

# Dagga (cannabis) usage among medical students in Johannesburg

S. M. LEVIN, C. BERMAN, H. COBB, J. McILRAITH

## Summary

Of 1020 undergraduate medical students at the University of the Witwatersrand surveyed in 1981 as regards attitudes to and patterns of illicit drug use 868 completed the questionnaire; 32,4% had tried dagga (cannabis) and 16,4% were still using the drug. There was a large increase in the number of students using the drug as they advanced through their studies (6% of the 1st-year class as against 24% of the 5th-year class). The timing of dagga use and previous experimentation with habit-forming drugs are mentioned, and reasons for non-experimentation and attitudes towards legalization of dagga are analysed.

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In the past 2 decades there has been an increase in the non-medical use of drugs in America, Europe and Australia,<sup>1</sup> and a similar trend is to be expected in South Africa as well. This survey of dagga (cannabis) usage was undertaken following concern expressed by faculty members and students that medical undergraduates were among the groups with a high drug usage rate.

## Subjects and methods

Medical students in the 1st, 2nd, 3rd, 4th and 5th years of study at the University of the Witwatersrand were surveyed. Sixth-year students were not surveyed because of logistical difficulties.

To ensure anonymity the 1020 participants were instructed to print answers and seal the questionnaire in a plain envelope, marked only with the year of study. A detailed survey of 36 questions was divided into two major areas: (i) patterns of individual drug usage; and (ii) opinions regarding drug usage. In order to ensure validity, 5 questions on social desirability were included. If less than 3 of these were answered correctly, the questionnaire was scrutinized and discarded if necessary.

As regards the pattern of drug usage, questions were asked concerning the age at which dagga was first tried, whether it was still being smoked, whether it was smoked during the academic term or during vacations, by whom and where the subject had been introduced to it, whether any other illegal drugs had been tried, and whether dagga was smoked during the examination

months. Those who had not tried dagga were requested to state their reasons.

In the second area, opinions were solicited as to whether dagga was detrimental to one's health, whether the effects of alcohol were worse than, better than or the same as those of dagga, whether the smoking of dagga should be legalized, and reasons why. A final question asked participants to estimate how many in their class had tried dagga and how many still used it over weekends.

Students were not asked about their academic records, as this would have created a means of identifying participants who had either failed or were first-class candidates. Our questionnaire is not included as it is to be used again shortly.

## Results

Of the 1020 students surveyed, 868 (85,1%) returned the survey. Because of our social desirability questions 2,3% of the returned questionnaires were rejected. Results were analysed according to classes to see if there was a consistent pattern of drug usage through the 5 years of study and to determine any trend towards increased drug usage as students progressed through medical school.

Of the five classes, 97% (215) of 1st-years returned the questionnaire as against 75% (155) of 2nd-years, 83% (170) of 3rd-years, 72% (143) of 4th-years, and 88% (165) of 5th-years. Of the 1st-year class, 84% had never tried dagga, 10% had tried it but no longer smoked it, while 6% of the class still smoked dagga. Table I shows the figures relating to 1st-years through to 5th-years. Of the whole medical school, 32,4% (of the sample of 848 students) had tried dagga and 16,4% were currently using the drug.

Of the students who were still smoking dagga, 10% were light smokers (twice or less in the past 6 months), 42% were moderate smokers (3-10 times in the past 6 months) and 48% were heavy smokers (more than 10 times in the past 6 months).

The vast majority (82%) of students who smoked dagga did so during both term and vacation time. However, 96% stopped smoking dagga during examination time, as they considered that it made it more difficult to discipline themselves, made them feel lazy, or impaired concentration. The minority who smoke during examination time (4%) do so because it makes them 'more expressive' and helps them to sleep.

Of those students who had tried dagga, including those who still smoked, the vast majority (89%) were introduced to the drug by a friend. The remainder were introduced by siblings, cousins and gardeners, while some sought out the drug themselves. Of the sample 32% had first been introduced to the drug at South African holiday resorts, 27% at parties, 18% at homes, 11% while abroad, 10% at school and 2% in the Army. The preferred times for smoking dagga were Friday night, Saturday and Sunday, usually just before or after dinner.

