number of previous descriptive studies on craving (e.g., Chakravorty et al., 2010). Second, the craving symptom being endorsed to a similar extent as other criteria, further supports its construct validity as has been the case in previous studies (Peer et al., 2013). Third, and most importantly, these findings converge with previous nosological studies that supported the inclusion of craving as an AUD symptom (Hasin et al., 2012; Keyes et al., 2011). In particular, this study assessed craving more comprehensively than had been done in many epidemiological surveys, making use of a psychometrically validated measure of craving that assesses multiple content domains. The facets of craving assessed on the PACS (i.e., duration, frequency, severity, ability to resist craving) comprised a symptom that aggregated with other AUD symptoms to form a unidimensional latent factor. As a result, it will likely behoove users of DSM-5 to strive to evaluate these attributes of craving not only to better understand an individual's unique experience with urges to drink and the impact of these urges, but also to evaluate wholly whether an individual's craving is severe and extensive enough to be endorsed as a diagnostic symptom. As a new symptom that has not typically been assessed in the context of diagnosis, characterizing craving in DSM-5 in a valid and meaningful way represents a new diagnostic challenge. The PACS may provide a heuristic framework to help guide diagnosticians in this endeavor.

While many individuals with alcohol-related problems report a strong or persistent desire to have a drink, clinically relevant craving as a diagnostic symptom involves a more severe phenomenon and one that likely reflects strong urges that are difficult to control, that may occur many times each day, that may occupy several hours of the day, and that may lead to the perception that it would be extremely difficult or impossible not to drink alcohol if it

were on hand. Considering these various content domains may facilitate an understanding of an individual's craving that is more interpretable than relying on highly subjective and narrow inquiries (e.g., did you ever want a drink so much that you could almost taste it). Therefore, this symptom may convey meaningful information regarding the severity of someone's disorder and reveal non-redundant information about an aspect of the disorder that can be inherently both distressing and impairing (e.g., feeling as one cannot control urges, having urges to use a substance for multiple hours daily).

Although the focus of this study was on craving as an AUD symptom, several collateral findings also merit discussion. First, the data revealed relatively weak internal consistency in the individual DSM-IV Abuse and Dependence diagnoses which was considerably improved when the two were combined. This provides further support for the decision to create a single Alcohol Use Disorder syndrome in DSM-5 as has been demonstrated in other studies (Hagman & Cohn, 2011). In addition, these data provide further evidence that the legal problems symptom has low prevalence relative to other criteria. Indeed, it was the symptom endorsed at the lowest frequency in this sample. Interestingly, although the combined abuse, dependence, and craving symptoms comprised a coherent unidimensional AUD, the symptoms of continued use despite adverse physical or psychological consequences from drinking and multiple unsuccessful attempts to reduce drinking, unexpectedly, did not load onto this latent syndrome. This may be related to the exclusion criteria for the parent pharmacotherapy study that did not allow for participants with serious medical and psychological difficulties and the treatment-seeking nature of the sample, respectively. Future research assessing craving in a non-treatment seeking AUD sample may be an important future direction to better understand whether these findings generalize to all AUD patients. When men and women were considered separately, slight differences emerged with the hazardous use symptom not aggregating with the latent AUD construct in men only. However, due to the reduced size of the gender-specific groups, caution should be taken not to over-interpret this finding. An adequately powered systematic examination of the factor structure of AUD symptoms in gender-specific samples reflects an important future direction.

This study had several notable strengths as well as some limitations of note. In terms of strengths, a community sample of treatment-seeking individuals is highly applicable for investigating the appropriateness of a new symptom. The assessment of AUD symptoms and AUD diagnoses used a best-practices approach of semi-structured interviews with case consensus agreement. Similarly, craving was assessed using a high-quality psychometrically valid instrument. Nonetheless, these strengths must be considered along with the study's limitations. One limitation is the relatively modest sample size. Another limitation is the previously unused PACS craving cutoffs scores. Although the PACS has demonstrated good psychometric properties, the PACS scores used to categorize the presence or absence of the craving symptom have not been used prior to this study. Due to the categorical nature of the current diagnostic system, distinctions must often be made to determine the level at which a symptom becomes severe enough to be clinically relevant from a quantitative standpoint. Nonetheless, potential concerns based on the cutoff scores generated for this study are somewhat mitigated by the content validity of the cutoffs in relation to the PACS items and by the findings that the differences in magnitude of the correlation coefficients of continuous

and trichotomized variable were nonsignificant. Still, this is a consideration in interpreting these findings and a possible future direction would be formal psychometric validation of the PACS and associated cut-offs for diagnostic purposes (e.g., sensitivity, specificity, positive predictive power, negative predictive power).

