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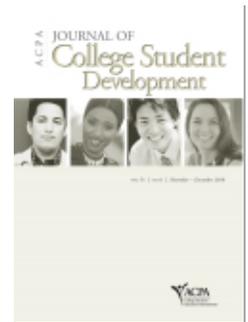
## Functions of Marijuana Use in College Students

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# Functions of Marijuana Use in College Students

Julie K. Bates   Michael P. Accordino   Robert L. Hewes

*Hierarchical regression analysis was used to test the hypothesis that specific functional factors of marijuana use would predict past 30-day marijuana use in 425 college students more precisely than demographic variables alone. This hypothesis was confirmed. Functional factors of personal/physical enhancement as well as activity enhancement were significant predictors of 30-day marijuana use. Furthermore, this model explained over half of the variance of students' monthly marijuana use. Implications for future research and practice are discussed.*

According to Gettman (2008), 35.7 million Americans—14.4% of the population—used illicit drugs in 2007. Exclusive marijuana users accounted for 41% of individuals using illicit drugs annually. Rates of illicit use, notably marijuana, have risen in the college-age population over recent decades. Gledhill-Hoyt, Lee, Strote, and Wechsler (2000) in their survey of 119 U.S. colleges noted that the number of students who identified themselves as current, past 30-day marijuana users increased by 21.7% between 1993 and 1999. In 2006, annual prevalence of use for any illicit drug among college students was 34.0%, with annual marijuana use at 30.0% (Johnston, O'Malley, Bachman, & Schulenberg, 2007). Additionally, Gledhill-Hoyt et al. found that the number of students who reported ever using marijuana rose 7.2% between 1993 and 1999. The Monitoring the Future Study reports similar increases in past 30-day marijuana use from 1993 to 1998

(Gledhill-Hoyt et al.). Complicating this issue in the U.S. is a drastic increase in the potency of marijuana (Stevens & Smith, 2005).

The Institute of Medicine (U.S.), Division of Neuroscience and Behavioral Health, (1999) cites the popularity of marijuana as a primary reason for the increase in use. Increased exposure to alcohol may result in greater access to other illicit substances, namely marijuana. Alternately, Johnston, O'Malley, and Bachman (1999) reported that increases in marijuana use by college students were related to the increases seen in younger adolescents, noting the change in pattern from the 1960s and 1970s when drug use appeared to begin in college and radiated down to younger students. Researchers asserted that the recent increases in initial drug use among younger age groups in the early 1990s have translated to higher rates of use in students who are now college aged. Furthermore, Gledhill-Hoyt et al. (2000) speculated that increases in marijuana use by college students may be due to a third of students initiating or beginning regular use in college, after the age of 18. Gettman (2008) reported on race and rates of marijuana use, finding that in 2006, non-Hispanic Whites accounted for 71.0% of annual marijuana use; African Americans, 14.0%; Hispanics, 10.1%; and other races, 4.3%. Johnston et al. (2007) reported that college males demonstrated higher levels of illicit drug use annually than females (39.0%, 31.0%). Marijuana use was also 9.0% higher in male college students (36.0%, 27.0%). More specifically, daily

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marijuana use was found to be 1.9% higher in males than in females (5.5%, 3.6%).

Of particular interest to practitioners working with the college-age population is the effect of marijuana on cognitive processes; most notably, memory impairment, decreased concentration, and reduced knowledge retention. For chronic users, cognitive impairments have the potential to affect a number of areas, including educational attainment. Gruber, Pope, Hudson, and Yurgelun-Todd (2003) argued that the effects of marijuana use go beyond cognition: social skills, vocational development, physical health, and mental health can also be affected.

