

A COMPARATIVE STUDY OF THE PSYCHO-SOCIAL PROFILE OF DRUG USING AND NON-DRUG USING SCHOOL CHILDREN

By
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NATIONAL DRUG RESEARCH CENTRE*
in collaboration with the
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PENANG, MALAYSIA

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RINGKASAN KAJIAN

PENGENALAN

Kajian ini adalah sebahagian daripada penyelidikan berhubung dengan pencegahan penyalahgunaan dadah melalui pendidikan. Ianya merupakan usaha kerjasama di antara Pusat Penyelidikan Dadah dan Jbat-Ubatan, dan Pusat Pengajian Ilmu Pendidikan, Universiti Sains Malavsia.

Tujuan utama kajian ini ialah untuk memperolehi profail psiko-sosial sekumpulan penuntut sekolah menengah atas di Pulau Pinang sebagai langkah untuk memahami latarbelakang penuntut-penuntut yang menyalahgunakan dadah di sekolah. Khususnya, kajian ini cuba membandingkan latarbelakang dan ciri-ciri sosial dan psikologi penuntut-penuntut yang menyalahgunakan dadah dengan penuntut-penuntut yang tidak menggunakan dadah.

Berdasarkan tinjauan ke atas bahan-bahan kajian yang berkenaan, lima faktor sosial dan empat faktor psikologi telah dipilih untuk dikaji dengan tujuan memperolehi maklumat tentang faktor-faktor yang berkaitan dengan tingkahlaku menyalahgunakan dadah di kalangan penuntut-penuntut di sekolah menengah. Lima faktor sosial yang telah dipilih dalam kajian ini ialah:-

- o Pengaruhannya kepercayaan keagamaan
- o Prestasi sekolah
- o Perhubungan dengan bapa/peniaga
- o Perhubungan dengan ibu
- o Perhubungan dengan ahli-ahli keluarga yang lain

Empat faktor psikologi yang telah dipilih ialah:-

- o Konsep sendiri
- o Lokas kawal (locus of control)
- o Kebimbangan (anxiety)
- o Keperluan psikologi (psychological needs)

Selain daripada itu, maklumat mengenai corak penyalahgunaan dadah bagi sampel ini juga diperolehi.

METODOLOGI

Sampel

Sejumlah 1178 orang penuntut sekolah menengah atas telah dipilih secara rawak dari enam buah sekolah menengah Pulau Pinang pada hujung tahun 1984.

Alat Pengukuran

Data-data mengenai corak penyalahgunaan dadah telah dikumpul dengan menggunakan borang soalselidik (rujuk kepada lampiran A, soalan 6 ke 12). Data-data mengenai faktor-faktor sosial telah dikumpul dengan menggunakan borang soalselidik yang sama (rujuk kepada Lampiran A, soalan 1 ke 5), manakala ujian-ujian tara telah digunakan untuk memperolehi data-data mengenai faktor-faktor psikologi.

Analisaan Secara Statistik

Analisaan dijalankan dengan menggunakan "Statistical Package for Social Science (SPSS)" dan "Statistical Analysis System (SAS)". Bagi penganalisaan awal, min-min dan sisihan-sisihan piawai bagi semua

skala-skala utama yang digunakan dalam kajian ini diperolehi dan dibandingkan dengan nilai-nilai norma.

Untuk kajian perbandingan di antara kumpulan-kumpulan yang berlainan dari segi corak penyalahgunaan dadah dan lima faktor sosial, min bagi faktor-faktor ini dibandingkan dengan menjalankan ujian 't' dan ujian x^2 , manakala analisis varian satu hala digunakan untuk menguji samada terdapat perbezaan yang bererti antara min-min bagi faktor-faktor psikologi.

KEPUTUSAN

A. Corak Penggunaan Dadah Secara Am

Keputusan utama yang berkaitan dengan corak penggunaan dadah bagi seluruh sampel diberikan di bawah ini. Untuk tujuan penganalisaan dalam kajian ini, perbezaan dibuat di antara 'dadah lembut' dan 'dadah keras'. 'Dadah lembut' merujuk kepada rokok dan arak, manakala istilah 'dadah keras' digunakan untuk dadah preskripsi yang boleh didapati samada secara halal atau haram (tranquilliser, barbiturates dan stimulants) dan dadah haram (candu, ganja, heroin).

1. Daripada 1178 orang penuntut dalam sampel ini, 323 orang (27%) menyatakan mengguna satu atau lebih dari satu jenis dadah (kedua-dua 'dadah keras' dan 'dadah lembut') yang dilaporkan dalam kajian ini. Bilangan penuntut yang melaporkan bahawa mereka menggunakan dadah preskripsi atau dadah haram, samada digunakan berasingan atau bersama dengan arak dan rokok ialah 35 orang (3%). Ini bermakna bahawa sebilangan besar penuntut-penuntut (73%) tidak terlibat dalam penggunaan sebarang dadah.

2. Arak merupakan bahan pertama yang digunakan oleh ramai penuntut sementara rokok merupakan bahan kedua. Sebanyak 14% dari 1178 orang penuntut dalam sampel ini melaporkan biasa minum arak, dan lebihkurang 7% melaporkan menghisap rokok. Peratusan ini tidak termasuk penuntut-penuntut yang menggunakan arak/rokok bersama dengan dadah yang lain.
3. Penganalisan ke atas subkumpulan minum arak menunjukkan bahawa hanya 3% daripada 231 penuntut-penuntut dalam subkumpulan ini selalu meminum arak. Kebanyakan penuntut-penuntut merupakan mereka yang minum arak kadangkala, manakala lebihkurang 10% daripada mereka melaporkan yang mereka tidak meminum arak lagi masa ini.
4. Lebihkurang 79% daripada penuntut-penuntut ini mula minum arak pada umur 13 tahun atau lebih, dengan 49% daripada mereka ini mula minum arak pada umur 16 tahun atau lebih.
5. Peninjauan ke atas perhubungan di antara umur mula minum arak dengan kekerapan minum arak menunjukkan bahawa lebih ramai penuntut-penuntut yang mula meminum bahan ini pada umur 16 tahun atau lebih, kekal dengan tingkahlaku ini.
6. Penganalisan ke atas subkumpulan yang merokok, yang terdiri daripada 135 penuntut-penuntut yang menghisap rokok sahaja atau bersama dengan dadah menunjukkan bahawa hanya 9% daripada mereka ini yang selalu merokok. Kebanyakan mereka merokok kadangkala. Satu perkara yang menarik ialah lebihkurang 33% daripada penuntut subkumpulan ini melaporkan bahawa mereka telah berhenti merokok pada masa kini.

7. Seperti subkumpulan minum arak, 78% daripada 135 orang penuntut-penuntut ini mula merokok pada umur 13 tahun atau lebih sementara lebihkurang 46% daripada mereka ini mula merokok pada umur 16 tahun atau lebih.
8. Tidak terdapat sebarang perhubungan di antara umur mula merokok dengan kekerapan merokok.
9. Penganalisan ke atas corak penggunaan 'dadah keras' terhad oleh sampel yang terlalu kecil, akan tetapi data menunjukkan bahawa lebihkurang 8% daripada penuntut-penuntut ini selalu menggunakan 'dadah keras' sementara 54% mengguna bahan ini kadangkala dan 38% telah berhenti mengguna dadah pada masa kini. Keputusan ini menyarankan bahawa sebilangan besar penuntut-penuntut adalah 'pencuba'.
10. Seperti pengguna 'dadah lembut', lebihkurang 83% daripada penuntut-penuntut ini mula menggunakan 'dadah keras' pada umur 13 tahun atau lebih dengan 58% daripada mereka ini mula mengguna bahan ini pada umur 16 tahun atau lebih.
11. Jenis dadah yang paling popular di kalangan penuntut-penuntut ialah "tranquilliser" (termasuk benzodiazepines) dan diikuti oleh ganja. "Tranquilliser" (termasuk benzodiazepines) adalah dadah preskripsi sementara ganja merupakan dadah haram di Malaysia.
12. Terdapat perhubungan yang bererti di antara penggunaan 'dadah keras' dengan menghisap rokok. Perhubungan yang sama juga

didapati di antara penggunaan dadah keras dengan minum arak. Dalam kedua-dua kes ini, didapati bahawa lebih ramai penuntut yang menggunakan 'dadah keras' juga merokok dan/atau meminum arak. Tambahan lagi, terdapat bukti yang menunjukkan bahawa terdapat satu haluan perkembangan dalam penggunaan dadah keras, iaitu penuntut-penuntut yang menggunakan dadah keras pada amnya bermula dengan penggunaan rokok/arak.

B. Faktor-faktor Sosial Yang Berkaitan Dengan Penggunaan Dadah

Dalam bahagian ini, perbezaan-perbezaan yang utama dari segi lima faktor sosial di antara tiga kumpulan pengguna disampaikan. Tiga kumpulan pengguna ini ialah 'bukan pengguna', 'pengguna dadah lembut', dan 'pengguna dadah keras'.

13. Secara relatifnya, sebahagian besar penuntut-penuntut yang menggunakan dadah, terutamanya 'dadah keras', tidak merasa bahawa kepercayaan keagamaan mereka mempunyai pengaruh yang kuat ke atas kehidupan harian bila dibandingkan dengan penuntut-penuntut yang tidak menggunakan sebarang jenis dadah.

14. Secara relatifnya, sebilangan kecil penuntut-penuntut yang menggunakan 'dadah keras' melaporkan prestasi sekolah yang sederhana. Dalam perkataan yang lain, prestasi sekolah bagi penuntut-penuntut ini adalah samada sangat baik atau lemah - ini merupakan satu corak prestasi yang berbeza bila dibandingkan dengan kumpulan pengguna 'dadah lembut' atau mereka yang tidak menggunakan dadah.

15. Secara relatifnya, tidak ramai penuntut-penuntut yang menggunakan 'dadah keras' mirip melaporkan perhubungan yang baik dengan bapa/penjaga mereka, ibu mereka, dan ahli-ahli keluarga yang lain bila dibandingkan dengan penuntut-penuntut dalam dua kumpulan yang lain.

C. Faktor-Faktor Psikologi Yang Berhubung Dengan Penggunaan Dadah

16. Hasil kajian mengenai konsep sendiri yang diukur dengan alat "The Tennessee Self-Concept Scale", telah menunjukkan perbezaan yang bererti di antara min-min tiga kumpulan penuntut ini bagi skala-skala berikut: Moral, nilai diri sebagai ahli dalam keluarga, sifat Kritik Diri dan Tingkahlaku. Perbezaan ini menunjukkan bahawa penuntut-penuntut yang menggunakan 'dadah keras' lebih mirip mempunyai pandangan diri yang lebih rendah mengenai moral dan nilai diri sebagai ahli dalam keluarga. Penuntut-penuntut ini juga lebih mirip mempunyai tanggapan yang lebih rendah terhadap tingkahlaku mereka dan mereka lebih kritis terhadap kelemahan diri mereka.

17. Walaupun tidak terdapat sebarang perbezaan yang bererti di antara min-min lokas kawal untuk ketiga-tiga kumpulan penuntut ini, tetapi terdapat tanda yang menunjukkan bahawa penuntut-penuntut yang menggunakan 'dadah keras' mempunyai lokas kawal yang lebih bersifat luaran daripada penuntut-penuntut yang tidak menggunakan sebarang dadah. Dalam perkataan lain, penuntut-penuntut yang menggunakan 'dadah keras' lebih mirip menganggap bahawa tingkahlaku mereka lebih dipengaruhi oleh

18. Walaupun tidak terdapat perbezaan yang bererti bagi paras kebimbangan, tetapi terdapat tanda yang menunjukkan bahawa penuntut-penuntut yang menggunakan 'dadah keras' mempunyai paras kebimbangan yang lebih rendah secara relatifnya.
19. Ketiga-tiga kumpulan penuntut ini berbeza dengan bererti dari segi lapan dimensi personaliti: sifat mencapai, sifat agresif, sifat dominan, tabiat menonjol diri, tabiat khayal mencapai, sifat elak bahaya, sifat impulsif, dan sensualiti. Analisa lanjutan menunjukkan bahawa penuntut-penuntut yang menggunakan dadah lebih bersifat mencapai, impulsif, agresif, dominan, menonjol diri dan khayal mencapai. Mereka juga lebih berani menghadapi risiko.

PERBINCANGAN

Dalam perbincangan ini, khususnya berhubung dengan perubahan yang bererti dalam corak penggunaan dadah di kalangan penuntut-penuntut sekolah menengah semenjak tahun-tahun 70an, kajian yang dibuat oleh Spencer dan Navaratnam dalam tahun 1976 dirujuk. Untuk mengadakan perbandingan yang bermakna di antara kajian ini yang melibatkan sampel penuntut-penuntut sekolah menengah atas di Pulau Pinang, dan kajian Spencer dan Navaratnam, hanya keputusan-keputusan yang berkaitan dengan sampel penuntut-penuntut sekolah menengah atas di Pulau Pinang dalam kajian Spencer dan Navaratnam dirujuk.

Kajian Spencer dan Navaratnam (1976), telah menunjukkan bahawa sebilangan besar penuntut-penuntut dalam sampel mereka tidak terlibat dalam penggunaan dadah. Keputusan kajian ini bahawa 73% penuntut-penuntut sekolah menengah atas di Pulau Pinang tidak pernah mengguna sebarang jenis dadah menyokong kesimpulan kajian Spencer dan Navaratnam. Walau bagaimanapun, terdapat perubahan yang bererti dalam bilangan penuntut yang menggunakan 'dadah keras'. Peratusan 3% yang didapati dalam kajian ini adalah lebih rendah daripada 13.7% yang dilaporkan bagi sampel 1976/1977. Kemerosotan yang bererti dalam peratusan penuntut-penuntut sekolah menengah atas yang melaporkan mengguna 'dadah keras' barangkali disebabkan oleh dua faktor. Pertama, undang-undang dan suasana sosial mengenai penggunaan dadah telah berubah semenjak 1976. Hukuman undang-undang dan sosial yang keras terhadap sesiapa yang terlibat dengan dadah haram (termasuk penggunaan dadah preskripsi secara haram) barangkali telah mempengaruhi cara-cara penuntut apabila menjawab soalan-soalan mengenai

penggunaan dadah. Khususnya, penuntut-penuntut mungkin telah menjawab dengan lebih berhati-hati ataupun telah memberi jawapan yang diharapkan oleh masyarakat. Tambahan pula mereka mungkin telah mengertikan penggunaan dadah sebagai penggunaan dadah secara haram, dan bukan penggunaan dadah tanpa sebab-sebab perubahan yang dianggap haram. Perbezaan dalam persepsi ini akan mempengaruhi pelaporan penuntut-penuntut dengan kuatnya, maka bilangan yang lebih kecil telah dilaporkan. Keduanya, penuntut-penuntut dalam tahun 1984, mungkin mempunyai maklumat yang lebih tentang dadah amnya, maka mereka dapat membezakan serta melaporkan jenis-jenis dadah yang berlainan dengan lebih tepat dari segi penguatkuasaan dan dapat melapor dengan betul. Setakat mana kedua-dua faktor ini telah mempengaruhi cara penuntut melaporkan penggunaan dadah tidak dikaji dalam kajian ini. Walau bagaimanapun, sekiranya kadar penggunaan dadah yang dilaporkan tidak terlalu rendah dari sebenarnya, maka bilangan penuntut yang mengguna 'dadah keras' telah merosot sedikit. Ini perlu dibukti benar dengan selanjutnya.