In sum, the collected findings largely support the addition of craving to the AUD diagnosis in DSM-5 and, although not the specific focus of the study, the data also support combining the two DSM-IV diagnoses and dropping alcohol-related legal problems as a symptom. During the transition from DSM-IV to DSM-5, evaluating the newly added AUD symptom in a valid way supported by research is paramount. Thus, findings herein suggest assessing many relevant aspects of craving phenomenology evaluated on the PACS as a logical starting point. Psychiatric nosology is necessarily an iterative empirical process that includes continued examination of both the existing syndrome and prospective changes on an ongoing basis. This includes making revisions to better categorize clinical syndromes as well as the symptoms that comprise them.

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Table 1Participant characteristics ($N = 104$)

Characteristic	Mean (SD)/%/Median (IQR)
Age	41.27 (11.24)
Sex	62% Male 38% Female
Race	
<i>White</i>	74.0%
<i>African American</i>	22.1%
<i>Mixed Race</i>	1.9%
<i>Native American/Alaskan Native</i>	1.9%
Hispanic Ethnicity	2.9%
Income	\$20,000–\$29,999 ([\\$0–\$9,999]–[\\$50,000–\$59,999])
AUD Symptoms ^{<i>I</i>}	6.17 (2.27)
Penn Alcohol Craving Scale	18.94 (5.99)
Alcohol Use Disorder Identification Test	23.02 (6.95)
Drinks/Week	52.77 (41.70)
Drinking Days/Week	5.40 (1.69)
Drinker Inventory of Consequences	48.85 (23.67)

Notes:

^{*I*} with legal, AUD = DSM-IV Alcohol Use Disorder

Table 2

Alcohol use disorder correlates and symptom endorsement

Symptom	CORRELATES			ENDORSEMENT	
	AUDIT	Drinks/week	DrInC	% meeting diagnostic criteria	Rank order frequency
Abuse (DSM-IV)					
Neglect major role obligations	.46	.33	.46	42%	9
Hazardous use	.23	.16	.26	66%	4
Legal problems	.24	.16	.22	10%	12
Social/interpersonal problems	.49	.35	.44	63%	5
Dependence (DSM-IV)					
Drink more/longer than planned	.24	.15	.26	81%	2
Desire to quit/cut down	.14	-.10	.07	91%	1
Time spent using/recovering	.51	.52	.38	62%	6
Activities given up	.54	.45	.41	41%	10
Physical/psychological consequences	.18	.08	.27	54%	7
Tolerance	.17	.22	.14	73%	3
Withdrawal	.49	.25	.57	35%	11
New to DSM-5					
Craving	.41	.36	.22	47%	8

Note. DrInC = Drinker Inventory of Consequences score; AUDIT = Alcohol Use Disorder Identification Test score

Table 3

Exploratory factor analysis of AUD symptoms

	Retained DSM-IV AUD Symptoms	DSM-5 AUD Symptoms		
		Combined	Males	Females
Neglect major role obligations	.56	.55	.60	.54
Hazardous use	.31	.30	.24	.37
Social/interpersonal problems	.61	.60	.64	.56
Drink more/longer than planned	.37	.36	.33	.45
Desire to quit/cut down	.09	.13	.31	-.18
Time spent using/recovering	.64	.67	.53	.85
Activities given up	.55	.55	.50	.53
Physical/psychological consequences	.18	.16	.10	.24
Tolerance	.36	.35	.48	.33
Withdrawal	.52	.52	.34	.76
Craving	--	.44	.44	.50

Note. AUD = Alcohol Use Disorder