Replies to 'How does dagga affect you?' showed that those who had tried and stopped smoking dagga had had more adverse reactions (such as nausea, vomiting and dizziness) than those who continued smoking — 20% compared with 5%. Positive effects of dagga smoking (for example, being 'stoned' and relaxed) were experienced by 77% of those continuing to smoke compared with 51% of the group who no longer smoked. Other

University of the Witwatersrand Medical School, Johannesburg

S. M. LEVIN, 6th-year medical student

C. BERMAN, 6th-year medical student

H. COBB, 4th-year medical student

J. McILRAITH, 2nd-year medical student

Date received: 7 July 1982.

Reprint requests to: Mr S. M. Levin, 39 Kent Road, Dunkeld, Johannesburg, 2196 RSA.

TABLE I. MEDICAL STUDENT RESPONSE TO DAGGA USAGE

	1st-year	2nd-year	3rd-year	4th-year	5th-year
<b>Average age</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
<b>Never smoked</b>	<b>180 (84%)</b>	<b>109 (70%)</b>	<b>111 (65%)</b>	<b>90 (63%)</b>	<b>92 (56%)</b>
<b>Tried and stopped</b>	<b>22 (10%)</b>	<b>29 (19%)</b>	<b>27 (16%)</b>	<b>21 (15%)</b>	<b>33 (20%)</b>
<b>Still smoking</b>	<b>13 (6%)</b>	<b>17 (11%)</b>	<b>32 (19%)</b>	<b>32 (22%)</b>	<b>40 (24%)</b>
<b>No. of respondents</b>	<b>215 (97%)</b>	<b>155 (75%)</b>	<b>170 (83%)</b>	<b>143 (72%)</b>	<b>165 (88%)</b>

effects experienced included enhancement of taste of food and appreciation of music, and a greater tendency to laugh.

Asked whether they had thought of taking other illegal drugs, 90% of those who had never tried dagga had not contemplated it, in contrast to 78% of those who had tried dagga and stopped and 57% of those who still smoked. Other habit-forming drugs had been tried by 9% of those who still smoked dagga, compared with 5% of those who had tried dagga and stopped and 2% of those who had never smoked dagga. The most commonly tried drugs were Obex, Mandrax, amyl nitrate, cocaine, LSD, 'magic mushrooms' and Valium.

Of the participants in the study, 67.4% had never tried dagga. Reasons given were: 'I don't need an artificial high' (36%); health reasons and fear of addiction (26%); risk of being apprehended (21%); unavailability of dagga (14%), and religious beliefs (3%).

When the students were asked for their opinions as future doctors regarding the possible detrimental effects of dagga, a striking trend was observed. Table II shows that those who do not smoke dagga think it is detrimental, while those who do smoke dagga think it is not detrimental.

Those students who had never tried dagga and those who had stopped were in agreement as to their reason for not smoking — 55% gave its detrimental effect on health as their main reason, while 28% feared psychological dependence. Of students continuing to smoke, 35% listed psychological dependence as the main reason why dagga was detrimental. Of this group, only 29% said that the effect of dagga on other bodily functions was the reason

why it was bad. This group linked the detrimental effects of dagga to the amount smoked — 29% said that the bad effects of dagga on health depended on the quantity smoked, while only 3% of the other two groups thought that the detrimental effects of the drug were related to the amount smoked.

A similar trend to that noted in Table II was seen when students were asked to compare the effects of dagga with those of alcohol — of those who had never smoked 45% said that dagga was worse than alcohol, while 45% of those who had smoked and stopped were unsure, and 69% of those who continued to smoke said alcohol was worse than dagga.

