

Relationships Between Boredom Proneness, Mindfulness, Anxiety, Depression, and Substance Use

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Boredom proneness has been associated with a wide range of social and psychological problems. According to the attentional theory of boredom proneness, boredom results from a deficit in attention (Harris, 2000). The current study investigated the relationship between mindfulness (the ability to attend to the immediate environment) and boredom proneness, as well as the relationship between mindfulness and negative outcomes such as anxiety, depression, and substance use. Subjects ($n=138$) completed the Boredom Proneness Scale (Farmer & Sundberg, 1986), Mindfulness Attention Awareness Scale (Brown & Ryan, 2003), Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983), and a substance use questionnaire. Results show that boredom proneness correlated positively with anxiety, depression, and substance use, and negatively with mindfulness. In addition, mindfulness correlated negatively with anxiety, depression, and substance use. The current study provides initial evidence regarding the relationship between boredom proneness and mindfulness. Future research addressing the nature of this relationship is of importance, given the need for an intervention to address the negative consequences of boredom.

Keywords: boredom proneness, mindfulness, anxiety, depression, substance use

The term boredom is used to refer to a wide range of experiences. In general, the term boredom refers to an aversive subjective state of dissatisfaction attributed to an inadequately stimulating environment (Mikulas & Vodanovich, 1993). Although definitions of boredom vary slightly in content, most definitions incorporate the concepts of environmental monotony and constraint. In order to examine the theorized relationship between boredom and inattention, the current study utilizes the following definition of boredom: A state of dissatisfaction resulting from a combination of an uninteresting environment and attentional constraint (Mikulas & Vodanovich, 1993; Todman, 2003). Given established correlations between boredom and numerous negative outcomes (Blaszczynski, McConaghy, & Frankova, 1990; Caldwell & Smith, 2006; Farmer & Sundberg, 1986; Gordon, Wilkinson, McGown, & Jovanoska, 1997; Paulson, Coombs, & Richardson, 1990), this area of research is important.

The experience of boredom has both situational and individual determinants. When boredom is experienced as a result of external circumstances, it is considered situation-dependent (Todman, 2007). Alternatively, when boredom is considered the result of individual determi-

nants it can be viewed as a personality characteristic that varies in degree across individuals. Trait boredom is referred to as boredom proneness and is operationalized as an individual's susceptibility to experiencing boredom. Whereas state boredom is conceptualized as the actual subjective experience of boredom, trait boredom is conceptualized as the individual's dispositional susceptibility to boredom (Todman, 2007).

Theory of Boredom

The current investigation focused on internal cognitive factors, namely attention, which has been identified as a causal factor for boredom proneness (Fisher, 1993; Hamilton, 1981; Harris, 2000). As stated above, the two main components of boredom are a monotonous environment and constraint. When these conditions are met, the inability to engage and sustain attention typically results in the experience of boredom (Berlyne, 1960; Carrier, Cheyne, & Smilek, 2008; Damrad-Frye & Laird, 1989; Hebb, 1966). Researchers have theorized that a deficit in attention contributes to the experience of boredom (Fisher, 1993; Hamilton, 1981; Harris, 2000). Boredom is considered an aversive subjective state that results from attempts to allocate attentional resources to an environment that is no longer interesting coupled with the natural tendency to remove attention from such an environment (Todman, 2003). Recently, Harris (2000) proposed the attentional theory of boredom proneness suggesting that this trait is associ-

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ated with the inability to regulate attention in a directed, focused manner (Fisher, 1993; Hamilton, 1981).

According to this attentional theory of boredom proneness it is hypothesized that the cultivation of attention should reduce an individual's propensity to experience boredom. Mindfulness is defined as moment-to-moment awareness (Epstein, 1995) with attention directed to what is happening in the present moment (Brown & Ryan, 2003). The positive effects of mindfulness have been investigated in recent decades. Studies have found that mindfulness is negatively associated with anxiety (Kutz, Borysenko, & Benson, 1985), depression (Teasdale, Scott, Moore, Hayhurst, Pope, & Paykel, 2001), and substance abuse relapse (Witkiewitz, Marlatt, & Walker, 2005).

