

Research paper

NON-MEDICAL USE OF PRESCRIPTION PSYCHOTROPIC DRUGS AMONGST UNIVERSITY OF MALTA STUDENTS

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Abstract. The non-medical use of prescription drugs (NMUPD), mostly psychotropic drugs, is registering an increase in prevalence worldwide, with emerging adults being considered a vulnerable group. In Malta, the evidence base for the prevalence of NMUPD is somewhat lacking, especially for this age group. This paper documents data on the prevalence of NMUPD among University of Malta (UOM) students and explores patterns of use including: age of initial use, source, motivation for use, and use of prescription drugs together with alcohol. The relationship of NMUPD with a number of socio-demographic variables is also examined. An anonymous online questionnaire distributed to the entire UOM student population was used to collect the data. Of the 347 students who completed the questionnaire, 7% reported lifetime non-medical use of opioids, 3.5% reported lifetime non-medical use of CNS depressants and 2.8% reported lifetime non-medical use of CNS stimulants. Consistent with the literature on the subject, female students reported higher engagement in NMUPD than males. The paper concludes with a number of recommendations.

Keywords: Non-medical use of prescription drugs, emerging adults, Malta, university students

1 Introduction

While the non-medical use of prescription drugs (NMUPD) is reported to be on the rise across the globe (UNODC, 2011), the real dimensions of the phenomenon are difficult to ascertain due to a number of challenges in monitoring (Clark, 2015). The 2013 report by the the Council of the EU (Lithuanian Presidency) states that: “Gaps in monitoring prescribing patterns of licit controlled medicines and difficulties in detecting the population who misuse prescription medicines have made the definition of the extent

and the severity of the problem across Europe particularly challenging thus far” (Lithuanian Presidency of the Council of the EU, 2013, p. 7). This paper is important because it attempts to fill a research gap by exploring the prevalence of NMUPD among the Maltese university population.

In this paper, NMUPD is defined as “the taking of prescription drugs, whether obtained by prescription or otherwise, other than in the manner or for the reasons or time period described, or by a person for whom the drug was not prescribed” (Lithuanian Presidency of the Council of the EU, 2013, p. 14) and is concerned with the misuse and abuse of psychotropic drugs. Three main classes of prescription drugs are used non-medically (Clark, 2015): opioids (eg hydrocodone (Vicodin[®]), oxycodone (OxyContin[®], Percocet[®]), morphine (Kadian[®], Avinza[®]), codeine[®]), CNS depressants (benzodiazepines, such as diazepam (Valium[®]) and alprazolam (Xanax[®]) and barbiturates, such as mephobarbital (Mebaral[®]), sodium phenobarbital (Luminal[®]) and sodium pentobarbital (Nembutal[®]), and CNS stimulants (methylphenidate (Ritalin[®], Concerta[®]), dextroamphetamine (Dexedrine[®]) and mixed-salts amphetamine (Adderall[®]).

In 2010, the United Nations Office on Drugs and Crime (UNODC) and the World Health Organisation (WHO), identified NMUPD as a novel threat to public health. In the US, the 2014 National Survey on Drug Use and Health, estimated that 2.1 million Americans initiated NMUPD that year. More females than males initiated NMUPD, and of the new users 30% were adolescents (SAMSHA, 2015). Prescription opioid use, is a challenging problem in the US, with use increasing fourfold in three decades (Volkow & Compton, 2006) and exceeding the use of illicit drugs. In the US in 2014, NMUPD was most common among emerging adults aged 18 to 25. In this group, 4.4% reported nonmedical use in the last 30 days. Among the 12 to 17 age group, 2.6 % registered NMUPD in the last 30 days (SAMSHA, 2015). In both the US and in Europe University students may be at greater risk for NMUPD, due to ease of access of drugs in university settings and the likelihood of their peers sharing prescription drugs (McCabe, Teter, & Boyd, 2006). In Europe, the 2015 ESPAD report highlights how the non-medical use of CNS depressants was common amongst 16 year olds with 17% in Poland and 16% in the Czech

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Republic. The use of substances is gendered and one finds that in Europe girls are more likely than boys to use non-prescription tranquillisers or sedatives. While the gender gap for substance use has been consistently decreasing, in the case of NMUPD this gap is reversed (Clark, 2015). Young people who engage in NMUPD also tend to use other licit and illicit substances. Particularly worrying is the evidence based prediction that those who use prescription opioids at an early age tend to also use illicit opioids when older (McCabe, 2012).