Sungguhpun peratusan pengguna 'dadah keras' telah merosot semenjak tahun 1976, corak kekerapan mengguna 'dadah keras' tidak berubah. Iaitu hanya sebilangan kecil pengguna 'dadah keras' yang kerap mengguna dadah atau yang mengguna dadah berbilang jenis. Kebanyakan mereka ini mengguna sejenis dadah dan menggunakannya kadangkala. Ini membayangkan bahawa mereka ini mungkin menggunakan dadah secara 'percubaan' sahaja.

Mengenai corak penggunaan 'dadah lembut', semenjak tahun 1976 rokok dan arak kekal merupakan dadah yang luas digunakan oleh

penuntut-penuntut sekolah menengah atas. Walau bagaimanapun, terdapat perubahan dalam populariti rokok dan arak. Dalam tahun 1976, lebihkurang 31% penuntut-penuntut sekolah menengah atas Pulau Pinang menghisap rokok dengan lebihkurang 10% daripada mereka ini meminum arak. Sebaliknya dalam tahun 1984, lebihkurang 20% daripada penuntut-penuntut dalam sampel kajian ini meminum arak, dan kira-kira 11% daripada mereka ini menghisap rokok. Publisiti mengenai bahaya merokok yang intensif dan semakin menambah dalam tahun-tahun kebelakangan ini mungkin telah meningkatkan kesedaran penuntut-penuntut tentang bahawa menghisap rokok dan ini mungkin telah menyebabkan kurang populariti menghisap rokok.

Hubungan antara merokok/meminum dan penggunaan 'dadah keras' yang didapati dalam tahun 1976 mendapat sokongan dalam kajian ini. Secara relatifnya, lebih ramai penuntut yang menggunakan 'dadah keras' miris menghisap rokok atau/dan meminum arak. Dalam kajian ini, didapati juga aliran perkembangan dalam penggunaan 'dadah keras'. Hampir semua penuntut yang menggunakan 'dadah keras' pada amnya bermula dengan merokok/meminum.

Seperti dalam tahun 1976, purata umur mula merokok dan mengguna 'dadah keras' pada amnya kekal pada umur 16 tahun dan lebih. Walau bagaimanapun, terdapat perubahan dalam jenis 'dadah keras' yang menjadi pilihan penuntut sekolah menengah atas ini. Ganja, sejenis dadah haram di Malaysia, merupakan 'dadah keras' yang paling popular dalam tahun 1976, manakala dalam kajian ini "tranquillisers", sejenis dadah preskripsi, muncul sebagai 'dadah keras' yang paling popular di kalangan penuntut-penuntut sekolah menengah. Penguatkuasaan

undang-undang terhadap pembekalan dan permintaan dadah haram masa kini mungkin telah menyebabkan ganja tidak dapat diperolehi dengan senang. Sebaliknya, penguatkuasaan ini tidak begitu menjejaskan pembekalan "tranquilliser" yang tertentu.

Dari kajian ini, dapatan bahawa remaja yang mengguna dadah mirip melaporkan kurang terlibat dalam hal-hal keagamaan dan mempunyai perhubungan yang kurang mesra dengan keluarga selaras dengan dapatan yang dilaporkan oleh Spencer dan Navaratnam (1976). Juga bezaan yang besar yang pengkaji-pengkaji ini dapati mengenai prestasi sekolah pengguna 'dadah keras' serupa seperti yang diperhatikan dalam kajian ini. Seterusnya, berbanding dengan penuntut-penuntut yang tidak mengguna sebarang dadah, penuntut-penuntut yang mengguna dadah lebih mirip mempunyai konsep sendiri yang lebih rendah, dan mempunyai nilai diri yang lebih rendah dari segi moral, perhubungan dengan keluarga dan tingkahlaku.

Kajian serupa yang dijalankan oleh Choo, Navaratnam dan Ward (1982) telah melibatkan perbandingan di antara bukan pengguna dan penagih heroin. Pengkaji-pengkaji ini melaporkan keputusan yang sama pada umumnya. Walau bagaimanapun, terdapat dua perbezaan. Pertamanya selain dari dapatan yang serupa dengan dapatan kajian ini mengenai tiga skala konsep sendiri yang disebut di atas, Choo dan rakan-rakan juga telah mendapati perbezaan yang bererti bagi skala sifat Fizikal dan sifat Peribadi. Keduanya, kajian oleh Choo dan rakan-rakan melaporkan perbezaan min yang lebih besar dan bererti bagi lima skala dari tujuh skala yang mereka gunakan. Perbezaan ini mungkin disebabkan oleh kerana kajian Choo, Navaratnam dan Ward membandingkan

sampel-sampel yang lebih heterogen dari sampel kajian ini. Khususnya, mereka telah membandingkan sekumpulan penagih heroin yang berumur di antara 15 ke 35 dengan kumpulan kawal yang bukan pengguna dadah. Sebaliknya, sampel yang digunakan dalam kajian ini merupakan sekumpulan penuntut sekolah menengah atas yang bersifat lebih homogen.

Keputusan kajian ini mengenai paras kebimbangan juga berbeza dari yang didapati oleh Choo, Navaratnam dan Ward (1982). Kajian ini mendapati tiada perbezaan yang bererti di antara pengguna dadah dan bukan pengguna dari segi paras kebimbangan. Walau bagaimanapun, harus diketahui bahawa alat pengukuran yang digunakan oleh Choo dan rakan-rakan berlainan dari yang digunakan dalam kajian ini. Oleh itu agak sukar untuk membuat perbandingan antara dapatan kajian ini dengan dapatan Choo dan rakan-rakan mengenai paras kebimbangan.

Kajian ini juga cuba menghubungkan lokas kawal dengan tabiat penyalahgunaan dadah. Didapati tidak ada perhubungan yang bererti di antara lokas kawal dan tabiat penyalahgunaan dadah penuntut-penuntut dalam sampel ini. Walau bagaimanapun, aliran yang didapati menunjukkan bahawa pengguna dadah, terutamanya pengguna 'dadah keras' lebih mirip mempunyai sifat kawal luaran. Aliran ini juga dilaporkan oleh Alexander dan Dibb (1977), Carman (1977), Jurich dan Polson (1984), Obitz, Cooper dan Madeiros (1974), Philips et al (1975) and Urbanski (1984).

Akhirnya perbandingan telah dibuat di antara bukan pengguna dan pengguna dari segi keperluan psikologi. Pada amnya didapati pengguna dadah lebih mirip bersifat mencapai, impulsif, agresif, dominan,

tabiat menonjol diri, khayal mencapai dan berani menghadapi risiko. Aliran yang serupa telah dilaporkan oleh Green dan rakan-rakan (1971), Holroyd, Kenneth, dan Kahn (1974), Krug dan Henry (1974), dan Segal (1975).

KESIMPULAN

Dalam kajian ini, keputusan bahawa 3% penuntut sekolah menengah atas terlibat dalam penggunaan 'dadah keras' perlu dipastikan memandangkan kajian sebelum ini telah mencatatkan peratusan yang lebih tinggi. Sehingga kajian-kajian selanjutnya dapat memberi matlumat yang lebih, kita harus berwaspada apabila mentafsirkan bahawa bilangan penuntut-penuntut sekolah menengah atas yang menyalahgunakan dadah telah merosot.

Selanjutnya, keputusan kajian ini mengenai faktor-faktor psiko-sosial menyarankan bahawa faktor-faktor ini berguna untuk membezakan pengguna-pengguna dadah daripada bukan pengguna. Lebih khususnya, telah diperlihatkan bahawa faktor-faktor sosial seperti perhubungan keluarga dan keagamaan, serta faktor-faktor psikologi seperti konsep sendiri dan keperluan psikologi adalah berkait dengan tabiat menyalahguna dadah.

1.0 INTRODUCTION

This report presents the findings from a survey which is part of a wider research study on Drug Education currently being undertaken by the National Drug Research Centre in collaboration with the School of Educational Studies, Universiti Sains Malaysia.

Studies conducted by the National Drug Research Centre during 1976/1977 have shown that 11.5% of 16,166 school children surveyed have had some experience with the non-medical use of drugs and that a trend towards multiple drug use was becoming evident. In addition to this, epidemiological studies conducted by the Centre also showed that 30% of the addicts started using drugs before reaching the age of 19 (Navaratnam, 1981). In the same study, based on the data collected from the upper secondary schools in Penang State, it was found that 13.7% of the upper secondary school students aged 16 to 18 years were drug users.

Clearly, the involvement of adolescents and young people in drug abuse has become increasingly serious. Early prevention efforts are therefore essential to prevent potential users being influenced to experiment with drugs.

As the starting point for early prevention, it is important to develop a clear picture of the etiology of the abuse of illicit drugs among this segment of the population. For this purpose, it is necessary to obtain reliable and comprehensive

data on the adolescents' attitudes and behaviours not only towards alcohol and drugs but also towards school performance, religion and their relationship with parents as well as data on adolescents' personality.

In the psycho-sociological field, the general influences on the health behaviours of the students are not well understood, and there are very few data to guide theorisation. Based on broad theories of social psychology, one may identify several factors which could generally be associated with health behaviours. For example, according to Jessor and Jessor (1977), the learning of a variety of health behaviours depends upon the quality of a child's relationship with his family and the school. Alienation from these institutions can be expected to generally influence the development of diverse health behaviour problems.

A. Family Relationship

There is an intensive and growing literature concerning the role of the family in the drug use of one or more of its members (Seldin, 1972; Harbin and Maziar, 1975; Stanton, 1978, 1979; Kandel, 1980a, b; Jessor and Jessor, 1977). Studies which focussed on family relationship and substance abuse have reported significant relationships between disturbed family relationship and alcohol/drug use.

Hamburg et al. (1975) found that students with a tendency towards a high level of drug use reported a lack of understanding by their parents and teachers, while Spencer and Navaratnam (1980) described those students who have ever used drugs as

having "somewhat looser association with the traditional sources of social morality, are more rebellious and more precocious than never users of the same age, and are more reliant upon friends and less upon parents." In the more recent studies, Byram and Fly (1984) reported that adolescents' alcohol use increased as family closeness diminished, and as friends' use of alcohol increased, while Padina and Schuele (1984) in their comparative study on adolescent non-users and alcohol/drug misusers found that alcohol/drug misusers perceived parents more negatively than non-users. Jurich et al. (1985) used a group of 48 high school adolescents who were drug abusers and a group of 24 drug users who were not drug abusers to examine the family variables that were associated to drug taking. The results indicated that the drug abusers reported significantly more of a communication gap between themselves and their parents than did drug users. Further the family of drug abusers were more likely to use either a laissez faire or an authoritarian disciplinary technique while families of drug users were more likely to use democratic types of discipline. Wells and Stacey (1976) in a study on a group of young drug misusers reported that drug misusers were more likely to have experienced an unhappy home and school life. Beschner and Treasure (1979) noted that the family pathology influenced drug use for both the boys and girls in their study. However, female drug users tended to be abused by their parents and had unsatisfactory relationship with their mothers. Similarly Tennat et al. (1975) in a study on childhood antecedent of drug and alcohol abuse reported that being punished over three times per week was related to abuse of amphetamines and opiates.

Thus most studies showed correlation between a tendency to engage in misuse of drug and disturbed family relationships. An exception is Binion's study (1979) in which both addicts and non-addicts reported having good/close relationship with their parents and siblings. Both groups described their childhood as happy and stable, their mother as loving parent. However, among the addicts and non-addicts, more subjects in the addict group reported that they received more punishment, quit school early, or ran away from home. Further, they reported the major reason for using drug was "avoidance of personal and family problems".

Pulkkien (1982), in a longitudinal study on youthful smoking and drinking among a group of Finnish school children reported that lack of parental encouragement and affectional interaction with the parents was associated with female smoking and male drinking. Girls who smoked reported conflicts, especially with their mothers. Similarly male heavy drinkers characterised their mothers negatively. While the home atmosphere appeared to be laissez faire, both males and females reported receiving corporal punishment, and considered their upbringing inconsistent. Further, their parents had little interest in their children's school progress. Choo, Navaratnam and Ward (1982) did a comparative study on heroin dependents and non-users. They found that heroin dependents scored significantly lower than non-users on the family dimension of the Tennessee Self-Concept Scale.

In summary, these studies indicate that disturbed family relationship and adolescent drug abuse appear to be significantly related.

B. The Influence of Religious Beliefs

Several studies revealed that the involvement with religion was associated with less use of various substances (Bowker, 1975; Turner and Willis, 1979; Yohe, 1981; Jessor and Jessor, 1977; and Kandel, 1978). Higher scores on religiosity scales or items such as frequency of church attendance had been consistently correlated with lower incidence of drug use (Gorsuch and Butler, 1976; Margulies et al., 1977; Jessor, 1976; Schlegel and Sanborn, 1979; Murty, 1979; Wehster and Mc Fadden, 1979).

Hamburg et al. (1975) reported that students with a predisposition towards heavy drug use were not active in religious activities. In a literature review (Smart, 1976) and in a study on the non-student youth from Mexico, Canada, Pakistan, India and Malaysia (Smart et al., 1981), it was reported that drug use was associated with low religious participation, and that of all the demographic variables, sex, age, SES and religion were probably the most important in predicting drinking among high school students. Burkett (1977) in a study on religion, parental influence on adolescent alcohol and marijuana use reported that there was a relatively strong negative relationship between religious participation and marijuana and alcohol use. Those respondents who attended church were more than twice as likely to believe that use of these substances was sinful than were those who did not attend, regardless of parents' religiosity. Tennat et al. (1975) found

that church attendance 50 times or more before age 25 was related to non-use of amphetamines. Choo, Navaratnam and Ward (1982) in analysing the Tennessee Self Concept Scale of the heroin dependents versus the non-users, found that the heroin dependents scored significantly lower mean values on the moral-ethical dimension of the self.

In all the studies above, there is a general trend that participation in religion activities is related to less tendency towards involvement in alcohol and drug abuse.

