

# Lifetime Prevalence of "Amotivational Syndrome" Among Users and Non-Users of Hashish

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The lifetime prevalence of amotivational syndrome was assessed in a group of 237 students at a Central European sports training facility using the criterion for amotivational syndrome formulated by Halikas, Weller, Morse, and Shapiro (1982). The group was regarded as being highly unlikely to have experienced an amotivational syndrome. The criterion for amotivational syndrome was met by 5.9% of the sample compared to 5.2% of Halikas et al.'s sample of regular marijuana users. The amotivational syndrome as measured by this criterion was not significantly associated with history of marijuana use. These results shed serious doubt on the validity of Halikas et al.'s study. No support is found for the amotivational syndrome hypothesis.

The suggestion that regular use of marijuana robs the user of energy and motivation is at least as old as the report of the Indian Hemp Drug Commission (1893-1894, p. 3281). More recently, this purported effect was given the name *amotivational syndrome* by Smith (1968) who reported this effect in some younger marijuana users who lost all desire to work or compete. He offered two illustrative case examples in which this syndrome disappeared after a period of abstinence from marijuana use.

At about the same time, McGlothlin and West (1968) had arrived independently at a similar observation. They described the development of what they termed *amotivational personality characteristics* in regular users of marijuana. Those characteristics included introversion, passivity, and lack of achievement-orientation.

The reality of this syndrome has been taken for granted by many workers in the drug abuse field. It is supported by a number of clinical reports such as those of Campbell (1976) and Kolansky and Moore (1972). This, however, represents an instance of the problem known to epidemiologists as the incompleteness of the clinical picture (Morris, 1975). It is really not surprising to find that marijuana users being seen by psychiatrists and clinical psychologists present a variety of psychopathologies. Such findings are equivalent to noting that the marijuana-using patients of obstetricians tend to be pregnant. Such clinical observations cannot constitute meaningful evidence of causation or even of association.

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Cross-cultural evidence has recently been presented which seems to show that no amotivational syndrome results among regular marijuana users in Costa Rica (Carter & Doughty, 1976), Jamaica (Comitas, 1976), or Greece (Boulougouris, Liakos, & Stefanis, 1976). In Jamaica, in fact, marijuana is considered to be an energizer—workers take ganja breaks much like American workers take coffee breaks. Parents may encourage their children to smoke ganja to improve their performance in school. These studies seem to be a two-edged sword with critics frequently arguing that the results actually support rather than refute the amotivational syndrome hypothesis.

Real evidence for a marijuana-related amotivational syndrome can only come from studies that compare truly representative marijuana users and nonusers. Such evidence has been provided on a correlational basis in a number of surveys of student populations (e.g., Kupfer, Detoe, Koral, & Fajans, 1973; Brill & Christie, 1974). With one exception such studies have consistently failed to support the hypothesis that marijuana use is associated with an amotivational syndrome. Mellinger, Somers, Davidson, and Manheimer (1976), in that one exception, found that the ability to stay in college, get good grades, and define career goals among a group of college freshmen were all inversely related to the degree of involvement with marijuana. Going beyond the merely correlational, however, attempts to induce an amotivational syndrome through administration of marijuana in a controlled trial have been unsuccessful (Mellinger et al., 1976).

The simple facts that a majority of college students are marijuana users and that the percentage is usually even greater among graduate students, medical students, and law students are often cited as major arguments against the assertion that marijuana use impairs achievement motivation. If amotivational syndrome were a common effect of marijuana use, then we would not expect to find marijuana users in large numbers wanting to go to college, let alone succeeding in college and going on to advanced studies.

Many advocates of the amotivational syndrome hypothesis have described this condition as a common effect of regular marijuana use. McGlothlin and West's (1968) original paper suggests that amotivational personality characteristics arise in "numerous" marijuana users but they give no indication of its relative frequency. Smith (1968), on the other hand, seems clearly to be describing a condition affecting only a minority of younger marijuana users. More recently, in fact, Smith and Seymour (1982, p. 69) have stated that "such impairment occurs only in a very small and susceptible segment of adolescent marijuana users." Similarly, Meeks (1982, p. 41) stated, "It is important that we recognize honestly that the vast majority of adolescents who smoke marijuana do not become burnouts."

If the amotivational syndrome is a relatively infrequent effect of regular marijuana use, then it could easily go undetected in many of the studies that have addressed this problem. An assessment of the prevalence of this putative syndrome would be of considerable value.

Halikas et al. (1982) conducted a study of the lifetime prevalence (although they mistakenly referred to it as incidence) of amotivational syndrome in a cohort of regular marijuana users. Their study was conducted on an available nonprobability sample of regular marijuana users. Based on an extensive

literature review, they developed a single question as their criterion for amotivational syndrome. That criterion was

Have you ever had a period when you weren't depressed or unhappy, but you just seemed to lose your motivation although you weren't particularly upset by that feeling? You may have felt no interest or desire to carry out your normal activities or responsibilities. Plans or goals that were at one time important to you seemed to have fallen by the wayside for no apparent reason and you had no plans or goals to really replace them. You may have been listless and at loose ends but you didn't seem to particularly care. You may have also experienced some of the following feelings or symptoms in a vague way. You may have had a feeling of increasing unsureness about yourself, felt that you were giving a decreased effort or half effort at work, felt you lacked drive, initiative or motivation. You have dropped out of school or quit work for no reason; or had no desire to work, compete or face a challenge. In general, you felt apathetic and disinterested in your previous pursuits. (p. 12)

Applying that criterion, 3 of the 97 regular marijuana users were identified as having experienced an amotivational syndrome. Two other subjects who had answered yes to the criterion question were excluded because they had also suffered a major depressive disorder. Thus the lifetime prevalence of amotivational syndrome without major depression might be calculated as 3.1%; with major depression as 2.1%; and both combined as 5.2%.