In Europe, NMUPD is only monitored in some countries (UNODC 2011: 6) and there is lack of consistency and comparability in the available data (Clark, 2015). Casati et al. (2012) claim that “although awareness of the misuse of medicines is increasing, data on the extent of the problem in the European Union are lacking” (Casati et al, 2012: p.228). Apart from the misuse of opioid substitution drugs, NMUPD has not, in Europe, been treated as a major problem (UNODC, 2011: 8). In a 2012 review of the research on NMUPD in Europe, Casati et al. reported disquieting figures for some European states. A postal survey in Scotland reported 37% prevalence of non-medical use of opioids. Females were more at risk than males (Porteous et al, 2005). In a study investigating prescription drugs in Norway (Bramness et al, 2007), 0.5% of respondents claimed that they have taken more than what was prescribed for them. A study in France showed that there are high levels of codeine misuse and a significant risk of fentanyl abuse and dependence (Cazorla et al, 2007).

A Council of Europe study on the gender dimension of NMUPD in Europe and the Mediterranean (Clark, 2015) identified females as being at higher risk for NMUPD. Gender, however, is not always predictive in the same manner for the different types of substances. Clark (2015) highlighted that women’s addictive career paths are characterised by telescoping and that emotional self-medication may be a motivating factor for NMUPD amongst women. Clark (2015) analysed data submitted by expert respondents from 17 countries and showed how in the general population, women used more prescription drugs more than men across all time periods (life time, last year and last thirty days). Use increased with age (Clark, 2015). The study found higher levels of NMUPD for women than men in Greece, Lithuania and Serbia, and the reversal in Israel and Lebanon. A prescription from a medical professional was most commonly cited source for both genders, followed by “from a friend or a relative”. This shows how easily prescription drugs may be diverted. The study reports that in Lithuania sedatives and tranquillisers obtained without a doctor’s prescription are more likely to be used by women aged between 45 and 64, people with a higher educational qualification, divorced or widowed people and the unemployed. Fatal overdoses related to prescription drugs had higher rates for women than men in Serbia and Germany (Clark, 2015).

In the Maltese context, the 2015 ESPAD report (Arpa, 2016) showed how 5% of 16 year olds drank alcohol together with pills to get high, 3% used pain relief medication to get high and 3% used CNS depressants without a prescription. A general population survey (GPS) conducted in Malta in

2001 (Korf & Benschop), reported that 14.9% of respondents used sedatives or tranquilizers once in their lives. Twice as many females than males made use of sedatives or tranquilizers in lifetime (Korf & Benschop, 2001). A more recent GPS showed a decline of use among both males and females but the gender difference remains very evident.

Emerging adults have been recognized as having heightened vulnerability for NMUPD (Clark, 2015). In the US, university students were found to have the highest rates. In US colleges, the annual prevalence of NMUPD rose from 8.3% in 1996 to 14.6% in 2006, whereas over this same period of time the prevalence of marijuana declined (SAMHSA, 2015). Social and academic stressors and ease of access of drugs and alcohol at university (Nock et al, 2008) were considered to lead to psychological difficulties among this group. Research amongst British university students showed that from those students who did not have any psychological problems prior to enrolling to university, 9% had developed symptoms of depression, and 20% has anxiety issues, while 26% who already had anxiety prior to starting university had developed depressive symptoms mid-way through the course. With regards to psychosomatic and psychological conditions, when comparing university students with their average peers who do not attend university, students have been found to be less healthy (Andrews & Wilding, 2004). In a study conducted with Malta University students (Cefai & Camilleri, 2009), 77% regularly suffered from exhaustion, 63% frequently experienced anxiety, 49% reported having headaches regularly, 46% frequently felt down, 16% had anxiety (compared to 2% in the general population), and 10% reported depression (compared to 1% in the general population). Furthermore, 3.4% claimed that they take sleeping tablets/tranquilizers (Cefai & Camilleri, 2009). Researchers report that students at university are more prone to mental than physical health difficulties (Stewart-Brown et al, 2000; Tinklin et al, 2005; ACHA, 2009).