Correlates of Boredom and Negative Outcomes

Research has demonstrated an association between boredom and a wide range of undesirable social and psychological problems. Individuals who score higher on boredom measures, such the Boredom Coping Scale (BCS; Hamilton, Haier, & Buchsbaum, 1984), Boredom Susceptibility Scale (BSS; Zuckerman, 1979), Leisure Boredom Scale (LBS; Iso-Ahola & Weisiger, 1990), and Free Time Boredom Scale (Ragheb & Merydith, 2001) have higher rates of negative behaviors including substance abuse (Paulson, Coombs & Richardson, 1990) and pathological gambling (Blaszczynski, McConaghy, & Frankova, 1990). Boredom has also been linked to decreased academic achievement and increased likelihood of dropping out of school (Caldwell & Smith, 2006). Boredom scores have correlated positively with indexes of depression and anxiety (Gordon et al., 1997), as well as hopelessness and loneliness (Farmer & Sundberg, 1986).

Boredom proneness has also been linked to numerous negative states. Studies have found a correlation between boredom proneness as measured by the Boredom Proneness Scale (BPS; Farmer & Sundberg, 1986), and depression as measured by the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock & Erbaugh, 1961), Minnesota Multiphasic Personality Inventory depression scale (MMPI; Hathaway & McKinley, 1940), and Multiple Adjective Checklist (MAACL; Zuckerman & Lubin, 1985). Relationships have also been found between boredom proneness and anxiety (Gordon, Wilkinson, McGown, & Jovanoska, 1997; Sommers & Vodanovich, 2000), neuroticism (Gordon

et al., 1997), and anxiety and depression as measured by the Hopkins Symptoms Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Additionally, research indicates that boredom proneness is linked to behaviors such as increased aggression and hostility (Rupp & Vodanovich, 1997), substance use (Paulson, Coombs, & Richardson, 1990), alcohol dependence (Orcutt, 1984; Todman, 2003; Wiesbeck et al., 1996), and susceptibility to heroin use (Serman, Zinser, Sideroff, & Baker, 1989; Todman, 2003). Positive relationships between BPS scores and personality traits such as impulsivity (Watt & Vodanovich, 1992), impatience, sensation seeking (Kass & Vodanovich, 1990), and self-reflectivity (Seib & Vodanovich, 1998) have been found. Cumulatively, these studies suggest that boredom proneness has social, emotional, and psychological repercussions. Boredom proneness thus seems to be a problematic trait that increases the probability of a range of negative behaviors.

According to this attentional theory of boredom proneness it is hypothesized that the cultivation of attention should reduce an individual's propensity to experience boredom. Mindfulness is defined as moment-to-moment awareness (Epstein, 1995) with attention directed to what is happening in the present moment (Brown & Ryan, 2003). To date, the relationship between mindfulness and boredom has been addressed in only one study. Trunnell, White, Cederquidt, and Braza (1996) found that participation in mindfulness training resulted in a decrease of self-reported boredom. Participants ($n=164$) enrolled in a recreation and leisure course were randomly assigned to two groups. The experimental group participated in a mindfulness meditation training program while the control group did not. Measurements of boredom relied on use of an adjective questionnaire (Ellis, Voelke, & Morris, 1994; Russell & McAuley, 1986; Trunnell et al., 1996). Results of a between subjects mean comparison revealed a significant decrease in boredom at post-test in the experimental group when compared with those in the control group. The authors hypothesized that an increase in attention and engagement explained this decrease in boredom scores (Trunnell et al., 1996). This explanation strengthens the attentional theory of boredom proneness by implicating a deficit in attention as a precursor to boredom proneness (Fisher, 1993; Hamilton, 1981; Harris, 2000).

One major limitation to this study was that a standardized measure of boredom was not utilized. Instead, an affect questionnaire was used that assessed boredom by the degree of pleasure or displeasure in activities (Russell & McAuley, 1986). Results from the study would have been strengthened with the use of a standardized measure, such as the Boredom Proneness Scale, to obtain a reliable assessment of boredom. Despite this limitation, the obtained results are a promising start to the investigation of the relationship between boredom proneness and mindfulness.

Further studying the relationship between mindfulness and boredom proneness has clinical utility given the numerous negative outcomes associated with the construct of boredom proneness. Given that a deficit in attention has been implicated in contributing to boredom proneness, individuals who score low on mindfulness are expected to score high on boredom proneness. Informed by the literature on the negative effects of boredom proneness, it is hypothesized that positive correlations will emerge between boredom proneness and anxiety, depression, and substance use. Additionally, given previous research (Kutz, Borysenko, & Benson, 1985; Teasdale et al., 2001; Witkiewitz et al., 2005) it is hypothesized that mindfulness will be negatively correlated with anxiety, depression, and substance use.