C. The School Performance

School performance/academic achievement has been studied frequently as a predictor, correlate, and outcome of adolescent drug use. Peddicord (1980) concluded that the users as a group are distinguishable from the non-users with respect to selected school performance and behaviour. Some studies on the relationship of the school performance and drug use found lower levels of school achievement associated with marijuana use (Simon, 1974; Anhalt and Klein, 1976; Jessor, 1976), while others found no relationship (McCann et al., 1977; Miranne, 1979; Simon et al., 1974). However, there is some evidence that heroin use is associated with disruptive school behaviour (Rathus et al., 1976).

Humburg et al. (1975) reported that the drug abusers had lower grade point average and tended to perceive the social aspect of the school as being more important than the intellectual aspect. Smart et al. (1981) concluded that having a low level of

schooling was one of the most important factors associated with the etiology of drug use. Similarly, Spencer and Navaratnam (1980) noted that the drug use was associated with a lowering of educational aspirations. In their study, only 55% of drug users in the older age group reported wishing to continue to university, and only 41% expected to achieve their goal. In the younger age group, 30.5% of drug users and 14.5% of non-users expected to stay at school until Form III. Further, they also had no interest in passing the examination, and their attitude towards examination was a reflection of parental attitude. Pulkkiens (1982) in a study on the Finnish school children found out that parents were indifferent to their children's success in school, so were their children. Parents were found to have no plan for the girls' schooling, and the boys' expectations for the future were pessimistic.

In brief, based on the literature review above, family relationship, parents as well as the children's attitude towards education and religiosity appear as significant social factors associated with youthful drug abuse.

In addition there were evidence (Blum and Richards, 1979; Braucht et al., 1977; Jessor, 1975; Wechsler, 1976) which suggest that other than the pro-substance-use social influences coming from the family, the school and the religion, psychological factors such as low self-esteem, low self-satisfaction, an external locus of control, high anxiety, a greater need for social approval, low social confidence, low assertiveness, impulsivity,

rebelliousness, an impatience to assume adult roles, and developmental factors, particularly those related to cognitive and social development, may also tend to increase adolescent's susceptibility to social pressures to use drugs.

D. Self Concept

According to Felker (1974) self concept refers to a unique set of perceptions, ideas, and attitudes that a person has about himself. The view that a person's self concept might be a major variable contributing to personal satisfaction and effective functioning is widely held by many personality theorists (e.g. Maslow, 1954; Rogers, 1951). The findings from the studies on the etiology of drug abuse generally indicate personality differences between alcoholics and non-drinkers. For example, Jones (1981) did a study on the relationship of self concept to drug use and non-drug use among a group of grade nine students. The results showed that regular and heavy users had significantly lower mean self concept. Similarly, Hebeisen (1975) concluded that the multi-dimensional construct of self esteem provides significant contrasts between normal and drug abusing populations. Drug-abusing populations were found to have lower self esteem than the normal population. Jurich and Polson (1984) found that the drug abusers used drug to enhance self concept.

Padina and Schuele (1984) did a study on the adolescent students and the patients in treatment for alcohol or drug misuse. In the study, each of the two groups were made up of very high

users, high users, moderate users, low users and stoppers of alcohol and drugs. The results indicated that for the student sample, low users had high self concept score. The same result was reported for the patient group. However, overall, the student sample had higher self concept scores than the patient sample.

Similarly, Urbanski (1984) found that low self esteem was related to greater alcohol involvement. A study by Choo, Navaratnam and Ward (1982) also revealed that the drug dependents obtained poorer self concept scores and had a higher level of anxiety than the non-user. Thus generally, low self esteem is associated with drug abuse.

E. Anxiety

Spielberger (1966, p. 363) conceptualised anxiety as "objective, consciously perceived feelings of apprehension and tension which were accompanied by or associated with activation (arousal) to the autonomic nervous system." Further, Spielberger et al. (1970) distinguished between state anxiety (A-State) and trait anxiety (A-trait). State anxiety refers to transitory anxiety which varies in intensity and fluctuates over time. Trait anxiety refers to relatively stable individual differences in anxiety proneness. Other studies have attempted to link anxiety and health problem behaviours. For instance, Robbins et al. (1970) did a study on a group of college students and reported that the users of cannabis derivatives tended to be more anxious

than the non-users. In a study comparing the anxiety levels of light users and heavy users of marijuana, Kupfer et al. (1973) found that heavy users tended to be more depressed and anxious. Harmatz et al. (1972) reported that the young people who employed additional drugs tended to show greater psychiatric impairment, especially higher depression and anxiety when compared to those who used only marijuana. Shader (1972) looked at continuers and discontinuers of multiple drugs in contrast to a normative reference population. He found that the continuers could only be distinguished by higher risk-taking scores. However, with the amount of drug intake controlled, they emerged to be significantly more depressed, anxious and were higher on general psychiatric impairment than the discontinuers. Anonymous (1969) and Rado (1957) concluded that marijuana and other drugs were used as a way to escape profound depression, and to diminish the intensity of unbearable feelings (Wurmser, 1972a, 1972b).

In a more recent study, Wells and Stacey (1976) using the Institute for Personality and Ability Testing's Anxiety Scale Questionnaire, found that the drug misusers were more anxious than the non-misusers. Colten (1979) compared female non-addicts and female addicts, and noted that the addicted females were higher in the reported symptoms of depression and anxiety. Similarly, Spencer and Navaratnam (1980) revealed that users, compared to non-users reported a significantly higher incidence of headaches, stomach upsets, insomnia, nightmare and general nervousness. Also users rated themselves as not happy. In a similar vein,

Kilpatrick (1976) reported that polydrug users were more anxious than the non-users.

The above findings indicate that anxiety is associated with involvement with drugs.

F. Locus of Control

Another psychological factor that has been shown to be related to health behaviours is the locus of control. The concept of locus of control in the social learning theory is defined as a generalised expectancy for internal or external control of reinforcements. This concept can be related to the concept of reinforcement responsibility which refers to the sense of responsibility that a person has for the outcome of his behaviour. Rotter (1966) distinguished individuals along the dimension of internality-externality. At one end are the individuals who have the tendency to perceive that they have control over events that occur to them. At the other end are the individuals who tend to believe that rewards and punishment are not contingent upon their behaviours. The former are termed as the internals and the latter, the externals. Most individuals may fall anywhere between these two extremes.

In the investigation linking locus of control to substance-abuse behaviour, James, Woodruff and Werner (1965) found that more internal males quit smoking for a specified length of time than did external males after hearing the United States Public Health Service Surgeon General Report concerning

the link between cancer and cigarettes. Likewise, Platt (1969) reported more success at influencing the smoking behaviour of internals than of externals. Olton (1982) found that internal students scored lower on the drug-related measures and higher on self-esteem. Externals with negative perceptions of school environment dimension scored higher on drug related variables and lower on self-esteem than internals with positive perceptions of school environment.

Obitz, Cooper and Madeiros (1974) found that the mean I-E score (Internal-External Scale by Rotter) of the young heroin addicts was significantly more external than the means of several comparison groups.

Similarly, Alexander and Dibb (1977) reported that the drug addicts exhibited elements of an external locus of control. Jurich and Polson (1984) in their study on the adolescent drug users and drug abusers found that the drug abusers used drug to cope with an external locus of control, a low self-image, feelings of disillusion and personal stress, while drug users were more likely to use drugs for recreational purposes. Urbanski (1984) studied a group of 361 ninth graders and found that an external locus of control as measured by Nowichi-Strickland Locus of Control Scale, was highly correlated with the male drinking behaviours. Philips et al. (1975) found that 'Never Users' of marijuana, hallucinogen, amphetamines, barbiturates and opiates were more internally controlled than current users whereas persons who had stopped using drugs fell in between. In addition, Duke

and Nowicki (1973) found internality to be associated with achievement, dominance, intraception, and affiliation scales and externality to be associated with the succorance and abasement scales.

Carman (1977) in a study involving a group of high school students concluded that students who used marijuana, barbiturates and hallucinogen more frequently were more externally controlled.

While the studies cited above indicate that externality is related to addictive behaviour, other studies have shown that addicts are more internally controlled than non-addicts. For example, Goss and Moroscho (1970), and Strassberg and Robinson (1974) reported that the users were more internal than non-users. Similarly, Berzins and Ross (1973) found that addicts of both sexes were significantly more internal than their student controls. A study done by Calicchia (1974) to tests the narcotic - induced internality interpretation of Berzins and Ross (1973) appear to provide some support to the latter's position.

The inconsistent findings in the locus of control studies of addictive behaviour and the varied attitudes of the investigators towards the I - E scale was noted by Plumb et al. (1975) in their literature review on chemical substance abuse and perceived locus of control. In spite of that, the authors felt that research on control expectancies of substance abusers should continue from the perspective that take account of the importance of the individuals' perception of the world and the self.

G. Psychological Needs

Another psychological factor that has been studied in relation to the health behaviour is the psychological needs. Needs, refer to the organisational tendencies which appear to give unity and direction to a person's behaviour. An individual's needs can be determined by examining the life transactions that he/she engages in. In the studies that attempt to examine the reasons and the pattern of drug use among people, personality and interpersonal variables are obviously important. The usefulness of these variables depends on how well they are able to predict which persons will begin to use drugs, who will cease using them and who will either increase or reduce their level of use apart from the changes in their psychological functioning and in their interpersonal relationship. In addition to this, personality and interpersonal variables also can tell us in what ways users are different from non-users in their values and life-styles. In this regard, Murray (1953) emphasised the need to view behaviour as an outcome of the relationship between the person and his environment. Segal (1975) conducted a series of discriminant analysis exploring the relationship between personality and environmental variables which might relate to substances use or non-use in young adults. The results of the analyses indicated that the students who showed the greatest involvement either with hard drugs or marijuana seemed to emphasise externally-oriented goals, such as seeking new experiences, desiring a sense of freedom from social constraints, and eschewing conformity and

achievement. More specifically drug usage was related to experience and sensation seeking, reflecting a tendency towards new and exciting experiences and a desire for an unconventional life style. Non-users, in contrast, tended to manifest an internal locus of control and less sensation seeking behaviour. In the cross validation discriminant analysis, the results indicated that those likely not to use drugs were individuals who tended to conform, not seek novel situations, and who were oriented towards achieving. In contrast, those who might tend to use or experiment with drugs were physically active; seek stimulating, exciting, or novel situations; strive for autonomy; and focus less on achievement. In a similar study, Mellinger, Somers and Manheimer (1975) found that illicit drug use was associated with emotional distress and also personality traits (such as creativity and openness to new experience) that might indicate high levels of ego development.

Krug and Henry (1974) in a study involving a student sample found that, in contrast to the non-users, the adolescent drug users tended to be more dominant, impulsive, morally expedient, socially uninhibited, unconventional and radical, while Green et al. (1971) found that the non-users scored higher than users on the scales measuring emotional stability, self-sufficiency and self-control, but lower in dominance and heedlessness. Further, the users appeared more vulnerable to frustration, were more headstrong, reckless, and group dependent than non-users.

Holroyd, and Kahn (1974) found that male moderate

and heavy users displayed more similarity to each other than non-users, valuing immediate pleasure and spontaneous social activity over postponed gratification necessitated by striving towards distant goals. In the same study, when compared to the male non-users, male users were more impulsive and emotionally expressive, self-reliant, rebellious towards external restraints and somewhat inclined towards thrill seeking or risk taking, and relatively less concerned with impressing others or seeking their approval; they also placed less emphasis on achievement than did non-users. When comparison was made between the female users and the female non-users, female users tended to be risk taking, less conforming, less ambitious, while the female non-users tended to be more controlling, nurturant and cautious.

However, a study by Huba, Segal and Singer (1977) reported that generally there was no difference in the personality of the users and non-users of drugs. In their study, the Jackson's Personality Research Form was used to study the personality of 1095 college students of both sexes. The sample was made up of non-users, 'alcohol only' users, 'marijuana only' users, and 'multidrug with marijuana' users. The results of the study revealed that generally the factor structure was stable across the sexes and the subgroups.

All the studies above, except the one reported by Huba, Segal and Singer (1977) revealed that the drug users possessed a different set of psychological needs. The lack of the difference in the personality structure users of from that of non-users as

reported in Huba, Segal and Singer study might be due to the fact that drug user sample was made up of moderate or short-term users whose psychological needs might not be too different from the non-users.

Summary

The literature review above generally shows consistent findings of the relationship between the various social variables and psychological variables, and the substance abuse behaviours. Generally, disturbed family relationship and adolescent drug abuse appear to be significantly related, while religiosity is related to adolescent drug abuse behaviour. The review reveals that participation in religious activities is related to less tendency towards involvement in alcohol and drug abuse. Adolescents' attitudes towards education appear to be associated with youthful drug abuse. Low level of schooling, poor school performance and poor academic achievement are considered as predictors, correlates, and outcomes of adolescent drug use. Also, low self esteem is generally associated with drug abuse, while in most of the studies reviewed, the drug users appear to be more depressed, anxious and are higher on general psychiatric impairment when compared to the non-users. Although the findings in the locus of control studies of addictive behaviour are inconsistent, most of the recent studies reveal that an external locus of control is generally associated with adolescents' drug use behaviour. Similarly, findings in most of the psychological needs studies of adolescents' drug abuse behaviour reveal that the psychological needs of the non-users and the drug users are different.

In brief the social and psychological variables discussed above appear to be useful factors for predicting the adolescent substance abuse behaviour.

2.0 PURPOSE OF THE STUDY

The purpose of the study was to obtain a psycho-social profile of a group of secondary school children in Penang as an attempt to understand the background of potential drug users in school. More specifically the study attempted to compare the background and some characteristics of the drug users and the non drug users in school.

Based on the literature review, five social and four psychological variables were included in this study in order to gain as comprehensive information as possible regarding the factors which are likely to be related to drug use among school children.

The five social variables are:-

- o the influence of religious belief
- o the school performance
- o the relationship to father/guardian
- o the relationship to mother
- o the relationship to other family members.

The four psychological variables are:-

- o self concept
- o locus of control
- o anxiety
- o psychological needs

In addition, information was also obtained on the pattern of substance-use of the sample.

2.10 RESEARCH QUESTIONS

In order to investigate the psycho-social correlates of the etiology of drug misuse, three major research questions comparing student drug users with non-users in terms of the general patterns of substance-use and the selected social and psychological variables were formulated.