2 Methods

This study investigated the prevalence of psychotropic prescription drug use and NMUPD amongst university students for lifetime, last year and last month use. It also included patterns of use including: age of initiation of NMUPD, types of prescription substances used, source, motivations for use, use of NMUPD with alcohol, as well relationships with gender, age, locality, employment, civil status and progression in the course of study. The study used an online questionnaire deployed to the entire student population (n= 11,500) at the University of Malta via eSIMS, an electronic Student Information Management System available to all University students in the spring of 2015. The questionnaire was constructed following a consultation of existing questionnaires exploring drug use namely: *ESPAD* (Hibell et al, 2003); *The Gender Dimension of Non-Medical Use of Prescription Drugs* (Clark, 2015); *Healthy Students Healthy Lives: The Health of Maltese University Students* (Cefai & Camilleri, 2009); and the *Use of Alcohol, Tobacco and other drugs in Malta, Report 2013* (Muscat et al, 2014).

The questionnaire was divided in 8 sections. The first section introduced the questionnaire and explains the research, the second asked about demographics, the third explored knowledge of prescription drugs and explains the various substances, the fourth explored patterns of use, the fifth explored the source of prescription drugs, the sixth attended to motivations, the seventh explored the participant's beliefs of consequences and the final section allowed for participants' comments. The sampling frame consisted of all the University of Malta students. The data was exported from SURVEYMONKEY, into IBM SPSS for statistical analysis and converted into categorical variables analysed as frequency data. The association between categorical variables was tested using the chi-square test. Since the research design utilized an anonymous online questionnaire, the responses to which could not be traced back to the respondents, ethical clearance was not sought from UREC. The study methodology was endorsed by the Psychology Dissertations Committee.

3 Results

3.1 Sample Decomposition

The response rate was 3.5%, with a total of 397 individuals completing the questionnaire. Female respondents were 70.5% and 29.5% were male. The highest proportion of the respondents were aged 20-22 years (38%) and were from the Northern Harbour district (31.82%). 6.82% were from Gozo. Respondents were mostly single (82.2%), followed by married (12.2%), cohabiting (3.8%) and separated or divorced (1.8%). 80.6% of the students were undergraduates while 19.4% were postgraduates. 44.9% of the students were in employment, mainly part-time, and studying.

Table 1. Gender and Medical Use of Opioids

			Gender		Total	
			Male	Female		
Have you ever taken opioids because a doctor prescribed them to you?	Yes	Count	13	28	41	
		% within Gender	16.0%	13.6%	14.3%	
	No	Count	57	167	224	
		% within Gender	70.4%	81.1%	78.0%	
	Don't Know	Count	11	11	22	
		% within Gender	13.6%	5.3%	7.7%	
	Total		Count	81	206	287
	% within Gender		100.0%	100.0%	100.0%	

$$X^2(2) = 6.248, p = 0.044$$

3.2 Medical Use of Prescription Drugs

Fourteen point two percent reported lifetime use of medically prescribed opioids. A higher proportion of males (16%) than females (13.6%) reported taking opioids because a doctor prescribed them ($p = 0.044$) (Table 1). Older students were more likely to report having been prescribed opioids ($p = 0.002$). Students were more likely to have been prescribed opioids if they were further advanced in their academic career ($p = 0.023$). There were no significant relationships between opioid use and district, employment and civil status.