According to Jeynes (2002), being under the influence of marijuana has a significant effect on academic achievement. Numerous theories, such as the family interaction theory, social development model, and problem behavior theory, have been used to associate adolescent academic achievement and skills with substance use. Bryant, Schulenberg, O'Malley, Bachman, and Johnston (2003) stated that failure in school is a well-documented risk factor for problem behaviors, particularly substance abuse. Register, Williams, and Grimes (2001) presented several factors in support of the negative relationship that existed between educational attainment and drug use. Some examples included increased value placed on recreational activity, lack of concern for future earnings, suspensions/expulsions, and decreased academic performance. Register et al. conceded, however, that drug use may actually increase academic achievement if the substance reduces stress and anxiety.

We focused on identifying functional sets for marijuana use. Boys, Marsden, Griffiths, and Strang (2000) discovered that functional sets for marijuana use which were related to social matters and mood were significant predictors of future motivations in regard to use. Additionally, they have suggested college

living arrangements, on-campus versus off-campus, contributed to rates of marijuana use. Prevention and intervention strategies on college and university campuses vary. While awareness and acknowledgment of a problem has grown, marijuana use actually increased (Licciardone, 2003). Treatment methods for marijuana dependence primarily focused on acquiring coping skills and motivational development. Boys et al. (2000) noted that there "is evidence that the decision to use a drug is based on a rational appraisal process, rather than a passive reaction to the context of the situation in which a substance is available" (p. 458).

Prevention strategies implemented in recent years (regardless of common goals to reduce usage) have lacked empirical support. Boys, Marsden, Griffiths, et al. (1999) suggested that the perceived function of a substance serves a significant predictor of future use. What remains unclear is whether drugs with similar effects are used for similar purposes. Understanding the associations between the reported functions of a substance and usage patterns should have substantial implications for prevention and intervention.

We aimed to identify which factors predicted the reasons for marijuana use among college students. Accordingly, the hypothesis for the study was that functions of Personal/Physical Enhancement, Social/Drug Effect Enhancement, and Activity Enhancement would significantly predict marijuana use beyond that predicted by demographic variables alone.

## METHOD

The current investigation was designed to examine, describe, and compare the prevalence, perceived consequences, and functional sets of marijuana use, as well as its effect on academic achievement in male and female college students. Participants were given two questionnaires: (a) the demographic questionnaire and

(b) the Functional Set Questionnaire (Boys, Marsden, & Strang, 2001).

## Participants

Participants included male and female students from a small private school in New England. Students from each academic department and academic year (undergraduate and graduate) were selected. General education courses were targeted due to the variability of student enrollment. Participants were selected by convenience sampling and were not randomly assigned in this investigation.

During the months of April and May of 2007, 458 participants completed the questionnaires. However, due to incomplete data, 33 (7.2%) participants were removed from the study. The final sample comprised 425 participants.

## Instrumentation

Two questionnaires were used in assessing student behavior and functional sets relating to marijuana use, as well as grade point average (GPA), living arrangements, and other demographic information. Students were first asked to complete a demographic questionnaire which included 7 questions pertaining to: age, academic year, gender, current residence, employment status, race/ethnicity, and academic major.

The Functional Set Questionnaire (FSQ) was completed next. The FSQ was created by the authors based on the results of qualitative interviews facilitated by researchers in previous studies relating to functional sets (Boys, Marsden, Fountain, et al., 1999; Boys, Marsden, Griffiths, et al., 1999). Functions that were identified as related to marijuana use were compiled into a structured questionnaire. The FSQ asks if the respondent has used marijuana for a particular function. If yes, the respondent indicates how many times in the past 30 days it was used for that function. Past researchers used

varied methods of data collection, including qualitative interviews, past literature, and informal discussions with people actively using substances. Reported functions from previous studies that investigated polysubstance use were excluded if linked to drugs other than marijuana. Part 1 of the questionnaire included 19 functions, 17 of which, according to Boys et al. (2001), measure perceived functions of marijuana use. The remaining items ("other" and "order of importance") were added by the authors to allow for any functions not listed and to investigate the top three most important reasons for use. The items encompassed five domains: (a) Changing Mood, (b) Physical Effects, (c) Social Purposes, (d) Facilitate Activity, and (e) Manage Effects from Other Substances.