Method

Participants

Participants with incomplete data ($n = 15$) were excluded from the analyses, leaving a total of 138 individuals (103 females, 33 males, and 2 who chose not to report their gender) whose scores were retained for analysis. Participants ranged in age from 22 to 70 with a mean age of 31 years ($SD = 10.7$). Participants identified themselves as White (76.1%), Hispanic/Latino (9%), Multiracial (6.5%), Black/African American (5.8%), Asian or Pacific Islander (5.8%), and Other (5.1%).

Measures

Boredom proneness. Trait boredom was measured using the BPS (Farmer & Sundberg, 1986), a 28-item scale with responses coded utilizing a true/false or Likert-scale format. Informed by previous research, the current study used the 7-point Likert-scale (1=

Highly disagree, 7= Highly agree) for increased sensitivity when compared to the true-false format of the instrument (Harris, 2000; Kass & Vodanovich, 1990; McLeod & Vodanovich, 1991; Seib & Vodanovich, 1998; Watt & Vodanovich, 1992). Eighteen items are scored to directly reflect high boredom proneness (e.g., Time always seems to be passing slowly) and ten items are reverse scored (e.g., I find it easy to entertain myself). Higher scores on the BPS reflect higher boredom proneness. Reliability for the 7-point Likert scale version of the BPS is adequate, with correlation coefficients ranging from .72-.75, (Ahmed, 1990; Blunt & Pychyl, 1998; Gana & Akremi, 1998) and test-retest reliability ranging from .79-.91 (Harris, 2000; Kass & Vodanovich, 1990; McLeod & Vodanovich, 1991; Vodanovich, 2003). BPS scores also correlate with other measures of boredom such as self-report ratings of boredom and interest (Farmer & Sundberg, 1986), the BSS (Farmer & Sundberg, 1986; Zuckerman, Eysenck, & Eysenck, 1978), and Lee's Job Boredom Scale (Farmer & Sundberg, 1986; Lee, 1983).

A reliability analysis of the BPS revealed a coefficient alpha of .86. A factor analysis of the scores on the BPS yielded results consistent with a three-factor structure of boredom proneness (Gordon et al., 1997). These factors were similar to results from previous studies suggesting the presence of an attention factor, interest factor, and restlessness factor in the construct of boredom proneness (Vodanovich, 2003). In addition, given previous empirical decisions to compute a composite score for boredom proneness (Ahmed, 1990; Vodanovich, 2003), all items were included in a composite score and used in the analysis.

Mindfulness. The Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003) was used to measure mindfulness. Mindfulness is conceptualized as a tendency to hold and sustain attention to what is happening in the present (Brown & Ryan, 2003; Block-Lerner, Salters-Pedneault, & Tull, 2005). The MAAS is a 15-item self-report instrument that asks participants to rate their personal experiences (e.g., I could be experiencing some emotion and not be conscious of it until some time later) on a 6-point Likert scale (1= Almost always, 6= Almost never). Higher scores on the MAAS reflect higher mindfulness. The MAAS demonstrates good reliability with a coefficient alpha of .81 (Brown & Ryan, 2003).

Reliability analysis with the MAAS revealed a coefficient alpha of .89 and factor analysis indicated a single factor solution, which is consistent with past literature (Bear, Smith, Hopkins, Krietemeyer, & Toney, 2006; Baer et al., 2008; Brown & Ryan, 2003).

Anxiety and Depression. The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) is a measure of anxiety and depression. The scale was chosen based on its clinical validity in assessing symptoms of anxiety and depression in the non-psychiatric general population (Zigmond & Snaith, 1983). The HADS is a 14-item scale that assesses the presence and severity of anxiety (HAD-A subscale) and depression (HAD-D subscale; Zigmond & Snaith, 1983). Responses were scored on a four point Likert scale, with 6 items reverse-scored (4 in the depression subscale and two in the anxiety subscale). Lower total scores represent low anxiety and/or depression and higher total scores represent high anxiety (e.g., I feel tense or wound up) and/or depression (e.g., I have lost interest in my appearance). The subscales have demonstrated good reliability with HADS-A coefficient alphas ranging from .68-.93 and HADS-D coefficient alphas ranging from .67-.90 (Bjelland, Dahl, Haug, & Neckelmann, 2002; Olsson, Mykletun, & Dahl, 2005). Additionally, a reliability analysis revealed a coefficient alpha of .82 for the composite HADS score (anxiety and/or depression).

A reliability analysis with the HADS revealed a coefficient alpha of .82 and a factor analysis with the Hospital Anxiety and Depression Scale yielded one main component. Consistent with past research (Zigmond & Snaith, 1983), this composite score was utilized in all correlation analyses.