Ten point six percent of the respondents reported use of medically prescribed CNS depressants in lifetime. Students were more likely to have been prescribed CNS depressants if they were older ($p = 0.03$). No statistical significant difference was found when testing for relationships between medical use of CNS depressants and gender, district, civil status, employment and year of study. 4.6% of the participants reported ever medical use of CNS stimulants. No statistical significant correlations were found between lifetime medical use of stimulants and district, gender, civil status, employment and progression in one's course of studies.

3.3 NMUPD

Table 2 illustrates lifetime, last year and last month non-medical use of opioids, CNS depressants and CNS stimulants.

Table 2. Prevalence Rates of Opioids, CNS Depressants and CNS Stimulants

	Lifetime	Last Year	Last Month
Opioids	7%	4.2%	0.7%
CNS Depressants	3.5%	2.8%	0%
CNS Stimulants	2.8%	1.4%	0%

Students reported higher use of non medically prescribed opioids in lifetime last year and last month.

Table 3 shows how females registered higher prevalence rates of ever use of non medically opioids ($p = 0.010$). Higher prevalence rates are again registered for females in last year ($p = 0.011$). No statistically significant differences were found for age, district, year of study, employment and civil status at lifetime and last year use. 0.7% of students reported the

non-medical use opioids in the last month, however no statistical differences were found between groups.

Table 3. Gender and Lifetime Non-Medical Use of Opioids

			Gender		Total
			Male	Female	
Have you ever taken opioids without a doctor's prescription?	Yes	Count	5	15	20
		% within Gender	6.3%	7.3%	7.0%
	No	Count	67	188	255
		% within Gender	84.8%	91.3%	89.5%
	Don't Know	Count	7	3	10
		% within Gender	8.9%	1.5%	3.5%
Total		Count	79	206	285
% within Gender		100.0%	100.0%	100.0%	

$\chi^2(2) = 9.262, p = 0.010$

Table 4 documents how a higher percentage of female lifetime was found to make use of CNS depressants (3.9%) ($p = 0.018$). 2.9% of the female students made non-medical use of depressants in last year compared to 1.3% of males ($p = 0.023$). No differences were found regarding age, district, employment, civil status and progression in course of studies.

Table 4. Gender and Lifetime Non-Medical Use of CNS Depressants

			Gender		Total
			Male	Female	
Have you ever taken CNS Depressants without a doctor's prescription?	Yes	Count	1	8	9
		% within Gender	1.3%	3.9%	3.2%
	No	Count	72	197	269
		% within Gender	92.3%	95.2%	94.4%
	Don't Know	Count	5	2	7
		% within Gender	6.4%	1.0%	2.5%
Total		Count	78	207	285
% within Gender		100.0%	100.0%	100.0%	

$\chi^2(2) = 8.802, p = 0.018$

Two point eight percent of students reported lifetime use of CNS stimulants, however no statistically significant differences were found for gender, age, civil status, employment, year of study and district. One point four percent of students took CNS stimulants non-medically in the last year. No statistically significant differences were found in the correlations between demographic variables.

3.4 Age of first use

Of those who reported NMUPD, 34% reported having first used the substance, not necessarily non medically, between the age 11 to 16, 32% between the ages of 17 to 19 and 34%

reported having been over 20 at first use. The modal age for onset of use of a prescription drug was found to be 16 years of age.

3.5 Source and motivation

The most commonly reported source of prescription drugs was a licit one, such as previously prescribed by the doctor to the student (44.82%). This was followed by bought without a prescription from a pharmacy (22.41%), got them from somebody else (15.52%), other methods (1.72%) and fake prescriptions (1.72%). Of those who had the drug previously prescribed by doctor, 18.95% reported taking prescription drugs to self-medicate. 4.03% reported using the drugs because they were curious, 2.82% reported using the drugs to feel relaxed and 1.61% reported using the drugs to feel high.

3.6 Stress

Over all, females reported experiencing more stress at University than males (Table 5).