In part 1 of the questionnaire, participants were asked if they had ever used marijuana to fulfill each particular function. Respondents were subsequently asked to rate how often they had used marijuana for each selected purpose in the past 30 days. Response options included *never*, *1 to 3 times*, *4 to 6 times*, *7 to 10 times*, and *more than 10 times* (coded 1 to 5 respectively). Items in part 2 addressed negative effects and were drawn from a study conducted by Boys, Marsden, Fountain, et al. (1999). Three items were included that asked how frequently in the past 30 days respondents had "felt sick or unwell," "taken more, or a stronger dose than you would have liked to," and "wished the effects would reduce or stop while intoxicated." Part 2 responses were the same as those in part 1, also coded 1 to 5. Content validity was established through a panel of five experts in the field of Substance Abuse Rehabilitation.

## Procedures

Permission to solicit students and to use class time was requested from academic deans and department heads prior to data collection.

Permission was sought through letters of consent, which explained the purpose, design, and potential risks, benefits, and implications of the research. Once permission was obtained, an appointment was set to collect data from the students. Prior to completing the questionnaires, students were required to read and sign an informed consent form.

The dependent variable consisted of the total frequency of marijuana use over a 30-day period. The independent variables included 18 items (functions) for using marijuana, assessed by the FSQ, a structured questionnaire with

22 total items. In order to reduce the number of functions as well as decrease the possibility of multicollinearity, a factor analysis using the varimax rotation was conducted (see Table 1). Consequently, 3 factors were identified:

*Factor 1. Personal/Physical Enhancement:*  
 (a) to relax, (b) to be stoned or intoxicated, (c) to better enjoy the company of friends, (d) to become elated or euphoric, (e) to improve sleep, (f) to decrease worrying about personal problems, and (g) to improve the effects of other substances; ( $\alpha = .90$ ).

TABLE 1.  
 Factor Loadings<sup>a</sup> for 18 Items From the Functional Set Questionnaire ( $N = 425$ )

	Personal / Physical Enhancement	Social / Drug Effect Enhancement	Activity Enhancement
Need to Relax	.78		
Quest to Be Stoned or Intoxicated	.83		
Decrease Boredom			.42
to Better Enjoy Company of Friends	.63		
to Become Elated or Euphoric	.65		
Improve Sleep	.63		
Decrease Worrying About Personal Problems	.57		
Improve Effects of Other Substances	.52		
Help Ease the Effects of Other Substances Including Alcohol		.41	
Increase Confidence When Talking/Socializing		.64	
to Stay Awake		.54	
Feel Better When Down or Depressed		.58	
to Help Keep Going With the Night's Festivities		.50	
Decrease Inhibitions		.50	
Enhance Sexual Performance			
Improve Concentration on Homework/Studying			.70
Enhance an Activity (I.E. Music/Sports)			.56
Other			

<sup>a</sup> Factor loadings based on principal axis factoring with varimax rotation. Factor loadings < .40 are suppressed.

*Factor 2. Social/Drug Effect Enhancement:* (a) to increase confidence when talking/socializing, (b) to stay awake, (c) to feel better when down or depressed, (d) to help continuing with the night's festivities, (e) to decrease inhibitions and (f) to help ease the effects of other substances including alcohol; ( $\alpha = .77$ ).

*Factor 3. Activity Enhancement:* (a) to decrease boredom, (b) to improve concentration on homework/studying, and (c) to enhance an activity (e.g., music or sports); ( $\alpha = .73$ ).

## Statistical Analyses

*Hierarchical Regression Analyses.* The hierarchical regression analysis (Cohen, Cohen, West, & Aiken, 2003) was used to determine if the variance of past 30-day marijuana use by college students was explained by function factors for marijuana use (e.g., Personal/Physical Enhancement factor and Activity Enhancement factor), beyond the demographic variables (e.g., age, gender, residence on/off campus, race, age at first use, employment status, and approximate GPA). See Table 2.