With respect to the general patterns of substance-use, the following research question was investigated:-

1. What were the general patterns of substance use for the overall sample, the soft drug group and the hard drug group.

With respect to the social variables, the following research question was investigated:-

2. What were the major differences between the students involved in drug use and those not involved with respect to:-

- o the influence of religious belief on daily activities
- o the school performance
- o the relationship with father/guardian
- o the relationship with mother
- o the relationship with other members of the family

With respect to the psychological variables, the following research question was investigated:-

3. What are the major differences between the students who were involved in drugs and those who were not involved in drugs with respect to:-

o the self concept as measured by the Tennessee Self Concept Scale in terms of the overall self esteem as well as the following nine subscales:

- i. physical self
- ii. moral-ethical self
- iii. personal self
- iv. family self
- v. social self
- vi. identity
- vii. self-satisfaction
- viii. behaviour
- ix. self-criticism

o the locus of control as measured by means of the Rotter Internal-External Locus of Control

o the anxiety as measured by means of the Spielberger's measure of trait anxiety

o the psychological needs as measured by means of the Stern's Activities Index in terms of the following twelve selected psychological needs.

- i. achievement
- ii. affiliation
- iii. aggression
- iv. dominance

- v. exhibitionism
- vi. fantasied-achievement
- vii. harm-avoidance
- viii. impulsiveness
- ix. nurturance
- x. sensuality
- xi. supplication
- xii. understanding

3.0 METHODOLOGY

3.1 SAMPLE

The basic research involved data collection from upper secondary school students during the end of the year 1984. Data collection took place in five cooperating secondary schools throughout the state of Penang. There are several reasons for choosing the senior secondary school students as optimal groups for monitoring the drug use, and related attitudes of youth. First, the completion of the secondary school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Secondly, the completion of secondary school represents the jumping off point from which young people diverge into widely differing social environments and experiences. Finally, there are some practical advantages to build a system of data collection around samples of secondary school seniors, since the task of data collection can be managed easily where the students' dispersion is small and the levels of resistance to being located and tested are very low, and thus the cost of the research financially and timewise can be decreased substantially.

One limitation in using the present sample is that it does not include in the target population those young men and women who drop out of secondary school before graduation (or before the last few months of the upper secondary year to be more precise). This excludes a relatively small proportion, which is not an

unimportant segment since we know that illicit drug use tend to be higher than average in this group (Johnston, 1973; Bachman, O'Malley and Johnston, 1978). However, the addition of a representative sample of dropouts would increase the cost of the present research very substantially, because of their dispersion and generally their reluctance to being located and interviewed.

3.2 INSTRUMENTS

A. Pattern of Substance Use

Data concerning the general pattern of substance use were collected using a questionnaire requesting the information in the students' use of soft drug which is defined in the study as consisting of alcohol and cigarettes; and the use of hard drug; their frequency of use and the pattern of use (See Appendix A, Questions 6 to 12).

B. Social Variables

In order to collect data with respect to social variables, a questionnaire was constructed in which the students were asked to respond on a five-point scale with 5 denoting the highest value and 1, the lowest value. Altogether there were five questions which solicited information on the students' religious beliefs; their school performance during the year; their relationship with their fathers/guardians, their mother and other members in their families (See Appendix A, questions 1 to 5).

C. Psychological Variables

Data on the self-concept, the locus of control, anxiety and the psychological needs were collected using standardised tests. The following section describes briefly the instruments used.

I. The Tennessee Self-Concept Scale (TSCS)

The scale consists of 100 self descriptive statements to which a person responds on a five-point Likert scale ranging from "Completely True" to "Completely False". Ninety of the 100 items are divided into an equal number of positive and negative statements. The remaining 10 items form the self-criticism score. The scale is self administering and it is applicable to the whole range of psychological adjustment from healthy, well adjusted people to psychiatric patients. In this study, ten major scores were used.

a. Total Self Esteem

The total self-esteem score reflects the overall level of self esteem. Individuals with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly while those with low scores tend to be doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves.

b. Physical Self

The score reflects the individuals' view of his physical appearance, skills, sexuality and his health.

c. Moral Ethical Self

This score reflects the individual's view of the self from a moral-ethical frame of reference, that is with respect to his relationship to God, his feelings of being a 'good' or 'bad' person, and his satisfaction with his religion or lack of it.

d. Personal Self

This score is a measure of the individual's sense of personal worth, his feeling of adequacy as a person and his evaluation of his personality apart from his physical or social self.

e. Family Self

The score reflects the individual's perception of self in reference to his closest and most immediate circle of associates.

f. Social Self

This score describes the "self as perceived in relation to others". In a more general way, it reflects the person's sense of adequacy and worth in his social interaction with other people in general.

g. Identity

The score reflects the individual's description of his basic identity, that is what he is as he sees himself.

h. Self-Satisfaction

The score describes the level of satisfaction or acceptance the individual has towards himself.

i. Behaviour

The score measures the individuals' perception of his own behaviour or the way he functions.

j. Self Criticism

This score is derived from ten mildly derogatory statements that most people admit as being true for them. High scores generally indicate a normal, healthy openness and capacity of self criticism. Extremely high score (above the 99th percentile) indicate that the individual may be lacking in defenses and may in fact be pathologically undefended. Low scores indicate defensiveness, and suggest that the positive scores are probably artificially elevated by defensiveness.

The norms for the means, standard deviations and reliabilities for all the scales above are reported in the manual of the Tennessee Self Concept Scale (Fitt, 1965). The norm group was a broad sample of 626 people.

II. The Rotter Internal-External Locus of Control

The Rotter Internal-External Locus of Control (Rotter, 1966) consists of 23 question pairs, using a forced-choice format, plus six filler questions. Internal statements are paired with external statements. One point is given for each external statement selected. Score can range from zero (most internal) to 23 (most external). Rotter (1966) reported acceptable reliability and discriminant validity. Also, it is conveniently brief and can be easily administered.

III. Trait Anxiety Scale

In this study, anxiety was measured using the trait anxiety scale of the Spielberger's State-Trait Anxiety Inventory. The trait anxiety scale consist of 20 items which measure how a person generally feels. High reliability (0.92 for female high school students, and 0.89 for male high school students) was reported in the manual. Similarly, acceptable discriminant validity was also reported in the manual.

IV. Stern Activities Index (SAI)

In this study, the psychological needs of the students was assessed using the Stern Activities Index (SAI). The Stern Activities Index consists of 30 scales of 10 items each.

Based on the literature review, 12 scales were selected from

associations with other versus social detachment, social independence, self-isolation, or unsociableness.

c. Aggression

Indifference or disregard for the feelings of others as manifested in hostility either avert or covert, direct or indirect, versus the denial or inhibition of such impulses.

d. Dominance

Ascendancy over others by means of assertive or manipulative control versus non-intervention, forbearance, acceptance, equalitarianism, permissiveness, humility, or meekness.

e. Exhibitionism

Self-display and attention-seeking versus shyness, embarrassment, self-consciousness, or withdrawal from situations in which the

h. Impulsiveness

Rash, impulsive, spontaneous, or impetuous behaviour versus care, caution, or reflectiveness.

i. Nurturance

Supporting others by providing love, assistance, or protection versus disassociation from others, indifference, withholding support friendship, or affection.

j. Sensuality

Sensory stimulation and gratification, voluptuousness, hedonism, preoccupation with aesthetic experience versus austerity, self-denial, temperance or abstinence, frugality, self-abnegation.

k. Supplication

Dependence on others for love, assistance, and protection versus detachment, independence, or self-reliance.

l. Understanding

Detached intellectualisation, problem-solving, analysis, theorising or abstraction as ends in themselves.

3.21 TRANSLATION OF THE INSTRUMENTS

The questionnaire on the social variables and the pattern of drug use, and the Spielberger's Trait Anxiety Scale contained items in both the National language as well as the English language. The other three tests for measuring the psychological variables namely, the Tennessee Self Concept Scale, the Rotter I-E Scale, and the Stern Activities Index were translated into the National Language, checked and pre-tested before they were administered to the students.

3.3 PROCEDURE

The questionnaire and the psychological tests were administered to the students by the research officers of the project with the assistance of the school. The standardised procedures detailed in the respective instruction manuals were adhered to, and testing sessions were arranged to coincide with the normal classroom period whenever possible. Complete anonymity was maintained by not requiring the students to supply personal particulars.

3.4 STATISTICAL ANALYSIS

The responses collected from the students were checked for any missing information and inconsistencies before they were coded. Analysis were carried out using the Statistical Package for Social Science (SPSS) and the Statistical Analysis System (SAS).

The students in the sample were classified in non-user group, user group and several subgroups based on their involvement in substance-use.

In the preliminary analysis, the means and the standard deviations for all the major scales used in the study were presented and were compared with the norm values, and the values for a group of Universiti Sains Malaysia students for the Tennessee Self Concept Scale.

In the comparative study between the different groups in terms of the pattern of drug use and the five sociable variables, the mean scores for these variables were compared using a series of t-tests. The patterns of responses for the different groups to each of the five sociological variables were compared using X^2 tests.

In the comparative study between the different groups in terms of the four psychological variables, one-way analysis of variance was used to detect any significant differences in the mean scores for these psychological variables.

3.5 FORMATION OF THE COMPARISON GROUPS

In this study, for comparison purposes three groups were formed based on the substances used. The three groups are the non-user group, the soft drug group and the hard drug group.

The non-user group was made up of those students who answered 'Never' or 'Not Applicable' to questions 6, 8 and 12 in the questionnaire which request for information on the frequency of cigarette use, alcohol use and hard drug use respectively (see Appendix A). That is the non-user group was made up of those students who had never been involved in any type of substance-use. On the basis of the above method of categorising the students, a total of 855 (72.6%) students out of the total sample of 1178 students could be classified as belonging to the non-user group.

The soft drug group was made up of those students who answered 'Regularly', 'Once in a While', 'Rarely' and 'Smoked/Drank before

but not Smoking/Drinking now' to questions 6 and 8 in the questionnaire which request for information on the frequency of cigarette use and alcohol use respectively (See Appendix A). Thus the soft drug group was made up of those students who had been involved in cigarette use, alcohol use, or both the cigarette and alcohol use. In this study, 'soft drugs' refer to alcohol and cigarettes. Based on this classification, there were a total of 288 (24.4%) students out of the total sample who could be classified as belonging to the soft drug group.

The hard drug group was made up of those students who had answered question 10 in the questionnaire which requests for information on the types of hard drugs used (See Appendix A). In this study, 'hard drugs' refers to opium, cannabis, morphine, heroin, sedative/barbiturates, pep pills/amphetamines, benzodiazepines and other tranquillisers. Based on this classification, the hard drug group was made up of those students who have had experience in taking any of the hard drugs mentioned above. The hard drug group included the students who combined using both the soft drugs and the hard drugs. This means that those students who used hard drugs and cigarettes, hard drugs and alcohol, and hard drugs, cigarettes and alcohol, were included in the hard drug group only. On this basis of the classification, there were 35 (2.97%) students out of the total sample of 1178 who could be classified as belonging to the hard drug group.

4.0 RESULTS

The results are presented under the following three main sections:-

- o General Patterns of Substance-Use
- o Social Factors Related to Substance-Use
- o Psychological Factors Related to Substance-Use

4.10 GENERAL PATTERNS OF SUBSTANCE-USE

Three main aspects of the general patterns of substance-use will be discussed in this section. The first aspect is concerned with the overall pattern of substance-use for the full sample, while the second aspect is concerned with a more detailed and separate analysis of the patterns of the use of soft and hard drugs. The last aspect that will be discussed in this section is concerned with the analysis of the relationship between the use of hard drugs and the use of cigarettes and alcohol.

4.11 PATTERN OF SUBSTANCE-USE: FULL SAMPLE

Table 1 below presents the patterns of substance-use for the full sample. Note that the term hard drugs used in this table is the same as defined earlier and a specific listing of the various types of drugs under this category is given in Table 10.

An examination of Table 1 shows that about 27% of the students used some form of substance and that alcohol is the most widely used substance followed by cigarettes. It should be

TABLE 1 PATTERN OF SUBSTANCE-USE

Categories	n	%
Not using any substance	855	72.6
Alcohol only	169	14.3
Cigarettes only	80	6.8
Alcohol and cigarettes	39	3.3
Alcohol, cigarettes and hard drugs	14	1.2
Hard drugs only	10	0.8
Alcohol and drugs	9	0.8
Cigarettes and drugs	2	0.2
Total	1178	100.0

pointed out that alcohol and cigarettes may also be used by the students in conjunction with the use of other substances. Out of 323 students who used some form of substance, a total of 35 students (10.8%) reported using drugs either on its own or in conjunction with alcohol and cigarettes.

In the next two sections (sections 4.12 and 4.13) a more detailed analysis of the use of soft drugs (cigarettes and alcohol) and the use of hard drugs will be discussed.

4.12 PATTERNS OF SOFT DRUG USE

In this section, separate analyses are provided for students using soft drugs such as cigarettes and alcohol. Note that students in the smoking subgroup may use cigarettes on its own or in combination with any other substances. Similarly, students in the drinking subgroup may also use alcohol on its own or in combination with any other substances. In view of this, a student may belong to both the smoking and drinking subgroups. In other words, membership in these two subgroups is not mutually exclusive. As a result of this, 135 out of 323 students (42%) belong to the smoking subgroup, while 231 students (72%) belong to the drinking subgroup.

A. Smoking Subgroup

Three main aspects related to the use of cigarettes will be discussed in this section - the frequency of cigarette use, the age of initiation, and the relationship between frequency of cigarette use and age of initiation.

I. Frequency of Cigarette Use

Table 2 presents the frequency of cigarette use by students in the smoking subgroup. An examination of the data presented in Table 2 reveals that only about 9% of the 135 students used cigarettes on a regular basis, while the majority of students (about 58%) are only occasional users of cigarettes. It is interesting to note that about 33% of these students reported that they smoked before but are currently not smoking.

II. Age of Initiation

Table 3 presents the age when students started to smoke. Forty six percent of the students reported that they started smoking at the age of 16 and above, while 32% reported they started smoking between the age of 13 to 15.

III. The Relationship Between Frequency of Smoking and Age of Initiation

For statistical reasons, data for the two age groups under the age of 13 had to be combined in Table 4. Similarly, the levels of frequency of use "Rarely" and "Once In A While" had to be combined. The obtained value of 9.06 for X^2 is not significant at the 0.05 level. This means that there is no significant relationship between the age when students began smoking and the frequency of cigarette use.

TABLE 2 FREQUENCY OF CIGARETTE USE

Frequency of Use	n	%
Regularly	12	8.9
Once in a while	36	26.7
Rarely	43	31.8
Smoked before	44	32.6
Total	135	100.0

TABLE 3 AGE STARTED SMOKING

Age Started Smoking	n	%
Before 10 years	11	9.3
10 to 12 years	15	12.7
13 to 15 years	38	32.2
16 years and above	54	45.8
Total	118	100.0

TABLE 4 RELATIONSHIP BETWEEN THE FREQUENCY OF SMOKING AND AGE OF INITIATION

Age of Initiation	Frequency			Total
	Regularly	Occasionally	Smoked Before	
Before 13 years	3 (2.6)	9 (7.6)	14 (11.9)	26 (22.1)
13 to 15 years	3 (2.5)	22 (18.6)	13 (11.0)	38 (32.1)
16 and above	5 (4.2)	37 (31.4)	12 (10.2)	54 (45.8)
Total	11 (9.3)	68 (57.6)	39 (33.1)	118 (100.0)

$\chi^2 = 9.06$; $df = 4$; $p > 0.05$
The figures in brackets denote percentages.