Table 5. Gender and Stress

		Gender	
		Male	Female
How stressful are you finding this academic year?	Very stressful	19.0%	32.8%
	Stressful	22.8%	36.3%
	Somewhat stressful	46.8%	25.4%
	Not stressful	11.4%	5.5%
Total		100.0%	100.0%

3.7 Alcohol and prescription drugs

Ninety one point three percent of respondents reported lifetime use of alcohol. 1% of the respondents always mix prescription drugs with alcohol, 10.1% sometimes mix alcohol with prescription drugs and 16.4% rarely mix both. No statistically significant correlations were found between the demographic variables.

4 Discussion

Youth researchers note that the transition to adulthood is becoming increasingly protracted and complex to negotiate and that “long-term demographic change, shifts in economic and educational structures, and recent social policy decisions” (Hall, Williamson & Coffey, 1998), are providing youth with increased challenges in negotiating complex transitions. The period of emerging adulthood, coined by Arnett, (2000) to discuss this specific life period, is characterized by identity exploration, some degree of instability and self focus. It is an age of feeling in-between, in transition, neither adolescent nor adult, marked by heightened differentiation in life trajectories (Arnett, 2000). This is due, in part, to the negotiation of pathways that may have earlier been curbed, as well as to the availability

of new trajectories. While it is a period where individuals experience a number of hopeful prospects and have an unparalleled opportunity to redirect their pathways, it is also a challenging period where the individual is typically required to make major adjustments, develop new competencies, and learn to cope with new experiences precipitating stress. This, combined with increased independence and freedom from adult supervision, may make emerging adults at risk of increased substance use. While the transition from adolescence to adulthood is a critical juncture for the development of health behaviours (Lara-Torre, 2008), emerging adults often do not think how their lifestyle choices will affect their wellbeing.

The need to intervene at this critical point in time is highlighted. Young people may experience stress, leading them to seek medical assistance. This study testifies to the preoccupying rates of both medically prescribed and non medical prescribed drug use by emerging adults in Malta and alerts to the readiness of medical practitioners to prescribe substances that are potentially dependence producing. The result indicate that University students may be at heightened risk due to the stresses of academic life and perhaps due to the fact that almost half of the sample were also working while pursuing an academic career. This substantiates the findings of Cefai and Camilleri (2009) discussed above.

This specific study has shown how opioids are the most commonly used prescription drugs and are used both according with medical practice (by prescription) and otherwise. Opioids are mainly prescribed for pain relief, but taken in high doses may bring about euphoria and have high abuse potential. While emerging adults may be taking these medications initially for pain relief, 7% of respondents claim to have used them non-medically. Studies in the US show an increase in the likelihood of developing an opioid use disorder amongst this cohort (Edlund et al, 2014).

While no significant gender differences were reported with regards to lifetime or last year use of stimulants, higher rates of lifetime use of opioids and depressants, and last year use of opioids and depressants, were reported by females. This coincides with ESPAD's findings from 1999, 2003 and 2011 which all clearly portray gender differences (typically, females report 3-4% more NMUPD than males). This research shows an unambiguous gender difference with regards to NMUPD, with females having higher prevalence rates than males. A similar vulnerability of women to the non medical use of prescribed drugs is registered in other studies (Simoni-Wastila et al., 2004).

While the gender gap for treatment demand for illicit substances in Malta continues to be wide, with the absolute majority of those in treatment being males (MFSS, 2016), women may be at increased risk of misusing medicines because illegal drug abuse is stigmatised even more strongly amongst women (Hecksher & Hesse 2009). Besides associated stigma, prescription drugs are easier to get hold of than illicit substances and the chance of arrest is minimal (Rigg & Ibanez 2010). The social acceptability of their

use and their perceived safety are also influencing factors. Clark (2015) highlights the role of trauma and interpersonal violence in female NMUPD. Women often use these drugs to cope with relational stress and negative emotional states. The abuse of prescription medications by females may be linked to their experience of psychological distress and stressful life situations including violence (Back et al., 2011). The accelerated disease progression observable among women who engage in NMUPD means that females come to use them regularly more quickly, thus "the window of opportunity for preventing progression is smaller for women" (Back et al., 2011:p 833).