In this method, independent variables are entered based on the logic of their effect order. Literature reviews of previous research were used to decide the entry order of the independent variables in this study. Many of the categorical data were coded dichotomously to preserve power, and because the majority of participants in each of these variables tended to fall into two groups. A power analysis found that with a sample size of 425,  $\alpha = .01$ , and 10 independent variables the power level was .93 and would most likely be able to detect an effect size as small as .05 (Cohen et al., 2003). According to Tabachnick and Fidell (2001), a sample size that is robust enough to perform multiple regression analyses with 10 independent variables should be approximately

400, or 40 participants for each independent variable. In this study, the sample size appears robust enough to conduct the statistical analyses.

*Assessing Multicollinearity.* Before conducting the hierarchical regression analysis, it is instrumental to assess multicollinearity, which occurs when two independent variables have strong correlations with each other; strong correlations can lead to an unreliable prediction from both variables as well as misinterpretation of the regression model (Cohen et al., 2003). The variance inflation factor (VIF) method collectively assesses how much individual regression coefficient variance is inflated when multicollinearity is present compared to the same coefficients, when that multicollinearity is not present (Neter, Kutner, Nachtsheim, & Wasserman, 1996).

## RESULTS

The average age of the participants was 20.42 ( $SD = 1.81$ ); the average GPA for participants was 3.27 ( $SD = 0.48$ ); and the average age of first use of marijuana was 11 ( $SD = 7.80$ ). Frequencies and past 30-day marijuana use means for the categorical variables are presented in Table 3. In the sample, 137 (32%) reported never using marijuana, while 288 (68%) reported having used it at least once. The overall mean of past 30-day marijuana use for the 288 participants admitting use was 6.27 ( $SD = 13.81$ ) with a minimum of 0 and a maximum of 100 times per month. The Cronbach's alpha for the FSQ was .92, indicating good internal consistency.

As a result of a high VIF finding, Factor 2 (Social/Drug Effect Enhancement) was eliminated from the analyses due to the fact that it was highly correlated with the other independent variables in step 2, creating the problem of multicollinearity. In step 1, which yielded an overall significant  $F$  ratio, approximate GPA was a significant predictor,

TABLE 2.  
Summary of Hierarchical Regression Analysis for Variables  
Predicting Past 30-Day Marijuana Use by College Students ( $N = 425$ )

Variable	B	SE B	$\beta$
<i>Step 1</i>			
Age	0.05	0.41	.01
Gender	1.86	1.19	.07
Residence On or Off Campus	-0.29	1.79	-.01
Race	1.05	1.96	.03
Age at First Use	0.27	0.07	.18**
Employment Status	1.82	1.25	.07
Approximate GPA	-3.12	1.31	-.13*
$R^2$ / Adjusted $R^2$ ***		0.07 / 0.05	
<i>Step 2</i>			
Age	0.31	0.31	.050
Gender	0.81	0.90	.030
Residence On or Off Campus	0.10	1.36	.003
Race	-0.35	1.49	-.010
Age at First Use	-0.04	0.06	-.020
Employment Status	1.21	0.95	.050
Approximate GPA	-0.25	1.01	-.010
Personal/Physical Enhancement	1.14	0.23	.220**
Activity Enhancement	7.94	0.81	.520**
$R^2$ / Adjusted $R^2$ ***		.47 / .46	

\*  $p < .05$ . \*\*  $p < .001$ . \*\*\* Adjusts for the number of independent variables in the model.

in that for every 1-unit increase in participants' GPA, 30-day frequency of marijuana use decreased by 3.12 points or uses. Age of first use was also significant: for every 1-year increase in age of first using marijuana, 30-day frequency increased by 0.27 points or uses, a surprising result when compared with previous studies (see Discussion section for Age of First Use).

In step 2, only the two function factors (1 and 3) were significant. For every *Yes*

response to one of the functions in Factor 1 (Personal/Physical Enhancement), the frequency of current past 30-day marijuana use could be expected to increase by an average of 1.14 points or uses. Likewise, for every *Yes* response to one of the functions in Factor 3 (Activity Enhancement), 30-day frequency of marijuana use increased by about 8 times.