'Should dagga be legalized?' A clear divergence of opinion was evident among the three categories of students. Of those who had never tried dagga 64% said that dagga should not be legalized. Those who had smoked it and stopped were almost evenly divided (57% in favour, 43% against), while those who still smoked dagga came out strongly in favour of legalization. Reasons for this seem to be contradictory (Table III). A third said it should be legalized so that the illegal stimulus would be removed and therefore fewer people would smoke dagga, which would seem to imply that most people smoke dagga from a sense of bravado. Another third said that responsibility for smoking dagga, as with cigarettes and alcohol, should lie with the individual and not the State. The remainder were evenly divided between those who said banning a drug did not stop supply and those who worried that a criminal record for a 'minor offence' would affect their future. The striking feature here is that

TABLE II. ATTITUDES TO DAGGA AND HEALTH

	Never tried dagga (%)	Tried dagga and stopped (%)	Still smoking dagga (%)
<b>Opinion on dagga</b>			
<b>Detrimental to health</b>	<b>60</b>	<b>41</b>	<b>24</b>
<b>May be detrimental</b>	<b>37</b>	<b>52</b>	<b>21</b>
<b>Not detrimental</b>	<b>2</b>	<b>7</b>	<b>47</b>

TABLE III. OPINIONS ON LEGALIZATION

	Never tried dagga (%)	Tried and stopped (%)	Still smoking (%)
<b>Reasons why dagga should be legalized</b>			
<b>Banning does not stop supply</b>	<b>18</b>	<b>17</b>	<b>16</b>
<b>Illegal stimulus would be removed and therefore dagga smoking would decrease</b>	<b>23</b>	<b>16</b>	<b>36</b>
<b>Responsibility rests with the individual and not with the State</b>	<b>49</b>	<b>49</b>	<b>32</b>
<b>Criminal record affects one's future</b>	<b>10</b>	<b>18</b>	<b>17</b>
<b>Reasons why dagga should not be legalized</b>			
<b>Leads to widespread use</b>	<b>42</b>	<b>40</b>	<b>51</b>
<b>Used as an escape route</b>	<b>9</b>	<b>6</b>	<b>9</b>
<b>Leads to stronger drugs</b>	<b>31</b>	<b>38</b>	<b>33</b>
<b>Hazard to others/unhealthy</b>	<b>18</b>	<b>16</b>	<b>7</b>

approximately half the students who smoke dagga feel that the responsibility rests with the person and not the State, and that if it were legal there would be no stimulus to experiment.

The majority of students who do not smoke dagga feel that it should not be legalized as it would lead to widespread use as well as leading the individual on to heavier drugs, that it is hazardous to health, or that people would use dagga as an escape mechanism. More than 90% of medical students knew someone who smoked dagga. Estimates by students who had never tried the drug as to how many of their classmates had tried the drug (28%) corresponded closely with the actual figures (32,4%). Those students who had tried dagga and stopped, and those who still smoked it, tended to give much higher estimates of the number of their classmates who had tried dagga (44% and 47% respectively). All students were accurate in estimating the number of their classmates who still smoked dagga (16,4%).

## Discussion

Our results correlate closely with those of other studies. A survey conducted at Rhodes University by Barnes<sup>2</sup> showed that 26% of the students had tried dagga while 19% were still on the drug. Solursh *et al.*<sup>3</sup> found that in a California medical school 73% had tried the drug while 41% were currently using it. Krupenski and Stroller<sup>4</sup> found that the proportion of Australian students experimenting with dagga was 23,4%, while Brown<sup>5</sup> in Australia found that 49,3% of the law students surveyed had tried the drug.

Our results showed that rates for both experimentation and the current use of the drug were higher than those found by Herr and Morley.<sup>6</sup> In 1977, 23,9% of students at the University of the Witwatersrand had tried dagga and 10,5% were currently using the drug. Simon's<sup>7</sup> survey in 1979 found that 25,1% of Witwatersrand University students had tried dagga.

As academic studies progress, increasing numbers of students try and continue to smoke dagga. A possible reason for this is the initial tough competition to get into medical school and pass the 1st year of study, which probably militates against student experimentation because of preoccupation with academic work. As students progress, academic pressures alter; confidence and ability to cope increase while parental pressures decline. Students may also feel a greater acceptance by the medical school faculty when they move from the main campus in Braamfontein to the medical school in Hillbrow on the completion of the 1st year.

We do not overlook the fact that 5th-year students have had 4 more years in which to experiment.<sup>8</sup> One of the major jumps in the number of students smoking dagga occurs between the 1st and 2nd years. We feel that the Christmas vacation after the pressures of 1st-year examinations was a period when many students tried dagga for the first time. Those who suffered adverse effects tended to discontinue the drug.