Early onset of non-medical use of prescription drugs, can have effect both on the outcome of future prescription drug abuse and later addictive involvement with substances; an increase of one year in the age of onset reduces the chances of dependence of abuse by 5% (McCabe et al., 2007). In this research, the two most popular ages of initiation to prescription drug use were 16 and 18. 20% of the students were 16 years old when they first made use of prescription drugs and 14% were 18 years old. This has important implications with addressing this age group through prevention efforts.

According to this research, the three most commonly reported sources of prescription drugs were "previously prescribed by a doctor" to the student (44.83%), followed by "bought without a prescription from a pharmacy" (22.41%), followed by "got them from friends or relatives" (15.52%). The most common source concurs with the results of the study by Clark et al. (2015:p. 93). The sources reported in this research were similar to the sources identified by SAMHSA in 2008 in a study of people aged 12 or over. However, Maltese university students also reported having bought them in a pharmacy without a prescription. This might alert one to the ease of getting medication without a prescription in a close-knit Maltese community, where everyone knows each other and has important policy implications.

Previous research, highlights students' NMUPD as being motivated by the need to self-medicate physical or emotional distress (Fords & Schroeder, 2009; McCabe et al., 2009; McCauley et al., 2009; McCauley et al., 2011; Teter, Falone, Cranford, Boyd & McCabe, 2010; Wu et al., 2008). The findings of this study resonate with this. While, in the US, students reported using stimulants to help them stay focused (Burgard et al., 2013; Garnier-Dykstra et al., 2012; Hanson et al., 2013; Rozenbroeck and Rothstein, 2011), in this research stimulants were the least common drugs used non-medically amongst University of Malta students.

This study highlights how more than 60% reported that they are finding this year stressful, 38% are finding it somewhat stressful. Students may experience psychological distress and in an attempt to cope, put themselves at risk for NMUPD. Females experienced more stress than males. In a 2012 study amongst US students, sad and depressive feelings were predictive of non-medical use of prescription drugs, mostly with opioids (Zullig & Divin, 2012). Females heightened stress may be placing them at a higher risk.

4.1 Limitations

The main limitations of this study are related to the sampling design. While the entire student population received the questionnaire, the sampling methodology did not utilise a systematic random sample and so the results are not generalizable. The non probability sampling technique can only give us information about those who answered the questionnaire. The convenience sample may have led to the under-representation or over-representation of particular groups within the sample. Despite this severe limitation, the study was aimed at being exploratory in nature and given the dearth of knowledge on NMUPD amongst emerging adults in Malta, this initial data may be seen to indicate trends amongst this group and provide indications for areas of further research. Another limitation is the response rate which was rather low, 3.5%, with a total of 397 university students completing the questionnaire. Another limitation concerns the interpretation of the items on the research tool. Since the survey was administered through an anonymous online questionnaire, it is also unknown whether the respondent answered their questions truthfully or if they understood what was being asked. This is however a limitation plaguing all self-report studies of substance use. Additionally, some questionnaires were submitted incomplete and needed to be discarded. A main limitation is that the study surveyed only university students who are a very particular group of young people and therefore the results cannot be generalised to other categories of youth.

5 Recommendations

A number of recommendations for further research, policy and practice emerge from this initial exploratory study. Reporting on the extent of NMUPD needs to become a priority in Malta, as elsewhere. Empirical investigations on NMUPD which tackle specific issues, such as the onset, acceleration, physical and psycho-social consequences for emerging adults as an “at risk” category are also due. Researchers need to develop monitoring systems for NMUPD that include other categories of prescription drugs, in addition to CNS depressants and that ask about the source of prescription drugs. In terms of practice (prevention and treatment), and given the evident gender gap in the data on NMUPD, this study recommends differentiated remedies for women and girls. Guidelines for prescription practices need to be developed, ensuring that while persons who need psychotropic prescription drugs, have access to them, this does not result in unnecessary prescriptions for these drugs, which might consequently find themselves diverted. A priority is also the development of education programmes aimed at the general public that advises on how to use medicines safely and store and dispose of them appropriately. Medical practitioners need to be trained to be able to assess and identify individuals at risk of NMUPD. This study also recommends that coherent policies addressing the use and misuse of medicinals, with specific reference to age and gender differences, be developed in Malta.