*Hypothesis Testing.* To address the research hypothesis, significance testing for hierarchical sets was computed by hand for each regression

equation using the following formula from Cohen et al. (2003):

$$F = \frac{R^2_{Y \cdot AB} - R^2_{Y \cdot A}}{1 - R^2_{Y \cdot AB}} \times \frac{n - k_A - k_B - 1}{k_B}$$

Significance testing was carried out by comparing the statistics obtained from computed *F* tests to critical values for  $\alpha = .01$  obtained from a table of *F* values in Cohen et al. and using degrees of freedom of  $k_A$  and  $n - k_A - k_B - 1$ . Accordingly,  $k_A$  equals the seven independent demographic variables (age, gender, residence on/off campus, race, age at first use, employment status, and approximate GPA) while set  $k_B$  equals the two independent function factors for marijuana use (Personal/Physical Effects Enhancement and Activity Enhancement).

Accordingly,  $R^2_{Y \cdot AB}$  equals the  $R^2$  for Step 2 (.47) in the regression analysis and  $R^2_{Y \cdot A}$  equals the  $R^2$  for Step 1 (.07). The hypothesis testing for hierarchical regression analysis found that the computed  $F(2, 415) = 34.21 >$  critical table  $F(2, 415) = 4.66$ . The hypothesis of this study was thereby supported; the conclusion was to reject the null hypothesis at  $\alpha = .01$ . Approximately 47% of the variance of past 30-day marijuana use was explained with this predictive model. The effect size of the variance explained due to function variables over demographic and vocational variables was large:  $f^2 = .75$  (Cohen, 1988).

## DISCUSSION

Our intent was to find variables that predicted

TABLE 3.  
Frequencies and Past 30-day Marijuana Use Means of Independent Variables  
(*N* = 425)

Variable	<i>n</i>	Valid %	<i>M</i>	<i>SD</i>
<i>Gender</i>				
Female	249	59.00	3.05	10.48
Male	176	41.00	5.95	13.15
<i>Current Residence</i>				
On Campus	341	80.00	4.26	11.72
Off Campus	84	20.00	4.20	11.87
<i>Race</i>				
Caucasian	387	91.00	4.29	11.66
Other	38	9.00	3.89	12.64
<i>Employment Status</i>				
Employed	289	68.00	4.59	12.67
Unemployed	136	32.00	3.54	9.45

past 30-day marijuana use while controlling for demographic variables. The intent was to further investigate self-identified reasons for use, as well as assess the magnitude of association between marijuana use and perceived functions. In step 1, an inverse relationship was found when examining frequency of past 30-day marijuana use and GPA: as use went up, GPA went down. Pullen (1994) found evidence of a similar negative relationship between alcohol consumption of college students and GPA: as alcohol use increased, GPA decreased. Bell, Wechsler, and Johnston, (1997) also found associations between marijuana use and decreased amounts of studying, poor concentration, impaired recall, and reduced memory. All of these factors have the potential to reduce the quality of study time, applied performance in the classroom, and ultimately GPA. Past researchers (Curran, Brignell, Fletcher, Middleton, & Henry, 2002; Pope & Yurgelun-Todd, 1996) have found evidence that prolonged marijuana use may result in cognitive deficits and lead to an overall decrease in intellectual functioning. Brook, Stimmel, Zhang, and Brook (2008) also found that earlier first use of marijuana was significantly associated with lower academic achievement and cognitive functioning.