Obviously, the lack of a control group is a major weakness of this study. Without a control group, this study cannot even demonstrate an association between marijuana and amotivational syndrome, let alone causation. Halikas (1982) had originally planned to include a comparison group but this was dropped for reasons which are not made clear.

An even more basic defect of this study falls under the heading of construct validity of putative effects (Cook & Campbell, 1979; Berkowitz & Donnerstein, 1982; Kiess & Bloomquist, 1985). Halikas et al. (1982) used a single interview question as their criterion for amotivational syndrome. Thus, the validity of their entire study hinges on the appropriateness of that one question in assessing amotivational syndrome.

The first question is not whether their results show any association between amotivational syndrome and marijuana use. The first question is whether or not they have shown any amotivational syndrome. To many readers the criterion question has looked like a description of a fairly common life experience rather than a description of a serious psychopathologic syndrome. From this perspective, the striking thing about the results is how low the lifetime prevalence was.

For this reason, a study was undertaken to assess the frequency with which Halikas et al.'s criterion for amotivational syndrome would be met in a population unlikely to be victims of any true amotivational syndrome.

## Method

### Subjects

This study was conducted at a large independent sports training facility in a major Central European city. The subjects were 238 students attending selected classes at the

facility. This was a nonrandom sample of convenience. All of the subjects were physical education majors preparing for careers as teachers, coaches, or athletic trainers. The subjects were all athletes. A number were Olympic hopefuls, and several had competed in the 1984 Olympics. A larger number had participated in the 1986 Pan-European Games.

Numerous nationalities were represented among the subjects. Most were from Central European or Eastern European nations. Only 4 non-Europeans were included—2 North Americans, 1 Australian, and 1 African.

These subjects had all met high standards for admission to the school. They were university students from nations where higher education is far from universal. Most were outstanding athletes who had worked for many years to achieve their current levels of ability in their chosen sports.

### *Procedure*

A brief questionnaire was administered to groups of students in selected large classes. Participation was voluntary. No identifying information was collected.

The questionnaire inquired into the marijuana use experience of the subjects and asked Halikas et al.'s criterion question for amotivational syndrome. This question was printed in English exactly as it appears in the original report. Only 11 potential subjects had to be excluded due to an inability to read English—an ability that is generally regarded as necessary for students at the school. The expressions "fallen by the way-side" and "at loose ends" were explained to all groups. Some subjects asked for definitions of words such as "listless" and "drive." Responses were transferred to magnetic data records, and all original questionnaires were destroyed to protect subject anonymity.

The subjects were assigned to three groups based on their self-report of lifetime marijuana use. Group 1 was composed of those who had never used marijuana. Group 3 was composed of those who reported that at some time in their lives they had used marijuana daily or almost daily for a period of 30 days or more. Group 2 was composed of those subjects whose marijuana use was not great enough to meet the criteria for Group 3. Current use was not examined.

Responses to the amotivational syndrome criterion were tabulated and cross-tabulated with the marijuana use group. A Chi-squared test of independence was applied to the cross-tabulated data.

### *Results*

Of the subjects, 113 (47.7%) reported that they had never used marijuana. Experimental or occasional use was reported by 67 subjects (28.3%). Daily use for a period of at least 30 days were reported by 57 subjects (24.1%). Most subjects reporting use of marijuana, reported using it in the form of hashish.

Fourteen of the 237 subjects answered yes to the criterion question. This would indicate a lifetime prevalence of 5.9% slightly higher than in Halikas et al.'s sample of regular marijuana users.

The amotivational syndrome question was answered yes by 7 (6.2%) of the nonusers, 4 (6.3%) of the occasional users, and 3 (5.6%) of those with daily use experience. There was no significant relationship between history of marijuana use and the amotivational syndrome criterion.

### *Discussion*

The proportion of this high-achieving group that met Halikas et al.'s criterion for amotivational syndrome was much the same as that in their sample

of regular marijuana users. This finding casts considerable doubt on the validity of their criterion for assessing amotivational syndrome. Any future studies should set a less simplistic criterion.

Furthermore, the proportion who met the criterion was actually slightly greater among those in this sample who had never used marijuana or whose use had been less than daily than it was among the daily users in this sample or the Halikas et al. sample of regular users. Thus, it appears that if this criterion measures any syndrome or behavior pattern it is not one associated with marijuana use.

This study cannot by any means be seen as having disproved the amotivational syndrome hypothesis. It has only cast serious doubt on one major study purporting to prove the existence of this syndrome. There is no doubt that some people, including some marijuana users, appear to be poorly motivated. Whether this constitutes a syndrome or not is another question. In any case, there does not appear to be any real evidence to suggest that marijuana use necessarily contributes to this condition. I am still prepared, as in the past (Duncan & Gold, 1982), to relegate the amotivational syndrome to the growing scrap heap of discarded marijuana myths.

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