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8 Conflicts of Interest

The authors report no conflicts of interest

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Appendix A

NON-MEDICAL USE OF PRESCRIPTION DRUGS AMONG UNIVERSITY STUDENTS

Welcome to My Survey

Dear student,

The aim of this study is to gather knowledge on the prevalence of non-medical use of prescription drugs (NMUPD) among university students. The Lithuanian Presidency of the Council of the EU in 2013 defined NMUPD as the: “use of a prescription drug, whether obtained by prescription or otherwise, other than in the manner or for the time period prescribed, or by a person for whom the drug was not prescribed”. For the purpose of this survey, prescription drugs are defined as pharmaceutical drugs which require a medical prescription to be dispensed.

This survey is strictly anonymous, and you are free to quit at any point, however your response is greatly appreciated.

Thanks

Demographics

The aim of this section of the survey is to gather some basic statistical data of the respondents. Any data and information given here and in any part of the survey is strictly anonymous.

1 Sex

Male Female other

2 What is your age?

3 Where do you currently reside?

4 What is your civil status?

5 At which faculty/institute/centre are you studying?

6 Which study level are you in?

Undergraduate Postgraduate

7 Which year are you in?

1 2 3
 4 5 6

8 What is your attendance mode?

full-time student
 part-time student

9 Are you currently employed?

yes no

Knowledge on Prescription Drugs

Prescription drugs are pharmaceutical drugs which require a medical prescription to be dispensed, contrary to over-the-counter drugs which can be obtained without a prescription.

10 Opioids are medications prescribed by doctors to relieve pain (strong pain killers), such as Vicodin[®], Oxycontin[®], Duragesic[®], Kadian[®], etc. Have you ever heard of opioids?

yes no

11 Do you think that opioids have any of the following side effects?

	yes	no	don't know
drowsiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mental confusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
constipation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
depress respiration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
euphoric feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12 Do you think that opioids can lead to physical dependence or addiction?

yes no don't know

13 Do you think people may experience the following symptoms when withdrawing from opioids?

	yes	no	don't know
agitation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
anxiety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
muscle aches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
gastrointestinal distress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14 CNS depressants are medications prescribed by doctors to treat anxiety and sleep disorders, also known as tranquilizers or sedatives (“kalmanti”). Types of CNS depressants are Valium®, Xanax®, Halcion® and ProSom®. Have you ever heard of CNS depressants?

yes no

15 Do you think that CNS depressants have any of the following side effects?

	yes	no	don't know
drowsiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
incoordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16 Do you think that CNS depressants can lead to physical dependence or addiction?

yes no don't know

17 Do you think withdrawing from CNS depressants abruptly can have severe effects, even life-threatening?

yes no don't know

18 CNS stimulants or amphetamines increase alertness, energy and elevate blood pressure and respiration. Stimulants are mostly prescribed by doctors to treat ADHD, narcolepsy, and occasionally as a last resort to treat depression. Types of stimulants are Dexedrine[®], Adderall[®], Ritalin[®] and Concerta[®]. Have you ever heard of CNS stimulants?

yes no

19 Do you think CNS stimulants have any of the following side effects?

	yes	no	don't know
increased heart rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
increased blood pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
constricted blood vessels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
increased blood glucose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
opening of breathing passages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
anorexic effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
heightened attention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
wakefulness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hallucinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
euphoria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
altered perception	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20 Do you think that CNS stimulants can lead to physical dependence or addiction?

yes no don't know

21 Do you think that people may experience the following symptoms when withdrawing from CNS stimulants?

	yes	no	don't know
fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sleep disturbances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Patterns of use

This section examines the patterns of use of the non-medical use of prescription drugs and illicit drugs. For the purpose of this survey, “non-medical use” means using the drugs without a doctor’s prescription or not as prescribed. “Non-medical use” also includes being previously prescribed the drug by the doctor, and then consuming the drug later after the prescription expired or not as the prescription states.