TABLE 5 FREQUENCY OF ALCOHOL USE

Frequency of Use	n	%
Regularly	7	3.0
Once in a while	53	22.9
Rarely	149	64.5
Drank before	22	9.6
Total	231	100.0

B. Drinking Subgroup

Three main aspects related to the use of alcohol will be discussed in this section - the frequency of alcohol use, the age of initiation, and the relationship between frequency of alcohol use and age of initiation.

I. Frequency of Alcohol Use

Table 5 presents the frequency of alcohol use by students in the drinking subgroup. An examination on the data presented in Table 5 reveals that only 3% of the 231 students used alcohol on a regular basis. In contrast to the smoking subgroup, about 10% of the students reported that they had used alcohol but currently do not drink. The results in Table 5 also indicate that the majority of the students used alcohol occasionally. This finding is similar to that for the use of cigarettes.

II. Age of Initiation

Table 6 presents the age when students started to drink. Data presented in Table 6 are similar to that for the Smoking Subgroup. Forty-nine percent of the students reported that they started drinking at the age of 16 and above, while about 30% reported they started drinking between the age of 13 to 15.

III. The Relationship Between Frequency of Drinking and Age of Initiation

Table 7 presents the relationship between the frequency of

TABLE 6 AGE STARTED DRINKING

Age Started Drinking	n	%
Before 10 years	19	9.6
10 to 12 years	23	11.6
13 to 15 years	59	29.8
16 years and above	97	49.0
Total	198	100.0

TABLE 7 THE RELATIONSHIP BETWEEN THE FREQUENCY OF ALCOHOL USE AND THE AGE OF INITIATION

Age of Initiation	Frequency		Total
	Currently Drinking	Drank Before	
Before 13 years	38 (90.5)	4 (9.5)	42
13 to 15 years	49 (83.0)	10 (17.0)	59
16 years and above	94 (96.9)	3 (3.1)	97
Total	181 (91.4)	17 (8.6)	198 (100.0)

$X^2 = 9.02$; $df = 2$; $p < 0.05$

The figures in brackets denote percentages

alcohol use and the age of initiation. For statistical reasons, it was necessary to combine the data for the two age groups before 13 years. Similarly, it was necessary to combine the data for frequency of alcohol use resulting in only two levels, namely, "Currently Drinking" and "Drank Before".

The X^2 value of 9.02 presented in Table 7 is significant at the 0.05 level indicating that there is a relationship between the age when students started alcohol use and the frequency of its use. More specifically, the data in Table 7 shows that a larger proportion of students who started drinking early have reported that they are no longer drinking. This implies that the majority of students who started drinking when they were 16 or above are still currently drinking.

4.13 PATTERNS OF HARD DRUG USE

Three main aspects related to the use of hard drugs will be discussed in this section - the frequency of hard drug use, the age of initiation, as well as the pattern of the use of hard drugs. It should be stressed that the findings in this section are at the best tentative in view of the small sample size involved.

A. Frequency of Hard Drug Use

Table 8 presents the frequency of hard drug use by students in the Hard Drug group. An examination on the data presented in Table 8 reveals that only about 8% of the 26 students used hard drugs on a regular basis. It is interesting to note that about

TABLE 8 FREQUENCY OF HARD DRUG USE

Frequency Of Use	n	%
Regularly	2	7.7
Once in a while	4	15.3
Rarely	10	38.5
Used before and not now	10	38.5
Total	26	100.0

TABLE 9 AGE STARTED TAKING DRUGS

Age Started Taking Drugs	n	%
Before 10 years	3	12.5
10 to 12 years	1	4.2
13 to 15 years	6	25.0
16 years and above	14	58.3
Total	24	100.0

38% of the students reported that they used hard drugs before but are currently not using. In general, however, a large proportion of them (about 54%) are light users of hard drugs.

B. Age of Initiation

Table 9 presents the age when students started to use hard drugs. A majority of the students (about 58% reported that they started using hard drugs at the age of 16 and above, while a quarter of them (25%) reported they started using hard drugs between the age of 13 to 15.

C. Pattern of Drug Use

There are two main aspects in the analyses presented in this section. The first is concerned with the type of drug used, and the second is concerned with mono and poly drug use.

I. Types of Hard Drugs Used

Table 10 presents the types of hard drugs used by the students in this sample. Note that the total number of reports on the type of drugs used is 78 and not 35 since each student can report the use of more than one type of drugs. An examination of the data in Table 10 reveals that tranquillisers including benzodiazepines are the most widely used substances reported by the students in this subgroup. This is followed by cannabis which is used by about 31% of these students.

II. Pattern of Mono/Poly Drug Use

Table 11 and Table 12 present the patterns of monodrug use

TABLE 10 TYPES OF DRUGS USED

Drug Type	n	%
Benzodiazepines	14	40.0
Other Tranquillisers	16	45.7
Cannabis	11	31.4
Sedative/Barbiturates	10	28.6
Pep Pills	8	22.9
Opium	7	20.0
Morphine	6	17.1
Heroin	6	17.1
Total	78	-

TABLE 11 PATTERNS OF MONO DRUG USE

Drug Type	n	%
Benzodiazepines	7	29.2
Other Tranquillisers	7	29.2
Cannabis	5	20.8
Pep pills/Amphetamines	2	8.3
Heroin	1	4.2
Opium	1	4.2
Sedative/Barbiturates	1	4.1
Total	24	100.0

TABLE 12. PATTERN OF POLYDRUG USE

Drug Type	n	%
Opium and cannabis	1	20.0
Morphine and barbiturates	1	20.0
Barbiturates and other tranquilliser	1	20.0
Barbiturates, pep pills/amphetamines and other tranquillisers	1	20.0
Barbiturates, benzodiazepines and other tranquillisers	1	20.0
Total	5	100.0

and polydrug use respectively. Note that 24 out of 35 students using hard drugs are monodrug users. Data presented in Table 11 on the pattern of monodrug use reveals that benzodiazepines and other tranquillisers are the most commonly used drugs reported by the students in this sample. The next most commonly used drug is cannabis. Cannabis is considered an illegal drug, while benzodiazepines and other tranquillisers are prescription drugs.

Data presented in Table 12 is based on a very limited sample and as such it is difficult to draw any conclusions on the pattern of polydrug use of the students.

4.14 RELATIONSHIP BETWEEN THE USE OF CIGARETTES AND ALCOHOL TO THE USE OF HARD DRUGS

In this section, the relationship between the use of cigarettes and the use of hard drugs, and the relationship between the use of alcohol and the use of hard drugs are discussed separately.

A. Relationship Between the Use of Cigarettes and the Use of Hard Drugs

In this section, the relationship between the students' use of cigarettes and their use of hard drugs is presented.

More specifically, the relationship between the frequency of smoking and the use of hard drugs, and the relationship between the use of cigarettes and the pattern of hard drugs used are discussed.

I. The Relationship Between the Frequency of Smoking and the Use of Hard Drugs

For statistical reasons, data for the four levels of frequency of smoking 'Regularly', 'Once in a while', 'Rarely', and 'Smoked before but not now' had to be combined. The resulting levels of frequency of smoking are: "Smoking" and "Do Not Smoke".

In Table 13, the obtained value of 37.37 for X^2 is significant 0.01 level, indicating that there is a relationship between the frequency of smoking and the use of hard drugs. More specifically, a large proportion (46%) of students who reported using hard drugs, also indicated that they used cigarettes. In contrast only 10% of students who did not use hard drugs reported that they smoked. These results indicate that there is a close relationship between the use of hard drugs and the use of cigarettes.

II. The Relationship Between Smoking and the Pattern of Hard Drug Use

The examination of the relationship between smoking and the pattern of hard drug use is limited by the sample available. However, out of 16 students who smoked and used hard drugs, 4(25%) of them were using cannabis and 3 (19%) of them were using benzodiazepines.

B. Relationship Between the Use of Alcohol and the Use of Hard Drugs

In this section, the relationship between the students' use

TABLE 13 THE RELATIONSHIP BETWEEN THE FREQUENCY OF CIGARETTE USE AND THE USE OF HARD DRUGS

Use of Hard Drugs	Frequency Of Cigarettes Use		Total
	Smoking	Do Not Smoke	
Using Hard Drugs	16 (45.7)	19 (54.3)	35
*Not Using Hard Drugs	119 (10.1)	1024 (89.9)	1143
Total	135 (11.5)	1043 (88.5)	1178 (100.0)

$X^2 = 37.37$; $df = 1$; $p < 0.01$

*This group includes the soft drugs users and the non users. The figures in brackets denote percentages

TABLE 14 THE RELATIONSHIP BETWEEN THE FREQUENCY OF ALCOHOL USE AND THE USE OF HARD DRUGS

Use of Hard Drugs	Frequency of Alcohol Use		Total
	Drinking	Do Not Drink	
Using Hard Drugs	23 (69.7)	10 (30.3)	33
*Not Using Hard Drugs	208 (18.2)	935 (81.8)	1143
Total	231 (19.7)	945 (80.3)	1176 (100.0)

$X^2 = 53.92$; $df = 1$; $p < 0.01$

*This group includes the soft drug users and the non-users. The figures in brackets denote percentages

of alcohol and their use of hard drugs is presented. More specifically, the relationship between the frequency of drinking and the use of hard drugs, and the relationship between the use of alcohol and the pattern of hard drug use are discussed.

I. The Relationship Between the Frequency of Alcohol Use and the Use of Hard Drugs

For statistical reasons, data for the four levels of frequency of drinking 'Regularly', 'Once in a while', 'Rarely', and 'Smoked before but not now' had to be combined. This result in only two categories, namely, 'Drinking' and 'Do Not Drink' in Table 14.

The obtained value of 53.92 for X^2 is significant at the 0.01 level. The data suggest that there is a relationship between the frequency of drinking and the use of hard drugs. In other words the majority (69.7%) of students who reported using hard drugs also reported using alcohol. In contrast only 18% of students not using hard drugs reported that they used alcohol.

II. The Relationship Between the Use of Alcohol and the Type of Hard Drugs Used

The examination of the relationship between pattern of hard drug use and drinking shows that out of 23 students who used both alcohol and hard drugs, 6(26%) of them were using tranquilliser and 4(17%) of them were using cannabis.

In the study of the relationship between the use of cigarettes and alcohol to the use of hard drug, it was found that

the majority of the students who used hard drugs generally began with the use of cigarettes or/and alcohol.

4.20 SOCIAL FACTORS

The major differences between students who are involved in drugs and those who were not involved are analysed with respect to five social variables below:-

- o the influence of religious beliefs on daily activities.
- o the school performance.
- o the relationship with father/guardian.
- o the relationship with mother
- o the relationship with other members of the family

4.21 INFLUENCE OF RELIGIOUS BELIEFS ON DAILY ACTIVITIES

The students' responses to the following item 'My religious beliefs have a strong influence on my daily activities' were scored on a five point scale ranging from 'Strongly Agree' to 'strongly disagree'. For the purpose of the analysis shown in Table 15, a value of 5 was assigned to the 'Strongly Agree' response; 4 to the 'Agree' response; 3 to the 'Somewhat Agree' response; 2 to the 'Disagree' response and 1 to the 'Strongly Disagree' response.

Table 15 shows the mean score and the standard deviation for each of the three groups. The mean scores and the standard deviations were calculated based on the five point scale assigned

TABLE 15 INFLUENCE OF RELIGIOUS BELIEFS: MEAN SCORES AND STANDARD DEVIATIONS FOR THE USER AND THE NON-USER GROUPS

	Groups		
	Non User	Soft Drug	Hard Drug
Mean	4.19	3.92	3.51
SD	0.72	1.02	1.24

TABLE 16 INFLUENCE OF RELIGIOUS BELIEFS: RESPONSE PATTERN OF THE USER AND THE NON-USER GROUPS

Groups	Religious beliefs have a strong influence				Total
	Strongly Agree	Agree	Somewhat Agree	Disagree and Strongly Disagree	
Non-User	271 (34.1)	427 (53.7)	78 (9.8)	19 (2.4)	795
Hard Drug	8 (22.9)	15 (42.8)	4 (11.4)	8 (22.9)	35
Soft Drug	87 (30.2)	125 (43.4)	52 (18.1)	24 (8.3)	288
Total	366 (32.7)	567 (50.7)	134 (12.0)	51 (4.6)	1118 (100.0)

$X^2 = 61.8$; d.f. = 6; $p < 0.01$
The figures in brackets denote percentages

to the responses. The results shown in Table 15 reveal that generally the students who reported not using any substance tended to agree more with the statement when compared to students who reported using hard drugs. Note, however, that there is larger variability in the responses of individual student using hard drugs to this item. Students using soft drugs tended to hold the opinions which are intermediate between the students in the other two groups.

In order to further examine the response pattern of the three groups to this item, a frequency table was prepared and presented in Table 16. In table 16, the responses 'Disagree' and 'Strongly Disagree' were combined to meet the requirement for the X^2 test.

As indicated in Table 16, the obtained X^2 value is significant at the 0.01 level. This indicates that there are significant differences in the response patterns of the three groups. More specifically an examination of the figures in Table 16 suggests that a relatively larger proportion of students using hard drugs tended to disagree or strongly disagree with the statement "My religious beliefs have a strong influence on my daily activities" when compared to students in the other two groups. In other words, students using hard drugs reported that religious beliefs had a relatively weaker influence on their daily activities. This finding is similar to the trend shown by the data in Table 15.

4.22 SCHOOL PERFORMANCE

The students' responses to the item "During this year, my school performance has been -----" were scored on a five point scale. A value of 5 was assigned to the 'Very Good' response; 4 to the 'Good' response; 3 to the 'Average' response; 2 to the 'Below Average' response and 1 to the 'Poor' response.

The mean score and the standard deviation for each of the three groups of students are presented in Table 17. The data suggest that students using soft drugs tended to have the same school performance as students not using drugs. Students using hard drugs, however, tended to report better mean school performance.

For a more detailed analysis on the response patterns of the three groups to this item, a frequency table was prepared and presented in Table 18. In Table 18, the responses 'Below Average' and 'Poor' were combined for statistical reason.