Substance Use. The Substance Use Questionnaire was developed to elicit the information needed for the current study. The 15 items used in the current study were adapted from questions included in the Alcohol, Smoking, and Substance Involvement Screening Test (WHO ASSIST Working Group, 2002), a semi-structured interview measuring lifetime and recent (past 3 months) substance use as well as problems related to substance use, risk of current or future harm, dependence, and injection drug use. Because the current study focused on lifetime and recent substance use, the entire questionnaire was not used. Additionally, the

ASSIST instrument, along with other substance use questionnaires, has not been validated for use with the general adult population, where a lower prevalence of substance use problems are to be expected (Lanier & Ko, 2008).

Participants were asked to provide information about their lifetime experience with alcohol and drugs as well as information regarding use of alcohol or drugs in the past 6 months (e.g., In the past 6 months, have you used alcohol?). A comprehensive list of substances was identified and participants were asked to report lifetime and recent use using a 9-point Likert scale (1= Never in lifetime, 5= Two or three times a month, 9= Once a day or more). Reliability analyses with the Substance Use Questionnaire revealed a coefficient alpha of .65. See Table 1 for substance use means. See Appendix for Substance Use Questionnaire.

Procedure

Subjects were recruited via email blasts and recruitment flyers. Specifically, recruitment flyers were posted around the campus at the New School University in New York City. Email blasts were sent out to all members of the New School Community, as well as members of Filmworks, Inc., YAI Network, and numerous other places of both profit and nonprofit employment in the New York City area. Interested participants were directed to Survey Monkey (an online survey tool) in order to complete the instruments. Participants were required to read an informed consent protocol and indicate their willingness to participate by providing an electronic signature. Following this process, participants completed survey measures in the following order: Mindful Attention Awareness Scale, Hospital Anxiety and Depression Scales, Substance Use Questionnaire, Boredom Proneness Scale and brief demographic items indicating age, sex, and race.

Results and Discussion

Correlations Between Measures

Bivariate Pearson correlations were conducted in order to investigate the relationships between mindfulness, boredom proneness, and negative outcomes. Results indicated significant positive correlations between boredom proneness, anxiety and/or depression and substance use. Additionally, significant negative

BOREDOM PRONENESS, MINDFULNESS & NEGATIVE OUTCOMES

Table 1
Frequency of Substance Use

	<i>N</i>	<i>M</i>	<i>SD</i>
Alcohol	137	5.80	1.91
Tobacco	138	3.51	2.74
Marijuana	138	3.00	2.03
Codeine	137	1.77	1.20
Benzodiazepines	138	1.74	1.49
Cocaine/Crack	137	1.70	1.11
Adderall/Ritalin	138	1.66	1.42
Hallucinogens	138	1.49	0.61
Ecstasy	138	1.43	0.57
Methamphetamine	138	1.18	0.39
Heroin/Opium	138	1.17	0.38
GHB/Rohypnol	137	1.14	0.35
Inhalants	138	1.14	0.46
Barbiturates	137	1.09	0.28
Steroids	138	1.07	0.29

correlations between mindfulness and boredom proneness, anxiety and/or depression, and substance use were found. Table 2 details the obtained correlations. There were no significant age, sex, or ethnic differences that emerged for scores of boredom proneness, anxiety/depression, and substance use.

Research has shown positive relationships between boredom and variables such as substance abuse (Paulson, Coombs & Richardson, 1990), depression (Farmer & Sundberg, 1986), and anxiety (Gordon et al., 1997). The current study continued this line of research and demonstrated consistent results. Despite vast evidence of the detrimental effects of boredom, few studies have addressed the theorized relationship between boredom and inattention. This research supports previous speculation that a deficit in attention may contribute to the development of the boredom prone personality (Fisher, 1993; Hamilton, 1981; Harris, 2000).

Boredom prone individuals may have a diminished ability to be mindful, or sustain attention to their im-

mediate environments in a directed, focused manner (Fisher, 1993; Hamilton, 1981; Harris, 2000). Boredom is a direct function of the cognitive effort required to sustain focused attention (Leary, Rogers, Canfield, & Coe, 1986), therefore training one's attention may increase one's ability to remain stimulated and subsequently decrease boredom (Hamilton, 1981; Seib & Vodanovich, 1998). Boredom has been found to stem from inattention related to both external and internal stimulation (Damrad-Frye & Laird, 1989; Fisher 1998; Seib & Vodanovich, 1998). Internal distractions, such as a tendency to monitor one's moods, or an inability to successfully label one's moods, may result in an inhibited ability to concentrate and engage with the environment (Harris, 2000). Theoretically, mindfulness, which has been found to increase attention to both external and internal stimulation (Anderson, Lau, Segal, & Bishop, 2007; Bishop et al., 2004), may decrease the attentional difficulties associated with boredom proneness.