### Age of First Use

While age of first use was a significant predictor of past 30-day marijuana use in step 1, it was a positive relationship. Such a finding is not supported by previous research. Gfroerer, Wu, and Penne (2002) found an association between age of first marijuana use and later dependence. In this 2000 report, 7% of adults who first used marijuana at age 14 or younger were found to be dependent on illicit drugs. Gfroerer et al. notes that this is over twice the rate of those who initiated at age 15 to 17, and more than five times the rate of those who initiated at age 18 or

older. Ellickson, D'Amico, Collins, and Klein (2005) found that early use of marijuana was associated with a greater number of marijuana-related consequences experienced at age 18. Additionally, Gfroerer and Epstein (1999) examined the influence of early use on future substance abuse treatment, finding that age of first use was the most significant predictor of future treatment need.

### Marijuana Use, Gender, Residence, and Race

We found no differences in frequency of past 30-day marijuana use between students who lived on campus and those who lived off campus; past researchers, however, have found differences between these two groups. Gfroerer, Greenblatt, and Wright (1997) suggested living arrangements influenced rates of marijuana use in college students. Residing with parents versus living away from home, either in an apartment or on campus, affects personal accountability as well as the availability of marijuana. Living in on-campus housing often includes supervision through residential assistants and directors. Gender did not play a role in determining use in this study. Boys et al. (2000) examined the link between gender differences and drug use patterns; our research supports the assertions of other researchers that gender does not determine use. Additionally, race was not found to be a significant predictor.

### Reported Functions for Use

In step 2, the significant functions identified by participants who had used marijuana in the past 30 days were primarily Factor 3 (Activity Enhancement) and secondarily Factor 1 (Personal/Physical Effects Enhancement). Both factors yielded significant coefficients with Activity Enhancement being most notable.

Our results contrast somewhat to previous research conducted by Boys and Strang (2003)

who found that individuals who used marijuana did so primarily to improve mood. The functions reported in this study largely suggest marijuana is primarily used to meet the need for an enhanced social environment. College administrators and student organizations on campuses should consider these functions when implementing social calendars: additional events may provide alternatives to marijuana use for combating boredom.

The functional set approach presented here appears to align with the life-process model of addiction based on the function as an assumed intention of the person using. The life-process model does not view addiction as a disease, rather as a habitual behavior and source of gratification (Davies, 1997). The model also heavily focuses on the social environment and the deficits that perpetuate the behavioral response. The opposing viewpoint, the medical or disease model, views addiction as a biological process with genetic factors that predispose an individual to the compulsion of using (Leshner, 1997). Both models, though in stark contrast to one another, emphasize social and relational supports in overcoming the desire to use (former), and/or maintaining a disease-free state (latter).

For this study we did not work towards proving or disproving either theory. The purpose of identifying functions for use was to target specific, individual reasons why students used marijuana in the past 30-days. Whether those reasons initiated or perpetuated use was not a concern. The free will to use versus the biologic compulsion is irrelevant when looking at the self-reported functions in the context of college students. These results are intended for use in efforts towards future prevention of illicit marijuana use and intervention with abusers, not as support for either addictive model. The functions identified largely support the need for enhanced socialization, a key point in both models of addiction.

## Limitations

These results must be considered in the context of the limitations of the research. Participants were sampled from a private college in Western Massachusetts. Previous researchers studying functional sets have mainly focused on self-identified active polysubstance users (Boys, Marsden, Fountain, et al., 1999; Boys, Marsden, Griffiths, et al., 1999). We did not ask about the use of other substances, focusing solely on marijuana use. Racial disparities must also be considered: more than 90% of the sample self-identified as non-Hispanic White. Socioeconomic status and family background, while not directly controlled, were implicitly controlled by the sample setting: a private school in New England. The lack of diversity may impact the application of these results in alternate settings. Furthermore, no attempt was made to control participants by their drug-use histories, and the functions of use for individuals who had used marijuana outside the 30-day time frame used in the investigation were not recorded.