Table 18 shows that the obtained X^2 of 36.02 is significant at the 0.01 level. This means that there are significant differences in the reported response patterns of the three groups. An examination of the figures in Table 18 reveals that a relatively higher proportion of students using hard drugs tended to report their school performance as either very good or below average/poor when compared to students in the other two groups. Note that this appears to be different from the conclusion based on the data presented in Table 17. On closer examination,

TABLE 17 SCHOOL PERFORMANCE: MEAN SCORES AND STANDARD DEVIATIONS FOR THE USER AND THE NON-USER GROUPS

	Groups		
	Non User	Soft Drug	Hard Drug
Mean	3.23	3.21	3.38
SD	0.75	0.85	1.27

TABLE 18 SCHOOL PERFORMANCE: RESPONSE PATTERN OF THE USER AND THE NON-USER GROUPS

Groups	School Performance				Total
	Very Good	Good	Average	Below Average	
Non User	29 (3.6)	230 (28.9)	448 (56.4)	88 (11.1)	795
Hard Drug	8 (23.5)	8 (23.5)	11 (32.4)	7 (20.6)	34
Soft Drug	15 (5.2)	83 (28.8)	149 (51.7)	41 (14.3)	288
Total	52 (4.7)	321 (28.7)	608 (54.4)	136 (12.1)	1117 (100.0)

$X^2 = 36.02$; $df = 6$; $p < 0.01$
The figures in brackets denote percentages

however, the findings are not inconsistent for the results shown in Table 18 merely reflect the larger standard deviation reported for the hard drug users in Table 17.

As in the preceding section, the responses of the students using soft drugs tended to be intermediate to that of the other two groups.

4.23 RELATIONSHIP WITH THE FATHER/GUARDIANS

The students' responses to the item "My relationship with my father/guardians is generally" were scored on a five point scale. On the basis of this scoring, the mean response of each of the three groups are presented in Table 19. Note that a higher mean would indicate a more positive relationship.

The data in this table suggest that students using hard drugs tended to report poorer relationships with their fathers/guardians when compared to students in the other groups. Note, however, that the higher standard deviation of 1.32 implies that there are large variations in the responses of the individual students to this item. This finding is similar to that found for the preceding two variables.

Further analysis on the response pattern of the three groups to the item "My relationship with my father/guardian is generally" was carried out and the result is shown in Table 20. In Table 20, the responses 'Below Average' and 'Poor' were

TABLE 19 RELATIONSHIP WITH FATHER/GUARDIANS: MEAN SCORES AND STANDARD DEVIATIONS FOR THE USER AND THE NON-USER GROUPS

	Groups		
	Non-user	Soft Drug	Hard Drug
Mean	4.48	4.19	3.97
SD	0.72	0.80	1.32

TABLE 20 RELATIONSHIP WITH FATHER/GUARDIAN: RESPONSE PATTERN OF THE USER AND THE NON-USER GROUPS

Groups	Relationship with my Father/Guardian				Total
	Very Good	Good	Average	Below Average & Poor	
Non-User	454 (57.5)	280 (35.4)	42 (5.3)	14 (1.8)	790
Hard Drug	16 (45.7)	10 (28.6)	4 (11.4)	5 (14.3)	35
Soft Drug	105 (37.0)	137 (48.2)	34 (12.0)	8 (2.8)	284
Total	575 (51.9)	427 (38.5)	80 (7.2)	27 (2.4)	1109 (100.0)

X² = 62.50; df = 6; p < 0.01
The figures in brackets denote percentages

combined in order to satisfy the statistical requirements for the X^2 test.

As indicated in Table 20, the obtained X^2 value is significant at the 0.01 level. This suggests that there are significant differences in the response patterns of the three groups. More specifically, the data suggest that a relatively smaller proportion of the students using hard drugs tended to have very good/good relationship with the father/guardian when compared with the other two groups. In other words, a larger proportion of the students using hard drugs tended to have below average or poor relationship with father/guardian.

There are indications that, in general, students using soft drugs tended to report slightly better relationship with father/guardians than students using hard drugs. As with the preceding variables, the student-father relationship of the soft drugs users is not as good as that of the non drug users. This finding is similar to that presented in Table 19.

4.24 RELATIONSHIP WITH MOTHER

A five-point response scale was used in scoring the students' responses to the item " My relationship with my mother is generally". Similar to the last item, a value of 5 was assigned to the 'Very Good' response, 4 to the 'Good' response; 3 to the 'Average' response; 2 to the 'Below Average' response and 1 to the 'Poor' response.

Table 21 presents the mean score and the standard deviation for each of the three groups. An examination of the results in Table 21 reveals that students using hard drugs tended to report poorer relationship with their mothers when compared to students in the other two groups. Note that there is larger variability in the responses of individual student using hard drugs to this item when compared to the students in the other two groups. However, this difference in variability is smaller than that found for the preceding three variables.

To further examine the response patterns of the three groups to the item "My relationship with my mother is generally", a X^2 test was performed and the results are presented in Table 22. For statistical reasons, the responses 'Below Average' and 'Poor' were combined.

Table 22 shows that the obtained X^2 of 29.30 is significant at 0.01 level. This means that there are significant differences in the reported response patterns of the three groups. More specifically, a larger proportion of the students using hard drugs reported poorer relationship with their mothers when compared to the other two groups. In other words, a larger proportion of students using hard drugs tended to have below average and poor relationship with their mothers. In general, the perceived student-mother relationship of soft drugs users is in between that for the other two groups.

TABLE 21 RELATIONSHIP WITH MOTHER: MEAN SCORES AND STANDARD DEVIATIONS AND FOR THE USER AND THE NON-USER GROUPS

	Groups		
	Non User	Soft Drug	Hard Drug
Mean	4.67	4.49	4.32
S.D.	0.60	0.68	0.97

TABLE 22 RELATIONSHIP WITH MOTHER: RESPONSE PATTERN OF THE USER AND THE NON-USER GROUPS

Groups	Relationship with Mother				Total
	Very Good	Good	Average	Below Average and Poor	
Non User	562 (71.5)	198 (25.2)	19 (2.4)	7 (0.9)	786
Hard Drug	19 (55.9)	10 (29.4)	2 (5.9)	3 (8.8)	34
Soft Drug	164 (57.5)	99 (34.7)	19 (6.7)	3 (1.1)	285
Total	745 (67.4)	307 (27.8)	40 (3.6)	13 (1.2)	1105 (100.0)

$X^2 = 29.30$; $df = 6$; $p < 0.01$
The figures in brackets denote percentages

4.25 RELATIONSHIP WITH OTHER FAMILY MEMBERS

The students' responses to the item "My relationship with other family members is generally" were scored on a five point scale, similar to that used in the preceding items.

Table 23 presents the mean score and the standard deviation for each of the three groups. The results in Table 23 reveals that the students using hard drugs tended to report poorer relationship with other members of the family when compared to the other two groups. Similar to the preceding variables, there is also larger variability in the response of individual students using hard drugs to this item.

The response patterns of the three groups to the item "My relationship with other members of my family is generally" were further examined using X^2 test. The results are presented in Table 24. In Table 24, the responses 'Below Average' and 'Poor' were combined for statistical reasons.

In Table 24, the X^2 value obtained is significant at 0.01 level. This means that there are significant differences in the reported response patterns of the three groups. More specifically, a relatively larger proportion of the students not using any substances tended to report very good relationship with other family members when compared to the other two groups. On the other hand, the students using hard drugs tended to report below average and poor relationship with other family members when compared to the other two groups.

TABLE 23 RELATIONSHIP WITH OTHER FAMILY MEMBERS: MEAN SCORES AND STANDARD DEVIATIONS FOR THE USER AND THE NON-USER GROUPS

	Groups		
	Non User	Soft Drug	Hard Drug
Mean	4.40	4.27	3.94
S.D.	0.65	0.67	1.06

TABLE 24 RELATIONSHIP WITH OTHER FAMILY MEMBERS: RESPONSE PATTERN OF THE USER AND THE NON-USER GROUPS

Groups	Relationship with other Members				Total
	Very Good	Good	Average	Below Average And Poor	
Non User	384 (48.6)	348 (44.0)	51 (6.5)	7 (0.9)	790
Hard Drug	9 (28.1)	18 (56.3)	1 (3.1)	4 (12.5)	32
Soft Drug	110 (38.9)	139 (49.1)	34 (12.0)	0 (0.0)	283
Total	503 (45.5)	505 (45.7)	86 (7.8)	11 (1.0)	1105 (100.0)

$\chi^2 = 15.45$; $df = 6$; $p < 0.01$
The figures in brackets denote percentages

4.30 PSYCHOLOGICAL FACTORS

As indicated earlier, the psychological variables in this study include the following:-

- o self-concept as measured by the Tennessee Self Concept Scale.
- o locus of control as measured by Rotter's I-E Locus of Control Scale.
- o trait anxiety as measured by Spielberger's State-Trait Anxiety Inventory.
- o psychological needs as measured by Stern's Activities Index.

There are two main aspects in the analyses presented in this section. The first is concerned with preliminary analysis of all the psychological variables in this study. More specifically, the means, standard deviations, and reliabilities for the full sample are presented and discussed. The second aspect is concerned with a comparison of the three groups of students along each of these psychological variables. The three groups of students are the non user group, the hard drug group and the soft drug group as defined in Section 3.0.

4.31 PRELIMINARY ANALYSES

Table 25 and Table 26 present the means, standard deviations, reliabilities and other relevant information for the Tennessee

TABLE 25 COMPARISON OF MEAN, STANDARD DEVIATION AND RELIABILITY
FOR THE TEN TENNESSEE SELF CONCEPT SCALES
WITH NORM GROUP

Scales	N	Mean	Standard	Reliability	T-test (p)
Physical Self	1178	68.67(71.78)*	8.03(7.67)*	0.84(0.87)*	0.001
Moral-Ethical Self	1178	64.06(70.33)	6.60(8.70)	0.85(0.80)	0.001
Personal Self	1178	66.60(64.55)	8.34(7.41)	0.84(0.85)	0.001
Family Self	1178	66.92(70.83)	6.86(8.43)	0.88(0.89)	0.001
Social Self	1178	62.56(68.14)	7.58(7.86)	0.85(0.90)	0.001
Self Criticism	1178	27.99(35.54)	5.41(6.70)	0.79(0.75)	0.001
Identity	1178	118.66(127.10)	13.32(9.96)	0.87(0.91)	0.001
Self-Satisfaction	1178	100.18(103.67)	10.25(13.79)	0.90(0.88)	0.001
Behaviour	1178	109.96(115.01)	12.10(11.22)	0.94(0.88)	0.001
Self-Esteem	1178	328.80(345.57)	31.10(30.70)	0.95(0.92)	0.001

*Mean, Standard Deviation and Reliability for the norm group. The reliability for the norm group was based on test-retest over a two-week period, while the reliability for the student sample in this study was calculated using KR20.

TABLE 26 COMPARISON OF MEAN STANDARD DEVIATION AND RELIABILITY
FOR THE TEN TENNESSEE SELF CONCEPT SCALES WITH
USM GROUP

Scales	N	Mean	SD	Reliability	T-test (p)
Physical Self	1178	68.67(64.66)*	8.03(7.92)*	0.84(0.50)*	0.001
Moral-Ethical Self	1178	64.06(64.09)	6.60(7.76)	0.85(0.52)	NS
Personal Self	1178	66.60(63.84)	8.34(8.13)	0.84(0.47)	0.001
Family Self	1178	66.92(65.02)	6.86(7.31)	0.88(0.50)	0.001
Social Self	1178	62.56(60.12)	7.58(7.79)	0.85(0.50)	0.001
Self Criticism	1178	27.99(38.81)	5.41(5.23)	0.79(0.50)	0.001
Identity	1178	118.66(113.97)	13.32(13.34)	0.87(0.50)	0.001
Self-Satisfaction	1178	100.18(98.38)	10.25(12.96)	0.90(0.51)	0.001
Behaviour	1178	109.96(104.38)	12.10(11.52)	0.94(0.31)	0.001
Self-Esteem	1178	328.80(316.3)	31.10(32.47)	0.95(0.49)	0.001

*Means, Standard Deviations and Reliability for the university students. The reliability for the university students was based on a test-retest on a period of 16 weeks, while the reliability for the school students was calculated using KR20.

Self Concept Scale. Similar data for the locus of control, trait anxiety and psychological needs are presented in Tables 27, 28 and 29, respectively.

A. Self Concept

In Table 25, the normative data presented in brackets are taken from the manual (Fitts, 1965). The norm group was a US sample (n = 626) drawn from various parts of the country with ages ranging from 12 to 68. Approximately equal numbers from both sexes, Negro and White subjects, representing all educational, social and economic levels were used.

An examination of the data in Table 25 shows that there are significant differences between the students in this study and the norm group on all the ten scales of the Tennessee Self Concept Scale. With the exception of the personal self scale, the students' means for all the other scales are lower than those for the norm group. Of particular interest, the means for the following scales: the moral ethical self, the social self, the self criticism, the identity, the behaviour and the self esteem are more than five units lower than those for the norm group.

In Table 25, the KR₂₀ reliabilities obtained in the present study show that the scales have quite a high internal consistency.

The data from the present study are also compared with those obtained from a group of university students (n = 562). (Choo and Maznah, 1983). The results are shown in Table 26.

An examination of Table 26 shows that except for the Moral Ethical Self and Self Criticism, the high school students scored significantly higher in the other eight scales of the Tennessee Self Concept indicating that, generally, these students have better self concept when compared to the university students. However, the high school students appear to be less critical of themselves when compared to the university students. This is reflected in the low mean of 27.99 for Self Criticism as compared to a mean of 38.81 for the university sample. This low score for the high school students indicates that they probably are more defensive.

B. Locus of Control

The relevant data are presented in Table 27. Note that the normative data presented in brackets are taken from Hsieh, Shybut and Losof(1969), and it is based on a group of high school students consisting of 133 males and 108 females.

An examination of Table 27 shows that there are no significant differences between the mean obtained in this study and that for the normative data. However, there are some indications that the Malaysian high school students tended to be slightly more external (as reflected in the higher means) than the high school students used in the normative group, implying that the Malaysian high school students in this sample tended to perceive their behaviours being influenced more by external forces rather than by internal attributes.

TABLE 27 MEANS, STANDARD DEVIATIONS AND RELIABILITIES
FOR LOCUS OF CONTROL

Group	N	Mean	SD	Reliability	T-test (p)
Present sample	997	8.93	3.28	0.72	
Norm	241	8.58	3.89	-	NS

TABLE 28 MEANS, STANDARD DEVIATIONS AND RELIABILITIES
FOR TRAIT ANXIETY

Group	N	Mean	SD	Reliability	T-test (p)
Present student sample	928	42.71	7.70	0.95	-
Norm Group					
Males	190	39.37	9.40	0.89	0.01
Females	187	41.61	11.29	0.92	0.01

C. Trait Anxiety

In Table 28, the normative data are taken from the manual (Spielberger, 1970). The data are based on a group of high school students consisting of 187 females and 190 males.