Table 2
Correlations Between All Variables

	Anxiety/Depression (HADS)	Substance use (composite)	Mindfulness (MAAS)
Boredom Proneness (BPS)	.45**	.28**	-.52**
Anxiety/Depression (HADS)	--	.12	-.39**
Substance use (composite)		--	-.22**

Note: N = 138. * p < .05, ** p < .01.

Implications

A vast amount of research has illustrated the positive effects of mindful attention, or mindfulness. For instance, mindfulness training programs have been evaluated as a means to treat chronic pain, with results showing decreased subjective ratings of pain, other medical symptoms, and general psychological symptoms (Baer, 2003; Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985; Randolph, Caldera, Tacone, & Greak, 1999), as well as enhanced emotional well-being (Astin, 1997; Shapiro, Schwartz, & Bonner, 1998; Williams, Kolar, Reger, & Pearson, 2001). Mindfulness training has also been found to be effective at ameliorating symptoms associated with treatment of medical disorders such as fibromyalgia (Goldberg et al., 1994; Kaplan, Goldenberg, & Galvin, 1993; Teasdale et al., 2000; Williams et al., 2001), psoriasis (Kabat-Zinn et al., 1998), and cancer (Carlson, Ursuliak, Goodey, Angen, & Speca, 2001; Speca, Carlson, Goodey, & Angen, 2000;). Finally, mindfulness training has been found to be effective in treating Axis I disorder symptomatology including anxiety (Kabat-Zinn et al., 1992) and binge eating disorder (Kristeller & Hallett, 1999). The results from the current study are an initial step towards understanding the relationship between mindfulness and boredom. It appears that mindfulness training may also prove beneficial in reducing the negative outcomes associated with boredom proneness.

Limitations

As the current study utilized correlational analyses, no inference about the direction of the observed relationship can be made. Future studies should utilize an experimental method to directly manipulate of the presence of mindfulness in order to fully understand the nature of the relationship between mindfulness and boredom. Another limitation of the current study was the use of self-report measures. As with any self-report measure, there is a risk of response bias. Additionally, The Substance Use Questionnaire was developed for the current study and is not a standardized measure. Finally, given the possible differences between self-report and actual engagement of sustained attention, one cannot assume that responses to the MAAS accurately describe the tendency to engage attention. A follow-up study should include both the MAAS and an objective measure of attention, such as a continuous performance test, to confirm the correlation between the two measures of attention and further support the proposed relationship between a deficit in attention and boredom.

Conclusion

Despite the limitations mentioned above, the current study supports previous research illustrating the negative effects of boredom proneness and the positive effects of mindfulness. In addition, these results provide evidence regarding the relationship between mindfulness and trait boredom, highlighting the nega-

tive relationships between the two. Given the need for an intervention that addresses the negative consequences of boredom, continued research that explores the relationship between mindfulness and boredom is of importance. Specifically, future research should investigate the possibility that mindfulness is a mediator between attention and negative outcomes. If a specific pathway between attention and boredom can be uncovered, interventions directed at increasing attentional resources, such as mindfulness, may be implemented in boredom prone individuals to decrease related negative outcomes.

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LEPERA

Appendix

Substance Use Questionnaire

Please answer the following questions to provide information regarding your lifetime experience [use other than that required for medical reasons] with alcohol and drugs as well as information regarding your use of alcohol or drugs in the past 6 months. Please remember all of your responses are confidential.

In the past six months, have you used.....

Tobacco Products (Cigarettes, Cigars, Pipes, Chewing Tobacco)

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Alcohol

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Marijuana, Hashish

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Cocaine, Crack

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Amphetamine or Methamphetamine

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Adderall, Ritalin

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Benzodiazepines (Xanax, Valium, Librium, Klonopin, etc)

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

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Barbiturates (Phenobarbital)

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Hallucinogens (LSD, PCP, psilocybin)

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Heroin, Opium

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Codeine, Morphine, Vicodin, Percocet, Oxycotin

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Inhalants(nitrous, glue, petrol, paint thinner, etc.)

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

Steroids

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

MDMA

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more

GHB, Ketamine, Rohypnol

1	2	3	4	5	6	7	8	9
Never in lifetime	Never in past six months	Less than once a month	About once a month	Two or three times a month	Once or twice a week	Three or four times a week	Nearly everyday	Once a day or more