## Implications for Future Research

The steady increase of illicit substance use in the college-age population must be addressed in a proactive, efficacious manner. Boys et al. (2000) pointed out that few assessment instruments have been developed specifically for the identification of individual reasons for drug use. Further, many of the existing assessments focus on alcohol or a general potential for, or evaluation of, abuse or addiction to multiple substances. Future researchers should continue to develop assessment instruments that aim to target specific, individual reasons for use. If such instruments can be developed, the potential for individualized, motivationally specific interventions is greatly increased. Previous research methodologies were supported by the current investigation (Boys, Marsden, Fountain, et al., 1999; Boys, Marsden, Griffiths,

et al., 1999), as the FSQ yielded significance in regard to specified functions of marijuana use, narrowing the results to one substance in place of several. The FSQ was implemented with the intent of assessing functions solely related to marijuana. The specific nature of the instrument provides a basic template to future researchers in assessing the functional impact on marijuana use.

Few studies have been conducted to examine the associations between the functions of marijuana use and implications for prevention. Boys, Marsden, Griffiths, et al. (1999) suggested that functions of use may act as predictors for future use. Future researchers should follow up on this hypothesis and investigate the link between current functions for use and future motivation to engage in drug-seeking or drug-refusal behaviors.

Future researchers should also consider the combined effect of alcohol and marijuana use; each has been found to correlate with a reduction in GPA. Though gender did not affect rates of use in our results, common functional sets, if identified for each gender, could lead to gender-specific prevention and intervention strategies and should be considered by future researchers.

### Implications for Practice

For new and effective substance-abuse treatments to be developed, the specific reasons for use must be identified. Blanket, one-size-fits-all approaches to drug prevention should be abandoned for more current, personal approaches; the assumption that everyone who uses, uses for the same reason must be revised. Rehabilitation professionals could potentially use the functional set of an individual in treatment planning, education in coping skills, discharge recommendations, and relapse prevention. This type of patient–treatment matching model might increase counselor understanding of client goals and overarching

treatment needs. For example, understanding functional sets for marijuana use may increase the rehabilitation counselor's understanding of client readiness to change. If readiness to change is conceptualized as the client's balance of costs versus benefits of undertaking any behavior, then the possibility exists that the functional sets of marijuana use may correlate with a decision process to change such maladaptive behavior. Moreover, a client's personal beliefs about the nature of an addiction problem may impact readiness to change and/or interfere with treatment. This being said, the counselor would be at a significant advantage to provide the appropriate match between the client's personal beliefs concerning the etiology of the addiction, the client's readiness to change, and therapeutic interventions.

Identification of individualized functions regarding marijuana use can provide insight for both counselor and client into motivations for use. One example involves the social aspects of drug abuse or addiction. Rehabilitation counselors can use identified functions as a guide to understanding the social atmosphere surrounding the client or the atmosphere to which the client is returning. Specifically, if a client identifies functions of marijuana (or other drug) use as “to increase confidence when talking/socializing,” “to help keep going with the night's festivities,” and “to decrease inhibitions,” the client may be using substances to compensate for social deficits. This investigation provided new insight and support for this assertion: the results show social factors as a primary function of use, contrasting previous findings (Boys & Strang, 2003) that identified mood enhancement as a primary function. In response to social deficits or concerns, concrete skills such as assertiveness training or relaxation techniques could be taught to meet those needs, and the basis for substance use could potentially break down, perhaps to the point of complete cessation.

Gruber et al. (2003) noted that the effects of marijuana use transcend the cognitive realm, such as social skill development, physical and mental health, and vocational choice. The destructive impact upon interpersonal skills, social and intimate relationships, and family structure and dynamics will likely continue without intervention. As such, understanding individualized functions regarding marijuana use may provide new prevention efforts for those who are not yet using marijuana.

Finally, the identification of individualized functions regarding marijuana use could potentially strengthen the therapeutic alliance between counselor and client. Understanding the client and the nature of addictive patterns as it relates to the environment, social cues,

triggers, support systems, etc., only enhances the therapeutic bond by allowing for open and honest communication from the onset. The therapeutic alliance is built on a foundation of truth, honesty, empathy, and open communication. Identification of individualized functions regarding marijuana use, therefore, should increase awareness of client needs while expanding treatment options and forming more cohesive counseling relationships.

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