Separate normative data are presented for the male and the female groups because the normative data for the combined group are not available. As a result, the mean for the students in the present sample are compared with those for the females as well as the males in the normative group.

An examination of Table 28 shows that the mean anxiety level of the present sample is significantly different from the means of the female as well as the male normative groups. Data reveal that the high school students of the present sample are more anxious than the male norm and the female norm.

D. Psychological Needs

In Table 29, the normative data presented in brackets are taken from Stern (1969). The norm group consisted of 1076 U.S. students drawn from 23 colleges.

An examination of Table 29 shows that the means of nine of the twelve scales for the present student sample are significantly different from those for the following scales: achievement, dominance, fantasied-achievement, harm-avoidance, impulsiveness and supplication. The direction of the differences indicates that the Malaysia high school students appear to be less achievement oriented, more tolerant, more subject to

TABLE 29 MEANS, STANDARD DEVIATIONS AND RELIABILITIES FOR PSYCHOLOGICAL NEEDS

Stern Activities Index	N	Mean	SD	Reliability	T-Test (p)
Achievement	929	5.17(6.33)	2.10(2.24)	0.77(.073)	0.001
Affiliation	949	6.24(6.709)	2.15(2.72)	0.86(0.81)	0.001
Aggression	954	3.92(4.09)	1.50(2.37)	0.69(0.69)	NS
Dominance	946	3.62(6.04)	2.14(2.51)	0.73(0.77)	0.001
Exhibitionism	948	3.93(3.83)	2.40(2.56)	0.77(0.75)	NS
Fantasied-Achievement	949	4.77(3.34)	2.31(2.06)	0.70(0.72)	0.001
Harm-Avoidance	946	7.32(4.93)	2.18(2.40)	0.77(0.67)	0.001
Impulsiveness	941	3.29(5.61)	1.77(2.06)	0.65(0.64)	0.001
Nurturance	945	6.93(6.50)	2.10(2.38)	0.85(0.73)	0.001
Sensuality	940	4.89(4.76)	1.58(1.86)	0.73(0.53)	NS
Supplication	942	7.32(6.24)	1.48(2.12)	0.83(0.67)	0.001
Understanding	937	7.37(6.98)	1.94(2.34)	0.86(0.74)	0.001

fantasied-achievement, take less risk, more deliberate, more dependent on others when compared to the normative group.

The reliabilities for the 12 scales in the present study are obtained by KR₂₀'s and they are generally moderate and similar to that found for the normative group.

4.32 A COMPARISON OF THE NON-USER GROUP WITH THE USER GROUPS ALONG THE PSYCHOLOGICAL VARIABLES

This section focusses on a comparison of the students who did not use drugs (the non-users) with the students who used drugs (the soft drug users and the hard drug users) in terms of the psychological variables, namely, the self concept, the locus of control, the trait anxiety and the psychological needs.

A. The Self Concept

The three groups of students were compared along the ten self concept scales as measured by the Tennessee Self Concept Scale. These ten scales are the physical self, the moral ethical self, the personal self, the family self, the social self, the identity, the self-satisfaction, the behaviour, the self-criticism and the self-esteem.

Table 30 presents the means, the standard deviations and the results of ANOVA. Data presented in the table reveal that at the 0.01 level, there are significant differences between the three groups on four of the ten Tennessee Self Concept Scales, namely, the moral-ethical self, the family self, the self criticism, and

TABLE 30 MEAN AND STANDARD DEVIATIONS OF THE TENNESSEE SELF CONCEPT SCALE (TSCS) FOR THE USER AND NON-USER GROUPS

TSCS Score	Non User		Soft Drug		Hard Drug		F-test (p)
	Mean	SD	Mean	SD	Mean	SD	
Physical Self	68.34	8.07	68.40	7.91	66.89	8.17	NS
Moral Self	64.59	6.61	62.56	6.26	63.39	7.36	p 0.01
Personal Self	66.73	8.35	66.31	8.38	65.71	7.77	NS
Family Self	67.25	6.80	66.25	6.92	64.46	6.89	0.01
Social Self	62.36	7.47	62.92	7.70	64.40	8.96	NS
Self Criticism	27.32	5.22	29.71	5.34	30.09	6.88	p 0.01
Identity	118.7	13.25	118.58	13.39	116.40	14.81	NS
Self-Satisfaction	100.5	10.07	99.97	10.59	102.74	11.69	NS
Behaviour	110.4	12.15	107.89	11.60	105.60	12.16	p 0.01
Self Esteem	329.5	31.07	326.44	31.06	324.74	31.66	NS

the behaviour. The trend of the differences indicates that the students using hard drugs tended to score lower on the moral ethical scale when compared to the non-users but somewhat higher when compared to the soft drugs users. With regard to the family self scale and the behaviour scale, the hard drug users scored lowest among the three groups. These students, however, score highest for the self-criticism scale.

These results suggest that students taking hard drugs tended to have lower opinions regarding their moral worth, and their worth or value as a family member. They also tended to have poorer perception of their own behaviour or the way they functioned. On the other hand, the high score on self criticism indicates that they were more critical of their own weaknesses or were less defensive than other students.

There is no significant difference between the three groups with regard to the overall self concept score, that is the self esteem scale. However, from Table 30, the trend indicates that the non-users scored the highest in self esteem, followed by the soft drug users and finally the hard drug users.

B. Locus of Control

Table 31 presents the relevant data comparing the means of the three groups on the variable. Locus of control as indicated in the table, there are no significant differences between these means at the 0.05 level. However, the trend in the differences indicates that the students using hard drugs tended to be more

TABLE 31 MEANS AND STANDARD DEVIATIONS FOR LOCUS OF CONTROL OF THE USER AND NON-USER GROUPS

	Group			F-test
	Non User	Soft Drug	Hard Drug	
Mean	8.81	9.23	9.42	NS
SD	3.25	3.28	3.96	

TABLE 32 MEANS AND STANDARD DEVIATIONS OF TRAIT ANXIETY FOR THE USER AND NON-USER GROUPS

	Group			F-test
	Non User	Soft Drug	Hard Drug	
Mean	42.88	42.33	41.89	NS
SD	7.54	8.03	9.11	

external than the non-users implying that the hard drug users tended to perceive their behaviours as being influenced more by external forces rather than by themselves.

C. Trait Anxiety

Table 32 presents the mean scores for trait anxiety for the three groups of students. As indicated in this table, there are no significant differences between these mean scores at the 0.05 level of significance. However, the results in Table 32 shows that the non user has the highest trait-anxiety, followed by the soft drug user, and the hard drug user has the lowest trait-anxiety.

D. Psychological Needs

The relevant data for this section are presented in Table 33 which shows that there are significant differences between the three groups of students along eight of the twelve Stern's Activities Index Scales, namely, achievement, aggression, dominance, exhibitionism, fantasied-achievement, harm-avoidance, impulsiveness and sensuality.

More specifically, the results reveal the following differences:-

Achievement: Students using hard and soft drugs were more achievement oriented, that is, they tended to strive harder to achieve success or to prove their worth through personal effort.

Aggression: Students using drugs, especially those using hard drugs tended to be more aggressive or indifferent to the feelings of others, either directly or indirectly.

Dominance: Students using drugs are were more manipulative, assertive and less tolerant.

TABLE 33 MEANS AND STANDARD DEVIATIONS FOR THE STERN
ACTIVITIES INDEX SCALES FOR THE USER AND NON-
USER GROUPS

Scale	Non-User		Soft Drug		Hard Drug		F test (p)
	Mean	SD	Mean	SD	Mean	SD	
Achievement	5.01	2.04	5.69	2.19	5.50	2.61	0.01
Affiliation	6.27	2.18	6.11	2.06	6.41	2.11	NS
Aggression	3.77	1.35	4.31	1.73	4.68	2.40	0.01
Dominance	3.36	1.97	4.36	2.45	4.76	2.41	0.01
Exhibitionism	3.78	2.36	4.29	2.45	5.29	2.47	0.01
Fantasied- Achievement	4.48	2.25	5.59	2.30	6.05	2.31	0.01
Harm-Avoidance	7.57	2.09	6.61	2.19	6.20	2.99	0.01
Impulsiveness	3.15	1.70	3.61	1.81	4.65	2.68	0.01
Nurturance	7.00	2.03	6.71	2.30	7.14	2.26	NS
Sensuality	4.72	1.53	5.36	1.63	4.65	1.68	0.01
Supplication	7.36	1.42	7.23	1.63	7.14	1.98	NS
Understanding	7.35	1.91	7.40	2.03	7.67	1.83	NS

- Exhibitionism: Students using drugs and especially those using hard drugs liked to show off and to seek attention.
- Fantasied-Achievement: Students using drugs tended to daydream more about achieving fame, power and public recognition.
- Harm-Avoidance: Students using drugs tended to take risk i.e. they had a careless or indifferent attitude towards danger, disregard for personal safety, thrill-seeking.
- Impulsiveness: Students taking hard drugs in particular were rash, impulsive or impetuous.
- Sensuality: Students using soft drugs were the most sensual, i.e. they had a need for sensory stimulation and gratification and were pre-occupied with aesthetic experience. On the other hand, both the non-users and students using hard drugs were less sensual in nature.

In brief, the non user group scored significantly lower than the soft drug group and the hard drug group along achievement, aggression, dominance, exhibitionism, fantasied achievement, impulsiveness and the sensuality dimensions but scored significantly higher on the harm-avoidance. The soft drug group scored significantly higher than the non user group on achievement, and lower than the hard drug group on impulsiveness.

In other words, the drug users tended to be more achieving, impulsive, aggressive, dominating, attention seeking and to engage in fantasied-achievement and take greater risks. There are also indication that the hard drug users were much more impulsive when compared to the soft drug users.

5.0 SUMMARY OF FINDINGS

A. The major findings related to the general pattern of substance use for the full sample are provided below. For purposes of the analyses in this study, a distinction is made between cigarettes and alcohol which are labelled as soft drugs and other substances which are labelled as hard drugs. Therefore in this study 'soft drugs' refer to the socially accepted substances like alcohol and cigarettes. The term 'hard drugs' is used to refer to both prescription drugs available from either legal or illegal sources (tranquilliser, barbiturates and stimulants) as well as illegal drugs (opium, cannabis, heroin).

1. Of the 1178 students in this sample, 323 students (27%) reported the use of one or more substances (both soft and hard drugs). The number of students who reported that they used prescription or illegal drugs either on their own or in conjunction with alcohol and cigarettes is 35(3%). This means that the majority of students (73%) were not involved in the use of any of these substances.
2. Alcohol is the most widely used substance followed by cigarettes. Some 14% of the 1178 students in this sample reported the use of alcohol while an additional 7% reported smoking. These figures do not include students who use alcohol/cigarettes in combination with other substance.

3. An analysis of the drinking subgroup reveals that only 3% of the 231 students drank alcohol on a regular basis. The majority of students, however, were occasional users of alcohol while some 10% of them reported that they had now given up the use of alcohol.
4. As with the smoking subgroup, about 79% of these students started drinking at the age of 13 or above with 49% of the subgroup starting at age 16 or above.
5. An examination of the relationship between age of initiation and frequency of drinking indicates that a larger proportion of students who started the use of alcohol at the age of 16 or above had continued drinking.
6. An analysis of the smoking subgroup, which included 135 students who used cigarettes on its own or in conjunction with other substances, reveals that only 9% were regular users. The majority were occasional users of cigarettes. It is interesting to note that about 33% of these students reported that they had currently stopped smoking.
7. Seventy-eight percent (78%) of these 135 students began smoking at the age 13 or above with about 46% of them began to smoke at the age of 16 or above.

8. There is no relationship between the age of initiation of smoking and the reported frequency of smoking.
9. The analysis of the pattern of hard drug use is limited by the small sample size, but the data suggests that about 8% of these students were regular users of hard drugs. The majority of these students were occasional users of hard drugs (54%) or had currently given up this practice (38%). This finding seems to suggest that a large number of students were experimenters.
10. As with the use of soft drugs, some 83% of these students began using hard drugs at the age of 13 and above with some 58% of them beginning at the age of 16 and above.
11. The most popular drugs used by students were tranquillisers (including benzodiazepines) - which are prescription drugs - followed by cannabis which is an illegal drug in Malaysia.
12. There is a significant relationship between the use of hard drugs and the use of cigarette. A similar significant relationship was also noticed between the use of hard drugs and the use of alcohol. In both cases a relatively higher proportion of students who used hard drugs also smoked and/or drank. Furthermore, there is evidence to suggest that there is a developmental

trend in the use of hard drug, i.e. those students who used hard drug generally began with the use of cigarettes/alcohol.

B. Social Factors Related To Drug Use

In this section the major differences along the five social factors or dimensions between the three groups of drugs users are presented. The three groups of drug users are the non-users, those using soft drugs and those using hard drugs.

13. A relatively larger proportion of students using drugs, especially hard drugs, did not feel that their religious beliefs had a strong influence on their daily activities when compared with students who did not use any substance.
14. A relatively lower proportion of students using hard drugs reported average school performance. In other words, the school performance of these students was either very good or below average - a pattern which is significantly different from that for the other two groups.
15. A relatively lower proportion of students using hard drugs tended to report very good/good relationships with their father/guardian, mother, and other members of the family when compared to the students in the other two groups.

C. Psychological Variables Related To Drug Use

In this section the major differences along the four psychological factors or dimensions between the three groups of drug users are presented.

16. Significant differences between the means of the three groups of students were found for the following Tennessee Self Concept Scales: Moral Self, Family Self, Self Criticism, and Behaviour. The direction of these differences suggest that students taking hard drugs tended to have lower opinions regarding their own moral worth as well as their worth or value as a family member. These students also tended to have a poorer perception of their own behaviour or the way they functioned and were more critical of their own weaknesses.
17. Although there are no significant differences between the means of the three groups of students on locus of control, there are indications that students using hard drugs tended to be more external than non-users, that is, the hard drugs users tended to perceive their behaviour as being influenced more by external factors rather than by themselves.
18. Similarly, although no significant differences were obtained for the trait anxiety measure, there are

indications that hard drug users tended to have a relatively lower level of trait anxiety.

19. The three groups of students differed significantly along eight psychological dimensions: achievement, aggression, dominance, exhibitionism, fantasied achievement, harm-avoidance, impulsiveness and sensuality. Further analyses suggest that the drug users tended to be more achieving, impulsive, aggressive, dominating, attention seeking, and to engage in fantasied achievement. They also tended to take greater risks.