We did not find it surprising that many students were first introduced to dagga while at holiday resorts, away from their parents and without the stresses of academic study. This correlates well with the doubling of the number of students who smoke dagga between the 1st and 2nd years and our opinion that experimentation takes place during the vacation at the end of the 1st year.

A large number of students tried dagga for the first time at parties, where the prevailing atmosphere and peer group pressure is more conducive to experimentation. Those who first tried it abroad probably did so because it is more socially acceptable in many countries and more available, while the authorities may be more lenient to dagga smokers.

The number of students who first tried dagga in the Army is low, because most medical students study before doing their national service. (Levin<sup>9</sup> found that the army is not an initiation ground for dagga usage.) Students were not asked whether they thought dagga led to harder drugs. We noted, like Eng's<sup>10</sup> that

students who had tried another habit-forming drug were a very small minority; often one participant would reply that he had tried several.

It was surprising that among medical students who have never tried dagga, health reasons and fear of addiction ranked second on their list of reasons for abstinence. The major reason given was that they did not need an artificial 'high' and included statements that sex, sport, life in general, and religion all gave 'highs' without the potential legal and health problems associated with dagga. This important information offers guidelines for the future handling of the problem.

The large number of students who gave fear of being caught and legal consequences as their reason for not smoking leads us to surmise that strict dagga legislation does have some deterrent effect. The 14% who gave unavailability of the drug as their reason for not smoking it may be regarded as possible future dagga users. Their reasoning implies that given the opportunity they would use it. This correlated closely with the study conducted by Lipp *et al.*<sup>11</sup>

Students who smoke dagga rationalize their behaviour by stating that dagga is not detrimental to their health and that the effects of alcohol are worse. However, the converse also seems to apply; students who have never smoked dagga regard it as far more dangerous than alcohol. The group of students who have tried and stopped take a middle road.

Most students thought that the drug should be legalized and gave reasons, but the majority of those who thought so were still smoking dagga while those who disagreed had usually never tried it or had stopped.

The majority of medical students have never tried dagga but have a very accurate idea of how many of their classmates use it. We feel that by virtue of their numbers this group should be acquainted with a wide stratum of the medical school and be able to judge the true position. Students who have tried dagga or still smoke it (a total of 32,4%) tend to overestimate the number who have tried the drug, perhaps attributing their own behaviour to others as a way of justifying it.

In conclusion, the idea that most medical students smoke dagga is a myth. Although students may make verbal claims to classmates and occasional faculty members that many medical students smoke dagga, the majority acknowledge in an anonymous and objective survey that this is not so.

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## REFERENCES

1. Healey P. *Patterns of Drug Use in Australia (1970 - 1977)*. Melbourne: Drug Education Unit, Health Commission of New South Wales, 1978.
2. Barnes R. Dagga use amongst Rhodes University students. *Rand Daily Mail* 1978, 7 April.
3. Solursh LP, Weinstock S, Saunders CS, Ungerleider JT. Attitudes of medical students towards cannabis. *JAMA* 1971; **214**: 1371-1372.
4. Krupenski J, Stroller A. Drug problems among the young population of Victoria, Australia. *J Drug Issues* 1977; **7**: 365-371.
5. Brown RA. A preliminary survey of drug use among law students in New South Wales, attitudes and habits. *J Drug Issues* 1977; **7**: 439-443.
6. Herr P, Morley JE. Drug use patterns among South African undergraduates. *S Afr Med J* 1972; **46**: 1404-1406.
7. Simon A. A study of drug abuse in a group of South African university students. *S Afr Med J* 1982; **61**: 666-668.
8. Chakraborty AK, Mira R, Ganguly SS. Drug abuse in medical students in Calcutta — a preliminary study. *Indian J Med Res* 1980; **71**: 465-467.
9. Levin A. The pattern of drug taking among drug dependent South African National Servicemen. *S Afr Med J* 1972; **46**: 1690-1694.
10. Eng RC. The drug abuse patterns of helping profession students in Brisbane, Australia. *Drug Alcohol Depend* 1980; **6**: 231-246.
11. Lipp ML, Benson SG, Taintor L. Marijuana use by medical students. *Am J Psychiatry* 1971; **128**: 207-212.