22 Have you ever taken any of the following because a doctor *PRESCRIBED* them to you?

	yes	no	don't know
Opioids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23 If yes to any of the above, what was the reason you were prescribed the drug?

24 Have you ever taken prescription drugs non-medically?

yes no don't know/don't remember

25 Have you ever taken any of the following drugs *WITHOUT* a doctor's prescription?

	yes	no	don't know
Opioids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26 During the past year, have you ever taken any of the following drugs without a doctor's prescription?

	yes	no	don't know
Opioids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27 Have you ever used any of the following drugs non-medically in the past month?

	yes	no	don't know
Opioids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28 During the past 30 days, on how many days did you take prescription drugs non-medically?

	yes	no	don't know
Opioids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS depressants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS stimulants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29 *In your lifetime, did you ever make use of the following?*

	yes	no	don't know
alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
marijuana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cocaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ecstasy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
amphetamines (uppers, pep pills, bennie, speed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LSD or other hallucinogens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
crack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
heroin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"magic mushrooms"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30 *Do you ever mix prescription drugs with the following?*

	yes	no	don't know
alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
marijuana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
cocaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ecstasy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
amphetamines (uppers, pep pills, bennie, speed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LSD or other hallucinogens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
crack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
heroin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
"magic mushrooms"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31 *What was your age the first time you took prescription drugs non-medically?*

Sources

This page examines sources of prescription drugs and ease of obtaining drugs. All information is strictly anonymous.

32 *The last occasion you took prescription drugs, how have you obtained them?*

- fake prescription
- were previously prescribed by a doctor for oneself
- got them from somebody else (friend/relative)
- bought them without prescription in a pharmacy or drugstore

- bought them over the internet
- other
- never took prescription drugs

33 How difficult is it for you to obtain prescription drugs without a prescription?

- impossible
- very difficult
- fairly difficult
- fairly easy
- very easy
- don't know

Motivation

This part of the survey tries to identify any possible reasons which may be motivators for using prescription drugs non-medically.

34 If you ever took prescription drugs non-medically, what was the reason for doing so?

- I never took prescription drugs non-medically
- I wanted to feel high
- To feel relaxed
- I was curious
- To self-medicate (drug already prescribed previously by doctor)
- To self-medicate (drug never prescribed previously by doctor)
- Other (please specify) _____

35 Do any of your friends/family make use of prescription drugs non-medically?

	none	few	some	most	all	don't know
Friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36 How stressful are you finding this academic year so far?

- very stressful
- stressful
- somewhat stressful
- not stressful

37 Within this academic year, what strategies did you use most to cope with stress? You can select more than one

- studying harder
- better planning and organisation

- asking help from lecturers and colleagues
- counselling
- family support
- talking with friends
- praying
- positive thinking
- time management
- cutting on leisure activities
- physical exercise
- drinking
- going out/partying
- avoidance/running away
- smoking
- comfort eating
- yoga/progressive relaxation
- watching television
- prescription drugs
- illicit drugs
- Other (please specify) _____

Consequences

Finally, this page attempts to identify to perceptions of the consequences of the non-medical use of prescription drugs.

38 *How much do you think people risk harming themselves (physically or in other ways), if they...*

	no risk	slight risk	moderate risk	great risk	don't know
take opioids non-medically once or twice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
take opioids non-medically regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
take CNS depressants non-medically once or twice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
take CNS depressants non-medically regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
take CNS stimulants non-medically once or twice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
take CNS stimulants non-medically regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The end!

39 *Thanks for filling out this survey, should you have any further comments please leave them in the comment section below :)*