6.0 DISCUSSION

In the discussion of the present findings, particularly in reference to any significant changes in the patterns of drug use among the secondary school children since the 70's, a study reported by Spencer and Navaratnam in 1976 will be referred to. To increase the comparability between the present study which used a sample of Penang upper secondary school children and the study done by Spencer and Navaratnam, only the relevant findings related to their Penang sample of secondary school children will be used.

In their study, Spencer and Navaratnam (1976) noted that the majority of the students in Penang sample were not involved in the use of drugs. The findings of the present study that 73% of the Penang upper secondary school children have never taken any form of soft drugs or hard drugs supported the earlier findings of Spencer and Navaratnam. However, there has been a significant change in the number of those students involved in hard drug use. The 3% found in the present study is lower than the 13.7% that was reported for the 1976 sample. The significant decrease in the percentage of older secondary school children reported taking hard drugs may be due to two factors. Firstly, there has been significant changes in the legal and social environment related to drug abuse since 1976. The severe social and legal sanction against anybody found with illegal drugs (including the illegal use of prescription drugs) as widely published may have affected the way students responded to the questions regarding drug use. More specifically, students might have answered more cautiously or might have provided more socially desirable

answers. Further they might interpret drug use as the illegal use of drugs, rather than the non-medical use of drug which might be considered legitimate. Such a change in perception would strongly influenced the reporting; hence the smaller numbers being recorded. Secondly, students in the 1984 sample were probably better informed about drugs in general so that they were able to discriminate among various kinds of drugs, their legal status, and hence to report more specifically. To what extent these factors might have influenced the way in which students reported the use of drug is not within the scope of this study. Nevertheless, if one assumed that the degree of under reporting was not great, it is quite possible to interpret that there may have been some decrease in the number of students using hard drugs. However, this needs to be further validated.

While there has been a decrease in the percentage of hard drug users since the 1976 study, the pattern in the frequency of use has remained the same. That is, only a small minority of hard drug users were frequent or polydrug users. A greater number of them were occasional monodrug users suggesting that they might have used drugs on a purely experimental basis.

With regard to the pattern of use of soft drugs, since 1976 cigarettes and alcohol have remained as the most commonly used drugs by secondary school students. However, there appears to be a reversal in the reported popularity of alcohol and cigarette use. In 1976, roughly 31% of the upper secondary students in Penang used cigarettes with about 10% of them using alcohol; whereas in 1984, about 20% of the students in the sample used alcohol, and some 11% of them used

cigarettes. The increased and intensive publicity of the dangers of smoking in recent years may have raised the students' awareness of the hazard of smoking and may have contributed to a decrease in popularity of cigarette use relative to that of alcohol.

The relationship between smoking/drinking and hard drug use in 1976 is confirmed in this study. Relatively, a larger proportion of the students using hard drugs tended to smoke and/or drink. In the present study, it was also found that there was a developmental trend in the use of hard drugs. Nearly all the students who used hard drugs generally began with the use of cigarettes/alcohol.

As in 1976, the average age of initiation for smoking and using hard drugs has generally remained at the age of 16 years and above. There was however, a change in the preference of the type of hard drugs reported by the upper secondary students Cannabis(ganja) an illegal drug in Malaysia, was the most popular 'hard drug' in 1976. For the present study, however, tranquillisers, a prescription drug, appear to be the most popular hard drug used by the students. The recent more severe legal enforcement on the supply and demand of illegal drugs may have made cannabis (ganja) not so easily available. In contrast, this change in the legal environment has selectively affected the availability of tranquillisers.

The present findings that drug abuse adolescents tended to report low religiosity and poor relationship with their families concur with similar findings reported by Spencer and Navaratnam (1976). Similarly, the large variability in the school performance of hard

drug users was also noted in the present study. Further, compared to non-users, drug users tended to have a lower general self concept and a lower value on moral-self, family self and behaviour. A similar study done by Choo, Navaratnam and Ward (1982) involving a comparison between non-users and heroin addicts found basically similar differences in self concept. However, there are two differences between the findings of the present study from that of Choo, Navaratnam and Ward (1982). Firstly, in addition to the above three scales found in the present study, significant differences along the physical and personal scales were also reported in their study (1982). Secondly, their study reported greater mean differences for the five significant scales. These differences could be due to the fact that the study by Choo, et al. (1982) compared samples which were more heterogeneous than the sample used in the present study. More specifically, they compared a group of 15 to 35 year old heroin dependents with a similar control group who were non drug users. In contrast, the sample used in the present study consisted of a group of upper secondary students who were relatively a more homogeneous group.

With regard to anxiety level, in contrast to the findings in the 1982 study, the present study did not find any significant difference between the drug users and non-users. However, it should be noted that Choo, Navaratnam and Ward (1982) used a different instrument to measure the anxiety level, thus, making direct comparison with the present study difficult. The present study also tried to relate locus of control with substance-abuse behaviour and found that there was no significant relationship between the two variables. The trend

however, revealed that the drug users, especially the 'hard drug' users tended to be more externally controlled compared to the non-users. Similar trend was reported by Alexander and Dibb (1977), Carman (1977), Jurich and Polson (1984), Obitz, Cooper and Madeiros (1974), Philips et al. (1975) and Urbanski (1984).

Finally, a comparison was made between the non-users and the drug users in terms of the psychological needs. The finding revealed that generally the drug users tended to be more achieving, impulsive, aggressive, dominating, attention seeking, to engage in fantasied-achievement, and take greater risks. Similar trends were reported by Green et al. (1971), Holroyd, Kenneth, and Kahn (1974), Krug and Henry (1974) and Segal (1975).

7.0 CONCLUSION

The present findings that 3% of upper secondary school students were involved in the use of hard drug need to be confirmed in view of the fact that the earlier study has noted a higher figure. Until further studies could provide more information, one should be cautious in interpreting that there has been a decrease in the number of upper secondary students involved in drug abuse.

Further, the present findings with regard to the selected psycho-social variables suggest that these variables could be useful for distinguishing the drug users from the non-users. More specifically, social variables such as family relationship and religiosity, and psychological variables such as self concept and psychological needs have been shown to be significantly related to adolescent substance-abuse behaviour.

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APPENDIX A

SOAL-SELIDIK: DATA LATER-BELAKANG
(QUESTIONNAIRE : BACKGROUND DATA)

Arahan/Instructions: Sila Tandakan pada jawapan yang paling sesuai
(Please circle the most appropriate answer)

1. Ugama saya mempunyai pengaruh yang kuat ke atas hidup saya sehari-hari
(My religious beliefs have a strong influence on my daily activities).

A. Sangat Setuju
(Strongly Agree)

B. Setuju
(Agree)

C. Kurang Setuju
(Somewhat Agree)

D. Tidak setuju
(Strongly Disagree)

E. Sangat Tidak Setuju
(Strongly Disagree)

2. Kemajuan saya di sekolah sepanjang tahun ini adalah
(During this year my school performance has been)

A. Sangat Baik
(Very Good)

B. Baik
(Good)

C. Sederhana
(Average)

D. Tidak Baik
(Below Average)

E. Lemah
(Poor)

3. Pada amnya perhubungan saya dengan bapa/penjaga saya adalah
(My relationship with my father/guardian is generally)

- A. Sangat Baik
(Very Good)
- B. Baik
(Good)
- C. Sederhana
(Average)
- D. Kurang Baik
(Below Average)
- E. Tidak Baik
(Poor)

5. Pada amnya perhubungan saya dengan ahli-ahli lain di dalam
keluarga saya adalah
(My relationship with other members of my family is
generally)

- A. Sangat Baik
(Very Good)
- B. Baik
(Good)
- C. Sederhana
(Average)
- D. Kurang Baik
(Below Average)
- E. Tidak Baik

7. Nyatakan bila anda mula menghisap rokok
(State the time you first started smoking)

- A. Sebelum umur 10 tahun
(Before 10 years old)
- B. 10-12 tahun
(10-12 years)
- C. 13-15 tahun
(13-15 years)
- D. 16 tahun ke atas
(16 years and above)
- E. Tidak berkenaan
(Not applicable)

8. Nyatakan kekerapan anda minum bir atau tuak, minuman keras
(State how often you drink beer or other alcoholic drinks)

- A. Selalu
(Regularly)
- B. Kadangkala
(Once in a While)
- C. Amat Jarang
(Rarely)
- D. Tidak Pernah
(Never)
- E. Dahulu minum tetapi tidak sekarang
(Drank before but not drinking now)

9. Nyatakan bilakah anda mula minum bir atau minuman keras
(State the time you first drank beer or other alcoholic drinks)

- A. Sebelum umur 10 tahun
(Before 10 years old)
- B. 10-12 tahun
(10-12 years)
- C. 13-15 tahun
(13-15 years)
- D. 16 tahun ke atas
(16 years and above)
- E. Tidak berkenaan
(Not Applicable)

10. Tandakan (✓) bertentangan bahan-bahan di bawah yang pernah anda gunakan
(Mark (✓) against the substances listed below which you have used before)

Bahan-bahan	Tanda (✓)
A. Candu (Opium)	
B. Ganja (Cannabis)	
C. Morfin (Morphine)	
D. Heroin (Heroin)	
E. Sedative/Barbiturates	
F. "Pep Pills"/Amphetamines	
G. Valium/Librium/Roche	
H. Other Tranquillisers	

11. Nyatakan bilakah anda mula menggunakan bahan-bahan ini
(State the time period you first used these substances)

- A. Sebelum umur 10 tahun
(Before 10 years old)
- B. 10-12 tahun
(10-12 years)
- C. 13-15 tahun
(13-15 years)
- D. 16 tahun ke atas
(16 years and above)
- E. Tidak Berkenaan
(Not Applicable)

12. Nyatakan kekerapan anda menggunakan bahan-bahan ini.
(State how often you have used these substances)

- A. Selalu
(Regularly)
- B. Kadangkala
(Once in a while)
- C. Amat Jarang
(Rarely)
- D. Tidak menggunakannya lagi
(Not using anymore)
- E. Tidak berkenaan
(Not Applicable)

APPENDIX B

TABLES OF ANALYSIS OF VARIANCE FOR TENNESSEE SELF CONCEPT SCALES:

A. PHYSICAL SELF

SOURCE	DF	SS	MS	F. VALUE	PR>F
Between	2	157.15	78.58	1.22	0.2963
Within	1175	75829.67	64.54		
Total	1177	75986.82			

B. MORAL ETHICAL SELF

SOURCE	DF	SS	MS	F. VALUE	PR>F
Between	2	907.56	453.56	10.57*	0.0001
Within	1175	50426.74	42.92		
Total	1177	51334.30			

C. PERSONAL SELF

SOURCE	DF	SS	MS	F. VALUE	PR>F
Between	2	65.67	32.83	0.47	0.62
Within	1175	81805.61	69.62		
Total	1177	81871.28			

D. FAMILY SELF

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	433.57	216.79	4.64*	0.0098
Within	1175	54890.60	46.72		
Total	1177	55324.17			

E. SOCIAL SELF

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	190.75	95.38	1.66	0.19
Within	1175	67378.05	57.34		
Total	1177	67568.80			

F. SELF CRITICISM

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	1388.68	694.34	24.66*	0.0001
Within	1175	33082.07	28.15		
Total	1177	34470.75			

G. IDENTITY

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	191.53	95.76	0.54	0.58
Within	1175	208788.54	177.69		
Total	1177	208980.07			

H. SELF-SATISFACTION

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	243.39	121.69	1.16	0.3143
Within	1175	123405.64	105.03		
Total	1177	123649.03			

I. BEHAVIOUR

SOURCE	DF	SS	MS	F VALUE	PR>F
Between	2	2556.57	1278.28	8.85*	0.0002
Within	1175	169753.79	144.47		
Total	1177	172310.36			

J. SELF ESTEEM

SOURCE	DF	SS	MS	F VALUE	PR > F
Between	2	2972.96	1486.48	1.54	0.215
Within	1175	1135547.96	966.42		
Total	1177	1138520.92			

*F value significant at 0.01 level

APPENDIX C

TABLE OF ANALYSIS OF VARIANCE FOR LOCUS OF CONTROL

SOURCE	DF	SS	MS	F VALUE
Between	2	37.88	18.94	1.77
Within	994	10660.07	10.72	
Total	996	10697.94		

APPENDIX D

TABLE OF ANALYSIS OF VARIANCE FOR TRAIT ANXIETY

SOURCE	DF	SS	MS	F VALUE
Between	2	68.57	34.29	0.58
Within	925	54936.75	59.39	
Total	927	55005.33		

APPENDIX E

TABLES OF ANALYSIS OF VARIANCE FOR STERN ACTIVITIES INDEX SCALES

A. ACHIEVEMENT

SOURCE	DF	SS	MS	F VALUE
Between	2	76.94	38.47	8.85*
Within	926	4024.81	4.35	
Total	928	4101.75		

B. AFFILIATION

SOURCE	DF	SS	MS	F VALUE
Between	2	5.18	2.59	0.56
Within	946	4367.00	4.62	
Total	948	4372.18		

C. AGGRESSION

SOURCE	DF	SS	MS	F VALUE
Between	2	62.23	31.12	14.30*
Within	951	2069.90	2.18	
Total	953	2132.13		

D. EXHIBITIONISM

SOURCE	DF	SS	MS	F VALUE
Between	2	83.22	41.61	7.31*
Within	945	5375.90	5.69	
Total	947	5459.12		

E. DOMINANCE

SOURCE	DF	SS	MS	F VALUE
Between	2	194.35	97.18	22.09*
Within	943	4148.65	4.40	
Total	945	4343.00		

F. HARM-AVOIDANCE

SOURCE	DF	SS	MS	F VALUE
Between	2	178.35	89.17	19.54*
Within	943	4303.02	4.56	
Total	945	4481.37		

G. FANTASIED-ACHIEVEMENT

SOURCE	DF	SS	MS	F VALUE
Between	2	240.84	120.42	23.59*
Within	946	4829.09	5.10	
Total	948	5069.92		

H. NURTURANCE

SOURCE	DF	SS	MS	F VALUE
Between	2	14.70	7.35	1.67
Within	942	4150.10	4.41	
Total	944	4164.80		

I. IMPULSIVENESS

SOURCE	DF	SS	MS	F VALUE
Between	2	72.04	36.02	11.75*
Within	938	2875.34	3.07	
Total	940			

J. SUPPLICATION

SOURCE	DF	SS	MS	F VALUE
Between	2	3.36	1.68	0.76
Within	939	2070.89	2.20	
Total	941	2074.25		

K. SENSUALITY

SOURCE	DF	SS	MS	F VALUE
Between	2	77.15	38.57	15.88*
Within	937	2276.12	2.43	
Total	939	2353.27		

L. UNDERSTANDING

SOURCE	DF	SS	MS	F VALUE
Between	2	2.48	1.24	0.33
Within	934	3517.23	3.77	
Total	936	3519.71		

*F value significant at 0.01 level